

Including Parents in AAC Interventions for Children with ASD: Insights from an Ecological Technology-based Intervention

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Context

Clinical research demonstrated the relevance of including parents as interventionists for children with Autism Spectrum Disorders (ASD). Notably, *conducting interventions at home* could represent a success factor for children with ASD to help generalize learnings (Debodinance *et al.*, 2017). In the field of Alternative and Augmentative Communication (AAC) interventions, a meta-analysis reported the high effectiveness of communication partner training on a range of outcomes measures: frequency of communicative acts, social interactions, communicative initiations, *etc.* (Kent-Walsh *et al.*, 2015). However, parents were only included in 4 on 30 AAC interventions for children with ASD reviewed (Logan *et al.*, 2017). Authors reported that parents are usually solicited only to identify preferred items to increase the motivation towards communication.

Objective. This work aims to 1) document parents' needs for AAC interventions and 2) measure the impact of including parents as communication partners within an AAC intervention for children with ASD.

Method

We conduct a technology-based AAC intervention inspired by the PECS protocol similarly to King *et al.* (2014), in a changing criterion single-case experimental design. We added **measures for parents** to the original protocol followed by the children.

Participants. 7 families and their child with ASD, from two geographical sites: a medico-educational institute in Saint-Malo (France) and in an area around Liège (Belgium).

Material. A technology-based solution – named Tiwouh - has been used to support the present intervention. This tablet application proposes pictogram-based communication boards enhanced with speech-generation.

Intervention. After a brief training, parents were to take the role of alternatively communication partner and physical guide during each session.

Parents

Support Needs for AAC intervention
(iDevice, Meder, 2012)

Self-efficacy
(Sense of Competence Questionnaire, Jansen *et al.*, 2007)

Implementation fidelity
(video-recording of every session)

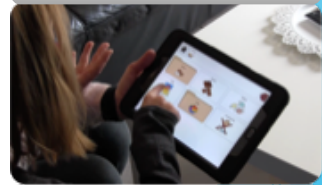
Generalization
(Untrained items and communication partner)

Children

Early results

- Parents need support from trained professionals for both **choosing appropriate tools** and **conducting intervention at home**.
- **Good self-efficacy** reported for parents
- **Good implementation fidelity** of parents for the early phases
- **Generalization achieved on untrained materials and communication partners** for children

Parent and child using AAC application Tiwouh at home



Conclusion - Take home message

Including parents within AAC interventions can be **successfully achieved with a quick training** to extend the AAC intervention to home. Moreover, the very early results of this ongoing study suggest that **it could increase outcomes of interventions for children with ASD**, especially regarding the **generalization toward untrained pictograms and communication partners**. Therefore, this work urges professionals to support parents of children with ASD, instead of just identifying preferred items, to choose appropriate tools and conduct the intervention to be successfully implemented at home.

References

- Debodinance, E., Maljaars, J., Noens, I., & Van den Noortgate, W. (2017). Interventions for toddlers with autism spectrum disorder: A meta-analysis of single-subject experimental studies. *Research in Autism Spectrum Disorders*, 36, 79-92.
- Kaiser, A. P., & Roberts, M. Y. (2013). Parents as communication partners: An evidence-based strategy for improving parent support for language and communication in everyday settings. *Perspectives on Language Learning and Education*, 20(3), 96-111.
- Kent-Walsh, J., Murza, K. A., Malani, M. D., & Binger, C. (2015). Effects of communication partner instruction on the communication of individuals using AAC: A meta-analysis. *Augmentative and Alternative Communication*, 31(4), 271-284.
- King, M. L., Takeguchi, K., Barry, S. E., Rehfeldt, R. A., Boyer, V. E., & Mathews, T. L. (2014). Evaluation of the iPad in the acquisition of requesting skills for children with autism spectrum disorder. *Research in Autism Spectrum Disorders*, 8(9), 1107-1120.
- Logan, K., Iacono, T., & Trembath, D. (2017). A systematic review of research into aided AAC to increase social-communication functions in children with autism spectrum disorder. *Augmentative and Alternative Communication*, 33(1), 51-64.
- Meder, A. (2012). *Mobile media devices and communication applications as a form of augmentative and alternative communication: An assessment of family wants, needs, and preferences* (Doctoral dissertation, University of Kansas).

