

Helping Answer Needs by Developing Specialists in Autism: Program Evaluation



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Abstract

The 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. The primary goals and objectives of the model are to provide:

- a focus on individual strengths of each student
- a focus on comprehensive training (i.e., assessment to goal development)
- hands on learning with children of various levels of functioning and challenge
- training in a model of didactics combined with modeling, practice, and feedback in a supportive coaching environment
- training to multiple caregivers working hands on with individuals with autism in various environments
- provision of training based on a "best practices" approach to assessment and intervention
- development of curriculum and behavioral planning based on data driven decision making

Following an initial training, participants were asked to provide feedback on several aspects of the training, including rating the thoroughness of information presented, the materials provided, and the hands-on experiences. Both strengths and weaknesses were analyzed with emphasis on program adaptation for future trainings. Results of the evaluations as well as future adaptations to the program will be presented.

Introduction

The HANDS in Autism model of training was developed in 2004, a result of project funding from the CDC. Through this clinical experience, it was noted that caregivers coming from traditional educational conferences with excitement to implement what they had learned were not appropriately tooled to apply the knowledge they had gained. They became promptly discouraged with the methodologies and processes as they struggled to effectively apply and individualize the principles in their naturalistic setting. It was hypothesized that caregivers would benefit most from a more active learning process that would allow them to better comprehend, envision the application, maintain, and generalize information. The framework and beginnings of this intensive training model were developed over the past 1 1/2 years, with primary consideration provided to an intensive, hands-on training rooted in ABA principles and best practices methodology and guidelines outlined in several documents (e.g., National Research Council, 2001; New York State Program Quality Indicators, 2001; Iovanne, Dunlap, Huber, & Kincaid, 2003).

The program seeks to bridge the gap between information learned in more traditional didactic/lecture training modalities and hands-on practical experience. Participants learn in an active environment through didactic, intensive hands-on practice, and feedback sessions. Ultimately, participants are asked to apply the principles learned through the didactic and observation opportunities presented during the training to diverse real life situations as they interact with a variety of child participants differing in age and behavioral and developmental profiles.

Educator and professional participants were recruited through a variety of public announcements, flyers, and internet resources. Educator and professional participants were required to show potential to benefit from an intensive and structured program. They were also required to allow HANDS staff to gather materials and information regarding the current strategies used in their classrooms.

Hypotheses

The training program would show effectiveness by the increased knowledge and understanding demonstrated by participants across the five modules (behavior, communication, social skills, and academic assessment) individually and as a whole.

In addition, participant ratings of the training program across several variables will demonstrate overall satisfaction with the training and provide feedback for improving subsequent training sessions.

Methods

To best prepare for the hands-on component of the week-long training, baseline information was collected on the current knowledge, classroom structure, and implemented strategies utilized by each educator and professional participant. Educator and professional participants were asked to send in a copy of an IEP and a BIP that they had prepared prior to the beginning of the training week. Program staff utilized this information to assess participants' present level of performance.

Educator/professional participants attended eight hours of training per day for a five-day period. Educator/professional participants began each day by completing a Pre-Discussion Questionnaire pertaining to the corresponding training topic. Questionnaire topics included behavior, communication, social skills, classroom structure, and academic assessment. After training activities were completed, educator/professional participants were then asked to complete a Post-Discussion Questionnaire, identical to the Pre-Discussion Questionnaire as well as an evaluation corresponding to the material covered that day. In addition, on the final day of training, participants were asked to complete an evaluation relating to the training as a whole.

Measures & Coding Procedures

Pre-Post Data

The pre and post tests consisted of several free response questions designed to assess the participants conceptual and practical knowledge of the topic. Participants' responses were entered into a database to de-identify the hand writing. Additionally, the responses were given a code, kept separate from the responses, to keep the coder blind to the participant and response condition (pre or post). The coders (two HANDS in Autism team members with expertise on each topic) rated each response based on a five-point scale (1 = poor response; 5 = excellent response). Due to time constraints, the responses were only coded once and thus inter-rater reliability could not be calculated. Each participant completed every measure. However, when preparing the data for coding and analysis, it was noted that the pre-test for the behavior module was missing for all but 1 participant. Thus no pre-post test comparison could be done on that module. The behavior module data was included in the overall analysis (n=10). Due to the limited sample and exploratory nature of the measures, no reliability or validity assessments were calculated at this time.

Program Evaluation Data

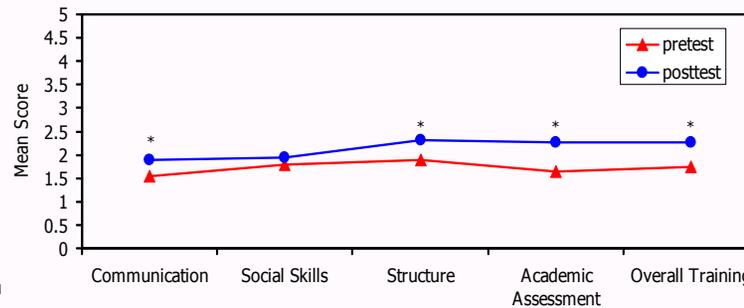
The program evaluation asked participants to rate their satisfaction with topics presented each day as well as for the overall training on a five-point scale (1 = Not at all; 5 = Very much so). Additionally, participants were asked to indicate how likely they would be to recommend each day's training activities to others. Factors evaluated for each training module include:

- Thoroughness of topic coverage
- Ability to hold attention/interest
- Quality of the speaker
- Hands-on classroom activities
- Hands-on group activities
- Materials provided
- Facilities
- Level of knowledge

Participants were also asked to rate the global effectiveness of training on the following variables:

- How well the training prepared them
- How the training positively effected their work
- Understanding of material
- Ability to integrate into their work
- Essential elements covered

Figure 1. Mean pre-post test scores for each training module and training overall (n=10).



Note: The Behavior module was not included due to missing data.
* p<.05

Table 1. Mean participant evaluation ratings.

Evaluation Criteria (n=10)	Mean (std. dev)
Variable	
Thoroughness	4.49 (.37)
Attention/Interest	4.43 (.23)
Speaker	4.63 (.31)
Hands-on Classroom Activities	4.30 (.62)
Hands-on Group Activities	4.05 (.74)
Materials	4.49 (.36)
Facilities	4.33 (.63)
Knowledge	4.46 (.41)
Interest	4.47 (.41)
Recommend	4.77 (.32)
Day	
1: Structure	4.59 (.44)
2: Academic Assessment	4.42 (.57)
3: Communication	4.04 (.63)
4: Social Skills	4.74 (.30)
5: Behavior	4.45 (.50)
Overall Training	
Preparedness	4.44 (.73)
Positive Effects	4.78 (.44)
Understanding	5.00 (.00)
Integration	4.67 (.50)
Essential Elements	4.44 (.53)

Results

Figure 1 presents the mean scores for the pre and post tests. There was a statistically significant improvement from the pre test to the post test for the overall training (t=-4.727, p<.001) and the communication (t=-3.30, p=.004), structure (t=-2.81, p=.012), and academic assessment modules (t=-4.05, p=.001). The social skills module did not demonstrate significant improvement from pre to post (t=-.899, p=.380). The behavior module could not be analyzed due to missing data. Table 2 presents the mean ratings for the training by variable, day and global training variables. It is important to note that all ratings exceeded 4.00 indicating high participant satisfaction with training content and format.

Conclusions & Future Directions

Overall, it appears that the training did have an effect on participants knowledge and understanding of key concepts. One concept, social skills, did not demonstrate significant improvement. Some important limitations in the study may be decreasing the observed effects and steps have been taken to avoid these limitations at future training sessions. The measures used to assess knowledge of the concept at both pre and post were not piloted or assessed for psychometric properties prior to their inclusion in the training. For that reason, a new set of measures has been developed using vignettes and asking participants to provide more application of skills. These measures will be tested during the summer of 2006 using a larger sample. Furthermore, procedures have been developed to reduce the occurrence of missing data. Participants appeared to be highly satisfied with the training sessions. Using these results and more qualitative comments from the participants, the HANDS training program was revised to include more hands-on activities and opportunities for discussion.

For more information, visit our website at www.handsinautism.org

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