Title: Reporting Practices on Factors Important for Language Development in Autism Studies

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Introduction: Factors such as family income, maternal education level, neighborhood disadvantage, and language quality at home have accounted for much of the variation in early language development among typically developing children (McKean et al., 2015; Simon-Cerejido et al., 2013; Vernon-Feagans et al., 2012). Despite the wealth of research underscoring the importance of family contextual factors on a child’s language development, a surprising number of published autism studies have failed to report basic demographic variables. Two reviews examining demographic (i.e., race/ethnicity) reporting outline the scarcity of this data; Pierce et al. (2014) found that only 28% of studies across 3 autism journals reported race/ethnicity data. West et al. (2016) reviewed studies on evidence-based practices in autism and found that only 18% reported sample race/ethnicity. This missing demographic information is alarming considering that language difficulties are not only prevalent across autism spectrum disorders, but also are significantly tied to sociodemographic factors. A logical next step for reviews is to investigate whether autism studies that use language as a primary outcome variable report demographic data relevant to language development.

The purpose of this review is to examine whether demographic reporting practices have improved since Pierce et al. (2014) and West et al. (2016). Our review specifically focuses on demographic reporting in autism studies that analyze language development. Extending beyond previous findings, reporting rates of additional socioeconomic variables beyond race and ethnicity are included.

Method: The PubMed search engine was used to survey key words, “autism” and “language” in article titles of studies published between January 1, 2016 and October 30, 2017. Articles included in this review were those that analyzed language ability or development in samples that included more than 1 child diagnosed or at high-risk for autism. Articles excluded were reviews and meta-analyses, brief reports, single-subject designs, non-autism populations, and adult populations. Of the 85 articles originally acquired through PubMed, 32 were included in this review.

Studies were considered as having reported a demographic variable if it included at least one demographic statistic (e.g., the sample’s average parent education level). Of note, there were studies that reported binary demographic data such as classifying its sample as either Caucasian or non-Caucasian. Additional reporting rates for studies including full demographic variable breakdowns (e.g., Caucasian, African American, Hispanic, etc.) are also included.

Results: Of the 32 articles reviewed, the following numbers represent studies that reported at least binary demographic data: 10 reported race/ethnicity, 9 reported parent education level, 1 reported household income, and 2 reported additional socioeconomic status (SES) variables. The additional SES variables were parent occupational prestige scores and employment status. Reporting rates for the categories of race/ethnicity and parent education decreased when examining studies that reported above and beyond binary classifications. Eight studies (25% of 32 studies) provided a full breakdown of participant race/ethnicity, while 6 studies (18.8%) gave further information on parent education. The study that reported income data provided comprehensive categorical breakdown of participants’ household incomes.

Notably, if a study reported on one demographic variable, it was also more likely to report on additional demographic variables. Six studies reported on at least 2 demographic categories, 5 of which reported on race/ethnicity and parent education level. Two studies reported on at least 3 demographic variables. Both of these reported on race/ethnicity and parent education level.

Discussion: Results from this review found similar reporting practices as Pierce et al. (2014) and West et al. (2016) in that a majority of studies reported no demographic information. Few studies within the last two years reported sufficient data on race/ethnicity (25%) and parent education levels (18.8%) to accurately capture the demographic groups represented within its sample. Additionally, research evidence to date has outlined the importance of sociocultural factors on language development.
These low reporting rates represent a significant research oversight given that the autism studies included focus specifically on language.

The cultural and socioeconomic disparities present in autism diagnoses and access to services (Zuckerman et al., 2017; Nowell et al., 2015; Mandell et al., 2009) further the narrative of specific demographic groups being unaccounted for or underrepresented in autism research. It is now imperative to include sample demographic data that can illustrate the representativeness of study samples to the general population.

References/Citations: