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Do Symmetric and Generalized Matching-to-Sample Skills Facilitate Choosing Preferred Items during Preference Assessments Using Pictures for People with Developmental Disabilities?

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Abstract

We identified two groups of participants: one who could indicate their preferences using both objects and pictures (Picture Group, n = 9) and the other who could indicate their preferences using objects but not pictures (Object Group, n = 11). We compared the two groups' performance on five discriminations: (a) object-picture matching and (b) its symmetry, picture-object matching; (c) generalized object-picture matching and (d) its symmetry, generalized picture-object matching; and (e) generalized identity picture-picture matching. The Picture Group performed significantly better than the Object Group on four of the five tasks ($p < .01$). Findings also suggest that the effectiveness of picture preference assessment may be associated with the ability to perform generalized matching.

Making preferred items more available in the immediate environment allows individuals with developmental disabilities to feel happier, and ultimately their quality of life is improved (Green, Gardner, & Reid, 1997; Wehmeyer & Schwartz, 1997). Access to preferred items also reduces challenging behavior (Vollmer, Marcus, & LeBlanc, 1994) and enhances acquisition of functional skills (Green et al., 1988). Considerable research has shown that direct preference assessment is a reliable method for identifying preferred stimuli for this population (Tullis et al., 2011). When assessing preferences, choices can be described vocally or presented using objects or pictures. Preference assessments using objects can be impractical. Describing choices vocally can be quite efficient, but it requires successive auditory discriminations, which can be challenging for many individuals with severe and profound developmental disabilities. Using pictures in preference assessments is more practical than objects and the simultaneous visual discriminations required for picture preference assessment are less difficult than auditory discriminations (Kerr, Meyerson, & Flora, 1977).

Considering the practical advantages of using pictures over objects, recent research has examined discrimination skills needed for picture preference assessments. Several conditional discriminations such as matching object-to-picture, picture-to-object, and generalized matching have been implicated as possible prerequisites. Nguyen et al. (2009) taught object-picture matching to individuals for whom

picture preference assessments was ineffective, and evaluated whether picture preference assessment effectiveness improved following training in a multiple-baseline design across training tasks. Three participants with developmental disabilities who showed preferences during assessments with objects but not with pictures were taught object-to-picture matching tasks unrelated to the items used during preference assessments. The authors hypothesized that participants who showed differential preferences during assessments with objects, but not with pictures of the same objects, would improve their concordance between the two modes after being taught object-picture matching. The results showed that concordance improved for two participants after mastering two and three matching tasks, respectively. However, concordance did not improve for the third participant after mastering two tasks and after additional training. Nguyen et al. suggested that training additional discrimination tasks might be necessary for responding to picture preference assessments. It is possible that "generalized matching," the ability to match new stimuli without training (Pear, 2001), may be necessary. Nguyen et al.'s study, however, did not assess this skill.

Clevenger and Graff (2005) examined performance on picture preference assessments and whether individuals could match objects to pictures. While their study was not related to training specific skills, they did examine different discriminations. Picture-to-object and object-to-picture matching skills were evaluated with six participants and three of them were able to match objects to pictures and pictures to objects (mean accuracy 94%), while the other three were unable to do so (mean accuracy 29%). The results indicated that participants who were able to match object to pictures and pictures to objects showed high correspondence between object and picture preference assessments (i.e., they selected the same preferred stimuli in both assessments), whereas participants who did not demonstrate those matching skills showed low correspondence between object and picture preference assessments. However, it was not clear whether the two matching relations (object-to-picture and picture-to-object) involved the same stimuli.

The purpose of this study was to examine the relations between picture preference assessment and five conditional discriminations with two groups of participants: one group that could perform both object and picture preference assessments, but not vocal preference assessment (Picture Group) and another group that could perform object preference assessments only (Object Group). Each participant was assessed on the following discriminations: (a) object-picture matching and (b) its symmetry, picture-object matching; (c) generalized object-picture matching and (d) its symmetry, generalized picture-object matching; and (e) generalized identity picture-picture matching. Ethics approval was obtained from our Research Ethics Board before the study began.

Method

Participants and Settings

Twenty adults with developmental disabilities participated. Written informed consent to participate was obtained from their legal guardians or substitute decision makers. The Object Group (n = 11) consisted of six males and five females, with a mean age of 39.6 years (range, 24 to 53). According to their health records, two participants were diagnosed with profound developmental disabilities, and seven with severe developmental disabilities. The remaining two participants in the Object Group were diagnosed with developmental disabilities, but no information on level of functioning was indicated in their health records. The Picture Group (n = 9) included six males and three females with a mean age of 36.7 years (range, 31 to 42). Two participants were diagnosed with profound developmental disabilities and five with severe developmental disabilities. The remaining two participants in the Picture Group were diagnosed with developmental disabilities, but no information on level of functioning was indicated their health records (see Table 1).

All participants received the *Assessment of Basic Learning Abilities* (ABLA) assessment prior to the study. The ABLA is a learning assessment of how rapidly an individual learns to perform several basic discrimination tasks (Kerr et al., 1977; Martin & Yu, 2000; Vause, Martin, & Yu, 2007). All Object Group participants learned to per-

form (pass) ABLA Level 2, a two-choice visual discrimination that involves position and visual cues, and five participants passed up to Level 3, a two-choice visual discrimination. Participants who passed Level 2 have been shown to be able to perform paired-stimulus preference assessment with objects (Thomson, Czarnecki, Martin, Yu, & Martin, 2007). None of the Object Group participants passed Level 4 (quasi-identity visual matching) or higher. For the Picture Group, four participants passed ABLA Level 4, two participants passed Level 3, and two participants passed Level 2 (see Table 1).

Participants were assigned to either the Object or Picture group based on the results of paired-stimulus preference assessments with food items in objects, pictures, and vocal modes (procedure described below). To be assigned to the Object Group, a participant must have selected a high preference (HP) food item on at least 80% of the preference assessment trials

Table 1. Participant Characteristics

					Preference Assessment (% HP Selected[a])		
Participants	*Sex*	*Age (Yrs)*	*Functioning*	*ABLA Level[b]*	*Object*	*Picture*	*Spoken*
Object Group							
1	F	38	Severe	3	90	50	40
2	F	42	Profound	2	100	55	65
3	M	38	Severe	2	100	45	40
4	M	36	DD[c]	3	100	45	45
5	M	24	Severe	3	100	60	50
6	M	35	DD[c]	2	100	60	60
7	M	47	Severe	3	100	30	60
8	F	47	Severe	2	80	45	50
9	F	44	Severe	3	80	45	40
10	F	53	Severe	2	100	50	50
11	M	31	Profound	2	80	60	45
Picture Group							
12	F	39	Severe	4	100	90	50
13	M	36	Severe	3	100	80	50
14	M	36	Profound	2	100	80	45
15	M	31	DD[c]	2	100	85	60
16	M	42	Severe	4	100	90	50
17	M	36	DD[c]	4	90	85	50
18	F	40	Severe	2	90	95	50
19	F	39	Severe	4	100	95	60
20	M	31	Profound	3	100	95	60

a HP = high preference item.
b Highest ABLA level passed.
c Developmental disabilities with no information on functioning level.

with objects, and must have selected the same HP item on less than 80% of the assessment trials in pictures and in vocal modes. All 11 participants in the Object Group met this criterion. To be assigned to the Picture Group, a participant must have selected the same HP food item on at least 80% of the preference assessment trials in both object and picture modes, and must have selected the same HP item on less than 80% of the assessment trials in vocal mode. All nine participants in the Picture Group met this criterion (see Table 1).

Following the paired-stimulus preference assessments, all participants were assessed on the following discriminations: (a) object-picture matching and (b) its symmetry, picture-object matching; (c) generalized object-picture matching and (d) its symmetry, generalized picture-object matching; and (e) generalized identity picture-picture matching.

Throughout the study, participants were assessed individually and all sessions took place in a testing room. Participants sat behind a table, in a chair, across from the experimenter during all assessments. During some sessions, an observer was present to conduct reliability checks.

Preference Assessments for Group Assignment

A paired-stimulus preference assessment was completed for each participant using six food items (objects). The procedure was deemed effective if it identified a high-preference (HP) and a low-preference (LP) food item. A high-preference item was one that was selected on at least 80% of the trials, whereas a low-preference item was selected on no more than 20% of the trials (Pace, Ivancic, Edwards, Iwata, & Page, 1985). Parents or caregivers were asked to nominate a list of food items for each participant and items selected for the preference assessment were considered based on ease of presentation and availability.

The paired-stimulus preference assessment procedure involved presenting two stimuli concurrently on each trial. Each stimulus was paired with every other stimulus twice and the order of presentation was randomized. Each participant received 30 trials to complete the preference assessment for the six food items. The two items were presented at an equal distance from the participant and the left-right positions were counterbalanced across trials. The participant was prompted to look at each item and then asked to "pick one." An *approach* response was defined as the participant touching or pointing to an item without rejecting it within 8 secondsafter being asked to choose. A *rejection* was recorded if the participant pushed an item away. After a rejection, an approach to the other available item was permitted on the same trial. On each trial, the item selected was recorded. If neither item was selected after 8 seconds, the trial was recorded as *no selection*. Immediately following an approach response, the participant was thanked for choosing and provided with the item selected. If a participant approached both items simultaneously, he/she was blocked gently and the trial was repeated.

Once the high- and low-preference items had been identified using objects, the preference assessment was repeated for only these two items in the object mode, then in picture and vocal modes. Each mode of assessment was presented for 20 trials. The picture preference assessment procedure was the same as the object preference assessment, except that 15 cm x 20 cm color photographs instead of the objects, were presented and the participant received the object corresponding to the chosen photograph on each trial. During the vocal preference assessment, each item was concealed in a box that looked identical. The boxes were presented to the participant one at a time and the tester named the item in the box while placing it on the table. The participant was then asked to choose. Upon choosing a box, the participant was given the item from that box.

Stimuli for Experimental Tasks

To lessen the influence of history, stimuli for all matching tasks were made up of parts from everyday objects, rather than the objects themselves. For example, items included the axle of a toy car, part of a knob, the end of a shovel, etc. The smallest stimulus was approximately 2.5 by 7.5 by 2.5 cm and the largest was approximately 12.5 by 13 by 12.5 cm. Picture of each item was a 15 by 20 cm color photograph, taken against a grey background.

Symmetric Object-Picture and Picture-Object Matching

An object-to-picture matching-to-sample task involves presenting objects as samples and pictures as comparisons. For example, if object A is the sample stimulus and pictures of objects A and B are the comparisons, selecting the comparison picture of object A would be correct; whereas if object B is the sample stimulus, selecting the comparison picture of object B would be correct. A symmetric matching relation involves reversing the roles of the stimuli as samples and comparisons (Sidman & Tailby, 1982). Therefore, the symmetric relation of the above example would involve picture-to-object matching with pictures presented as samples and objects as comparisons.

In the present study, we assessed whether participants were able to perform symmetric object-picture matching using one set of task stimuli, consisting of two objects and pictures of those objects. During object-picture matching, on each trial, two 15 cm by 20 cm color photographs (comparisons) were placed on the table approximately 15 cm apart in front of the participant and the participant was asked to look at each picture. An object (sample) corresponding to one of the comparisons was then held at the participant's eye level and the experimenter said "match." A correct response was recorded if the participant selected (pointed to or touch) the corresponding picture within 8 seconds. Selecting the incorrect comparison or not responding within 8 seconds was scored as incorrect. The assessment consisted of 10 trials. The sample stimulus was randomized across trials and the same sample was not presented for more than two consecutive trials. The positions of the comparison stimuli were counterbalanced across trials and the correct comparison stimulus appeared in each position an equal number of trials. The experimenter said "thank you" at the end of each trial regardless of accuracy. No other programmed consequences were provided for responding. However, before presenting each trial, the participant was asked to perform a behavior unrelated to the task (e.g., roll a ball to the experimenter) and was reinforced with praise and an edible to maintain general attending and instruction-following behaviors.

During picture-object matching, the same stimuli and procedure were used except that the roles of the sample and comparison were reversed. That is, on each trial a picture was the sample and the objects were the comparisons.

The order of the object-picture and picture-object tasks was alternated across participants in each group. For each task (object-picture and picture-object), a "pass" was given for the task if a participant responded correctly on at least eight of the 10 trials (80%) for that relation.

Generalized Symmetric Object-Picture Matching

Generalized matching is demonstrated when an individual responds correctly on the first trial when presented with novel stimuli that have not been previously reinforced (Pear, 2001). In this study, the procedure for testing generalized symmetric object-picture matching was similar to the symmetric object-picture task described above except that 10 pairs of different stimuli were used. For each task (object-picture and picture-object), the stimulus pairs were presented in random order and each pair was presented for one trial. The positions of the correct comparisons were counterbalanced across trials. A "pass" was given for a task if a participant responded correctly on at least eight of the 10 trials (80%) for that relation. The order of object-to-picture and picture-to-object matching tasks was alternated across participants.

Generalized Picture-Picture Identity Matching

A matching-to-sample task in which the samples and comparisons are physically identical in all respects is called identity matching (Pear, 2001). In this study, generalized picture-picture identity matching was measured using 10 stimulus pairs involving pictures that were not used in the previous tasks. Stimulus pairs were presented in random order, each pair for one trial, and the positions of the correct comparisons were counterbalanced across trials. On each trial, a picture was the sample and two pictures (one matching the sample) were comparisons. Except for the task stimuli, the definitions of correct and incorrect responses, consequences for responding, and presentation procedures were the same as that described above for generalized symmetrical matching.

Interobserver Reliability and Procedural Integrity Checks

Interobserver reliability checks were conducted for each participant and for each discrimination task. During a reliability check, an observer independently recorded the participant's response on each trial. A trial was considered an agreement if both the experimenter and the observer recorded the same response. In contrast, a trial was considered a disagreement if the experimenter and the observer recorded different responses. Percent agreement for a session was calculated using the following formula: number of agreements/(number of agreements + disagreements) × 100 (Martin & Pear, 2011). Reliability checks were conducted during: (a) 80% of the object preference assessment sessions, 75% of the picture preference assessment sessions, and 55% of the spoken preference assessment sessions; (b) 75% of the ABLA sessions; and (c) 75% of the matching task assessment sessions (for group assignment). Percent agreement per session was 100% across participants.

During each of the above sessions, the observer also evaluated procedural integrity by recording whether the experimenter carried out the procedures correctly on each trial using a behavior checklist that was appropriate for the assessment being conducted. For example, the behaviors for the matching task assessments included presenting reinforcement for an alternate appropriate behavior, presenting the correct comparisons in the predetermined positions during the trial, presenting the correct sample, giving the appropriate instruction to begin the trial, and providing the appropriate consequence following a response. A trial was considered correct if all steps were carried out correctly. The percentage of trials carried out correctly per session was 100% across participants.

Results

Group Assignment

Participants were assigned to the object and picture groups based on their performance during the preference assessments in object, picture, and vocal modes. The results of these assessments for each group are shown in Table 2 (see Table 1 for individual data). As can be seen in Table 2, participants in the Object group selected their HP food items on 93.6% of the trials on average (range 80-100%). While participants in the Picture group selected their HP food items on greater than 90% of the trials in object mode. Both groups selected the same HP food items near chance level in vocal modes. As predicted, the two groups differed significantly only in the picture mode with the Picture group performing significantly higher (M = 88.3%) than the Object group (M = 49.6%), $t(18) = 11.4$, $p < .001$, 2-tailed.

Matching Task Performance

Table 3 shows the percentages of correct responses for each participant across the five tasks. Table 4 shows the mean percentages and standard deviations per group for each task. The Object Group means were near chance level (50%) on all tasks, and the Picture Group means were higher than the Object Group on all tasks. Levene's test of equality of variances was significant ($p < .05$) for two tasks (Generalized Symmetric Picture-Object and Generalized Identity Picture-Picture). Therefore, between-group comparisons were completed using independent samples *t*-tests for unequal variances for these two tasks, and for equal variances for the other three tasks. Overall alpha was set at .05 with Bonferroni correction; thus each comparison was evaluated using $p = .01$, 1-tailed. The Picture Group means were significantly higher than the Object Group means on four tasks (Symmetric Object-Picture, Symmetric Picture-Object, Generalized Symmetric Object-Picture, and Generalized Identity Picture-Picture).

The number and percentage of participants in each group who met the pass criterion on each task are shown in Table 5. Only one Object Group participant met the criterion on one task, whereas at least five of the nine Picture Group participants met the criterion on four tasks.

For the Picture Group, examination of the individual data (Table 3) revealed that eight of the nine participants passed at least one task (P14 was the exception). Of these eight participants, two passed four tasks (P17 and P19), three passed three tasks (P16, P18, and P20), one passed two tasks (P12), and two passed one task (P12 and P15).

Table 2. Mean Percentage (Standard Deviation) of Trials the High Preference Item was Selected During Paired-Stimulus Preference Assessments in Object, Picture, and Vocal Modes

	Object Group (n = 11)	*Picture Group (n = 9)*		
	Mean (SD)	*Mean (SD)*	*t*	*p*
Object Preference Assessment	93.6 (9.2)	97.8 (4.4)	1.3	0.21
Picture Preference Assessment	49.6 (9.1)	88.3 (6.1)	11.4	.001
Vocal Preference Assessment	49.6 (8.8)	52.8 (5.7)	1.0	0.33

Table 3. Percentage of Correct Responses

	Symmetric (% Correct)		*Generalized Symmetric (% Correct)*		*Generalized ID Picture-Picture (% Correct)*
Participants	*Object-Picture*	*Picture-Object*	*Object-Picture*	*Picture-Object*	
Object Group					
1	30	50	60	50	50
2	40	60	20	40	50
3	40	50	40	50	60
4	50	50	60	70	70
5	50	40	60	70	60
6	50	60	60	60	60
7	60	60	30	60	50
8	60	40	40	50	50
9	60	40	50	50	40
10	60	60	70	60	60
11	70	50	80	40	50
Picture Group					
12	60	70	80	80	60
13	70	50	60	50	90
14	70	50	70	50	60
15	70	70	80	60	80
16	80	50	70	80	80
17	80	60	80	80	90
18	80	60	80	90	50
19	80	70	90	80	100
20	90	80	60	40	80

Table 4. Group Means and Standard Deviations of Percent Correct Responses

	Object Group (n = 11)	*Picture Group (n = 9)*		
	Mean (SD)	*Mean (SD)*	*t*	*p*
Symmetric Object-Picture	51.82 (11.68)	75.56 (8.82)	5.028	<.001
Symmetric Picture-Object	50.91 (8.31)	62.22 (10.93)	2.632	.009
Generalized Symmetric Object-Picture	51.82 (17.79)	74.44 (10.14)	3.383	.002
Generalized Symmetric Picture-Object	54.55 (10.36)	67.78 (17.87)	1.967	.036
Generalized Identity Picture-Picture	54.55 (8.20)	76.67 (16.58)	3.653	.002

Discussion

The Picture Group performed significantly better than the Object Group on four of the five matching tasks. Individual data showed that only one Object Group participant (P11) met the pass criterion on one task, whereas eight of nine Picture Group participants met the pass criterion on at least one task with six participants passing two or more tasks. Despite the between-group differences on the four discrimination tasks, the relative importance of each task is less clear. Moreover, examination of individual data revealed some unexpected performance patterns that warrant discussion.

First, for the symmetric object-picture and picture-object tasks, although five participants passed the object-picture task, four of these five participants did not pass the reverse picture-object relation involving the same stimuli (Table 3). No participant showed the opposite pattern (passing picture-object and failing object-picture). This suggests that the picture-object relation (pictures as samples and objects as comparisons) may be more difficult than the object-picture relation when the roles of the stimuli were reversed. Of the four participants who did not pass the picture-object relation, three were tested on the symmetric picture-object task before the symmetric object-picture task, which may suggest a possible practice effect. However, this was not observed with other participants. For participants who were tested on the symmetric object-picture task before the symmetric picture-object task, mean accuracy was 60.9% and 53.6% for the two tasks, respectively. For participants who were tested on the two tasks in the reverse order, mean accuracy was 58.9% and 64.4% for the two tasks, respectively. In other words, participants performed slightly better on the symmetric object-picture task than on the picture-object task regardless of order.

Second, all four participants who had passed the symmetric object-picture task and failed the symmetric picture-object task also passed

Table 5. Number (%) of Participants Who Met the Pass Criterion (≥ 80%) on Each Task

	Symmetric		*Generalized Symmetric*		
	Object-Picture	*Picture-Object*	*Object-Picture*	*Picture-Object*	*Generalized Identify Picture-Picture*
Object Group n = 11	0 (0)	0 (0)	1 (9.1)	0 (0)	0 (0)
Picture Group n = 9	5 (55.6)	1 (11.1)	5 (55.6)	5 (55.6)	6 (66.7)

the generalized symmetric picture-object task. This is unexpected in that generalized matching is usually considered more difficult (Pear, 2001). This pass/fail pattern was also observed to a lesser extent in object-picture matching. Of the five Picture Group participants (P12, P15, P17, P18, and P19) and one Object Group participant (P11) who had passed the generalized symmetric object-picture task, three (P11, P12, P15) did not pass the symmetric object-picture task. What might have caused this performance pattern? One possibility is that the observed results may have been due to a task order effect (e.g., symmetric tasks preceded generalized symmetric tasks). For those participants who failed the symmetric object-picture matching task but passed the generalized symmetric object-picture matching task, two of the three participants received the symmetric task prior to the generalized symmetric tasks. Of the four participants who had failed the symmetric picture-object task but passed the generalized symmetric picture-object task, two were presented with the symmetric task prior to the generalized symmetric task. Therefore, the results could not be attributed to order of testing. Examination of other participants also showed that no apparent practice effect (i.e., performance improvement as testing progressed). When examining all participants as a group, the mean percent correct was 60.5, 60.0, 61.5, 61.0, and 62.5 from the first to the last task, respectively. Another possibility that could have affected the difference (or lack of) between symmetric object-picture performance and generalized symmetric object-picture performance was that the former trials might have functioned as generalized matching trials. For both tests, we selected stimuli that were unfamiliar to the participants to lessen the influence of history. Procedurally, the two tests differed in that the symmetric object-picture performance used the same stimulus pair across trials, whereas the generalized symmetric object-picture performance used a different stimulus pair on every trial. Since the participant did not receive reinforcement for correct matching in both procedures, it is possible that the symmetric object-picture trials might have functioned as generalized matching trials despite the repeated exposure to the same stimuli.

