Evaluating the Impact of Statewide Community-Based Training for Early Intervention Providers

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Abstract

The Washington State (WA) ASAP! Program was designed to build capacity among early intervention (EI) providers to use evidence-based intervention strategies with young children for whom ASD is suspected. Toward this end, we offered free workshops on a low-cost, easily implementable, ASD-specialized intervention, Reciprocal Imitation Training (RIT). RIT is a short-term, play-based behavioral intervention that uses a naturalistic approach to teach object and gesture imitation to children with ASD (Ingersoll, 2010). To date, 261 providers have been trained across 5 communities in WA. Results revealed that the ASAP! RIT workshops were well-received and resulted in increased providers' knowledge about ASD-specialized intervention and use of RIT with families. Improved levels of comfort from pre-workshop to a 3-month follow-up were found for: working with young children with ASD; discussing treatment goals with parents; coaching parents; and setting treatment goals. Six-month follow-up data collection is now underway. Overall, RIT appears to be an acceptable intervention for EI providers and has helped increase community capacity for the provision of ASD-specialized services.

Background

For toddlers with autism spectrum disorder (ASD), participation in early ASD-specialized intervention (i.e., tailored activities that target core impairments in social interaction, imitation, communication, and play) is associated with significant improvements in social, language, cognitive, and behavioral functioning (Dawson et al., 2010; Ingersoll, 2010; Kasari et al., 2010; Landa et al., 2010).

However, families and their toddlers with ASD face several obstacles to accessing ASD-specialized intervention, including: (1) long waitlists for initial diagnostic evaluations; (2) high out-of-pocket costs; and (3) limited availability of service providers delivering ASD-specialized intervention. These obstacles often prevent toddlers with or suspected ASD from receiving ASD-specialized services before age 3.

Early Intervention (EI) services, as mandated by Part C of the Individuals with Disabilities Education Act (IDEA, 2004), are available at no cost to families of infants and toddlers under age 3 with developmental disorders or delays. However, the capacity for providing ASD specialized services within EI programs is limited; the majority of states reporting an increased demand for ASD services since 2007, yet a shortage of EI providers with ASD specialization (Wise et al., 2010).

The Washington State (WA) ASAP! Program aims to increase community capacity for the provision of early ASD-specialized intervention by providing free training workshops for EI providers in Reciprocal Imitation Training (RIT; Ingersoll, 2010; 2012). RIT is an easy-to-learn, targeted behavioral intervention with a strong evidence base that was designed to improve imitation skills and other social-communicative behaviors in children with ASD.

Study Objectives

To evaluate the effectiveness of the ASAP! Program's RIT training workshops for:

(1) Increasing EI providers' *knowledge* about ASD-specialized early intervention;

(2) Increasing EI providers' *comfort* with delivering specialized services to young children with ASD;

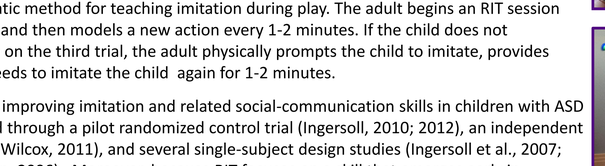
(3) Increasing EI providers' *implementation* of ASD-specialized intervention in their current practices.

Method

Design and Participants

As part of the ASAP! program, EI providers were trained in RIT through one-day interactive educational workshops. EI providers' knowledge of ASD-specialized intervention, comfort working with young children with ASD, and implementation of RIT were measured via self-report surveys before training, immediately after training, and 3 months following the training workshop (see **Figure 1**).

Figure 1. Timeline for EI providers' self-report of knowledge and practices



To date, 8 RIT workshops have been conducted and 261 EI providers have attended. Providers had a range of professional backgrounds and varying levels of experience working with young children with ASD (**see Table 1**). To date, three-month follow-up surveys have been sent to 216 providers, 66 of whom (31%) have responded.

The workshops have taken place in five diverse communities in WA (**see Figure 2**). Four of the communities are in rural areas (Clallam, Yakima, Chelan) and/or have large Hispanic populations (Yakima= 46%; Chelan= 27%; Skagit= 18%).

Table 1. EI providers by professional background and years of experience

Professional Background	*n* (%)	Years of Experience *M* (*SD*)
Early Childhood/Special Educators	84 (32)	7.34 (7.18)
Speech-Language Pathologists	44 (17)	7.18 (8.38)
Occupational/Physical Therapists	27 (10)	13.55 (10.54)
Behavior Therapists/BCBAs	11 (4)	6.11 (5.13)
Other (psychologist, nurse, counselor, etc.)	49 (19)	7.43 (7.38)
Undisclosed Professional Background	46 (18)	2.3 (3.50)

Figure 2. WA communities trained on RIT

Reciprocal Imitation Training (RIT)

RIT Workshop Overview:

EI providers were trained in RIT through one-day interactive educational workshops. On average, 33 EI providers attended each workshop. The training workshops combined didactic presentations, group discussion, live demonstrations, and hands-on practice with performance-based feedback and coaching.

