

The challenge: Getting research interventions into community where they are needed

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What does it take to get effective interventions into the community? This question remains too often unanswered. We tend to accept the ‘research to practice gap’ endorsing the belief it will take an average of 17 years for effective practices to become integrated into community practice (Morris, Wooding & Grant, 2011). Some researchers, however, are offering solutions to shorten this time period. For example, testing an intervention in the community right from the beginning, thus cutting out many of the years testing in the lab before moving to community (Weisz, Donnenburg, Han, & Weiss, 1995). Others argue for developing an intervention with community partners to ensure greater buy in, and adoption so that community interventions are effective and sustained. This latter practice, known as community partnered participatory research (CPPR), ensures that the interests of the community partners and the researchers are on equal footing (Jones & Wells, 2007).

In moving interventions into community practice, researchers employ implementation science methods with a particular focus on fidelity of the community practitioner (the ability of the practitioner to deliver the intervention as it was intended). An issue with respect to children with an autism spectrum disorder (ASD), however, is the great variability in response to evidence based interventions. Therefore, it may not be enough to examine whether community practitioners can deliver an intervention as it was intended. We also must test whether the intervention provides benefit to children in the community, and if the benefits are similar to those found in more controlled settings.

To understand how well an intervention is working in the community, we employed a “hybrid implementation and effectiveness design”. This type of design prioritizes examination of both the staff’s delivery of the intervention and also children’s outcomes, instead of just one or the other. This study advances our understanding of the effectiveness of a communication intervention for young children with ASD by testing it in community early intervention centers providing publically funded services to toddlers with ASD.

## **The question**

The research study was conducted over the course of one school year. The community partner who delivered the services to the children was located in two low resource neighborhoods in New York City. The goals of the study were developed with the priorities of the community provider in mind using community partnered participatory research methods. The center directors wished to know if their existing social group program was advancing the toddlers’ communication, play, and social interaction skills. To explore this question, the study compared this existing program with a rigorously tested comprehensive social communication intervention called Joint Attention, Symbolic Play, Engagement, and Regulation (JASPER) developed at the University of California Los Angeles. JASPER has over 20 years of research examining the effects of the intervention on the play, communication (nonverbal and spoken language), and social engagement of infants through school age children with ASD, and in a range of environments.

## **What we did and what we found**

To examine these questions, classrooms at the center were assigned at random to either receive JASPER training and deliver the intervention with their toddlers or to continue with the regular social group program. Each classroom included about 8-10 toddlers who were each paired with a paraprofessional teaching assistant (TA). TAs in the JASPER classrooms were provided with a week-long crash course including evening lecture and daytime coached practice with children. TAs then delivered 10 weeks of JASPER intervention. Because the TAs were learning along the way, a local supervisor was trained to provide additional on-site coaching. In addition, TAs sent videos of their JASPER sessions weekly to the UCLA team who provided written feedback and engaged the supervisor in a weekly call.

Another common challenge in community based research is the assessment of children's outcomes. This study supported the development of the center's local capacity to assess the children's play, and social communication skills using a tool designed for teachers and community clinicians (Short Play and Communication Evaluation: SPACE- Shire et al., 2016). Center staff (independent of the TAs) delivered the SPACE to assess children's skills at entry, exit, and follow up.

Across the 113 toddlers and 45 TAs included across four classrooms, the results indicated that toddlers who received the JASPER intervention showed greater increases in their social engagement with others, play skills, initiations of communication to request and to socially share with others (known as "joint attention") than their peers in the regular social groups. These findings maintained when we checked in with follow up assessments at the end of the school year. Researchers often expect drops in the quality of the intervention delivery when the program is moved out of the university research setting and into real world conditions, However, TAs in this study showed an average of 80% strategy use, meeting the standard that university clinicians have been held to in research trials.

### ***So what does this mean?***

To our knowledge, this is the first randomized trial to put a complex communication intervention for toddlers with autism into the hands of paraprofessional TAs in real world conditions. The findings demonstrate that community implementation of an evidence tested early intervention is possible, with positive effects on community practitioners as well as children.

### ***Key Points***

- Novel use of hybrid design to look at both children's outcomes and how well the intervention delivered by community staff
- Paraprofessional TAs can deliver complex social communication interventions in real world environments with toddlers with autism
- TAs learned to deliver the intervention with a mix of local and research team remote support
- This study includes a highly diverse population including staff with diverse background and toddlers who range in developmental skill level and home environment
- Community staff were taught assessments, and delivered the outcome measures, activities that are usually done by research staff

## **References**

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