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Staff training on choice availability and its effects on adaptive and maladaptive behavior in persons with developmental disabilities in the group home setting

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STAFF TRAINING ON CHOICE AVAILABILITY AND ITS EFFECTS ON
ADAPTIVE AND MALADAPTIVE BEHAVIOR IN PERSONS WITH
DEVELOPMENTAL DISABILITIES IN THE
GROUP HOME SETTING

by

Tami Jo Mc Knight

A thesis submitted in partial fulfillment
of the requirements for the degree of

Master of Arts
in

Psychology

Department of Psychology
University of Nevada, Las Vegas
August 1997

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University of Nevada, Las Vegas
August 1997
ABSTRACT

Recent research regarding persons with developmental disabilities has focused on the effects of choice availability on adaptive and maladaptive behavior. Because degree of choice within one's living environment is considered a key element of quality of life, it seems important to evaluate this variable and its relationship to adaptive and maladaptive behavior. In this preliminary study, direct-care staff members in a group-home setting were taught to increase choice opportunities in the areas of eating, leisure, and personal hygiene for residents with mild, moderate, or severe mental retardation. This investigation also examined the effects of increased choice availability on residents' adaptive and maladaptive behaviors. Increased staff training on choice availability was expected to result in improved choice and changes in levels of adaptive and maladaptive behavior for such residents. Results indicated that direct-care staff members who received training to increase choice reported increased choice opportunities for their residents. Increased choice, however, did not lead to improved levels of adaptive and maladaptive behavior for treatment group residents.
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CHAPTER 1

INTRODUCTION

Prior to 1960, individuals with disabilities were provided with few of their inalienable rights. These individuals were often denied the freedom to make independent decisions or even give consent about key life decisions (Walker, 1988). Choices regarding where to live, what and how to learn, what activities to participate in, who to associate with, where to work, what clothing to wear, and what foods to eat were generally made by parents, guardians, teachers, direct-care staff members, and/or physicians (Harchik, Sherman, Sheldon, & Bannerman, 1993). During the past thirty years, however, reforms have occurred to improve the lives of individuals with disabilities. The first major reform was initiated during the 1960s and involved the principles of deinstitutionalization and "normalization." These principles involved the stipulation that living and working conditions should, as much as possible, approximate those of typical society (Wolfensberger, 1972).

Also during this period, the civil rights movement led
to moral concerns about the dignity and care of persons with disabilities (Budd & Baer, 1976; Emerson, 1985; French, 1986). Professionals began to question the custodial and inhumane treatment that was common to institutions housing individuals with mental retardation (Walker, 1988). Mental health advocates forced legal changes to obtain adequate services and promote rights for this population. The litigation that emerged provided the impetus for moving residents from large institutions to smaller, community-based settings (Bruininks, Hauber, & Kudla, 1980; Polloway, Smith, Patton, & Smith, 1996; Smith & Polloway, 1995; Walker, 1988). These settings were supposedly smaller, more normalized, less confining, and less restrictive. These environments included group homes, intermediate care facilities, and a variety of alternative housing arrangements known as community-based service-delivery programs (Reischl & Wordes, 1994; Schalock, Harper, & Genung, 1981). These settings had fewer residents, increased staff-resident ratios, more active programs for residents, and more typical living environments compared to larger institutions (Fine, Tangeman, & Woodard, 1990).

Specifically, the principle of normalization guided service-delivery providers to (1) allow an individual with disabilities "to obtain an existence as close to normal as possible" (Dennis, Williams, Giangreco, & Cloninger, 1993, p. 502; see also Wolfensberger, 1977), (2) allow for more regularity in the way an individual appeared, behaved, and
lived (Stark & Goldsbury, 1990), and (3) promote the right to personal choice (Owen & Symons, 1993). The concept of least restrictive environment emphasized the need to implement treatment alternatives that imposed the minimum amount of restrictiveness upon an individual's rights and freedom.

Quality of Life

As institutional reform progressed and more individuals with disabilities were placed into community-based programs, concerns arose regarding the concept of normalization. For example, several authors (e.g., Guess, Benson, & Siegel-Causey, 1985; Turnbull & Turnbull, 1985) criticized the predominant "fix-it" model that emphasized structure and control in habilitative programs within service settings. Instead, these authors advocated more independence and autonomous decision-making for individuals with disabilities. The move toward increased autonomy and independence has since become a central focus of researchers and caregivers.

As the normalization of service delivery environments was called into question, a second reform movement started during the mid-1970s and focused on the "quality of life" of persons with severe disabilities. Quality of life is broadly defined as "the adoption of lifestyle that satisfies one's unique wants and needs" (Karan, Lambour, & Greenspan, 1990, p. 85). The concept of quality of life has been
deemed especially pertinent to those with limited physical and communicative abilities. Individuals with such disabilities are often at risk for dependence upon others.