Participant 14 also provided an unexpected finding. He was the exception in the Picture Group who did not pass any of the five tasks. His highest accuracy was 70% correct on the symmetric and generalized symmetric object-picture tasks. It is possible that this participant would have met the pass criterion if more test trials were administered. However, Participant 14's performance does raise the possibility that skills other those tested may be important to the effectiveness of picture preference assessment.

Except for P14, however, all other Picture Group participants passed at least one of the three generalized matching tasks (P13 and P20 passed one each; P12, P15, P16, and P18 passed two each; and P17 and P19 passed three each). Perhaps the critical skill is to be able to perform some form of generalized matching, be it object-to-picture, picture-to-object, or picture-to-picture. The discriminations investigated are clearly not exhaustive, future research might consider including identity object-object matching and generalized identity object-object matching.

Further research is also needed to determine if one or a combination of generalized conditional discriminations are functionally related to the effectiveness of picture preference assessments. Similar to the approach taken by Nguyen et al. (2009), this can be evaluated by teaching individuals who are unable to perform picture preference assessments (e.g., individuals in the Object Group in this study) the failed conditional discriminations. If, after learning the discriminations, the individual shows improved concordance between object and picture preference assessments, it can be said that the matching task is a prerequisite to perform preference assessments using pictures.

A secondary finding of this study is the relation between ABLA performance and picture preference assessment. First, previous studies have shown that passing ABLA Levels 2 and 3 (ability to learn to perform simple discriminations with position and/or visual cues) are associated with object preference assessment (Thomson et al., 2007; Conyers et al., 2002; de Vries et al., 2005). Consistent with this finding, the present study shows that all 11 Object Group participants passed up to ABLA Levels 2 or 3 and none passed Level 4. Second, previous research also showed that passing ABLA Level 4 (ability to learn to perform partial-identity visual matching) is positively correlated with picture preference assessment effectiveness (Conyers et

al., 2002; de Vries et al., 2005). Consistent with this finding, all four participants (P12, P16, P17, and P19) who passed up to ABLA Level 4 were able to respond to picture preference assessment (Table 1). However, 5 (31%) of the 16 participants who did not pass ABLA Level 4 (P13, P14, P15, P18, and P20) selected their HP items in the picture mode at 80% or higher. This suggests that ABLA Level 4 may underestimate a client's ability to respond to picture preference assessments. Future research should further examine the association between the ABLA and picture preference assessment effectiveness.

Overall, the results of this study extend previous research on relations between discrimination skills and picture preference assessments in several ways. First, this study extends previous research by Clevenger and Graff (2005) and Nguyen et al. (2009) by using a larger sample in a group design. Second, the participant's ability to respond to vocal preference assessment was unknown in the Clevenger and Graff study. In this study, the participant's ability to respond to preference assessment in vocal mode was controlled through direct preference assessment prior to testing the discrimination tasks. Third, this study expanded on previous research by examining the relation between generalized matching and picture preference assessment effectiveness. Lastly, this study added to the findings on the relation between ABLA performance and preference assessment. Providing choices to people with developmental disabilities is an important dimension of quality of life. Therefore, assessing preferences and providing preferred items or activities should be incorporated into the daily lives of these individuals. However, we must consider the discrimination skills of the individual in order to develop and use the most effective assessment procedures (Conyers et al., 2002; de Vries et al., 2005). As our understanding of the relation between various discriminations and picture preference assessments increases, we will be in a better position to design an effective training program by incorporating critical discriminations as target behaviors.

Key Messages From This Article

People with disabilities: Choices should be provided to you with consideration given to your abilities.

Professionals: The method of preference assessment should be individualized based on the discrimination ability of the person with disabilities.

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