Abstract

One mission of HANDS in Autism (Helping Answer Needs by Developing Specialists in Autism) is to provide practical and applicable information to a variety of caregivers from an ABA-based framework and to provide an option for training that promotes practical learning opportunities through an innovative and intensive hands-on and coaching experience. Participants were rated on their knowledge and application of several aspects of the HANDS curriculum both before and after the training session. Curriculum that was assessed included: identification of proper functions of behavior, and prompting strategies. There are nine items, each worth seven points (except 1 item worth 5 points) for a total of 61 points. Participants receive 1 point for identifying a correct response, and -1 point for selecting an incorrect response. Failure to select a correct response does not earn any points. Participants’ scores are added across items and divided by 61 to get a percentage score. Higher scores indicate better performance on the AoK. Ideally, through this assessment, we are able to demonstrate both an increase in the selection of correct responses as well as a decrease in the selection of incorrect responses. Participants completed this rating prior to training (baseline), at the end of the last day of training (immediate), and again four months following the training (delayed). To determine the effectiveness of the HANDS in Autism model, participants were assessed both through observation and skill demonstration regarding their ability to retain, understand, and apply material taught during the training session. Specifically, participants were asked to complete a knowledge test (Assessment of Knowledge [AoK]) before the training, immediately after the training, and 4 months following the training. During the training, participants were observed making and implementing academic tasks. They were then given feedback and asked to re-teach their tasks. This process allowed participants to develop and refine their teaching skills and learn from the feedback. The delayed test allowed us to determine participants’ immediate incorporation of feedback into products. Through this assessment procedure, we were able to demonstrate that the HANDS in Autism model is an effective program for educating professionals in working with children with autism.

Methods and Participants

Thirty-nine individuals working in an educational environment with children across the autism spectrum attended eight hours of training per day for a four week period over the three training sessions. Prior to attending the training, participants completed the AoK as part of an initial assessment packet. The measure was then repeated on the last day of training at the end of the day and again 4 months after training was completed to determine participants developed teaching skills during training. The scores that were presented were (23% rating of tasks both prior to and following feedback.

Assessment of Knowledge (AoK)

This measure was adapted from a measure used in previous training sessions. The goal of the AoK is to demonstrate knowledge about particular areas relevant to working with children with autism in an educational setting that are also addressed in the HANDS in Autism curriculum. The areas assessed include physical and visual structure of the classroom, facilitating social skills, incorporating students with autism into group settings, assessment strategies, promoting communication, generalization of skills, determining functions of behavior, and prompting strategies. There are nine items, each worth seven points (except 1 item worth 5 points) for a total of 63 points. For each question, 10 responses are provided. For each item, seven responses are correct and three are incorrect (except one item where five responses are correct and 5 responses are incorrect). Participants are asked to select which responses best answer the question. Participants receive 1 point for identifying the correct response, and -1 point for selecting an incorrect response. Failure to select a correct response does not earn any points. Participants’ scores are added across items and divided by 61 to get a percentage score. Higher scores indicate better performance on the AoK. Ideally, through this assessment, we are able to demonstrate both an increase in the selection of correct responses as well as a decrease in the selection of incorrect responses. Participants completed this rating prior to training (baseline), at the end of the last day of training (immediate), and again four months following the training (delayed).

Teaching Tasks Rating Scale

As part of the hands-on nature of the HANDS in Autism model, participants were asked to develop an educational task and implement it with one of the children with autism. Participants were rated on the following criteria (scored 1 = not very true, 5 = very true with higher scores indicating better performance): clarity of the task, appropriateness of the task for the child assigned, use of visual structure, organization of sequence and steps within the task, completeness and utility of the task, and incorporation of the child’s interests into the task. Trained research staff rated the tasks during implementation. Scores were averaged across the 10 items to obtain a mean task rating. Following implementation of the task, participants were given feedback from the HANDS in Autism model. This feedback was designed to guide participants in revising their teaching strategies. Participants were then asked to take an updated version of the task and implement it with a new child. This revised task was then rated by trained research staff for clarity of the task, appropriateness of the task for the child assigned, use of visual structure, organization of sequence and steps within the task, completeness and utility of the task, and incorporation of the child’s interests into the task. Participants were then asked to take an updated version of the revised task and implement it with another child. This revised task was then rated by trained research staff for clarity of the task, appropriateness of the task for the child assigned, use of visual structure, organization of sequence and steps within the task, completeness and utility of the task, and incorporation of the child’s interests into the task.

Hypotheses

The training program would demonstrate efficacy as noted by the increased knowledge and understanding demonstrated by participants across all ratings. Specifically, participants’ scores on the AoK would be better immediately following training and maintain the 4-month follow-up compared to scores at baseline before training. Also, participants’ ratings of their teaching tasks following immediate feedback would be better compared to their originally developed task.