TEACHING FOSTER GRANDPARENTS TO TRAIN SEVERELY HANDICAPPED PERSONS

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Five foster grandparents were taught training skills for use in their daily interactions with severely handicapped persons in an institution. Following baseline, specific teaching procedures consisting of teacher instructions, prompts, modelling, and praise were implemented. The grandparents' frequency of training three skill areas increased as the specific teaching was implemented in multiple-baseline format. The total amount of training continued as teacher instructions, prompts, and modelling were terminated and praise continued, although the grandparents spent their training time emphasizing only two of the three skill areas. Teacher presence was gradually reduced over an 11-week period, with no decrease in grandparents' frequency of training. Four of the foster grandchildren, all profoundly retarded and multiply handicapped, demonstrated progress throughout the study. Results were discussed in light of the available contributions of foster grandparents in institutional settings and maintenance of staff training.

DESCRIPTORS: change agents, paraprofessional training, classroom, foster grandparents, severely handicapped adolescents

In the past two decades, paraprofessionals have become increasingly involved in training institutionalized retarded persons. Ward staff, students, and retarded peers have been taught training techniques based on operant principles (Bricker, Morgan, and Grabowski, 1972; Craighead and Mercatoris, 1973; Gardner, 1972a; Gladstone and Sherman, 1975; Horner and Keilitz, 1975). One group of paraprofessionals frequently present in retardation institutions that has received only minimal research attention is the foster grandparent organization. This group of senior citizens represents an important resource that, given appropriate training and supervision, could significantly enhance resident services.

The foster grandparent program is a federally funded project designed to provide purposeful employment to elderly, low-income persons, and to provide increased interpersonal relationships for retarded youth (Bateman and Hawkins, Note 1). Each senior citizen is assigned a small number of retarded children or adolescents and, in principle, considers those persons his/her foster grandchildren. Considering the frequently noted shortage of staff in institutions (Pierce, Hoffman,

and Pelletier, 1974; Rich and Gilmore, 1964; Savino, Kennedy, and Brody, 1968), the value of foster grandparents as training personnel seems noteworthy.

Previous literature has discussed benefits of the foster grandparent program for the grandparents and institutional residents (Nash, 1968). However, only limited research has been reported that investigated their training potential. Two institutional projects have been reported that included grandparents as students (Gray and Kasteler, 1969; Watson, Gardner, and Sander, 1971). With one exception (Heimberg and Bailey, Note 2), functional analyses of training programs for foster grandparents generally have not been attempted. Additional research seems war-

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ranted to demonstrate training skills that they can employ and specific methods of teaching and maintaining those skills.

One population of institutional residents for whom foster grandparents may be especially beneficial is severely handicapped, nonambulatory youth. Historically, severely handicapped children have not received developmental services comparable to persons with less serious disabilities (Cleland, Swartz, and Chasey, 1971; Gunzburg, 1975; Harvey, 1976; Thompson, 1976). However, recent legislation (P.L. 94-142), enacted to ensure appropriate education to all children regardless of severity of handicap (Irvin, 1976), should stimulate more training for the multiply handicapped retarded (Harvey, 1976; Thompson, 1976). The foster grandparents represent an immediately available source of personnel to increase services to this population. The generally low level of gross motor activity of profoundly retarded, physically disabled children appears particularly suited for interactions with senior adults.

A large number of investigations have been reported that demonstrate methods of teaching behavioral techniques to institutional paraprofessionals (see Gardner, 1972*b*; Iwata, Note 3, for reviews). However, shortcomings of such in-service programs have been well discussed in light of their limited impact on the behavior of staff in daily working situations (Iwata, Bailey, Brown, Foshee, and Alpern, 1976; Montegar, Reid, Madsen, and Ewell, 1977) and the lack of maintenance data (Kazdin, 1973). The present investigation attempted to incorporate procedures to teach training skills to foster grandparents for use with multiply handicapped persons, to increase use of those skills in daily interactions with residents, and to maintain skills without daily monitoring by a teacher or supervisor.

METHOD

Participants and Setting

The study was conducted at a state institution for developmentally disabled persons. Five fe-

male foster grandparents working in one ward were asked by the experimenter to participate on a voluntary basis. These particular grandparents were chosen because they previously had been assigned multiply handicapped residents who appeared to receive the least amount of training services from other facility personnel. One grandparent terminated her participation at the beginning of the final experimental condition. The grandparents ranged in age from 63 to 76 yr, had been employed at the center for an average of 5.8 yr, and averaged 9.2 yr of formal education. Their formal job description centered on providing general interactions and affection to residents.

The residents assigned to the grandparents were all multiply handicapped females and ranged in age from 15 to 18 yr. Based on previous psychological evaluations, each girl was described as being profoundly retarded. All were confined to wheelchairs and none performed basic self-help skills. Each girl displayed spastic and/or athetoid limb movements. Except for the 2-hr period spent with foster grandparents each day, these residents generally remained unoccupied in a wheelchair or bed.

The teacher (experimenter) was a 22-yr-old woman employed as a bachelor's level psychologist. She had previous experience with multiply handicapped children and had received undergraduate training in behavior analysis.

A large lounge area, centrally located on the resident's ward, was used for the study. The grandparents sat around a large picnic table with their residents, who remained in wheelchairs. The lounge area was used daily by the grandparents as a place to meet with their residents and contained a number of tables and miscellaneous equipment (wheelchairs, recliners, chairs, *etc.*).

Behavior Definitions

Foster grandparent behavior. Three categories and five subcategories of foster grandparent behavior were defined.

1. Training interaction: behaviors with the apparent purpose of teaching a skill. Any grand-

parent behaviors that appeared to be instructing, prompting, modelling, manually guiding, or reinforcing specific resident skills were counted as training. Grandparents who were engaging in training interactions were further scored for the specific subcategory being trained: (1) *Head and neck skills*: behaviors with the apparent purpose of improving a resident's head and neck control. Examples included moving an object within the resident's visual field and manually turning her head parallel with the object; instructing the resident to look at the grandparent, which required her to move her head; praising a resident for looking at a toy, which required head movement; and holding a toy above the resident's head while calling her name. (2) *Reaching skills*: behaviors with the apparent purpose of improving a resident's skills at extending her arms outward in a reaching manner. Examples included a grandparent asking the resident to touch her while standing several centimeters away, moving the resident's arm toward a ball, and praising a resident for stacking blocks, which required arm extension. (3) *Manipulating skills*: behaviors with the apparent purpose of improving a resident's skills in holding and manipulating objects with her hands and fingers. Examples included placing a rattle in the resident's hand and assisting her in shaking it, instructing a resident to hold a ball, demonstrating how to move her fingers in order to squeak a toy and praising her, and manually guiding a resident's fingers in squeezing a ball of play dough. (4) *Moving body parts*: behaviors with the apparent purpose of teaching residents to move particular body parts on command, with the exceptions of head and neck movements, outward arm extension, and specific hand/finger movements. Examples included physically assisting a resident in moving her leg on command, instructing a resident to raise her folded arms above her legs, and praising a resident for moving her feet when requested. (5) *Other*: behaviors with the apparent purpose of teaching skills other than head and neck control, reaching, manipulating, and moving body parts. Examples in-

cluded prompting the residents to say "hello", attempting to elicit a smile by instructions and modelling, and praising a resident for sitting up straight in her wheelchair.

2. Teacher interaction: attending, listening, or talking to the teacher. Examples included nodding to the teacher, attending to her demonstration of rewarding a resident, and speaking to the teacher about resident progress.

3. Nonwork activities: performing tasks that did not involve residents and were not teacher interactions. Examples included talking with another grandparent without interacting with a resident, looking out the window, sitting and staring with no other apparent activity, searching through a purse, reading a book, *etc.*

Each of the categories (training, teacher interaction, and nonwork) were mutually exclusive, but the subcategories were not. Hence, only one category could be scored for each interval. If more than one category occurred during an interval, observers were instructed to score the category that occurred during the longest part of the interval. If the training category was scored, observers then scored all training subcategories (head and neck, reaching, manipulating, body parts, and other) that occurred for any part of the observation interval.

Teacher behavior. Categories of teacher behavior employed were defined as follows:

1. Approval: positive statements relating to training behaviors. Examples included "Nice training", "Stacey's really turning her head well now. Nice job", *etc.*

2. Disapproval: negative statements directed toward a grandparent for engaging in nonwork activities. Examples would include "Looking out the window won't teach Laura anything", "I'm not sure that's a good idea", *etc.*

3. Neutral: any verbal or physical interaction with a grandparent that is neither approving nor disapproving, such as "It looks like summer is here to stay", helping a grandparent pick up a toy, *etc.*

Observation Procedures

Observers were present at one end of the room approximately 3 m from the closest grandparent during the sessions. Each was equipped with an observation sheet and an earphone connected to a tape recorder for observation instructions. Observations lasted approximately 20 min during the first part of the 30-min session. Individual grandparents were observed on a 10-sec observe, 10-sec record schedule, with the order of the grandparents randomized daily. After each grandparent was observed once, the sequence was repeated until each grandparent was sampled 10 times. The teacher was observed intermittently on a 5-sec observe, 5-sec record schedule, with a total of 20 observation intervals per session. The teacher observations occurred after three grandparents were observed, again after two more grandparents were observed, then after three, *etc.*

Observers and Reliability

Observations were conducted by three undergraduate students assigned to the project as part of a practicum experience and one bachelor's-level staff psychologist. None of the observers was told the experimental purpose of the study nor when experimental phases were changed. All observers were trained through instructions, questions and answers, and practice observations under the direction of the experimenters. Following explanations of the behavior definitions, a test was administered that required memorization of definitions and examples with 100% accuracy. Two 30-min role-playing sessions, which included identifying examples of each category, were then conducted. Finally, before observing as part of the study, each observer kept data simultaneously but independently with a trained observer during the session. Feedback from the experimenter concerning the reliability was provided after each session until reliability of at least 70% was recorded for each category. During sessions, observers stood approximately 1 m apart to ensure independent recordings.

Reliability checks were conducted by a second observer during 50% of all sessions with at least three checks for each experimental condition. Reliability was calculated for each category and each subcategory by dividing the number of agreements as to the occurrence of the specific category or specific subcategory during an interval by the number of agreements plus disagreements. An agreement was scored only when both observers recorded the presence of a behavior. For example, if one observer scored the training category and the head and neck subcategory while another observer scored training and manipulation, then an agreement was scored for training and disagreements for both head and neck control and manipulation. All intervals in which neither observer scored the behavior as occurring were not included in calculating reliability scores.

Experimental Procedures

Curriculum. Before baseline, residents were observed by the experimenter and ward staff to determine their skill level and training needs. The observations suggested that all residents were deficient in elementary gross and fine motor skills. Also, in order to minimize the amount of physical activity required by the grandparents, only skills that could be taught while the grandparent and resident remained seated were considered. Using *A step-by-step learning guide for retarded infants and children* (Johnson and Werner, 1975) as a guide, specific gross motor and fine motor skills appropriate to the residents' skill levels were selected: moving the head and neck, reaching, manipulating objects, and moving other body parts.

Baseline. Baseline consisted of the grandparents meeting with their residents and conducting general activities as they had been doing for several years. However, they were asked to remain in the lounge adjacent to the resident living area for 30 min immediately after picking up their resident in the morning. The lounge generally contained a varying number of toys for use by the grandparents and other persons. To control

for fluctuations in the availability of toys, 20 toys were disbursed at the beginning of each session throughout the study. Included were rattles, blocks, play dough, balls, squeeze toys, and small stuffed animals.

On the first day of baseline, the teacher explained that she would be present each day during the 30-min session in the lounge. She described her purpose as providing assistance in conducting activities with the residents in order to enhance specific skill development. Twenty minutes of this class were spent discussing the four skill areas: head and neck control, arm reaching, object manipulation, and controlled movements of other body parts—in terms of the related resident behaviors and the significance of developing each skill. The teacher also provided verbal instructions about activities with the toys, which could be used to help develop certain skills. For example, the teacher described how play dough might be placed in the resident's hand to teach her to squeeze and the grandparent could get feedback about squeezing by looking at the clay; how to play with a rattle to help grasping development; how to stack blocks to elicit reaching practice, and how to make sounds to elicit head-turning practice. The grandparents were asked to continue their interactions with the grandchildren and to try a number of different activities in the four training subcategories in order to help develop a variety of skills. Types of verbal interactions were also explained, such as instructing residents in particular behaviors and praising residents for compliance. Grandparents were informed that observers would be present to obtain information about interactions between them and the residents.

For the remainder of baseline, specific activities were mentioned daily by the teacher for approximately 2 min at the beginning of each session. Hence, baseline consisted of grandparents conducting activities that they generally engaged in before baseline, along with teacher instructions as to new activities for teaching specific skills. Sessions were conducted on all

week days that three or more grandparents were present.

Specific teaching: head and neck skills. During the second phase, specific teaching (*i.e.*, instructing, modelling, verbal prompting, and praising) was introduced for one subset of grandparent training skills. Grandparents were instructed each day to engage in training interactions that focused on improving the resident's control of head and neck movements, and the teacher modelled various techniques. In addition, the teacher verbally prompted the grandparents to engage in head- and neck-training exercises with the residents (*e.g.*, suggesting alternative approaches), and she verbally approved of foster grandparent behaviors directed at training those skills. The instructions to conduct training in head and neck control were given by the teacher only at the beginning of each 30-min period for approximately 2 to 5 min, except for the first day, during which they lasted approximately 15 min. The modelling, prompting, and praising continued throughout the 30 min. For the final two sessions, instructing, modelling, and prompting were terminated and only teacher praise continued. Throughout each class, the teacher attempted to attend to each grandparent for approximately the same amount of time.

Specific teaching: reaching. During this phase, specific teaching was used for training reaching skills. No instructions, prompts, modelling, or praise were directed at grandparent behaviors related to teaching head and neck control. This condition lasted for eight sessions, with the final three sessions consisting only of teacher praise.

Specific teaching: manipulating objects. Specific teaching was used in this condition to train grandparents to teach object manipulation skills to residents. No instructions, prompts, modelling, or praise were directed at grandparent behaviors related to training head and neck skills or reaching skills. This phase lasted nine sessions, with the final three consisting only of teacher praise.

Praise. The praise condition consisted of instructing grandparents once each day to train any resident skills. Throughout the sessions, the

teacher praised all behaviors that included training in head and neck skills, reaching, or manipulating objects.

In order for grandparents to continue training residents with less direct supervision, the number of days per week of teacher presence was gradually decreased. After the seventh day of the praise condition, the teacher was present for three of the five daily sessions for the following three weeks, and for two of the five sessions for the next four weeks. The days of the week that the teacher was present were chosen randomly. Grandparents were informed by the teacher before reducing her presence that she would be present only intermittently to assist them, but that they should continue training. When the teacher was present, she continued to praise training behaviors as in the beginning of the praise condition.

Throughout the praise condition, observations were conducted during every session that the teacher was present.² To evaluate the amount of training taking place when the teacher was not present, observations were conducted during three sessions in which the teacher was absent. The grandparents were informed that periodically, observers would be present when the teacher was not. For three weeks, one day was randomly chosen for the observations to take place, and grandparents were not told in advance which weeks or days the observers would be present.

Followup. Four weeks after the praise condition was terminated, a followup observation was conducted. During the interval between the final week of the praise condition and the followup observation, the grandparents continued to meet in the lounge area daily, and the teacher was present two randomly chosen days each week. The teacher continued to praise training behaviors as in the praise condition. The followup observation occurred when the teacher was present.

²During this phase, a number of sessions were cancelled due to grandparent and resident illnesses and bad weather.

Experimental Design

A combination multiple-baseline, reversal-experimental design was used (Baer, Wolf, and Risley, 1968). A multiple baseline across three subcategories of training behaviors was implemented to evaluate the effectiveness of specific teaching on increasing the training behaviors of the grandparents (Figure 1). A reversal procedure was used after implementation of specific teaching for two of the three subcategories of training skills because training a number of behaviors cannot occur simultaneously, and the effects of specific teaching would not be as evident when more than one set of training behaviors was being taught. Throughout the investigation, training behaviors related to teaching movement of other body parts served as a control.

Resident Skill Assessment

A test of resident skills was administered to determine if a change in resident behavior occurred. Table 1 is an example of the Skills Inventory, which contained 20 items designed to sample skills in the four training areas. The person administering the test instructed the resident to emit a behavior, and recorded whether or not the behavior occurred within 5 sec of the request.

The Skills Inventory was administered before baseline and before specific teaching for head and neck control. Additional administrations occurred at the end of each subsequent experimental condition. The grandparents administered the test with the assistance of a recorder, who read the inventory items. An independent tester (staff member) also administered the test later that day to assess whether the residents' skills generalized to the instructions of other persons besides the grandparents. Reliability on resident responses was conducted by a second observer, who was not informed of the purpose of the study or of the occurrence of teaching interventions. Reliability was conducted for six tests, and was determined by dividing agreements as to the occurrence of specific resident responses following each request by agreements plus disagreements

Table 1
Resident Skills Inventory

<i>General Category</i>	<i>Skill</i>
Head and neck	Turns head to right when name is called on right side. Turns head to left when name is called on left side. Turns head upward when name is called from above.
Reaching	Reaches for a toy with two hands when placed six inches from center of body. Reaches for a toy six inches from right hand. Reaches for a toy six inches from left hand. Reaches for a toy 12 inches from right hand. Reaches for a toy 12 inches from left hand.
Manipulating objects	Holds a small object for 10 seconds in right hand. Holds a small object for 10 seconds in left hand. Squeaks toy with right hand. Squeaks toy with left hand. Shakes rattle with right hand. Shakes rattle with left hand. Squeezes clay $\frac{1}{2}$ inch with right hand. Squeezes clay $\frac{1}{2}$ inch with left hand.
Body movement	Moves right arm when arm is touched and instruction is given. Moves left arm when arm is touched and instruction is given. Moves right leg when touched and instruction is given. Moves left leg when touched and instruction is given.

and multiplying by 100. Reliability averaged 99%.

RESULTS

Reliability

Reliability data for grandparent behavior yielded an overall mean of 93%. Means (and ranges) for categories and subcategories were: training interactions 92% (70 to 100), head and neck training 96% (75 to 100), reaching train-

ing 82% (50 to 100), manipulation training 87% (60 to 100), training other behaviors 96% (50 to 100), nonwork activity 93% (54 to 100), and teacher interactions 95% (50 to 100). No observations of body-movement training were recorded during reliability observations. Means for teacher behaviors were approval 86% (0 to 100) and neutral interaction 78% (50 to 100). No observer recorded any disapproving teacher behaviors.

The lower ranges of reliability calculations occurred when the behaviors were recorded at lower frequencies, so that a small number of disagreements resulted in low percentages. The actual number of disagreements for categories and subcategories per session averaged: 1.1 per session for training interactions, 1.8 for head and neck training, 1.0 for reaching training, 0.83 for manipulation training, 1.1 for training other behaviors, 1.3 for no activity, and 1.2 for teacher interactions.

Grandparent Behavior

Figure 1 demonstrates the amount of training of subcategory skills for the five grandparents (beginning with the praise condition, the data represent only four grandparents). During baseline, grandparents spent 0% of the time training head and neck skills. When specific teaching was instituted, this increased to an average of 20%. When these training behaviors were no longer taught during the second baseline, the per cent of intervals decreased to 1%. An average of 2% occurred during the praise condition, and 0% occurred during followup. Reaching training averaged 8% during baseline, 38% while specific teaching was in effect, 21% during the second baseline, and 40% during the praise condition. Reaching training was recorded in 45% of the intervals during followup. Manipulation training increased from 10% during baseline to 37% during specific teaching; an average of 32% occurred during praise and 28% on the followup observation. Training behaviors directed at moving specific body parts averaged 0% during all conditions, with only one occur-

Fig. 1. Mean per cent of intervals that grandparents engaged in head and neck, reaching, manipulating, and body-movement training per session. Arrows designate sessions where praise alone was continued contingent on training for the remainder of that phase. The teacher was present during all sessions except those designated by triangles.

rence reported throughout the investigation. Other behaviors were trained less than 0.2% of the intervals throughout the study.

Figure 2 shows the increases in all training interactions and the decrease in nonwork activities throughout the study for the five grandparents. During baseline, training averaged 25%. Averages of 32%, 44%, and 56% occurred during phases of specific teaching for head and neck, reaching, and manipulating skills, respectively. During the praise condition, training averaged 73% when the teacher was present and 66% when she was not. Training was 77% during followup. No decrease in training frequency was noted as the teacher faded her presence during

the praise condition. Nonwork activities decreased from an average of 40% during baseline to 33%, 18%, and 18% where specific skills were taught, respectively. When all training interactions were praised, nonwork averaged 13% when the teacher was present and 11% when she was not. Nonwork was recorded for 15% of the intervals during followup.

Figure 3 shows the behavior for each of the five grandparents. When specific teaching was applied to the three successive training behaviors, all grandparents increased their use of those specific training behaviors over baseline levels. During the baseline following specific teaching for head and neck skills and reaching skills, all

Fig. 2. Mean per cent of intervals that grandparents spent in training and in nonwork activities. The teacher was present during all sessions except those designated by triangles.

grandparents decreased their use of those two training behaviors, respectively. When praise was presented contingent on any training behavior, training occurred a greater percentage of intervals than during baseline for each grandparent.

Resident Skills

The Skills Inventory, when administered by the grandparents, showed increases in the number of skills performed for four of the five residents during the study (Table 2). The residents improved an average of 3.4 items from the pre-baseline administration to the administration following the specific teaching manipulation phase. When the inventory was administered by an independent tester, similar results were obtained, with an improvement over prebaseline of 5.4 items. The test administered during the followup period by the grandparents reflected improvement on an average of 6.8 items compared to the prebaseline inventory. Improvement in specific

skill areas did not coincide with training of specific skills.

Teacher Behavior

During baseline, teacher approvals averaged 1%. An increase to an average of 5%, 5%, and 6% occurred during the specific teaching phases, respectively. Approvals averaged 5% during the praise condition and during followup. Neutral interactions averaged 27% during baseline and did not vary more than 2% during specific teaching or the praise condition. No disapprovals were recorded.

DISCUSSION

A teaching package for increasing training interactions of foster grandparents with multiply handicapped children was evaluated. The amount of time grandparents engaged in training specific skills was higher when the teaching package was implemented than during baseline

Fig. 3. Per cent of intervals that individual grandparents spent in head and neck, reaching, and manipulating training. The solid line indicates the total per cent of intervals spent in training, whereas the per cent for each of the three training subcategories is indicated by the amount of area filled in according to the legend. The graph reflects the total number of sessions that individual grandparents were present throughout the study.

conditions for all three areas of training for each grandparent. Because baseline consisted primarily of giving verbal instructions or "lecturing", the low rates of training provided strong evidence for the use of teaching methods that in-

clude modelling and practice with immediate feedback and praise provided. The total amount of time grandparents spent in training increased steadily throughout the study as new skills were being taught and/or praised.

Table 2

Number of resident skills completed on skills inventory when tested by the foster grandparent.

Resident	Pre-Baseline	Post-Baseline	Post-Head/Neck Training	Post-Reaching Training	Post-Manipulation Training	Followup
1	15	12	13	15	15	16
2	4	8	8	9	9	10
3	4	10	8	12	12	13
4	2	2	2	3	4	
5	1	3	3	5	3	12

Note: Maximum score = 20.

The importance, and difficulty, of maintaining acquired training skills among institutional personnel has been previously mentioned (*e.g.*, Kazdin, 1973). The successful followup results were encouraging in the present study because frequency of teacher presence was gradually reduced over a seven-week period, with no decreases in amount of training conducted by the grandparents. Also, the followup data taken four weeks after termination of the praise condition reflected no decrease in amount of training. Observations conducted on days when the teacher was not present indicated that training occurred slightly less frequently, but well within the daily range of when she was present and considerably more frequently than the initial baseline. It also seems possible that the observers' presence might have served as a cue for training during these sessions. However, the outcome suggests that continued research on similar methods of fading supervision or teaching while maintaining desired training behaviors would be beneficial.

While not investigated here, it appeared that the process of grandparents training their residents with other grandparents present may have contributed to the successful followup data. Attention from other grandparents contingent on particular training interactions and resident improvement seemed to occur frequently and might have reinforced the grandparents' training. Also, conducting the training in the area where the grandparents regularly interacted with the residents, and at the same time that the grandparents were scheduled with their residents, may have enhanced the followup results, as time and setting generalization requirements were minimal.

The grandparents appeared to enjoy the sessions throughout the study. Only one grandparent chose to terminate her participation during the study, and that was when the teacher informed all grandparents that no new skill areas would be taught (beginning of the final experimental condition). At this time the grandparents were given the option of termination. The grandparent reported that she felt that her resident was not acquiring new skills and that she would ben-

efit more by being outdoors during that half hour. The data indicated that her resident had acquired fewer skills than three of the other four. A number of other grandparents expressed interest in the sessions and another class was initiated.

During the course of the grandparents' training, four residents showed improvement in the number of skills completed on the Skills Inventory. The residents also continued to show improvements when teacher presence was reduced. The data, however, do not reflect systematic improvements in skills as a function of training specific skills. That is, reaching skills not only improved during the phase where reaching was being focused on but also following other phases as well. This might be due to the grandparents training skills in addition to those emphasized by the specific teaching or that the resident behaviors were not totally independent. It is also possible that a variety of behaviors improved due to increased training in the general area of instruction following, as prompts and praise for following commands were a component within specific teaching for each skill area. Hence, the conclusion that the resident progress was solely attributed to the grandparent's training of those specific behaviors is open to question.

While the residents did not become eligible for special programs within the facility as a result of this study, continued acquisition of motor skills would allow them eventually to begin additional training from other institutional staff in such areas as self-help skills. For example, if motor skills like reaching and grasping were developed to the point where self-feeding or independent ambulation training could be accomplished, the residents would be eligible for entrance into training units where a greater degree of independence would be possible.

All three subcategories of training behaviors increased when specific teaching was implemented, but only reaching and manipulating occurred at frequencies higher than baseline during the praise condition. This did not conflict with the purpose of teaching several areas of

training, and then letting the grandparents choose which behavior to teach during the praise condition. However, in order to ensure that residents receive training in all areas, and not just in areas that may be more reinforcing for the trainer, future research could be directed at maintaining training behaviors in specified areas.

As noted previously, severely handicapped persons similar to the residents in this study traditionally have received few educational services, relative to persons with less serious handicaps (Cleland *et al.*, 1971; Gunzburg, 1975; Harvey, 1976; Thompson, 1976). The program described here represents one way of providing training services to severely disabled persons that utilizes personnel already available in many institutions and that requires no additional funding.

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