A PILOT STUDY OF THE EFFECT OF PICTURE EXCHANGE COMMUNICATION SYSTEM ON ADAPTIVE FUNCTIONING, COMMUNICATION, AND PARENTAL SELF-EFFICACY

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**Objectives:** Many individuals with developmental disabilities experience communication difficulties, which can include delayed acquisition or absence of functional speech. A promising approach to developing communication skills in nonverbal individuals is the Picture Exchange Communication System (Frost & Bondy, 2002; PECS®). PECS is a program that teaches individuals to communicate by exchanging pictures as a method of communicating their needs and initiating social interactions. A particular focus within Ontario recently has been the efficacy of PECS interventions that are delivered by parents (Koudys et al., *Submitted for publication*). These parent-focused programs are a cost-effective solution for delivering PECS although their effectiveness at developing broader functional communication skills still needs to be established. An additional concern is how comfortable parents may be implementing these interventions, which require learning new skills and stepping into a role that would typically be filled by dedicated worker who is already familiar with the PECS intervention. Our study aimed to examine adaptive functioning, functional communication, and parent-self efficacy at the beginning and end of a 5-week PECS intervention.

**Methods:** Participants consisted of 8 parent-child dyads, with direct training focusing on the parents. All children were diagnosed with or suspected of having a developmental disability, did not use verbal or augmentative communication effectively at the beginning of the study, did not exhibit significant challenging behaviours related to physical aggression or self-injury, did not already have significant experience with PECS, and were between 2 and 8years of age.

Participants completed a 5-week PECS intervention program with their children and . completed a survey package at the beginning and end of the 5-week study period, each consisting of the GO4KIDDS Brief Adaptive Scale, Functional Communication Questionnaire, and a PECS self-efficacy scale. The Brief Adaptive Scale and Functional Communication Questionnaire were both designed for use in children with limited communication and developmental disabilities while the PECS self-efficacy scale was designed for use specifically in this study. Data from these scales will be transformed into numerical values and summed to create total scores for each participant at the pre- and post-timepoints. These total scores will be used in a repeated-measures factorial analysis of variance to determine whether there is a change over the course of the program. Item analyses will also be conducted to determine if specific communicative behaviours changed over the course of the study (e.g., requesting preferred items, asking for a break).

**Results:** The results of this study are still pending but will be completed during February of 2024.

**Discussion:** Despite the potential advantages that a parent-based PECS program has, there is little research examining how these programs affect adaptive behaviour and functional communication skills in the home environment and what parent characteristics might relate to effectiveness. It is important to understand these outcomes so that the effectiveness of these parent-mediated programs can be further understood.

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**References**

Frost, L. A., & Bondy, A. S., (2002). *The Picture Exchange Communication System Training Manual* (2nd ed.). Pyramid Educational Products, Inc. <https://pecs-canada.com/shop/pecs-training-manual-second-edition/#tab-description>

Koudys, J., Perry, A., Magnacca, C., & McFee, K. (in press). Predictors of PECS outcomes.  *Autism and Developmental Language Impairments.*