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One or two languages for children on the autism spectrum?¹

Jeden czy dwa języki w komunikacji z dziećmi ze spektrum zaburzeń autystycznych?

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Twenty percent of students attending California schools are English Language learners (ELLs) [Sugarman, Geary, 2018], and in 44.5 percent of homes, a language other than English is spoken, with 18.6 percent reporting they speak the language “less than very well”. Additionally, California has the highest number of persons who are foreign-born [U.S. Census Bureau, 2017].

For three decades, autism spectrum disorder (ASD) has been the fastest growing special education eligibility category for public education across the nation. Variations in percentages depend on many factors, including the methods used in analyzing prevalence studies. Nevison, Blaxill and Zahorodny [2018] found that the

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prevalence of ASD in California grew from 0.2 percent in the cohort of five-year-olds born in 1990s to 1.2 percent in a cohort of five-year-olds born in 2012. On average, one in 59 children have been identified as having ASD, and the diagnosis occurs in all racial, ethnic and socioeconomic groups [Center for Disease Control and Prevention, 2018]. Children of the autism spectrum from minority and low-income communities may be diagnosed significantly later, show more severe symptoms and demonstrate a higher risk of being misdiagnosed with an adjustment or conduct disorder [Center for Disease Control and Prevention, 2018]. The term *minority* does not necessarily refer to numerical representation but to socioeconomic, cultural and political status relative to a societally dominant language [Ramaga, 1992].

Becerra et al. [2014] compared the percentage of children from various cultural and linguistic backgrounds diagnosed with ASD between 1998 and 2009 in California (Los Angeles) with a national database. Results indicated that the diagnosis was 76 percent higher in children of foreign-born black mothers, 43 percent higher for Vietnamese, 25 percent higher for Filipinos, 26 percent higher for Central/South Americans, and 13 to 14 percent higher in US-born Hispanics and blacks compared with children of US-born white mothers.

These statistics raise several dilemmas for SLPs working with families from language minority groups whose backgrounds are different from the typical Euro-American background. Speech-language pathologists and the team need to be sensitive and consider their clients' linguistic and cultural backgrounds in their assessments and data evaluations [Ennis-Cole, Durodoye, Harris, 2013; Bauer, Winegar, Waxman, 2016]. Additionally, SLPs should be prepared to provide guidance about language use. One frequent question parents of these students ask is whether they should switch to or add English to the language they speak at home (L1). Some parents may be fluent in both languages, but others may not. Parents often fear confusing their child and/or contributing to delaying overall language development if they do not use English or if they use L1 at home. Many professionals, including SLPs, physicians and other allied professionals continue to counsel them to drop L1 [Kay-Raining Bird, Lamond, Holden, 2012; Drysdale, van der Meer, Kagohara, 2015; Yu, 2016]. Because the SLP and the team might not speak the family's and/or the child's language they may need to collaborate with a trained interpreter. However, this interpreter may assist them in not only interpreting the information but in understanding cultural characteristics that may impact the diagnosis of ASD on a given family [Langdon, Saenz, 2016].

Benefits of bilingualism for typically developing children

More than half the world's population is bilingual or multilingual, and becoming bilingual is a natural human process when individuals have an opportunity to either grow up using two languages or attend a school where another language is used for instruction. Benefits of bilingualism have long been reported by many [Bialystok, 2001; Grosjean, 2010; Paradis, Genesee, Crago, 2011; Baker, Wright, 2017], and include increased working memory, attention and metalinguistic skills. Likewise, there is ample research documenting the benefits of bilingual instruction, in particular the two-way immersion model for both language minority and majority students on their performance in reading and math [Genesee, 1983; Collier, Thomas, 2004; Lindholm-Leary, Howard, 2008; Marian, Shook, Shroeder, 2013]. However, in reality, most developing ELL students or those on the autism spectrum do not attend bilingual programs for a variety of reasons (e.g., insufficient number of programs, not available in the ELL student's language) [Yu, Hsia, 2018].

