

Diagnostic Category: Autism Spectrum Disorder Discipline: Psychotherapy, Behavioural Therapy

Reference	N	Intervention (n)	Telerehabilitation program's:	Platform & clinician's involvement	Outcomes
Country Study Design Quality (for RCTs)	Sample description (dx specifics, age, gender)	vs. Comparison (n) Frequency & duration	I. Focus II. Nature III. Target IV. Receiving client		Child-related outcomes Parent-related outcomes (+) significant between-group differences for RCTs or within group improvements for non-RCTs (-) no significant between-group differences for RCTs or within group improvements for non-RCTs
Marino et al., 2020 Italy RCT PEDro score: 6/10 High quality	N=74 Parents with children with autism Child mean age: 5.78 ± 2.30 yrs Child age range: 2.5-10 yrs	Tele-assisted group (TG) (n=22) vs. Control group (in-person) (CG) (n=20) Phase 1: 2 hours per session for 12 plenary sessions	I. Disruptive/noncompliant behavior; parental distress; parent-child functional interaction II. Both groups received Applied Behavior Analysis Therapy (ABA). ABA therapy is used to improve challenging behaviors in children with ASD. ABA is based on theories that state that simple and complex behavior can be taught through a system of rewards and consequences. ABA focuses on a behavior approach, making it possible to improve behavioral, cognitive, social, and communication skills. The system uses	Web + Videoconferencing	At post-treatment (12 weeks): <i>(+) Severity of disruptive/noncompliant behavior: Home Situation Questionnaire (HSQ-ASD)</i> <i>(+) Social inflexibility: Home Situation Questionnaire (HSQ-ASD)</i> <i>(+) Demand avoidance (Demand-specific): Home Situation Questionnaire (HSQ-ASD)</i> <i>(+) Parent stress: Parental Stress Index/Short Form (PSI/SF)</i> <i>(+) Parental distress: Parental Stress Index/Short Form (PSI/SF)</i>

	<p>Child gender: 19M:4F</p> <p>Parent gender: 19M:23F</p>	<p>Phase 2: 2 hours/week for 12 weeks</p> <p>Phase 3: 2 hours/week for 12 weeks; TG using tele-assisted, CG was in-person.</p>	<p>reinforcement (rewards) to motivate children with autism to learn new skill, as well as trials that start with a prompt (antecedent) to execute the desired behavior.</p> <p>There are 3 phases to the program.</p> <p>-In phase I, all of the enrolled parents received 12 2 h-long plenary sessions of informative parent training about ASD characteristics and ABA/behavioral principles.</p> <p>-In phase II, all of the enrolled parents received 2 h/week for 12 weeks of group behavioral therapy administered in homogeneous groups (based on the developmental age, target behaviors, and ASD level of their children). In this phase, all of the children of the enrolled parents received 1 h/week of one-to-one ABA therapy, where parents were allowed and invited to observe the therapists during treatment sessions.</p> <p>-Phase III: TG: 2 hours/week of tele-assisted one-to-one behavioral-parent training and coaching</p> <p>CG: 2 hours/week of in-person one-to-one behavioral parent training and coaching</p>		<p>(+) <i>Parent-Child Dysfunctional Interaction: Parental Stress Index/Short Form (PSI/SF)</i></p> <p>(-) <i>Difficult Child: Parental Stress Index/Short Form (PSI/SF)</i></p>
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			<p>Phase III was used to report the results of TG vs CG.</p> <p>III. Child + parent</p> <p>IV. Parent Alone</p>		
<p>Heitzman et al., 2014</p> <p>USA</p> <p>Pre-post study</p>	<p>N= 10</p> <p>Parents with children who have ASD who live in a remote/rural community</p>	<p>Online and Applied System for Intervention Skills (OASIS) (n=10)</p>	<p>I. Parenting techniques, use of Applied Behavior Analysis strategies with children</p> <p>II. OASIS is a training program that combines web-based instructional modules with supervised hands-on practice of trained techniques by service providers working directly with children with autism. OASIS was used to implement Applied Behavior Analysis (ABA) procedures. The program was run using telemedicine and a web-based program: Learning Management System (LMS).</p> <p>ABA uses techniques to improve communication, direction following, eye contact, daily living skills, motor skills, academic skills, and decrease problem behaviors such as noncompliance, tantrums, running away, self-injury, self-stimulation, and aggression.</p> <p>The 8 modules of the OASIS program</p>		<p>Post-treatment (8 online modules):</p> <ul style="list-style-type: none"> • <i>Parent skill, use of ABA strategies.</i> Pre-post assessment of parent-child interactions: Across all parents, the mean pretest performance was 30.6% (range = 14%–46%), and the mean post-test performance was 71.8% (range = 51%–83%). The mean pre- to posttest skill gain across all parents was 41.23 percentage points (range = 28%–59%). • <i>Parent knowledge of ABA and autism.</i> Pre-post assessment: participants scored a mean of 53.13% correct on the pretest and 92.25% correct on the post-test • <i>Parent satisfaction with training.</i> Participants rated the program on 1-5 scale. The online tutorials had a mean importance rating of 4.62 (range = 4.38–4.88), and a mean satisfaction rating of 4.71 (range = 4.17–4.94). The telemedicine coaching sessions had a mean

