

## How do Sampling Contexts Impact Language Production in Individuals with Developmental Disorders? Expanding Our “Toolbox” for the Assessment of Diverse Populations

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This study presents a) a critical review examining the effects of sampling contexts on the oral language of children and adolescents with developmental disorders, and b) a retrospective, within groups, repeated measures study exploring the impact of play contexts on the oral language of pre-school children with Autism Spectrum Disorder. The critical review included evaluations of five nonrandomized clinical trials, and three within groups, repeated measures studies. The empirical study analyzed language samples from parent-child play with symbolic toys, tactile toys, and gross motor toys collected prior to treatment as part of a larger randomized control trial (Casenhiser et al, 2013). Findings from both studies revealed that sampling contexts impact various measures of oral language production in individuals with developmental disorders and ASD, including: language complexity, lexical diversity, mean length of utterance (MLU) in words and morphemes, and pragmatics. Beneficial contexts include: narration of wordless picture books, interviews and free play with symbolic and gross motor toys.

Language Sample Analysis (LSA) is a gold standard procedure for obtaining representative language samples in children (e.g., Miller, 1981). In fact, Caesar & Kohler (2009) found that 94% of Speech-Language Pathologists (SLPs) report using some form of a language sample as part of their standard protocol for assessing children’s oral language abilities.

Extensive research comprising both typically developing (TD) children, and those with developmental disorders (DD) has identified that different sampling contexts yield different language outputs (e.g., Miles, Chapman & Sindberg, 2006, O’Brien & Bi, 1995). Contexts can vary by changing the location, types of toys, or conversation partners. In TD children, free play and natural conversation, rather than clinician-led, structured activities, are associated with larger, more representative samples of oral language skills (e.g., Kwon et al, 2013; Southwood & Russell, 2004). For children and adolescents with DDs, such as Down Syndrome (DS), Fragile X Syndrome (FXS), Intellectual Disability (ID), and Autism Spectrum Disorder (ASD), language sampling contexts typically used with TD children may not accurately reflect the upper bounds of their oral language abilities (e.g., Abbeduto et al, 1995). As such, considerable research has aimed at exploring the effects of an array of

sampling contexts on different oral language measures in order to determine which context(s) can be considered optimal for individuals with DDs (e.g., Evans & Craig, 1992). Evaluating current evidence across sampling contexts with consideration of specific disorder types is important for informing clinical practice. Given the constraints on interactions in children with ASD, it may be particularly important to consider context when eliciting language samples from this population (Kasari et al, 2013).

The objective of Study 1 was to critically review existing literature examining the impact of different sampling contexts on language samples collected from children with ASD and other developmental disorders. The objective of Study 2 was to perform a retrospective analysis of pre-test data from a larger previous study (Casenhiser et al, 2013) to explore the impact of play context, or types of toys presented during free play, on the language production of pre-school children with ASD.

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Search Strategy

Online databases (PubMed, CINAHL, Proquest, PsychInfo, Google Scholar) were searched using the following terms: [(ASD) OR (“Autis\*”) OR (“Developmental Disorder”) AND (“sampling context”) OR (“language sampling context”) OR (“play context”) AND (“expressive language”) OR (“language production”)]. Reference lists of select articles were also used to obtain other relevant articles.

#### Selection Criteria

Studies included for review were required to describe the effects of sampling context on the oral language production of

reported. In addition, the study was limited by a very

settings. However, the study was limited by a lack of behavioural aspects of language, small language samples and small range of nonverbal cognitive ability among participants.

The data provide suggestive evidence that the impact of sampling contexts differ depending on disorder type. As such, SLPs should consider their choice of sampling context in the assessment of individuals



To date, only one study has been conducted to explore the effects of sampling context on oral language productio-3 (n) 685r85 (hd) ] TJ ET Q 0.24 0 0 0.2173.738 16 685.92 cm BT 0.8047 Tc 43 0 0 43 0 Tmm /TT1 1 T