Two landmark cases, Wyatt v. Stickney (1975) and Youngberg v. Romeo (1982), set a precedence for the care of persons with disabilities during this time. In both cases, the courts set a minimum standard for habilitative programs. Specifically, programs were ordered to provide individualized treatment planning by adequate and qualified staff (Bannerman, Sheldon, Sherman, & Harchik, 1990). Such provisions were partly an effort to improve the quality of life for the individuals served.

Factors Affecting Quality of Life

The concept of quality of life remains elusive and is not easily defined when applied to persons with mental retardation (Landesman, 1986; Rosen, 1986; Taylor & Bogdan, 1990). Quality of life refers to the degree of independence, productivity, and community integration that a person experiences as determined by subjective reports or objective evaluations (Schalock, 1990a, 1990b; Schalock, Keith, Hoffman, & Karan, 1989). Quality of life is further defined as "the freedom of action, a sense of purpose, achievement in one's life, self-esteem, integrity and fulfillment of some fundamental aspect of biological and psychological functioning in relation to activities of daily living" (Goodinson & Singleton, 1989, p. 330) and includes
dignity, basic human rights, freedom, and normal living
(Stark & Goldsbury, 1990). Goode (1990) posed that quality
of life for persons with disabilities may be composed of the
same factors important for persons without disabilities and
is experienced when basic needs and opportunities to pursue
and achieve life goals are met.

domains most relevant to quality of life include physical
well-being, material well-being, social well-being,
emotional well-being, and development and activity.
Development and activity fundamentally include self-
determination, independence, and the ability to exercise
choice and control in one's environment. Mittler (1984)
also argued that an important constituent of quality of life
is the opportunity for an individual to make choices between
perceived alternatives.

Three important factors of quality of life have
received the most attention from service-delivery providers
and researchers: preference, choice, and choice
availability (Karan et al., 1990; Kearney, Bergan, &
Mc Knight, in press; Whitaker, 1989). According to Shevin
and Klein (1984), preference refers to a subjective liking
or disliking of a particular item or person, whereas choice
refers to the objective act of selecting a "preferred
alternative from among several familiar options" (p. 160).
Choice, according to Turnbull and Turnbull (1985), may refer
to consenting or refusing to participate in an activity.
Choice involves identifying one's preferences and expressing those preferences (West & Parent, 1992). Guess et al. (1985) described choice as a decision-making process and an expression of autonomy and dignity.

"Choice availability" is broadly defined as the freedom to express preferences and make personal choices. Specifically, choice availability is the opportunity provided by direct-care staff members to residents with severe disabilities to choose options among various daily living activities (Kearney et al., in press; Kearney, Durand, & Mindell, 1995a, 1995b; Kearney & Mc Knight, 1997; Mc Knight & Kearney, 1994; Mc Knight, Tillotson, & Kearney, 1996). Choice availability is more narrowly defined by Brigham (1979) as "the opportunity to make an uncoerced selection from two or more alterative events, consequences, or responses" (p. 132).

Until recently, little professional attention was directed explicitly toward increasing choice for persons with disabilities. Furthermore, caregivers do not always know how to present choice-making opportunities to those with disabilities. For this reason, more research relevant to this area is necessary.

A review of literature relevant to preference, choice, and choice availability as factors that affect behavior and quality of life for persons with disabilities is presented next. Then, a preliminary study is described that will examine the effects of training direct-care staff members to
increase choice in the areas of eating, leisure, and personal hygiene for adults with moderate and severe mental retardation residing in an intermediate care facility.

Definition of Concepts

The term "disabilities" is defined here along the guidelines set up by the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) (American Psychiatric Association, 1994) category for mental retardation. According to the DSM-IV, the essential feature of mental retardation is "subaverage general intellectual functioning that is accompanied by significant limitations in adaptive functioning in at least two areas: communication, self-care, home living, social/interpersonal skills, use of community resources, self-direction, functional academic skills, work, leisure, health, and safety" (p. 39). Onset must occur before age 18 years. Four degrees of severity specify the level of intellectual impairment. These include mild (IQ ranging from 50-55 to approximately 70), moderate (IQ ranging from 35-40 to 50-55), severe (IQ ranging from 20-25 to 35-40), and profound (IQ below 20 or 25) mental retardation (Grossman, 1983). For the purposes of this paper, "disability" will refer to any DSM-IV category of mental retardation.

Langone (1992) and Sharpton and West (1992) distinguished those with mild, moderate, severe, and
profound mental retardation from those without cognitive disabilities using two criteria: intellectual capacity and adaptive behavior. Intellectual capacity is defined as one's "ability to reason" (Neufeldt & Guralnik, 1988, p. 702). Adaptive behavior is defined as "an individual's ability to meet the standards of maturation, learning, personal independence, and/or social responsibility at each life stage" (Langone, 1992, p. 1; Zucker & Polloway, 1987). According to Greenspan and Granfield (1992), adaptive behavior has two components, the ability to live independently and the ability to abide by community standards of acceptable behavior. Conversely, maladaptive behavior generally includes unacceptable behavior such as self-injury, biting, crying, hitting, kicking, pulling away, whining, or yelling (Campbell & Fletcher, 1993).

A number of researchers have indicated that the ability to express preferences and exercise personal choice enhances adaptive and subdues maladaptive behaviors (Dunlap, DePerczel, Clarke, Wilson, Wright, White, & Gomez, 1994; Dyer, Dunlap, & Winterling, 1990; Kennedy & Haring, 1993). For example, Dunlap et al. (1994) found consistently increased engagement to tasks and reduced levels of maladaptive behaviors (e.g. destroying property, noncompliance) when students were given choice-making opportunities among academic tasks.
Review of Literature Pertinent to Preference Choice, and Choice Availability

The following sections review literature pertinent to preference, choice, and choice availability in persons with disabilities. Most of the research on these constructs for this population has focused on participation, vocation, mealtime, leisure, daily living, and problem behaviors.

Participation

A number of researchers have (1) provided people with disabilities opportunities for choice or control over some aspect of a situation, and (2) examined how this affected their participation in leisure activities, social interactions, and daily routines. For example, Dattilo and Rusch (1985) concluded that, when students with severe disabilities could control a video presentation by pressing an electrical switch, they looked at the picture slightly longer than when presented with the same picture without choice. In another example, Kennedy and Haring (1993) found that teaching persons with disabilities to make choices resulted in more active participation in social interactions. Finally, Rice and Nelson (1988) concluded that providing choice-making opportunities was a significant motivator for increased participation in ironing.
Vocation

Research has also indicated that one benefit of choice for adults with disabilities is increased vocational engagement. One study suggests, for example, that clients attend to work tasks almost twice as much when they choose their tasks, or are assigned work on preferred tasks, than when assigned work on nonpreferred tasks (Parsons, Reid, Reynolds, & Bumgarner, 1990). Bambara, Ager and Koger (1994) evaluated adults with severe and profound mental retardation and also found that increased choice led to increased task engagement. Finally, Mithaug and Hanawalt (1978) demonstrated that a subject preferred to work on prevocational tasks that involved selected reinforcers.

Mealtime

Several studies have demonstrated that individuals with disabilities can make reliable meal selections when given increased choice (Parsons, McCarn, & Reid, 1993; Parsons & Reid, 1990; Reid & Parsons, 1991; Sigafoos & Dempsey, 1992). For example, Parsons et al. (1993) demonstrated that a choice provision program implemented during a mealtime activity resulted in more choice availability and that clients could reliably make preferences and choices over repeated opportunities. The choice provision program involved six steps designed to increase choice making opportunities for clients with disabilities. The first step involved an educational inservice meeting designed to
discuss the rationale for increasing choice opportunities and assessing and teaching choice-making skills. During the second step, staff members were provided with brief, written instructions on providing direct choice presentations. During the third step, direct choice presentations were verbally described. During the fourth step, direct choice presentations were practiced during role-play situations. The fifth step consisted of establishing an agreed upon number of choice presentations. Finally, questions were answered and a date was set to implement the next component of the program: in-vivo classroom training.

Leisure

Several studies have also shown the importance of choice in leisure-related activities. For example, Dattilo and Mirenda (1987) concluded that the leisure preferences of children with severe disabilities could be assessed using a computerized procedure. Furthermore, Sigafoos, Roberts, Couzens, and Kerr (1993) concluded that adults with multiple disabilities exhibit increased participation and adaptive behaviors with more choice-making opportunities during a wide range of leisure activities. Ludlow, Turnbull, and Luckasson (1988) also stated that leisure time is jeopardized when the choice of activity is taken from, or not presented to, an individual with a severe disability.
Daily Living

Choice-making opportunities have also been examined in the realm of daily living. Dhooper, Royse, and Rihm (1989) examined the everyday activities of adults with mental retardation, finding that they were most satisfied when allowed to choose living space, food, clothing, work assignments, and recreational activities. Sands and Kozleski (1994) found that, when participants with severe disabilities had more input regarding leisure activities and where they lived, a higher level of independent choice making was reported.

Problem Behaviors

The opportunity to make choices has been shown to reduce problem behaviors as well. Dyer et al. (1990) found that children with autism exhibited fewer problem behaviors (e.g. aggression, self-injury) when they had a choice of tasks, materials, and reinforcers than when the therapist made these choices for them. Carr and Carlson (1993) implemented choice during a routine shopping activity that resulted in significantly reduced problem behaviors in persons with developmental disabilities. Dunlap et al. (1994) also found that choice-making opportunities decreased disruptive behaviors.