Application to students on the autism spectrum

Students on the autism spectrum demonstrate varying degrees of challenges in communication. The research supporting the use of two languages with children on the autism spectrum is emerging, and the review presented here is divided into three sections:

- 1) studies comparing monolingual and bilingual children on the autism spectrum on various measures of language and communication skills,
- 2) outcomes of this therapy when therapy is conducted in L1 (only one study) and
- 3) issues regarding language use at home.

Comparing monolinguals and bilinguals on the autism spectrum

Drysdale, van der Meer and Kagohara [2015] conducted a literature search on bilingualism and children on the autism spectrum using specific criteria for their final selection and found that from an original pool of 23 studies, only eight met their criteria. Of those, four studies focused on comparing groups on various measures of linguistic and pragmatic areas [Hambly, Fombonne, 2012; Ohashi et al., 2012; Petersen, Marinova-Todd, Miranda, 2012; Valicenti-McDermott et al., 2013]. Although all four studies implemented a rigorous methodology in matching their samples, each focused on slightly different areas. Specifically, Hambly and Fombonne [2012] compared social abilities and language levels, and Ohashi et al. [2012] compared

the groups according to severity of autism-related communication impairment, age of first words and age of first phrases (receptive language scores, expressive language scores and functional communication scores). Both Petersen, Marinova-Todd and Mirenda [2012] and Valicenti-McDermott et al. [2012] studied overall language skills, but the first group of researchers analyzed receptive and expressive vocabulary and the second group analyzed various communication means, such as facial expression and pretend play. There were other differences among these four studies, such as participant ages, methods of identifying ASD and definitions for simultaneous and sequential bilingualism. None of the studies made comparisons across the various linguistic groups. A more recent study by Reetzke et al. [2015] involving children diagnosed with ASD in China who were exposed to one or more of the five major mutually unintelligible Chinese languages (i.e., Mandarin; Yue, including the Cantonese dialect; Xiang; Hakka and Southern Min). This study was the first conducted outside of the Western world. None of the five studies reported significant differences between the comparison groups in the language or pragmatic skills analyzed, indicating that children on the autism spectrum can acquire two languages. Nevertheless, care needs to be exercised in interpreting these preliminary results, because factors such as consistent exposure and nurturing of L1, as well as collaboration between teaching staff and parents and families, must be accounted for.

Use of therapy in L1

Only one study has considered the use of L1 in therapy in working with children on the autism spectrum. Seung, Siddiqi and Elder [2006] examined the efficacy of treating a bilingual male client on the autism spectrum using his L1, Korean, as the initial language of intervention for approximately one year before gradually transitioning the intervention to English. This study examined the development of receptive and expressive vocabulary over 24 months while receiving speech-language intervention twice weekly, 30 to 45 minutes each session. The client's progress in receptive vocabulary and following simple directions, as well as expressive vocabulary and two-word sentences, was examined every six months. He improved linearly in both receptive and expressive vocabulary in Korean during the first year of intervention in L1 (Korean). He gradually increased his responses to English instructions, his production of English vocabulary terms and the production of simple two-word combinations in English. He used English when he was at the preschool and Korean with his parents at home during the 24-month study period. It should be noted that he made gains in both Korean and English. In the second year of his intervention, when the gradual change from Korean to English intervention was made, his English acquisition emerged. His language age (the length of first exposure to English from preschool and speech-language therapy) was approximately two years and his

English acquisition level was commensurate to his language age, two years, as evidenced by the production of single words (e.g., noun, verbs, some pronouns and adjectives), a vocabulary spurt and two-word combinations. The results of this single-case, longitudinal follow-up study suggest that providing intervention in the client's primary language initially and gradually transitioning into English intervention may be a positive strategy to undertake. This strategy and other issues concerning language use in various contexts are discussed by Seung [2017].

Language use at home

Receiving an ASD diagnosis can be life-changing and stressful for parents, so they often turn to the guidance of experts. The information and advice professionals offer to parents have a tremendous influence on their beliefs about bilingualism, how they speak with their children and the interactional dynamics of the home [Yu, 2013; 2016]. Parents who are told to speak to their children in ways that are incongruent with the needs of their families may experience significant disruptions to everyday communications and affective connections in the home, including the exclusion of their children from participation in meaningful activities [Wharton et al., 2000; Kremer-Sadlik, 2004; Yu, 2016]. Professionals must, therefore, be mindful of the roles they play in advising families and be responsive to families' lived experiences of language use.

