Critical Review:
Effectiveness of baby sign in conjunction with oral language as an intervention to improve early language development in young children with Down Syndrome

Zaynab Albahrani
M.Cl.Sc (SLP) Candidate
University of Western Ontario: School of Communication Sciences and Disorders

This critical review examined the effectiveness of baby sign in conjunction with oral language as an intervention to improve early language development in young children under the age of five with Down Syndrome (DS). This critical review includes the evaluation of three case studies, one multiple baseline across participant design, and two case-control studies. The results of this review suggests that clinicians are to be cautious when using baby sign in conjunction with speech in their interventions for young children with Down Syndrome. They are further advised to allow parent involvement in therapy and to maintain a long treatment duration (i.e. 8 months or longer); however, as a result of the heterogeneous population, more research is needed with stronger research designs and larger sample sizes.

Baby sign is a form of manual communication that involves symbolic gestures caregivers deliberately teach to children (Fitzpatrick et al., 2014). Although there is little evidence that baby sign has either positive or negative effects on communication in typically developing (TD) children, numerous studies have suggested that children with Down Syndrome (DS) may still benefit from the use of baby sign (Dunst, Meter, & Hamby, 2011; Fitzpatrick et al., 2014).

DS is a genetic disorder characterized by an extra chromosome 21 and associated with physical growth delays, facial malformation, and mild to moderate intellectual disability. Furthermore, children with DS show extensive delays in word production compared to mental-age-matched TD children (Mundy, Kasari, Sigman & Ruskin, 1995). Since these delays in word production are disproportionate to the child's mental age (i.e. they are delayed compared to mental-age

with Bobby (3 times/week over 2 years) with a new set of signs introduced every session. The authors' rationale for how signs were chosen was appropriate and well-described. The outcome variables included records of words produced and manner of word production (spontaneous or elicited) by the clinicians and/or Bobby's mother. Imitated words were not counted in the study.

as an intervention for improving oral communication outcomes in young children with DS. More research is needed with stronger research designs (e.g., case-control studies, randomized control trials using wait-list controls

Zampini, L. & D'Ororico, L. (2009). Communicative gestures and vocabulary development in 36-month-old children with Down's syndrome.

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