Title: Comparing ASD Symptomatology in Bilingually and Monolingually Exposed Toddlers

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Introduction: Bilingualism and autism spectrum disorder (ASD) is a newer area of research, but several studies have shown that introducing a second language to a child with ASD does not affect overall development. When comparing language development in monolingual versus bilingual children with ASD, researchers have found no significant differences in vocabulary, language comprehension, word production, or reading and writing (Hambly & Fombonne, 2012; Uljarevic, Katsos, Hudry, & Gibson, 2016; Reetzke et al, 2015). Preliminary findings have suggested that bilingualism may provide advantages for children with ASD. Valicenti-McDermott and colleagues (2012) utilized primarily parent report on the Childhood Autism Rating Scale to examine ASD symptomatology, as well as developmental assessment scores on the Bayley Scales of Infant Development. They found that bilingually exposed toddlers with ASD engaged in more gesturing, cooing, and pretend play than monolingual peers with ASD. Studies have not examined these differences in toddlers using the Autism Diagnostic Observation Schedule, Second Edition (ADOS-2). The goal of this study is to compare monolingually and bilingually exposed toddlers with ASD on symptomatology in the areas of language, gestures, play skills, and restricted/repetitive behaviors.

Method: Participants were 51 toddlers diagnosed with ASD, ranging in age from 19 to 31 months (M=25.1 months, SD=3.8). 18 toddlers were classified as bilingually exposed and 33 as monolingually exposed. Monolingual families spoke English and bilingual families spoke English and another language (83.3% Spanish). The overall sample was 80% male; and 80% of participants were classified as low socio-economic status. 73% identified their ethnicity as non-Hispanic/Latino. Toddlers participated in the ADOS-2, Toddler Module and Mullen Scales of Early Learning assessments. Developmental assessment t-scores and ADOS-2 codes for gestures (codes A7, A8), language (codes A1, A1a, A2), play (codes C1, C2, C3), and restricted/repetitive behaviors (codes D1, D2, D3, D5) were compared across bilingually and monolingually exposed children using one-way analysis of variance.

Results: There were no significant differences between monolingually and bilingually exposed children on demographic variables (i.e. age, gender, or SES), nor on developmental assessment scores in visual reception, fine motor, receptive language, or expressive language. There were also no significant differences in language, gestures, or restricted/repetitive behaviors on ADOS-2 codes. Bilingually exposed toddlers demonstrated significantly greater play skills on the ADOS-2 than their monolingual peers with ASD (F(1, 49)=3.97, p=.05, d=.58).

Discussion: In this study, bilingually exposed toddlers’ language skills were not significantly different from their monolingual peers with ASD. This result supports previous findings that exposure to two languages does not exacerbate language delays in children with ASD. In this sample, bilingually exposed toddlers had stronger play skills than monolingual peers, consistent with the prior finding that bilingual exposure may confer benefit to children with ASD. This study did not replicate the finding that bilingually exposed children with ASD had relatively greater vocalizations or gestures. To better understand ASD and bilingualism, future work should utilize larger sample size and examine other possible differences in ASD symptoms and development.

References/Citations: