TRAINING STAFF TO IMPLEMENT BRIEF STIMULUS PREFERENCE ASSESSMENTS

CHRISTINA R. WELDY AND JOHN T. RAPP
ST. CLOUD STATE UNIVERSITY

AND

KELLI CAPOCASA
AUTISM MATTERS

We trained 9 behavioral staff members to conduct 2 brief preference assessments using 30-min video presentations that contained instructions and modeling. After training, we evaluated each staff member’s implementation of the assessments in situ. Results indicated that 1 or 2 training sessions for each method were sufficient for teaching each staff member to implement each assessment. We briefly discuss the clinical implications of our findings.

Key words: staff training, stimulus preference assessments, video modeling

Numerous studies have shown that stimulus preference assessments can identify reinforcers for individuals who have been diagnosed with developmental disabilities (e.g., Carr, Nicolson, & Higbee, 2000; DeLeon & Iwata, 1996; Roane, Vollmer, Ringdahl, & Marcus, 1998). For this reason, implementation of stimulus preference assessments is an important skill in which to train staff who work with this population. Training procedures have included antecedent-based approaches, such as enhanced instructions and video modeling (Graff & Karsten, 2012; Moore & Fisher, 2007), and consequence-based approaches, such as performance feedback and reinforcement contingencies (Roscoe & Fisher, 2008; Roscoe, Fisher, Glover, & Volkert, 2006).

Considerations when selecting staff training procedures include the amount of time and trainer resources available. Studies have shown that brief training procedures are effective (Graff & Karsten, 2012; Roscoe & Fisher, 2008). Although these methods require less training time, they still require training on an individualized basis, which may be difficult in settings with limited time and trainer resources. One way to address this limitation is to train preference assessments in a group-based format. For example, Catania, Almeida, Liu-Constant, and Di-Gennaro Reed (2009) used video modeling to train multiple staff members simultaneously to implement discrete-trial instruction.

The purpose of the current study was to evaluate the effects of a video presentation with instructions and modeling on nine staff members’ implementation of a brief multiple-stimulus-without-replacement (MSWO; Carr et al., 2000) assessment and a brief free-operant (FO; Roane et al., 1998) assessment. We trained staff members in two small groups, in the absence of a supervisor, and then assessed their performance during in situ probe sessions.

METHOD

Participants, Setting, and Materials

Nine staff members (seven women, two men) employed at a behavioral clinic for children and adolescents with autism served as the participants.
of this study. Seven participants held a bachelor’s level degree in a related field, and all were experienced in the implementation of behavior-analytic programming and data collection. However, none of the participants had experience in the observation or implementation of stimulus preference assessments before the study. At least five edible stimuli were provided for use during the MSWO assessments, and 11 novel leisure items (in a plastic box with a lid) were provided for use during FO assessments.

Response Measurement

We randomly assigned participants to one of two training groups: five (one resigned during baseline) to Group 1 and five to Group 2. The task analysis for the MSWO assessment was similar to that described by Roscoe and Fisher (2008). There were seven steps for setting up and conducting the assessment (e.g., selecting five items to assess, individually presenting each item to the client, placing all items in an arched array on the table, instructing the client to “pick one” at the start of the trial). There were four steps that depended on particular participant selection responses (e.g., if two items were selected simultaneously, the correct therapist response was to block access to both items and re-present the trial). There were also four responses for when and how to end the assessment and calculate data (e.g., conduct three presentation series, calculate percentage of selection for each item, and correctly identify the rank for each item).

For the FO assessment, the task analysis was similar to that described by Roane et al. (1998) and contained 11 steps. There were six items for setting up and conducting the assessment (e.g., selecting five items to include, presenting each item for 30 s or until the client stops engaging with the item, placing all items in an arched array, instructing the client to “play” at the beginning of the session, recording item engagement using 10-s momentary time sampling). There were two steps that depended on particular participant responses (i.e., if two or more items were simultaneously manipulated, the therapist recorded all items manipulated; the session ended at 5 min regardless of item engagement). There were three steps for ending the assessment and calculating the data (e.g., correctly calculating the percentage of intervals each item is manipulated). For each step, observers scored whether it was performed correctly or incorrectly. It is important to note that although some of the steps of the task analysis had multiple opportunities (e.g., instructing the client to select an item), data on correct and incorrect performance were scored only once per assessment for each of the steps of the task analysis. Therefore, for a step to be scored as correct, the participant had to complete the step correctly across all opportunities during the assessment.

Interobserver Agreement

A second observer independently scored the percentage of steps correctly implemented via video recordings for 54% and 29% of sessions for Group 1 and Group 2, respectively, for the MSWO assessment and 30% and 60% of sessions for Group 1 and Group 2, respectively, for the FO assessment. We calculated interobserver agreement scores on a step-by-step basis for each participant by dividing the number of agreements by the number of agreements plus disagreements and converting the result to a percentage. Mean agreement scores for MSWO and FO assessments were 91% and 95%, respectively, for Group 1 and 93% and 99%, respectively, for Group 2.

