HANDS in Autism Training:

Participant Self-Report of Training Efficacy

Noha Minshawi, Iryna Ashby, and Naomi Swiezy

HANDS in Autism, Indiana University School of Medicine

Abstract

Transportability of ABA-based interventions in educational settings is of great value. The HANDS in Autism summer program trains teachers and classroom staff to implement ABA-based interventions using coaching and mentoring in an analogue classroom setting. The training introduces school personnel to new concepts and techniques, as well as improves their application of previously learned skills. Participants in the weeklong training provided feedback at the end of the training and at three-month follow-up on 20 strategies covered. Participants rated whether a concept was new to him or her, whether the strategies were being applied at follow-up, and whether the use of previously-learned strategies had improved. At follow-up, 9 of the 20 strategies taught were reported as being used by at least 70% of participants. Of those 9 strategies, 5 were reported to be improved upon by at least 50% of participants and only 1 was reported as new to 50% of participants. Less than 10% of participants reported that they required prompting or review in order to implement these strategies. These data indicate that participants are learning and applying new skills, and improving upon previously learned material based upon this training. Study implications and future directions are discussed.

Introduction

Since 2004, the HANDS (Helping Answer Needs by Developing Specialists) in Autism training model has been striving to meet the growing need of school personnel working with children on the spectrum to deepen knowledge of ABA principles and best practices and to promote their application in school settings. The HANDS model curriculum allows participants to learn in an active environment through didactic, intensive hands-on practice, coaching, and feedback sessions with further utilization of these principles in real-life situations in the structured HANDS classroom with student participants of different ages and developmental profiles. Twenty educational and behavioral strategies are covered during the weeklong training. These strategies are: visual structure, physical structure, choreography, informal (educational) assessment, behavioral assessment, ongoing data collection, data representation and analysis, errorless learning, guided compliance, task analysis, principles of behavior, skills training, curriculum adaptation/implementation, behavior intervention planning, writing (educational and behavioral) goals and objectives, one-on-one teaching, group instruction, basic (educational) policy, best practice in educating children with ASD, and maintenance/generalization.

To verify that the HANDS training model can effectively meet the needs of the school personnel, professionals who participated in the weeklong training provided feedback at the end of the training and three month after the completion of training. Participants were asked to rate their current use of the 20 strategies covered at three-month follow-up. Participants rated whether a concept was new to him or her prior to training, whether the strategies were being applied at follow-up, and whether the use of previously-learned strategies had improved. This self-report measure allows us to demonstrate that participants in the HANDS in Autism training learned new skills, improved on areas, for which they received previous instruction, and continue to utilize these skills at follow-up.

Hypotheses

At follow-up, participants will report that they are currently using skills/techniques that were covered during the HANDS training, indicating that the training provides instruction in strategies that participants find useful and that the training has helped to prepare participants to utilize these skills.

Participants will report that the HANDS training has improved their application of previously-learned material (i.e., information learned in previous course-work, practicum, conferences, etc.), indicating that the training can supplement and further develop school personnel ability to work with children with ASD.

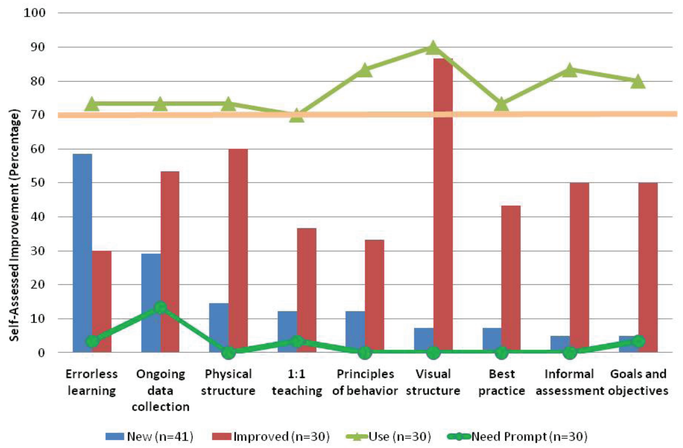
Participants will report that they do not feel that they require additional instruction or assistance to use strategies covered during the HANDS training, indicating that the training provides sufficient instruction, opportunities to practice, and feedback.

Methods and Participants

Forty-one (n=41) participants attended one of the 3 weeklong summer training sessions in 2009. Included were 68.29% (n=28) teachers, 24.49% (n=10) therapists (e.g., school psychologist, SLP, or OT), and 7.32% (n=3) instructional aides/paraprofessionals.

Forty-one (n=41) participants completed the satisfaction survey on the last day of training and thirty (n=30) participants completed a follow-up satisfaction survey before the deadline.

Fig. 1. Self-Assessed Improvement in Selected Curriculum Areas



Measure

Summer Training Final Day Evaluation Survey (2009 ©) consists of 10 questions that evaluate participants' satisfaction with various aspects of the training, novelty of the curriculum, as well as their experience immediately upon the completion of the training. Out of 10 questions, four were on a Likert scale (1-5), two allowed participants to choose all applicable components, and the remaining items provided participants with an opportunity to share opinions in an essay form.

Summer Training Follow-Up Satisfaction Survey (2009 ©) consists of 13 questions that evaluate participants' satisfaction three months after the training regarding the overall applicability of concepts and strategies learned during the training to their appropriate settings, specific concepts and strategies participants were able to use, problems encountered in the use of such strategies, suggestions of changes to the training curriculum, as well as specific concepts and strategies they feel they need more prompting or training on prior to further use. Out of 13 questions, four questions required yes/no answers and an area to ground the answer, three questions requested participants to select all applicable answers, and the remaining questions provided an opportunity to share opinions in an essay form.

Results

At three-month follow-up, of the 20 behavioral and educational strategies covered in the HANDS training, 9 strategies were reportedly being used by over 70% of participants. These strategies included: errorless learning, ongoing data collection, physical structure, one-on-one teaching, principles of behavior, visual structure, best practice, informal assessment, and writing goals and objectives. Of those 9 strategies, 5 (ongoing data collection, physical structure, visual structure, informal assessment, and writing of goals and objectives) were reported to be previously-learned material by at least 50% of participants. These participants reported that, although this was information that they had previously been exposed to, their knowledge and application of the strategies was improved upon through participation in the HANDS training. Only 1 of the 9 strategies (errorless learning) was new material for at least 50% of participants. Furthermore, less than 10% of participants reported that they required additional prompting or review in order to implement these strategies at three-month follow-up.

Conclusions and Future Directions

Results of this study demonstrate that the HANDS training model on ABA-based interventions contributes to the acquisition of knowledge and application of skills by educators and other school personnel working with children with Autism Spectrum Disorders. These data indicate that, at three-month follow-up, school personnel are utilizing the skills taught during the training, and that they report that the training has improved upon their application of previously-learned material. Furthermore, the combination of didactics, intensive hands-on practice, coaching, and feedback sessions that constitute the HANDS training assists school personnel in implementing some strategies without the need for further assistance.

While these results provide evidence of the efficacy of the HANDS training, they are not without limitations. First, the data in this study are self-report. Therefore, one cannot rule out the potential effect of biases and social desirability. Second, the research design employed in this study was not experimental; therefore a causal relationship between the HANDS training model and the results cannot be conclusively drawn. In order to determine a cause and effect relationship between the HANDS training and participant application of skills, a randomized, controlled trial is needed to compare the relevant outcomes of participants who complete the HANDS training to those who do not receive the training. In addition, an objective measure of the application of skills both before and after the training is needed in order to support the self-report data presented in this study.

For more information visit our website www.handsinautism.org

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