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Bilingualism in Autism Spectrum Disorder: Finding Meaning in Translation

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In the United States, 12 million children primarily speak a language other than English at home.¹ This represents about one in four children with autism spectrum disorder (ASD) being raised in a bilingual environment. The old notion that bilingualism could “confuse” a child has long been refuted by a large body of research that suggests quite the opposite.² As early as infancy, persons in a bilingual environment show advantages in certain cognitive tasks.³ Furthermore, there is evidence that bilingual persons perform better on tasks indicative of social understanding stemming from the ability to navigate the intricacies of more than one culture. Nevertheless, whether these advantages also apply to children with ASD remains a controversial topic.⁴

Children with ASD present with communication skill deficits that affect structural and functional components of language development.³ Furthermore, by having a social communication disorder, they have fewer opportunities to learn and practice language skills. Advocates of restricting multiple language exposure believe that being raised in a multilingual environment could worsen communication issues inherent to ASD.^{4,5} Studies to date suggest that bilingualism has no negative effect on language development in ASD. However, research in this area is limited, often lacks a monolingual comparison group, and is mostly restricted to early language acquisition.^{3,5} In addition, there is no clear consensus from professional organizations in the field; speech pathologists, health care professionals, and education specialists often provide conflicting views and recommendations for bilingual exposure in ASD.^{3,6-8}

In an effort to address disparities in autism, our Center has made a focused effort to improve recruitment of ethnically diverse populations for research participation. As such, over the past 2 years, we have conducted a large number of clinical research evaluations in bilingual and immigrant families raising children with ASD. Through this work, it has become clear to us that caregivers are often left, many times at a high emotional cost, with the difficult

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task of deciding if they should restrict language exposure to only one language.^{7,8} In this Clinical Perspectives article, we present narratives from bilingual families raising children with ASD who participated in research at the Seaver Autism Center for Research and Treatment at the Icahn School of Medicine at Mount Sinai between 2016 and 2018. We aim to use these stories of bilingualism in ASD to present important concepts and invite readers to reflect on the experience of these families.

BILINGUAL AND MONOLINGUAL CHILDREN WITH ASD PERFORM SIMILARLY ACROSS TASKS

Research to date indicates that at worst bilingual exposure in children with ASD has no effect on language development and at best offers advantages on adaptive functioning, social communication, and receptive language (see Wang *et al.*³ for an in-depth review). Valicenti-McDermott *et al.*⁵ found that toddlers with ASD and bilingual exposure made increased attempts to communicate through gestures, cooing, and engaging in pretend play compared with their monolingual peers. Similar advantages have been observed in school-aged children, where bilingual children with ASD scored higher than monolingual children with ASD in tests indicative of nonverbal and verbal communication.⁹ In addition, as has been reported for bilingual typically developing youngsters, bilingual children with ASD showed advantages on set-shifting tasks in cognitive tests.³ However, as none of these advantages are consistently reported across the literature, the accepted view is that bilingual exposure in children with ASD has no detrimental effect on the child.

We always made a point of primarily speaking Spanish [at home] ... he was mostly interested in letters, and he could decode the letters really early. But he wasn't verbal ... he could repeat words, but we didn't know if he could understand the meaning of the words. One day we were playing with cubes and I put the cubes out, and I spelled "dog," "d-o-g, and I asked him, what does it say? I was expecting him to say "dog," but he said "perro," dog in Spanish [emphasis added]. It was such a powerful moment because he had triangulated the two languages, and ... that told me that he knew that words had a meaning, and that he was using one language to learn the other, and that it was a three-legged stool that he couldn't do without.

When his doctor told me that [because] I didn't speak English to him, he was never going to learn how to speak I cried all night ... I wanted to learn [English] ... but I had to work, and there was no choice. Another mom at the school told me not to worry ... her son [with ASD] could speak both. But I worried that he was not making progress because I couldn't speak English to him. He now can speak both languages. He sometimes mixes them, or makes up words in a language to explain things in the other ... he loves words that only exist in one [of the languages] and gets so happy when he speaks to his family in Mexico ... and I have learned some English from him.

PARENTAL INTERACTION IS CRITICAL FOR LANGUAGE DEVELOPMENT IN ASD

Language acquisition in ASD is heavily influenced by parental interaction. However, a parent's role would be disrupted if there is nonnative language use with their child.⁸ For a caregiver, the level of proficiency in the language directed at their child leads to increased opportunities for parent-child interactions and facilitation of language development in daily life.⁷ For example, when parents use a nonnative language to communicate with their typically developing children, they interrupt more often and use shorter utterances.⁸ In addition, qualitative studies in ASD report that bilingual parents perceive a greater degree of intimacy, comfort, and competence when using their native language with their child.⁷

It was never a question for us, it is as much his language as English ... I don't think it has made a difference, and he loves watching the Indian cooking shows and cooking with mom ... they are very close because of that.

He has no words, but he understands both. I feel bad when I talk Japanese [to him] ... his speech therapist told me only to use English ... but at home, when it is just him and me, it is strange not to speak my language to my child. I think he responds to me better when I talk to him in Japanese and he understands when his dad and I talk ... there is a sense of familiarity for him, but still I think, what if I had only used English?

LIFELONG SOCIOCULTURAL IMPLICATIONS ARE UNDERSTUDIED

Assessing outcomes beyond childhood where cultural and societal aspects of bilingualism play a critical role is an important gap in the literature.^{3,6} Studies have found that for bilingual families, maintaining the parental native language as the home language facilitates cross-generational relationships, helps preserve cultural heritage, and supports a cohesive family relationship.^{7,9} As such, by limiting exposure to the parental native language in children with ASD, additional communication barriers could be created. These barriers could result in social and cultural effects when children with ASD are not fully integrated in their community and weakening of child and family relationships due to language barriers.^{3,7}

... not speaking Spanish [to our son] would have given him, a child with a communication disorder, an added communication problem ... and prevented him from having relationships with half of his family. ... It would have excluded him from half his life...

When his speech therapist told me only to speak English at home, I didn't think twice ... he was talking fluently within a few months. It is sad for me sometimes that he cannot understand Spanish, but I think it was for the best. ... Taking him to visit family in Ecuador has become problematic. He doesn't talk to his grandparents, uncles, or aunts. Some of his cousins speak English to him, but he is lost in the culture ... the older he gets, the more isolated he becomes in trips. ... Last time I left him in the US with his brother and he was happy to stay.

He, more so than his siblings . . . , uses language to understand social norms, there is a space for English and one for Spanish in his life, and that goes beyond the language. . . , he knows that people interact differently in both cultures, and he adjusts, probably more than his siblings do.

The benefits of bilingualism are not extensive across domains, and we do not recommend introducing a second language to promote cognitive and social development in children with ASD however, there appear to be advantages to bilingualism in children with ASD being raised in multilingual and multicultural households. As mental health professionals, we have the capacity to provide a space for families to consider the experience of their [bilingual] child across settings, relationships, and stages in life before making a decision with implications beyond the immediate crisis. As we work with bilingual families raising children with ASD, a condition that by definition affects a person's ability to develop social relationships, we should consider the words of Wittgenstein: "The limits of my language are the limits of my world."

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