			<p>are the following: (1) introduction to autism and behavioral treatment, (2) defining and observing behavior, (3) principles behavior, (4) stimulus control, (5) effective teaching strategies, (6) decreasing behaviors: antecedent control, (7) consequential control, (8) pulling it all together.</p> <p>Prior to each session, coaches reviewed parents' scores and responses for the module's tutorial assessment, and reviewed information provided by the parents in the LMS regarding their use of strategies at home and in the community. Each coaching session began with a discussion of the module's tutorial and the data collected at home on problem behavior and incidental teaching. Next, the coach assessed the parent's fidelity in performing the skill(s) targeted for that part of the module. Coaches did not advance parents to the next skill or module until they achieved at least 80% fidelity.</p> <p>III. Child + parent</p> <p>IV. Parent alone</p>		<p>importance rating of 4.64 (range = 4.75–4.46) and a mean satisfaction rating of 4.8 (range = 4.67–4.94).</p> <ul style="list-style-type: none"> • <i>Cost savings:</i> Families had mean travel savings of 2,263 miles.
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<p>Wacker et al., 2013</p> <p>USA</p> <p>Nonconcurrent multiple baseline design</p>	<p>N= 17</p> <p>Parents of children with ASD</p> <p>Child age range: 2.42 ± 6.15 yrs</p> <p>Child mean age: 4.27 ± 1.36 yrs</p> <p>Parent mean age: 33yrs</p> <p>Parent gender: 2M:16F</p>	<p>Functional communication training (FCT) (n=17)</p> <p>60min/session, 1 session/week for an average of 13 weeks.</p> <p>Parents were instructed to practice for 10-15min/day</p>	<p>I. Functional communication</p> <p>II. FCT escape (13 children): During escape sessions, the child was first taught to comply with the task request (work) and then to mand for a break to play. Thus, FCT escape comprised a two-step chain in which compliance produced the opportunity to mand and manding produced a 1- to 2-min enriched break (with preferred toys and parent attention) to play.</p> <p>FCT tangible (5 children): FCT tangible involved the child requesting toys after having to wait for increasing periods of time. FCT comprised a two-step chain in which appropriate waiting produced the opportunity to mand and manding produced brief (1- to 2-min) toys access.</p> <p>FCT attention (1 child): The child was taught to request attention when adult attention was removed. If problem behavior occurred during reinforcement, the mother removed her attentions.</p> <p>III. Child + Parent</p> <p>IV. Child/youth + parent</p>	<p>Videoconferencing</p> <p>Parents were coached to give the intervention via videoconferencing with the behavior consultant.</p>	<p>Post-treatment (average 13 weeks):</p> <p><i>Problem behavior:</i> Participants reduced problem behavior by an average of 93.5%.</p>
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