

Wendt, O. (2006). *The effectiveness of augmentative and alternative communication for individuals with autism spectrum disorders: A systematic review and meta-analysis*. Unpublished doctoral dissertation, Purdue University, West Lafayette. Lyle L. Lloyd (Advisor): 110 pages of text, 220 references, 8 appendices, 20 tables, and 1 figure.

The purpose of the present study was to integrate and synthesize, using meta-analytic methods, the extant research literature on the effectiveness of augmentative and alternative communication (AAC) interventions in individuals with autism spectrum disorders. According to recent estimates 25% to 61% of individuals with ASD are functionally non-verbal and will not develop gestural or any other non-verbal form of communication without systematic and ongoing AAC intervention. Many AAC approaches for this population lack empirical support and their effectiveness has not been well documented. Thus, the aim of this meta-analysis was to carefully examine experimental research literature and to review the existing evidence.

A comprehensive literature search for research studies, which included data on the effects of AAC, was conducted using a combination of electronic and hand searches. Retrieved intervention studies ranged from 1976 to April 2006 and included published articles and book chapters in addition to unpublished doctoral theses. Inclusion criteria were applied to 325 documents obtained from the search to ensure the methodological soundness of experiments included in this review. This resulted in the identification of 44 single-subject research studies and one group study that met inclusion criteria. Intervention outcomes were evaluated by using the Percentage of Non-overlapping Data (PND) for single-subject research designs and appropriate effect size indices for group designs. Sufficient data were found for inferential analyses of outcomes related to (a) effects of providing speech output via speech-generating devices, (b) teaching functional requesting skills, and (c) effects of AAC on natural speech production. Other intervention outcomes with limited data support were reported descriptively. Limitations of the current literature were another major finding as they precluded further in-depth analysis of study outcomes. These shortcomings concerned the small number of participants in the studies, the wide variety in participant characteristics and descriptions, the heterogeneity in AAC interventions, the range of outcome measures used, and methodological weaknesses. Based on these findings gaps in the existing research literature were revealed and directions for future research were derived.