Reciprocal Imitation Training (RIT):

RIT is a short-term intervention that uses a naturalistic behavioral approach to teach object and gesture imitation to young children with ASD within a play-based context (Ingersoll, 2008; Ingersoll & Schreibman, 2006). RIT was selected as the preferred intervention for the ASAP! Program because of its strong evidence base, its ease of administration, its compatibility with other interventions, and its focus on a core deficit area of ASD.

RIT employs a systematic method for teaching imitation during play. The adult begins an RIT session by imitating the child, and then models a new action every 1-2 minutes. If the child does not spontaneously imitate on the third trial, the adult physically prompts the child to imitate, provides praise, and then proceeds to imitate the child again for 1-2 minutes.

The efficacy of RIT for improving imitation and related social-communication skills in children with ASD has been documented through a pilot randomized control trial (Ingersoll, 2010; 2012), an independent replication (Cardon & Wilcox, 2011), and several single-subject design studies (Ingersoll et al., 2007; Ingersoll & Schreibman, 2006). Moreover, because RIT focuses on a skill that emerges early in development and does not require language competency, it can be used with children at very young chronological ages or with children with low language and developmental levels.

Measures and Variables

Workshop Evaluation (post-training): Consists of 12 items assessing providers' evaluation of the quality of the training and overall satisfaction rated on a 1-4 scale, with 4 indicating most positive ratings.

RIT Knowledge Questionnaire (pre- and post-training): Consists of 20 multiple -choice questions assessing providers' knowledge of RIT principles and concepts.

Provider Practices Survey (pre-training and 3-month follow-up): Consists of 37 items that assess providers' professional training, current practices, and comfort levels with providing ASD-specialized intervention. Response options range from 1-4 , with 4 indicating more favorable ratings. The 3-month follow-up version of the survey also assessed providers' implementation/use of RIT and their views regarding its effectiveness at improving children's social-communicative skills.

Results

Workshop Satisfaction

Workshop evaluations revealed high levels of overall satisfaction (*M*= 3.7; *SD*=.32). Attendees spontaneously listed hands-on practice (38.6%) and video examples (12.8%) as particular strengths.

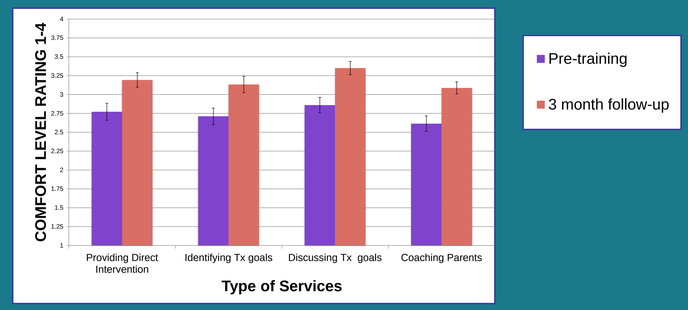
RIT Knowledge

EI providers demonstrated increases in knowledge and understanding of RIT from pre- to post-training. The percent of correct responses on the RIT quiz increased significantly, $t(155)=-10.66$, $p<.01$, as did the percent of providers demonstrating mastery of RIT principles (≥ 80% correct responses), χ^2 (1)= 4.13, $p<.05$.

Knowledge Measures	Pre-training	Post-training
Percent of correct responses on RIT Quiz (M[SD])	52 (18)	75 (25)
Percent of providers demonstrating mastery of RIT principles	8	65

Comfort Providing ASD-Specialized Intervention

EI providers reported increased comfort from pre-training to 3-month follow-up in: providing direct intervention to young children with ASD, $t(56)= -4.21$, $p<.01$; identifying treatment goals, $t(44)=-4.56$, $p<.01$; discussing treatment goals with parents, $t(56)=-4.49$, $p<.01$; and coaching parents, $t(56)=-5.44$, $p<.01$.



Implementation at 3-Month Follow-up

Use of RIT

Implementation Measures	3-month follow-up (#)
Providers implementing RIT	41
Children with/suspected ASD with whom RIT is being used	111
Parents coached on RIT	75
Providers intending to use RIT	19
Providers not using RIT	6

Of the 66 responders at 3-month follow-up, 91% were either using RIT or indicated that they intended to start using RIT.

Of the EI providers who were <u>not</u> using RIT, 40% cited the reason as having no children in need of ASD-specialized services in their caseload at the time.

Effectiveness of RIT

Of the 41 providers who were implementing RIT, 100% found RIT to be effective in improving children's imitation skills and 95% reported that RIT was effective at improving other social-communicative behaviors.

Conclusions

The RIT workshops have been well-received by EI providers and resulted in increased knowledge about RIT principles and use of RIT with children with ASD. Attending the workshop led to more generalized improvements in providers' comfort levels with providing direct services to young children with ASD, coaching parents, and setting and discussing treatment goals at follow-up. We are in the process of providing additional RIT workshops across WA and will be conducting 6-month follow-ups to continue to assess implementation. New strategies will be employed to improve provider response rate at follow-up, including the increased involvement of community "champions" in data collection. Overall, the ASAP! program has increased families' access to ASD-specialized early intervention at no cost through publicly available community-based services.

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