Of primary importance is that parents of children on the autism spectrum often feel significant pressure for their children to acquire English, frequently at the cost of losing their home languages. In the United States, heritage language maintenance is an uphill battle for all minority-language families [Fishman, 2006]. Many parents are told and believe that exposure to more than one language will exacerbate their children's developmental and social communication difficulties or hinder their mastery of English [Kay-Raining Bird et al., 2012; Yu, 2013]. Mastery of English is considered a matter of urgency for accessing valuable interventions, many of which are available only in English [Yu, Hsia, 2018]. Although parents overwhelmingly wish to transmit their native languages, studies have demonstrated that most do not pursue this goal if they believe it would get in the way of their children's success [Yu, 2013; Yu, Hsia, 2018]. At the same time, most parents received very little substantive help on how to effectively support their children's English acquisition, especially in ways that promote additive bilingualism [Yu, 2013].

It is important that SLPs and other professionals be sensitive to the fact that families of children on the autism spectrum are particularly vulnerable to heritage-language loss, and make concerted efforts to address the causes of the risk. This includes dispelling assumptions that bilingualism can cause harm. It also means actively encouraging heritage language maintenance and sharing strategies for its success. For

example, parents may not know that their children's heritage language competencies are likely to be quickly overtaken by English unless opportunities for sustained heritage-language learning and growth are made available [Schwartz, Verschik, 2013]. In addition, professionals must collaborate with parents to systematically bridge first- and second-language learning and to build on the foundations of a robust primary language. In 2013, Yu found that parents who felt self-efficacious in their abilities to support the growth of their children on the autism spectrum were more confident that they could do so regardless of what language(s) they spoke.

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Abstract

The emerging research comparing verbal and non-verbal development in typical individuals and those on the autism spectrum reveals no differences in the acquisition rate of specific features or concepts. Research on families suggests that what parents need is not to be given advice, but rather to be understood and supported by professionals who are family-centered as well as culturally and linguistically responsive. Choices about language use in families are complex matters that shift dynamically over time. These shifts can include changes in family membership, situational demands, variations in language proficiencies and many other constraints and affordances of family life that require constant adaptation and fluidity. Which language parents choose to speak with their children comes from deeply personal decisions that are neither right nor wrong, but those decisions are often constrained under the weight of fear and misinformation. Speech-language pathologists play an indispensable role in lifting this weight so that families feel the freedom to arrive at ways of speaking that promote their families' wellness and goals.

Streszczenie

Najnowsze badania mające na celu porównanie poziomu rozwoju werbalnego i niewerbalnego dzieci w normie rozwojowej i dzieci ze spektrum autyzmu nie ujawniły różnic w możliwości nabywania języka angielskiego przy zachowaniu języka ojczystego jako L1. Badania prowadzone wśród rodziców dzieci ze zdiagnozowanym autyzmem sugerują, że logopedzi nie powinni proponować nauczania tylko w języku angielskim (w nim prowadzona jest większość programów terapeutycznych) czy tylko ojczystym. Zadaniem logopedów i innych specjalistów jest zaplanowanie terapii w taki sposób, aby zachować szacunek dla kultury i języka swoich pacjentów. Wybór języka to złożona kwestia, uzależniona od struktury rodziny, wymagań sytuacyjnych, różnic w biegłości językowej oraz wielu innych ograniczeń i możliwości życia rodzinnego. To, w którym języku rodzice zdecydują się rozmawiać z dziećmi, powinno wynikać z ich osobistych decyzji. Decyzje te nie są ani dobre, ani złe, są jednak często podejmowane błędnie z powodu mylnego przekonania na temat negatywnego wpływu nauki dwóch języków na dzieci ze spektrum zaburzeń autystycznych. Logopedzi odgrywają ważną rolę w promowaniu wiedzy na ten temat – dzięki ich działalności rodziny mogą swobodnie korzystać z języka, który dobrze wpływa na samopoczucie i cele rodzin (utrzymanie języka dziedzicznego).