Design and Procedure

We used a nonconcurrent multiple probe design across preference assessments to evaluate the effects of video training on staff members’ implementation of MSWO and FO assessments. Group 1 was trained to implement the brief MSWO first and the FO second, and Group 2 was trained to implement the FO first and the brief MSWO second (i.e., Group 2 received training for the FO while Group 1 was in baseline
for the FO). Four total group video training sessions and two individual booster sessions were conducted across 4 weeks. Group training sessions lasted 30 min and were conducted in the clinic's lunchroom at approximately 7:30 a.m. before scheduled work hours. During baseline and after group training, the experimenter conducted in situ assessments in the client's treatment room during their regularly scheduled therapy sessions. For each in situ assessment, relevant assessment stimuli (i.e., edible or tangible items), a stopwatch (FO only), and the corresponding assessment data sheet were present. The presence of other staff and clients not involved in the study varied across in situ assessments.

Baseline. During baseline probes, the experimenter told the participant which preference assessment to conduct and provided the corresponding materials. The experimenter informed the participant that she would not answer questions or provide feedback and requested that participants inform her when they were finished with the assessment.

Video training. During the video training phase, members of the groups viewed a PowerPoint presentation that was projected on a wall using a laptop computer, portable speakers, and a projector. Each slide included detailed audio instructions and a corresponding video model for one or two steps of the task analysis. For example, on the first slide of the MSWO assessment, the audio stated that each of five edible items should be singly presented to the individual so that he or she can sample each item. A corresponding video clip showed the therapist presenting each item singly to the participant. The next step of the task analysis was described and depicted on the video model of the subsequent slide. After each step was reviewed separately, a final video clip displayed three sessions of the preference assessment in its entirety. In all video models, the first author served as the therapist, and a trained graduate student served as the client. Members of Groups 1 and 2 viewed the MSWO training video and the FO training video at different times (to view the training videos, see Supporting Information). Each training PowerPoint presentation lasted approximately 30 min, and all group members were trained simultaneously. On the same day or the following day (Participant 1 only) of the presentation, the experimenter conducted an in situ assessment. During this assessment, the participant was instructed to conduct the trained preference assessment with a designated client. The criterion for mastery was 90% accuracy across two in situ assessments.

Booster training. If a participant did not perform at 90% accuracy following the first viewing of video training, the participant viewed the same video again and conducted the corresponding preference assessment immediately after the second viewing. All of the participants performed at 90% accuracy after the first or second video viewing.

RESULTS AND DISCUSSION

Figure 1 depicts the results for Groups 1 and 2. All participants met the mastery criterion for both assessments. Only two participants (Participants 3 and 10) did not perform at 90% accuracy after the first viewing of the MSWO training video; both met mastery criterion after the second viewing.

The total training time for the seven participants who required only one training session per preference assessment was approximately 60 min (30 min for each video), whereas the two participants who viewed the MSWO video twice required 90 min of training time. Latency between video training and the first in situ assessment varied across participants, because in situ assessments were conducted individually. Mean latencies from training to the first in situ assessment were 5.9 hr (range, 0.2 hr to 25.5 hr) for the FO assessment and 3.6 hr (range, 0.5 hr to 7.5 hr) for the MSWO assessment. Mean latencies from the first in situ assessment to the second in situ assessment were 74.4 hr (range, 23.5 hr to 175.5 hr) for the FO assessment and 84.1 hr (range, 48 hr to 127 hr) for the MSWO assessment.
Figure 1. Percentage of correctly implemented steps by participants in Group 1 (top two panels) and Group 2 (bottom two panels) across baseline and video training sessions for the multiple-stimulus-without-replacement (MSWO) and the free-operant (FO) preference assessments. The arrows indicate booster training sessions.
Results of this study add to the literature on training individuals to implement preference assessments in a number of ways. First, our results indicated that staff can learn to implement brief assessments via instructions and video modeling in a group setting. Second, the training procedure did not require participants to rehearse their learned skills independent of testing (i.e., the in situ assessment). Third, the current findings replicate previous research that has demonstrated that antecedent-based training approaches may be sufficient for teaching implementation of preference assessments (e.g., Graff & Karsten, 2012). This information may be of interest to practicing clinicians who have limited time and money to train inexperienced staff members.

Some potential limitations to this study should be noted. First, although participants in this study had no experience in conducting preference assessments, each had at least 1 year of experience with behavior-analytic methodologies and data collection, and the majority of the participants held a bachelor’s degree in a related field. Thus, it is possible that the training method used in this study may not be adequate for teaching some individuals with less experience or education to implement preference assessments. Future research should assess the generality of the current training methods with newly hired staff members or other less experienced employees. A second limitation is that we did not evaluate the extent to which the staff members’ skills generalized across clients or settings. Anecdotally, one participant reported that she conducted preference assessments with clients outside the study, suggesting that her skills may have generalized to some extent. Future research should address this limitation. Finally, due to the arrangement of the treatment rooms (i.e., multiple clients and staff members in one room), participants may have had an opportunity to observe participants from the other group during in situ assessments. However, it is unlikely that peer observation affected the results, because none of the participants performed higher than 67% during baseline for either assessment method.

REFERENCES


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SUPPORTING INFORMATION

Additional supporting information may be found in the online version of this article at the publisher’s website.

Data S1. Free Operant Preference Assessment

Data S2. Brief Multiple Stimulus Without Replacement Preference Assessment