

Critical Review:
Effectiveness of Combining Peer-Mediated Intervention (PMI) with Speech Generating Device (SGD)
Intervention for Children with Autism Spectrum Disorder (ASD)

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This is a critical review examining the evidence of the efficacy of combining peer-mediated interventions (PMI) with speech generating device (SGD) interventions for children with Autism Spectrum Disorder (ASD) who are non-verbal or minimally verbal. A total of seven studies were selected and reviewed. Study designs include: single subject design (multiple baseline design) and randomized control trial design. Overall, the study findings show suggestive evidence that PMI in combination with SGD intervention, results in improved communication and social engagement in children with ASD.

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder that is characterized by impairment in communication skills and social interactions (Campisi et al., 2018). Individuals with ASD also display restricted repetitive pattern of behaviours, interests, or activities (Campisi et al., 2018). The prevalence of ASD among children and youth (5-17 years old) across Canada in 2015 was 1 in 66 (Public Health Agency of Canada, 2018). Because of the range of symptoms, deficits and abilities an individual with ASD may display, it is termed a “spectrum” disorder as abilities and deficits may lie anywhere along a spectrum (Public Health Agency of Canada, 2018).

Augmentative and Alternative Communication (AAC) is an effective method to allow for individuals with ASD to communicate in alternative manners. Speech Generating Device (SGD) is a type of AAC device that replaces or augments speech communication through the use of digitized and/or synthesized speech for non-verbal or minimally verbal individuals (Boesch et al., 2013).

Peer-mediated intervention (PMI) is used to increase and improve social skills in children with ASD, by training typically developing peers to model social initiations, responses, and interactions (Chang & Locke, 2016). Peer mediated intervention (PMI) allows peers to be the intervention agents (Chan et al., 2009). This may be beneficial for children with ASD because it provides opportunity for children with ASD to practice their communication skills and social interactions with peers and be included in their social settings (Chan et al., 2009).

Although there is a number of research supporting the use of SGDs and PMI separately, there is less literature on increasing augmented communication through the use of peer-mediated approaches or the potential benefits of PMI on social communication and engagement for children with ASD who use a SGD. As Thiemann-Bourque et al. (2017) suggested, combining PMIs with SGD interventions may support their communication and social engagement by teaching peers how to effectively use the SGD, how to respond appropriately to the communicative acts (CA) of those using a SGD, and encourage SGD use across various settings, allowing for greater generalization (Thiemann-Bourque et al. hh7 ing4 (a2 BTG) -5 25e42 365.7713A3 cr

procedure were described, allowing for replication in the future.

Results showed that all three children with ASD showed improvement in higher levels of CAs. The statistical analysis showed moderate effect sizes for all three participants with ASD. The total number of reciprocal exchanges between the children with ASD and their peer partner appeared to improve as well but only one participant with ASD showed ideal balance in CAs between initiations

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