Title: Predictors of Parent Fidelity in a Caregiver-Mediated Intervention for Toddlers with ASD

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Introduction: Caregiver-mediated interventions provide parents with strategies that scaffold and facilitate learning opportunities for their children through social interactions (Adamson, Bakeman, & Deckner, 2004). In toddlers with autism spectrum disorder (ASD), caregiver-mediated interventions can improve core social communication deficits, such as joint engagement (e.g., Kasari, Gulsrud, Paparella, Hellemann, & Berry, 2015). Parents’ ability to implement intervention strategies at high fidelity has a positive association with children’s social engagement, but some of the specific strategies can be difficult for parents to master (Shire et al., 2015). This study aims to investigate the predictors of parent implementation fidelity within a randomized control trial of young children with ASD.

Method: Participants in the original RCT were 86 toddlers with ASD and their primary caregiver (Kasari, et al., 2015). The toddler-caregiver dyads were randomized to receive either individualized caregiver coaching in a naturalistic developmental behavioral intervention (Joint Attention, Symbolic Play, Engagement and Regulation- JASPER) with the child present or a parent psychoeducational intervention without the child present. At entry, the average child chronological age was 31.5 months, average Mullen Developmental Quotient (DQ) was 68, and average Reynell expressive language score was 14.98.

Parent fidelity refers to the degree to which he/she implements the JASPER strategies as they are taught. Parent fidelity scores for entry, exit, and follow-up were coded from a taped parent-child interaction. Potential predictors of fidelity at exit and follow-up were parent fidelity at entry, Mullen DQ at entry (MSEL), entry symptom severity score from the Autism Diagnostic Observation Schedule (ADOS), initiations of joint attention (IJA) as coded from the parent-child interaction video at entry, and entry scores from the Parenting Stress Index (PSI). Multiple linear regression models were used to determine predictors of parent fidelity scores at exit and follow-up, respectively. Insignificant predictors were excluded from presented analyses.

Results: Treatment group was a significant predictor of both exit ($R^2=0.338$, $F(1, 76)=38.796$, $p<0.01$; $B=0.213$, $p<0.001$) and follow-up ($R^2=0.276$, $F(2, 65)=12.365$, $p<0.01$; $B=0.076$, $p=0.01$) parent fidelity. Furthering examining fidelity in the group of parents who received coaching, a regression model indicated a single predictor for increased fidelity at exit ($R^2=0.110$, $F(1, 38)=4.704$, $p=0.03$) -- a higher score on the PSI mood subscale ($B=0.018$, $p=0.03$). Similarly, at follow up a single predictor of fidelity was found for the coaching group ($R^2=0.230$, $F(1, 35)=10.449$, $p<0.01$), which was higher parent fidelity at entry ($B=0.680$, $p<0.01$).

Discussion: Parents in the individualized coaching group scored higher fidelity ratings at exit and follow-up compared to the psychoeducational group, indicating that parents that received hands on training were able to learn the strategies and maintain these strategies at a follow up visit. Within the coaching group, parents are taught skills in order to play an active role in their child’s development, a factor that may be empowering for those parents with higher initial negative mood scores. A high negative mood score at entry may indicate dissatisfaction with previous autism therapies, which may explain greater buy-in and subsequent adherence to this intervention where parents play a primary role. When examining fidelity at the follow up visit, parent initial fidelity was most predictive of later fidelity, suggesting that parents with a predisposition to JASPER strategies may be better candidates to learn JASPER and incorporate it into their existing social communication skill set. Future research should investigate parent perceptions of how to improve intervention coaching, maintenance of parent intervention strategies once study ends, and methods to alleviate parent stress throughout the intervention process.
References: