

Teaching Staff Members to Provide Choice Opportunities for Adults with Multiple Disabilities



Mary Salmento
Lehigh University

Linda M. Bambara
Lehigh University

Abstract: The purpose of this study was to evaluate a staff training package on staff members' ability to present single-stimulus choice opportunities in daily routines for four adults with profound mental retardation and severe physical disabilities. A multiple baseline across staff member/adult dyads was used to evaluate the effects of a three-component training package involving a consultation meeting, in vivo training using modeling and practice sessions, and feedback on the behavior of staff members and adults. Results showed an increase in the number of choices provided by the staff members and the number of choices made by the adults with disabilities. The changes in staff member behavior and adult responses were maintained immediately following training and at 1- and 3-month follow ups. Generalization data showed increased choice opportunities during the lunch routine with the same adult and during the dressing and grooming routine with another adult. Advantages of structuring choice opportunities using single-stimulus presentations are discussed.

“Positive behavior support is grounded in person-centered values that treat all people, regardless of their level of ability or the nature of their challenging behavior, with the same respect and dignity we hold for ourselves” (Bambara & Knoster, 1998, pp. 2–3). Person-centered values require us to honor personal preferences and choices (Bambara & Knoster, 1998). Providing opportunities for choices can have important advantages, such as enhancing quality of life (Bannerman, Sheldon, & Sherman, 1990; Hughes, Hwang, Kim, Eisenman, & Killian, 1995; Kern, et al., 1998), decreasing problem behaviors (Bambara, Koger, Katzer, & Davenport, 1995; Cooper et al., 1992; Dunlap et al., 1994; Dyer, 1987; Dyer, Dunlap, & Winterling, 1990; Foster-Johnson, Ferro, & Dunlap, 1994; Moes, 1998), and increasing motivation (Cooper & Browder, 1998; Foster-Johnson et al., 1994) and task engagement (Bambara et al., 1995; Dyer et al., 1990). However, several researchers (Houghton, Bronicki, & Guess, 1987; Rowland, 1990; Sigafos, Roberts, Kerr, Couzens, & Baglioni, 1994; Wilcox, Kouri, & Caswell, 1990) have observed that direct support staff members and teachers typically overlook opportunities for choice making, and frequently fail to respond to individuals' self-initiated expressions of choice.

Providing meaningful choice opportunities is one way to enhance the quality of life for people with severe disabilities. Many professionals describe procedures for structuring choice opportunities within routines throughout the day (e.g., Bambara et al., 1995; Brown, Belz, Corsi, & Wenig, 1993; Parsons, Harper, Jensen, & Reid, 1997; Parsons & Reid, 1990; Reid & Parsons, 1991; Sigafos, Roberts, Couzens, & Kerr, 1993). A structured choice opportunity involves presenting two or more alternatives, waiting for a response, and then honoring choice by providing the person with the selected option. Unfortunately, despite the emphasis on choice and choice procedures, people with the most severe disabilities remain the most vulnerable to the absence of choice and control in their lives (Houghton et al., 1987; Kishi, Teelucksingh, Zollars, Park-Lee, & Meyer, 1988; Parsons, McCarn, & Reid, 1993; Reid & Parsons, 1991; Stancliffe, 1995).

Several researchers have directed their efforts toward teaching staff members in community settings how to structure opportunities for choice making for adults with severe and profound mental retardation during daily routines. Specially, Parsons and Reid (1990) and Reid and Parsons (1991) trained staff members in community resi-

dences to provide choice during meal and/or snack times. Sigafoos et al. (1993) trained staff members to provide choices during leisure activities, and more recently, Parsons et al. (1997) taught staff members to provide choice opportunities during the leisure routines within a senior program for older adults with severe disabilities. In each of these studies, staff training involved the use of a multicomponent intervention, generally consisting of a brief inservice lecture, modeling and role playing, and ongoing feedback on staff members' in vivo performance. Taken together, these studies uniformly demonstrated that prior to training, staff members offered few opportunities for choice making, but when trained, staff members' provision of choice opportunities increased substantially. Further, across all studies, the adult's choice responses increased proportionately with increases in staff behaviors, providing evidence that choice making for adults with severe disabilities is dependent in part on the opportunities provided.

One issue that deserves further attention in the staff training literature is teaching staff members how to structure meaningful choice opportunities for people with severe cognitive and physical disabilities who have difficulty making clear, direct choice selections. Some individuals who are nonsymbolic communicators rely on unconventional gestures such as eye gaze, body language, or vocalizations to express preferences. However, because of their idiosyncratic nature, unconventional gestures can be easily overlooked as indicators of choice (Houghton et al., 1987; Rowland, 1990; Sigafoos et al., 1994; Wilcox et al., 1990). Other individuals may be physically incapable of making direct choice selections due to severe motor impairments. Still others, who are capable of making direct selections, may respond inconsistently, and eventually not at all due to the intense physical effort required to coordinate some motor movements (Sigafoos & Dempsey, 1992; Sigafoos, Laurie, & Pennell, 1995).

As an alternative to direct choice selections, Sigafoos and Dempsey (1992) and Green et al. (1988) demonstrated that idiosyncratic gestures in the form of approach or rejection behaviors can be used as valid indicators of choice or preference by people with profound and multiple disabilities. To demonstrate this, Sigafoos and Dempsey observed three children with multiple disabilities under two conditions in an ABAB reversal design. In the first condition, when the child approached one of two food or beverage items by looking at or toward an item, that item was given to the child. After receiving the item, the child was then observed to determine whether the item was accepted or refused. In the contrast condition, the child was given the item that was not selected. The results indicated that the children were more likely to accept items corresponding to their prior choice and were more likely to refuse items they did not approach. In a related study, Sigafoos and colleagues (1995) concluded that even when

children cannot make direct choice selections due to physical limitations, they nonetheless can indicate choice through idiosyncratic gestures and can benefit from the provision of structured choice opportunities.

Green and colleagues (1988) observed the approach and rejection responses of seven students with profound disabilities in the presence of a single object. They found approach behaviors to be valid indicators of preference by demonstrating that the items assessed to be preferred functioned reliably as reinforcers during skill instruction. Although the researchers' focus was on assessment, their use of a single-stimulus presentation provides important implications for practice. That is, presenting two or more choice options simultaneously, as in the Sigafoos and Dempsey (1992) study, may be physically taxing for some individuals as the task requires them to scan each item and then direct a gaze or movement toward one of the items. Choice selections may be unclear and difficult to execute due to inherent motor difficulties. As an alternative to presenting simultaneous options, the study by Green et al. (1988) suggested that idiosyncratic choice selection can be made by people with significant disabilities by presenting items in succession, one at a time.

In the present study, we sought to extend the staff training literature by teaching staff members who work with adults with severe cognitive and physical disabilities to provide multiple, single-stimulus choice opportunities during daily routines and to respond to each adult's idiosyncratic gestures of preference. Based on the procedures of other studies (Green, Parsons, & Reid, 1993; Sigafoos, Roberts, Couzens, & Caycho, 1992), staff training consisted of three components: an inservice consultation meeting, in vivo training, and ongoing feedback on the staff members' performance. In addition, we sought to extend research by assessing staff maintenance and generalization of choice opportunities across a different routine and another adult with severe multiple disabilities. To date, only Sigafoos et al. (1993) have assessed staff generalization across activities, with limited results. Specifically, this study addressed three questions: What are the effects of training on staff members' provision of single-stimulus choice opportunities during a daily dressing routine? Will staff members maintain and generalize choice opportunities across a different routine and across different adults? and What are the effects of increased choice opportunities on the choice responses of adults with severe multiple disabilities?

Method

PARTICIPANTS AND SETTING

Four support staff members and four adults residing at a community-based residential home serving medically fragile individuals with profound mental retardation and

severe physical disabilities participated. The four staff members were selected from among those who had a high school diploma, typically worked with the adult participants during the day, and had a minimum of 6 months of work experience at the residential home. Staff members ranged in age from 23 to 37 years and had worked at the home from 8 months to 4 years.

The adults with multiple disabilities were selected based on their ability to indicate preference through idiosyncratic response modes. Individual response modes were identified by observing voluntary body movements and selecting those that appeared to be associated with the approach or rejection of items (e.g., smiling when given a favorite food and making a face or pursing lips when given a nonpreferred food) for each participant. To validate the gestures as indicators of preference, we used Reid, Parsons, and Green's (1991) assessment procedures. Adults who demonstrated a consistent preference from two food items were selected to participate in the study.

Each staff person was paired with one adult participant. Table 1 identifies each pair and describes the participants with disabilities according to their diagnoses and response modes. Claire (28 years) had several diagnoses. She had difficulty controlling her arms and legs due to spasticity, but was able to turn her head from side to side and make facial expressions. She indicated an acceptance by smiling and/or looking at an item and a rejection by frowning and/or looking away from an item. Claire usually communicated through facial expressions. Doris's (28 years) body was in a fixed position; she could not bend at the waist or move her legs, arms, or hands, and she had extreme difficulty moving her fingers. She was able to turn her head from side to side and could make facial expressions. Doris usually communicated through facial expressions, by smiling and laughing. She indicated an acceptance by smiling and looking at an item and a rejection

by frowning and looking away from an item. Tony (51 years) could not move his legs, but he could control his head, arms, hands, and fingers. He communicated through facial expressions and was learning to use a communication board. He indicated an acceptance by pointing and a rejection by not pointing to an item. Jack (27 years) was able to move his arms and legs, but only slowly and with extreme effort. He indicated an acceptance by pointing and a rejection by pulling his arm away or not pointing to an item. Jack usually communicated through facial expressions and occasional pointing.

Four additional adults with severe multiple disabilities participated for the purposes of assessing staff generalization. These adults were selected based on their ability to execute voluntary bodily movements that were similar in form to those of the four original participants.

The consultation component of staff training occurred in a staff meeting room. All remaining observations and training occurred in the adults' bedrooms during naturally occurring routines. Generalization probes were conducted in the dining room during a lunch routine and in the adult's bedrooms during dressing and grooming routines.

DESIGN AND PROCEDURES

Design

A multiple baseline across staff member/adult dyads was used to evaluate the effects of the staff training package on the number of choice opportunities provided by staff members and the number of choice responses made by the adults. The training package was implemented sequentially across staff member/adult dyads, with training starting for a dyad after the previous dyad reached criteria on the steps for providing a choice opportunity during the feedback phase. The last dyad was added after the second staff participant withdrew from the study.

Table 1. Participant Characteristics

Staff member	Adult	Age	Diagnoses	Response modes
Jasmine	Claire	28	Profound mental retardation, cerebral palsy with spastic athetosis, scoliosis, seizure disorder, nonambulatory, tongue thrust, right hip displacement	Acceptance—Look and/or smile Rejection—Look away and/or frown
Nicole	Doris	28	Profound mental retardation, cerebral palsy with spastic quadriplegia, scoliosis, spinal fusion, nonambulatory, tongue thrust, seizure disorder, Harrington rod, microcephaly, femoral head resection	Acceptance—Look at and smile Rejection—Look away and frown
Brenda	Tony	51	Moderate mental retardation, cerebral palsy, nonambulatory, seizure disorder	Acceptance—Point at with finger Rejection—No point
Jeffrey	Jack	27	Profound mental retardation, cerebral palsy with spastic quadriplegia, contractures of all extremities, scoliosis, osteoporosis, nonambulatory, tongue thrust, seizure disorder	Acceptance—Point with finger or hand Rejection—No point or pull hand/finger away from item

Baseline

Baseline observations were conducted between one and four times per week on each staff member/adult dyad during their normal dressing and grooming routine that occurred during the morning hours. No changes were made to the routine and no feedback was provided to staff members.

Staff Training Intervention

Staff training consisted of three components: a consultation meeting, in vivo training, and feedback. The purposes of the first two components were to (a) provide a rationale for presenting choice opportunities, (b) teach staff members how to identify routines, (c) teach staff members to recognize choice opportunities within routines, and (d) teach staff members how to identify and respond to approach/rejection behaviors as indicators of choice. The consultation meeting and in vivo training were conducted one on one and lasted about 1 week.

The consultation meeting began with a discussion of the importance of choice making for all people, including people with profound mental retardation and severe physical handicaps. Next, Brown and colleagues' (1993) choice diversity model, which describes choice across several dimensions, was presented and discussed. These dimensions include a choice of tasks between or within activities or routines, choice of whether to participate, choice of whom to participate with, choice of where and when, and choice to terminate a routine or activity. Using Brown and colleagues' model, the staff members were guided to identify several choice opportunities for various routines across the day, and then specifically for the dressing and grooming activity. For the dressing routine, choice opportunities staff members identified included (a) choices between two items (e.g., shirts, pants, socks, shoes, deodorant, cologne/perfume, hats, accessory items, or lotions), (b) either/or choices (e.g., "Do you want to wear perfume or not?"), and (c) choices of order (e.g., "Do you want to put your shirt on first or your pants on first?"). The consultation meeting also involved guiding the staff members to identify approach and rejection behaviors as choice responses by the adults in their dyads. The staff members' basic understanding of the topics were assessed informally through questions and answers. The consultation meeting lasted approximately 2 hours, divided over 2 days.

During the second component, in vivo training, staff members were taught (a) how to present the previously identified choice opportunities during the actual dressing and grooming routine and (b) how to respond to each adult's choice responses. The staff members were taught to follow a sequence for presenting and responding to choices within routines. The sequence for providing choice opportunities was based on the assessment and choice procedures of several authors (Green et al., 1988; Sigafoos &

Dempsey, 1992; Sigafoos et al., 1993). However, the sequence was adapted for a single-stimulus presentation and included

1. Present and describe both choice options.
2. Offer first option and wait 5 seconds for a response.
3. Offer second option and wait 5 seconds for response.
4. Provide a choice, if one of the items is clearly selected.
5. Reoffer options, repeating steps 2 and 3 if the choice selection is unclear.
6. Repair, if necessary.
7. Repeat the sequence for additional choice opportunities. See Figure 1 and Table 2 for a visual flowchart and a detailed description of the sequence for providing a choice opportunity.

In vivo training occurred during the adult's dressing and grooming routine. The instructor modeled the steps for presenting the first choice opportunity, and then observed the staff person presenting the second opportunity. Correct responses were praised, and the staff person was encouraged to present the next choice. If the staff person

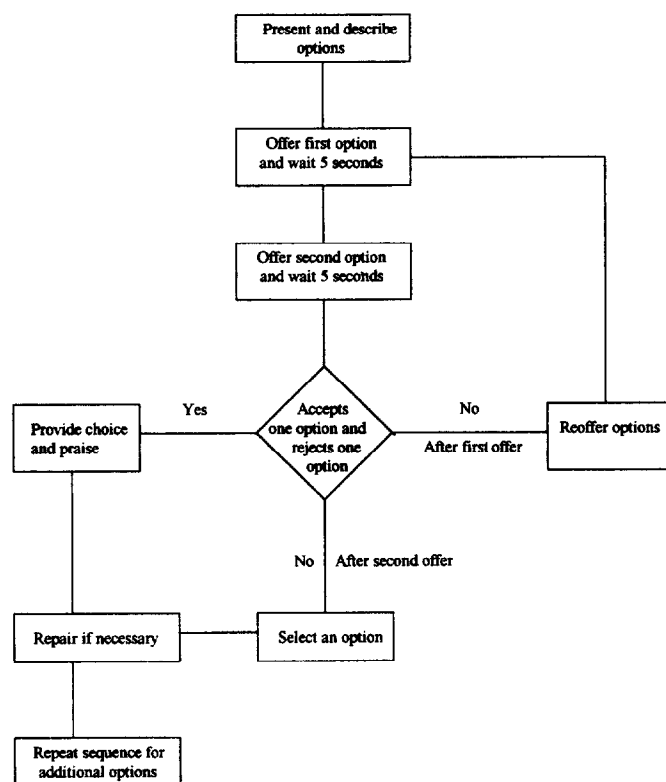


Figure 1. Flowchart of the components and sequence of providing choice opportunities.

Table 2. Sequence for Providing Choice Opportunities

1. *Present and describe options.* Describe the two options to the adult. Describe each option by putting it in the adult's visual field and gently rubbing each item against the adult's arm (so that he or she can feel the texture of the item).
2. *Offer first option.* Ask the adult if he or she wants to wear the first item by showing it to the adult and waiting 5 seconds for the adult to respond by making a voluntary movement toward the item for 3 seconds or a rejection away from the item. If the adult begins to approach the item, allow him or her enough time to finish the response.
3. *Offer second option.* Ask the adult if he or she wants to wear the second item by showing it to him or her and waiting 5 seconds for the adult to respond by making a voluntary movement toward the item for 3 seconds or a rejection away from the item. If the adult begins to approach the item, allow enough time to complete the response.
4. *Reoffer options.* If the adult does not clearly approach one item and reject the other (no response or no choice), then reoffer the items a second time (repeat Steps 2 and 3). If no choice is made after the second offer, select and give one option to the adult.
5. *Provide choice.* If the adult approaches one option and rejects the other (choice response), provide the selected item and praise the adult.
6. *Repair.* Repair if the adult does not seem satisfied or happy with his or her choice. Respond by saying, "Oh, you made a mistake or changed your mind," and then prompt the adult to approach the other item. Provide the adult with the other item.
7. *Repeat.* Repeat the sequence for the next choice opportunity identified in the routine.

did not implement the sequence correctly, the instructor again modeled, providing the staff person an opportunity to practice on the next choice occasion. Training on this component continued until staff members completed Steps 1 through 6 for at least 75% of possible choice opportunities for at least 2 consecutive days. Although choice opportunities were preselected (e.g., choice of pants), the actual choice options (e.g., different color, type of pants) could vary from day to day.

During the third component of training, staff members were provided with feedback on their performance immediately after the grooming routine. Feedback consisted of praise or correction for the total number of choice opportunities presented and for implementing the correct sequence. In addition, staff members were given alternative suggestions for offering choice if the choice opportunities fell below 75% of the identified opportunities. The feedback phase continued until staff members consistently offered at least 75% of the number of choice opportunities defined during the consultation meeting and implemented all steps for presenting choice correctly for 2 out of 3 sessions.

Maintenance and Follow Up

Following the feedback component, maintenance data were collected for at least 3 weeks. As at baseline, staff members were not provided feedback on their performance during the maintenance and follow-up phases. Follow-up data were collected 1 month and 3 months after each staff member/adult dyad completed the maintenance phase.

Generalization

Staff generalization of choice procedures was assessed across a different routine with the same adult participant

in the dyad and across a different adult in a similar dressing and grooming routine. Generalization data were collected during baseline, feedback, and maintenance phases, with each change in phase corresponding to the change in phases in the multiple-baseline design of the study. No feedback or training was provided during any generalization observations. Generalization observations with the same adult occurred during a lunch routine. Observations with a different adult occurred during that adult's dressing and grooming routine.

RESPONSE DEFINITIONS AND RECORDING PROCEDURES

During each observed routine, data were collected on the number of choice opportunities provided by staff members and the number of choice responses made by the adults with disabilities. A choice opportunity was scored when a staff person completed the entire sequence correctly. A primary observer recorded a plus (+) or minus (-) sign for each step of the sequence.

To measure choice response, data were collected on the adult's approach/rejection behaviors to each single stimulus presentation (Kennedy & Haring, 1993; Reid et al., 1991). An *approach* was defined as the adult making an apparent voluntary body movement toward an option for at least 3 seconds within 5 seconds of the staff member providing the item (Green et al., 1988; Reid et al., 1991). Alternatively, a *rejection* was defined as the adult making an apparent voluntary body movement away from the item within 5 seconds of the staff member providing the item. Approach/rejection responses were individually defined (see Table 1) and identified for each participant during the selection phase of the study. A choice response was scored when the adult approached one item and

rejected the other during either the first or second offer within a single choice opportunity. To preserve the adult's dignity during personal care observations, support staff members used privacy screens when appropriate.

INTEROBSERVER AGREEMENT

A second observer, who was naïve to the purpose of the study, recorded data simultaneously with but independently from the primary observer for approximately 28% of the total observations for each dyad. Agreement checks were conducted at least once in each phase of the study for all dyads. An *agreement* for choice opportunities was defined as both observers recording the same choice offered by the staff member, and the same scoring for correct/incorrect steps on the data collection sheet. An agreement for choice response was noted when both observers recorded the same choice opportunity and the same approach/rejection behaviors made by the adult with disabilities. Interobserver agreement was calculated by dividing the number of agreements by the number of agreements and disagreements, and multiplying by 100 for both choice opportunities and choice responses. Agreement for choice opportunities ranged from 80% to 100% across staff members, with a mean of 98%. Agreement for choice responses ranged from 83% to 100% across adults, with a mean of 98%.

Results

Figure 2 shows the number of choice opportunities presented by staff members and the number of choice responses made by the adults with disabilities across dyads in the dressing and grooming routine. During baseline, no choice opportunities were presented by the staff members and no choice responses were made by the adults. During the feedback phase, which followed the consultation and in vivo training components, the number of choice opportunities presented by the staff member in each dyad rose dramatically, with session means of 6.4, 4.3, 10, and 10.2 across dyads. Additionally, the number of choice responses made by the adults rose proportionately with the number of choice opportunities presented by the staff members. Maintenance data collected on each of the three dyads indicated that the number of choice opportunities and choice responses maintained relatively stable levels of responding after feedback from staff members was withdrawn. During the 1-month and 3-month follow-up probes, data on choice opportunities and adult responses remained within the range of responding for maintenance, although responses for both measures decreased slightly for each of the three dyads.

In the second dyad, Nicole was given a booster training session during the feedback phase after it was observed that she consistently presented less than 75% of the

identified choice opportunities. The booster session consisted of a discussion about the importance of providing choice opportunities and other alternatives for providing choice opportunities for Doris during the dressing and grooming routine. Shortly after the booster session, the number of choice opportunities Nicole presented increased, but Nicole subsequently withdrew from the study when she resigned from her position.

Figure 3 displays staff generalization to another adult during the dressing and grooming routine and to another routine (lunch) with the same adult in the original dyad. Generalization data were only collected on staff behavior. During baseline, no choice opportunities were presented to other adults during the dressing and grooming routine or with the same adults during the lunch routine. However, after initial training and during the feedback phase of the study, the number of choice opportunities increased for each staff person during the dressing and grooming routine with another adult and during the lunch routine with the same adult, with the exception of Nicole, who did not present choices to the same adult during the lunch routine. During maintenance the number of choices presented by Jasmine, Brenda, and Jeffrey remained consistent with the previous phase in both routines. For Jeffrey, a baseline probe was omitted inadvertently.

Discussion

Choice making is a basic human right that has not been afforded to people with the most severe disabilities (Kern et al., 1998). The absence of choice making renders one powerless to control critical aspects of life and can lead to the demonstration of challenging behaviors. People with the most severe disabilities are dependent on others to create opportunities for choice. In this study, we taught staff members to present choice opportunities to adults with significant physical and cognitive disabilities, using a single stimulus presentation. The results demonstrated that staff members increased choice opportunities during daily routines. Moreover, the results showed that when choice opportunities increased, the choice responses by the adults also increased. Further, staff members generalized their use of the choice-making procedure by increasing the number of choice presentation opportunities across different adults and with the same adult in different routines. Increased opportunities for choice making following training is consistent with previous studies that have taught staff members to recognize opportunities and the choice responses of persons with developmental disabilities (Green et al., 1993; Peck, 1985; Reid & Parsons, 1991; Sigafoos et al., 1993). This study extends the staff training literature (Parsons & Reid, 1990; Reid & Parsons, 1991; Sigafoos et al., 1993) by (a) teaching staff members to offer choices through the use of a single stimulus presentation, (b) pro-

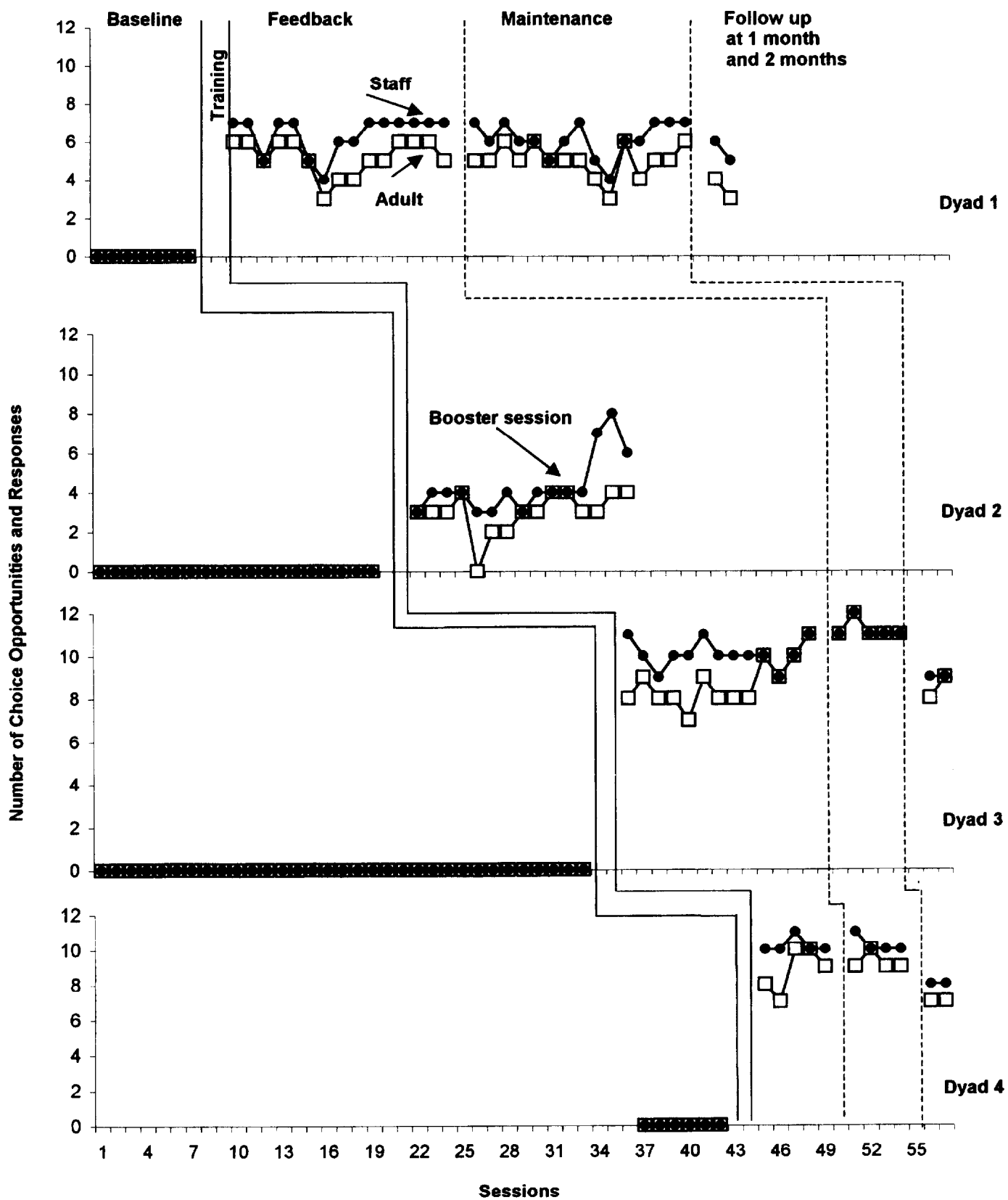


Figure 2. The number of choice opportunities presented by staff members (circles) and the number of choices made by adults (squares).

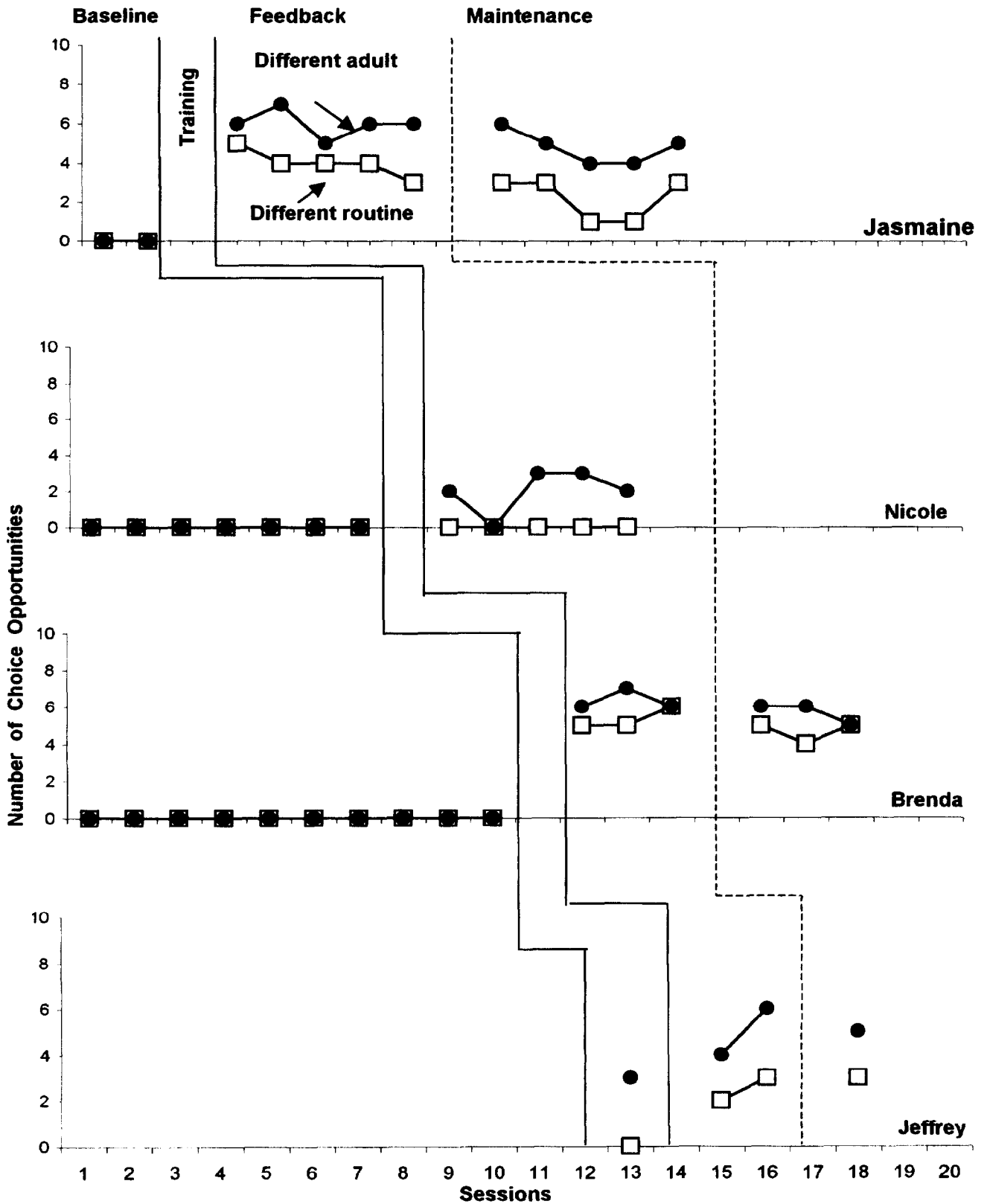


Figure 3. The number of choice opportunities presented by staff members to a different adult within a dressing and grooming routine (circles) and the number of choice opportunities presented by staff members to the same adult within a lunch routine (squares).

viding multiple choice opportunities within a routine, and (c) assessing staff generalization across different adults and routines.

The specific sequence of steps for providing choice opportunities was based on previous research (Sigafoos et al., 1993); however, the steps were adapted for a single-stimulus presentation. Previous studies (Parsons & Reid, 1990; Reid & Parsons, 1991; Sigafoos et al., 1993) offered choices between two items presented together. The current study presented choice options singularly, where the adults could indicate their selections by approaching and/or rejecting each item separately. This presentation style may be better suited for participants with significant communicative and/or physical limitations. Individuals with cerebral palsy with spastic athetoid movements, which can be rapid and continuous, could present communication challenges for both the person and the staff member. The single-stimulus presentation method may provide a way for adults to more clearly indicate their choice selection with less physical effort. Staff members may have difficulty distinguishing voluntary movements from nonvoluntary movements and when two or more items are presented together.

Teaching staff members to embed multiple, diverse choice opportunities within daily routines following Brown and colleagues' (1993) choice diversity model is another contribution of the study. The training resulted in substantially longer observation sessions (30 to 45 minutes) that are more representative of typical routines in natural settings than previous staff training research, where sessions lasted only 5 minutes (Peck, 1985; Sigafoos et al., 1993). Although choice opportunities increased substantially in the present study, it may be beneficial in future investigations to measure the type and diversity of choice opportunities provided by staff members to more fully assess the impact of training.

Few studies in the staff training literature in general have achieved positive demonstrations of staff generalization across settings or people (see Demchak, 1987; Jahr, 1998). One factor that may have contributed to the successful generalization in this study is the generic nature of training. During the inservice component, staff members were guided to apply the choice diversity model across several daily routines and to identify multiple possible response modes indicative of choice selections. However, these data should be interpreted cautiously as the generalization results may have been influenced by the presence of an observer. Future staff training research should address more unobtrusive methods of data collection to avoid this limitation.

Another limitation of the study was the loss of Nicole (second dyad) during the feedback phase and the addition of Jeffrey, without having completed an extended concurrent baseline. Although these modifications weaken the strength of the multiple-baseline design, experimental

control was nonetheless established through sufficient staggered replications.

Future research seems warranted to broaden understanding of what promotes the provision of choice-making opportunities by staff members in service settings. The data highlight different levels of staff response to training, with Nicole in the second dyad offering the fewest opportunities during training and generalization sessions. These differences across staff members may be explained by variations of the adults' response mode and the staff members' motivation to participate. For example, Sigafoos and colleagues (1994) suggested that teachers provide more communicative opportunities to children with greater communicative skills. Similarly in this study, the larger number of choice opportunities were presented to the adults with the ability to point, suggesting that staff members may have been influenced by this more recognizable response mode.

Additionally, staff members may have been negatively influenced by perceived job constraints. As noted by Reid and Parsons (1991), offering choices may take more staff member time and effort. In the present study, staff members had a difficult time waiting 5 seconds for a response, and during training often needed to self-prompt by counting the seconds out loud. At times staff members seemed more preoccupied with completing the routine than providing choice opportunities. This suggests that job descriptions may need to be modified to make choice making a critical responsibility of staff support.

In summary, the findings from this and other studies (Parsons et al., 1993; Reid & Parsons, 1991; Sigafoos et al., 1993) indicate that when staff members are trained in recognizing choice opportunities and recognizing adult responses, the number of choice opportunities offered increases. What motivates staff members to continue to provide these opportunities across routines and adults in the absence of observers remains to be answered though future research. Incorporating the training package with groups of staff members as opposed to individuals and/or as part of their routine job responsibilities may provide adults with disabilities more opportunities to make choices on a regular basis.

ABOUT THE AUTHORS

Mary M. Salmento, MEd, is a doctoral student in special education at Lehigh University. Her current interests include positive behavior supports, listening, and communication. Linda M. Bambara, EdD, is an associate professor of special education and executive director of the Lehigh Support for Community Living at Lehigh University. Her research interests include choice, positive behavior support, and supports for adults with developmental disabilities. Address: Mary Salmento, 48 Lynn Ave., Oreland, PA 19075.

REFERENCES

- Bambara, L. M., & Knoster, T. (1998). *Innovations: Designing positive behavior support plans*. Washington, DC: American Association on Mental Retardation.
- Bambara, L. M., Koger, F., Katzer, T., & Davenport, T. (1995). Embedding choice making in daily routine. *The Journal of the Association for Persons with Severe Disabilities*, 20, 185–195.
- Bannerman, D. J., Sheldon, J. B., & Sherman, J. A. (1990). Balancing the right to habilitation with the right to personal liberties: The rights of people with developmental disabilities to eat too many doughnuts and take a nap. *Journal of Applied Behavior Analysis*, 23, 79–89.
- Brown, F., Belz, P., Corsi, L., & Wenig, B. (1993). Choice diversity for people with severe disabilities. *Education and Training in Mental Retardation*, 28, 318–326.
- Cooper, K. J., & Browder, D. M. (1998). Enhancing choice and participation for adults with severe disabilities in community-based instruction. *The Journal of the Association for Persons with Severe Disabilities*, 23, 252–260.
- Cooper, L. J., Wacker, D. P., Thursby, D., Plagmann, L. A., Harding, J., Milliard, T., & Derby, M. (1992). Analysis of the effects of task preferences, task demands, and adult attention on child behaviors in outpatient and classroom settings. *Journal of Applied Behavior Analysis*, 25, 823–840.
- Demchak, M. A. (1987). A review of behavioral staff training in special education settings. *Education and Training in Mental Retardation*, 4, 205–217.
- Dunlap, G., DePerczel, M., Clarke, S., Wilson, D., Wright, S., White, R., & Gomez, A. (1994). Choice making to promote adaptive behavior for students with emotional and behavioral challenges. *Journal of Applied Behavior Analysis*, 27, 505–518.
- Dyer, K. (1987). The competition of autistic stereotyped behavior with usual and specially assessed reinforcers. *Research in Developmental Disabilities*, 8, 607–626.
- Dyer, K., Dunlap, G., & Winterling, V. (1990). Effects of choice making on the serious problem behaviors of students with severe handicaps. *Journal of Applied Behavior Analysis*, 23, 515–524.
- Foster-Johnson, L., Ferro, J., & Dunlap, G. (1994). Preferred curricular activities and reduced problem behaviors in students with intellectual disabilities. *Journal of Applied Behavior Analysis*, 27, 493–504.
- Green, C. W., Parsons, M. B., & Reid, D. H. (1993). Integrating instructional procedures into traditional congregate care situations for people with severe disabilities. *Behavioral Residential Treatment*, 8, 243–262.
- Green, C. W., Reid, D. H., White, L. K., Halford, R. C., Brittain, D. P., & Gardner, S. M. (1988). Identifying reinforcers for persons with profound handicaps: Staff opinion versus systematic assessment of preferences. *Journal of Applied Behavior Analysis*, 21, 31–43.
- Houghton, J., Bronicki, G. J. B., & Guess, D. (1987). Opportunities to express preferences and make choices among students with severe disabilities in classroom settings. *Journal of the Association for Persons with Severe Disabilities*, 12, 18–27.
- Hughes, C., Hwang, K., Kim J. H., Eisenman, L. T., & Killian, D. J. (1995). Quality of life in applied research: A review and analysis of empirical measures. *American Journal on Mental Retardation*, 99, 623–641.
- Jahr, E. (1998). Current issues in staff training. *Research in Developmental Disabilities*, 19, 73–87.
- Kennedy, C. H., & Haring, T. G. (1993). Teaching choice making during social interactions to students with profound multiple disabilities. *Journal of Applied Behavior Analysis*, 26, 63–76.
- Kern, L., Vorndran, C. M., Hilt, A. A., Ringdahl, J. E., Adelman, B. E., & Dunlap, G. (1998). Choice as an intervention to improve behavior: A review of the literature. *Journal of Behavioral Education*, 8, 151–169.
- Kishi, G., Teelucksingh, B., Zollars, N., Park-Lee, S., & Meyer, L. (1988). Daily decision making in community residences: A social comparison of adults with and without mental retardation. *American Journal on Mental Retardation*, 92, 430–435.
- Moes, D. R. (1998). Integrating choice-making opportunities within teacher-assigned academic tasks to facilitate the performance of children with autism. *Journal of the Association for Persons with Severe Handicaps*, 23, 319–328.
- Parsons, M. B., Harper, V. N., Jensen, J. M., & Reid, D. H. (1997). Integrating choice into the leisure routines of older adults with severe disabilities. *Journal of the Association for Persons with Severe Handicaps*, 22, 170–175.
- Parsons, M. B., McCarn, J. E., & Reid, D. H. (1993). Evaluating and increasing meal-related choices throughout a service setting for people with severe disabilities. *Journal of the Association for Persons with Severe Handicaps*, 18, 253–260.
- Parsons, M. B., & Reid, D. H. (1990). Assessing food preferences among persons with profound mental retardation: Providing opportunities to make choices. *Journal of Applied Behavior Analysis*, 23, 183–195.
- Peck, C. (1985). Increasing opportunities for social control by children with autism and severe handicaps: Effects on student behavior and perceived classroom climate. *Journal of the Association for Persons with Severe Handicaps*, 10, 183–193.
- Reid, D. H., & Parsons, M. B. (1991). Making choice a routine part of meal-times for persons with profound mental retardation. *Behavioral Residential Treatment*, 6, 249–261.
- Reid, D. H., Parsons, M. B., & Green, C. W. (1991). *Providing choices and preferences for persons who have severe handicaps: Practical procedures for good times*. Morganton, NC: Habilitative Management Consultants.
- Rowland, C. (1990). Communication in the classroom for children with dual sensory impairments: Studies of teacher and child behavior. *ACC Augmentative and Alternative Communication*, 6, 262–274.
- Sigafoos, J., & Dempsey, R. (1992). Assessing choice making among children with multiple disabilities. *Journal of Applied Behavior Analysis*, 25, 747–756.
- Sigafoos, J., Laurie, S., & Pennell, D. (1995). Preliminary assessment of choice making among children with Rett Syndrome. *Journal of the Association of Persons with Severe Handicaps*, 20, 175–184.
- Sigafoos, J., Roberts, D., Couzens, D., & Caycho, L. (1992). Improving instruction for adults with developmental disabilities: Evaluation of a staff training package. *Behavioral Residential Treatment*, 7, 283–297.
- Sigafoos, J., Roberts, D., Couzens, D., & Kerr, M. (1993). Providing opportunities for choice-making and turn-taking to adults with multiple disabilities. *Journal of Developmental and Physical Disabilities*, 5, 297–310.
- Sigafoos, J., Roberts, D., Kerr, M., Couzens, D., & Baglioni, A. J. (1994). Opportunities for communication in classrooms serving children with developmental disabilities. *Journal of Autism and Developmental Disorders*, 24, 259–279.
- Stancliffe, R. J. (1995). Assessing opportunities for choice-making: A comparison of self- and staff reports. *American Journal on Mental Retardation*, 99, 418–429.
- Wilcox, M. J., Kouri, T. A., & Caswell, S. (1990). Partner sensitivity to communication behavior of young children with developmental disabilities. *Journal of Speech and Hearing Disorders*, 55, 679–693.

Action Editor: Robert L. Koegel