

TEACHING TEENAGERS WITH AUTISM TO  
SEEK ASSISTANCE WHEN LOST

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Three teenagers with autism were taught to respond to a vibrating pager to seek assistance in community settings when physically separated from their parents or teachers. A multiple baseline probe design across participants demonstrated that, upon being paged, participants successfully handed a communication card to a community member indicating that they were lost. Generalization was assessed in nontraining community sites and on outings with the participants' parents.

DESCRIPTORS: autism, safety skills, vibrating pager, getting lost, seeking assistance

Independent participation in community activities is an important goal for learners with autism, their families, and their teachers. Concerns about safety, however, may impede efforts to foster community independence. Although several studies have focused on teaching safety skills to persons with disabilities (Poche, Brouwer, & Swearingen, 1981; Risley & Cuvo, 1980), no published studies have investigated strategies to teach individuals with autism to seek assistance when lost in community settings. The purpose of this study was to determine if individuals with autism could be taught to respond to a vibrating pager to seek assistance when separated from a teacher or par-

ent (Shabani et al., 2002; Taylor & Levin, 1998).

## METHOD

### *Participants and Experimenters*

The 3 participants in this study (Jane, Lisa, and Craig, ages 17, 13, and 14 years, respectively) all met the diagnostic criteria for autism and exhibited significant deficits in language, socialization, and self-care skills. The experimenters were familiar teachers and graduate students; community members were chosen randomly by the participant and were in no way prepared for participation in the study.

### *Setting and Materials*

Baseline sessions were conducted at five different community sites. Teaching took place at school and in two of the community sites. Three of the community sites were reserved as generalization probe sites where prompting and reinforcers were not provid-

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ed. Materials included a Jtech vibrating pager, worn on the rim of the participant's pocket or waistband, that vibrated for approximately 2 s when activated by the experimenter or parent. Materials also included a communication card placed in the participant's pocket or purse that contained the participant's name, a statement that he or she was lost, and an instruction to call or page the participant's parent or teacher.

#### *Measurement, Design, and Interobserver Agreement*

The dependent measure was the percentage of correct responses to being paged for each teaching trial. Each trial included four steps: approaching an adult, saying "excuse me," producing the communication card, and waiting with the adult until being reunited with the parent or teacher.

A multiple baseline probe design across participants was used to assess the effects of the pager prompt on assistance seeking. A second observer collected reliability data by covertly observing the participant's responses. Interobserver agreement was obtained on responding to the four steps to each teaching trial, and was calculated on a point-by-point basis. The number of agreements was divided by the number of agreements plus disagreements and multiplied by 100%. Reliability data were collected during 30% of the sessions throughout both baseline and intervention, and averaged 98%.

#### *Procedure*

*Baseline.* During baseline, a teacher accompanied the participant to each setting. The participant wore the pager and had the communication card in his or her possession. The teacher slipped out of view without activating the pager; a concealed second observer monitored the participant's safety and recorded responses. After approximately 2 min, the trial was ended, and the teacher reunited with the participant.

*School teaching.* Participants were first taught to give the communication card to a familiar adult at school when paged. Verbal instruction was provided prior to each teaching trial to inform the participant of the expected response. The teacher then stood approximately 1 ft away from the participant and activated the pager. Following the vibration, the teacher immediately guided the participant to approach the nearest adult, provided a verbal model for the participant to say "excuse me," and manually guided the participant to produce the communication card. Praise and edible reinforcers followed correct responses. All prompts and tangible rewards were eventually faded. The criterion for training at all sites was 100% correct independent responses for three consecutive teaching trials.

*Community teaching.* Once the participant was able to give the card to a familiar person at school, teaching began at two community sites. These were randomly assigned each day, and one or two teaching trials were conducted on each outing. These sessions were conducted exactly as baseline except that the teacher signaled the pager to vibrate. If the participant did not produce the card within 30 s, the teacher approached the participant and provided discrete prompts using a least-to-most prompting hierarchy. The criterion for community training was 100% accuracy for three consecutive teaching trials.

*Generalization probes.* At probe sites, prompts, error correction, and tangible reinforcers were not provided. A trial began when the teacher left the participant's view and paged the participant. If the participant did not correctly respond to the pager after 30 s, the pager was activated again. If the participant responded correctly, praise was provided after the teacher was reunited with the participant (e.g., "Jane, you found an adult when your pager signaled, good for you!"). If the participant did not respond correctly after the two pages, the trial was

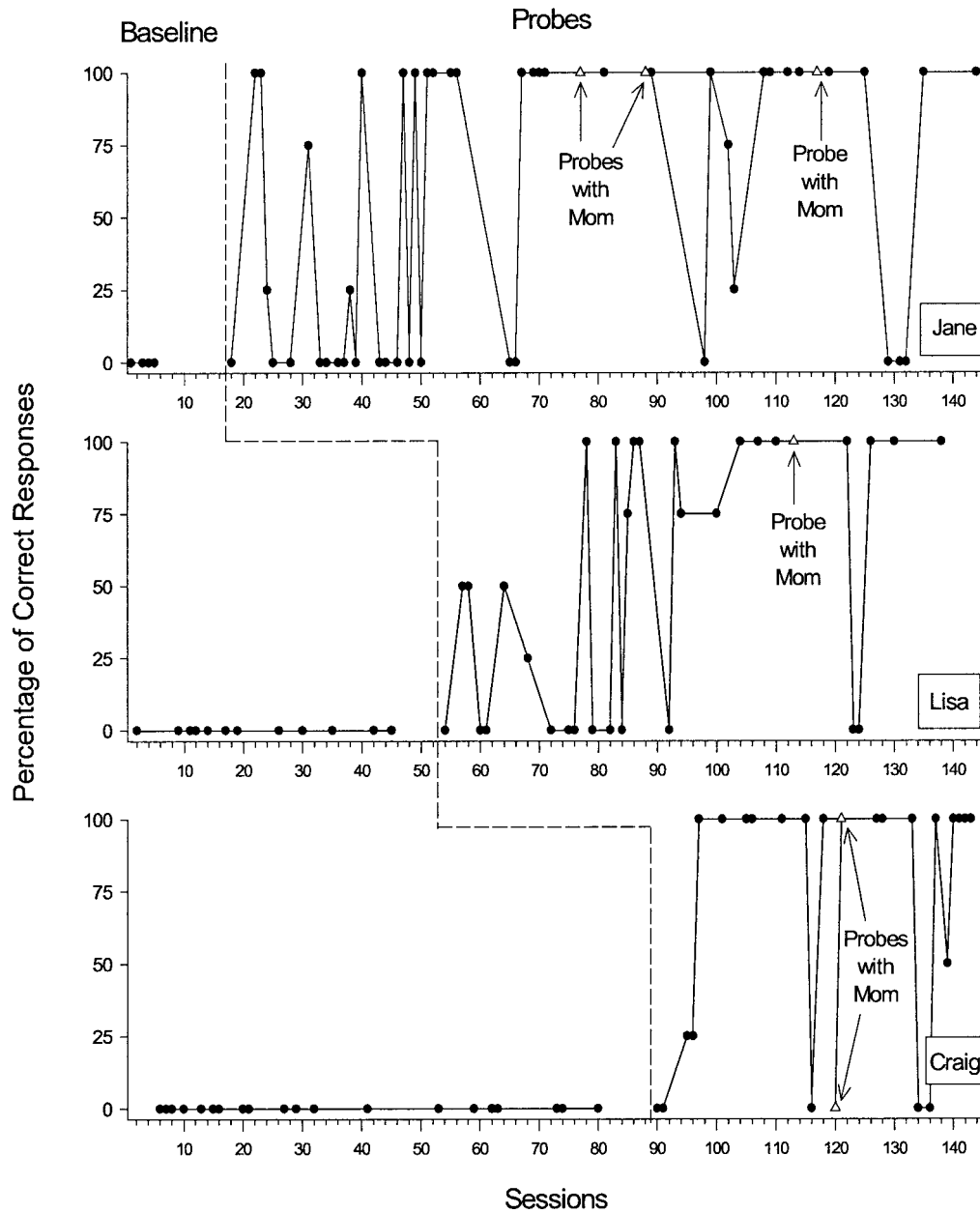


Figure 1. The percentage of correct responses per opportunity across sessions conducted in the generalization sites for all 3 participants.

abandoned after a total of 2 min and the teacher reunited with the participant.

*Parent probes.* These probes were the same as those used in the community probe sites except that the parent accompanied the participant to the setting and activated the pager. A teacher accompanied the participant

and parent to the setting but observed the participant's responses covertly.

## RESULTS AND DISCUSSION

All 3 participants learned to produce the card in response to the vibrating pager at

school and at the community training sites (acquisition data for these locations can be obtained from the first author). Figure 1 shows the data collected at the generalization probe sites (where prompts and reinforcers were not provided). None of the participants produced the communication card in baseline when separated from caregivers. Once prompted by the pager, however, all participants were observed to seek assistance by giving the communication card. Further, all 3 participants demonstrated the response with their parents.

Even though participants in this study were always observed by a second adult to secure their safety, future studies may want to improve the social validity of the training procedures by teaching participants to approach adults who may prove to be more helpful and less potentially dangerous (e.g., a sales clerk or cashier). A methodological limitation of this study was that responses to the pager (prior to being taught how to respond to the pager) were not measured in baseline. This did not permit a comparison of baseline responses to the pager prior to teaching. Acquisition data indicated, however, that none of the participants responded independently during the first teaching session; thus, responses to pager prompts in baseline would have been zero.

The results of this study are promising and suggest possible strategies for ensuring the public safety of individuals with autism

and may serve as a basis for future research. If participants can respond to pagers by producing a communication card, it may also be possible to prompt participants to activate a cellular phone to call home or to answer cellular phones to receive verbal prompts from care providers to seek assistance. Technological advances such as pagers, cellular phones, and Palm Pilots® provide educators and researchers with new tools with which to address the particular challenges of social and community integration for learners with autism. As the technological world advances, so can new intervention efforts aimed at increasing the independent functioning of individuals with autism.

#### REFERENCES

- Poche, C., Brouwer, R., & Swearingen, M. (1981). Teaching self-protection to young children. *Journal of Applied Behavior Analysis, 14*, 169–176.
- Risley, R. M., & Cuvo, A. J. (1980). Training mentally retarded adults to make emergency telephone calls. *Behavior Modification, 4*, 513–525.
- Shabani, D. B., Katz, R. C., Wilder, D. A., Beauchamp, K., Taylor, C. R., & Fischer, K. J. (2002). Increasing social initiations in children with autism: Effects of a tactile prompt. *Journal of Applied Behavior Analysis, 35*, 79–83.
- Taylor, B. A., & Levin, L. (1998). Teaching a student with autism to make verbal initiations: Effects of a tactile prompt. *Journal of Applied Behavior Analysis, 31*, 651–654.

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