A number of researchers have thus concluded that opportunities to express preference and choice have led to improvements in the areas of participation, vocation,
mealtime, leisure, daily living, and problem behaviors. Findings such as these are invaluable contributions to the area of mental retardation. Behind such important findings are assessment techniques important to the area as well. These assessment techniques are presented next.

Assessments

The following section will discuss the primary assessment techniques utilized when addressing preference, choice, and choice availability for persons with disabilities. Preference, choice, and choice availability can be assessed using interviews and questionnaires, picture presentations, technological mechanisms, and direct observation. This section will include a discussion of each of these procedures as well as their advantages and disadvantages.

Interviews and Questionnaires

Interviews and questionnaires to obtain information about preference, choice, and choice availability generally involve (1) direct interviews of clients, (2) ratings of clients, and (3) direct interviews of staff members.

Direct Interviews of Clients

Direct interviews have covered several areas related to preference and choice (Benz & McAllister, 1990; Cheseldine & Jeffree, 1981; Dhooper et al., 1989; Neumayer, Smith, & Lundegren, 1993; Rock, 1988). For example, Kishi, Teelucksingh, Zollers, Park-Lee, and Meyer (1988) directly
interviewed residents with severe disabilities and asked them to rate their perceived degree of choice in 10 daily activities involving eating, clothing, leisure, social contact, finances, and work. Stancliffe (1995) revised Kishi et al.'s (1988) items into positive (i.e., "Do you choose _____") and negative (i.e., "Does someone else choose _____") versions requiring a "yes/no" answer.

Schalock et al. (1989) reported good reliability and content validity of the Quality of Life Questionnaire, a 28-item measure rated on a three-point scale and used to partially assess level of environmental control for persons with disabilities. Dhooper et al. (1989) questioned 47 adults with mild and moderate mental retardation using an instrument to measure involvement and degree of choice in everyday life activities. Items covered such dimensions as personal and recreational activities. In addition, the Accreditation Council on Services for People with Disabilities (1993) used their Outcome Based Performance Measures to assess experiential, social, and creative choice opportunities for persons with mental retardation. Finally, Sands and Kozleski (1994) used the Consumer Satisfaction Survey to interview persons with disabilities to partially measure level of choice in life activities.

Ratings of Clients

Newton, Horner, and Lund (1991) used the Resident Lifestyle Inventory to identify client preferences among 144 activities. Staff members read aloud the names of the
activities and helped the participant communicate preferences or engage in an activity. The staff member then judged preference for the activity based on the participant's facial expression, level of active participation, and persistence to perform the activity.

Kearney et al. (1995b) introduced the Resident Choice Assessment Scale, a 25-item instrument designed to measure staff ratings of choice availability in a living environment. Items reflect the degree of choice given for personal (e.g., meals, clothes, roommate) and group (e.g., recreational, visitor) activities. The RCAS is rated on a seven-point, Likert-type scale and has demonstrated good test-retest reliability and validity. The RCAS may also be used to distinguish levels of choice availability among various living environments.

**Direct Interviews of Staff Members**

Newton, Ard, and Horner (1993) also interviewed direct-care staff using the Resident Lifestyle Inventory. Staff members were asked to rate client likes and dislikes of 144 activities. How staff members would typically present an activity as a choice option and how the client would typically choose an activity were evaluated (see also Newton, Ard, Horner, & Toews, 1996). "Staff members' activity preference ratings correctly predicted the choices made by the individuals with disabilities for 78% of the trials" (p. 239).
Finally, Fisher, Piazza, Bowman, and Amari (1996) asked caregivers to arrange, in order, expected client preferences from a standard list of stimuli. The authors then generated a list using a structured interview, the Reinforcer Assessment for Individuals with Severe Disabilities, to ask caregivers to provide their own ordered list of preferred stimuli within the general sensory domains (e.g., sight, hearing, smell, taste, touch). Systematic choice assessments were then conducted with both sets of stimuli. Results indicated that caregiver predictions of client preferences were slightly better for the set of stimuli they generated than for the standard list. The choice assessment also identified more potent reinforcers from the set of stimuli generated by the caregivers than from the standard set.

Advantages and Disadvantages of Interviews and Questionnaires

One advantage of interviews and questionnaires is that information can be obtained directly from those to whom preference and choice are most relevant (i.e., resident and caregiver). As well, an interview can be structured to allow for a broader examination of perceived satisfaction with, and control of, one's environment. Conversely, interviews and questionnaires pose two major disadvantages. Individuals with limited mental ability have a tendency to often acquiesce (yea-say) or dissent (nay-say; Heal & Sigelman, 1990; Heal & Sigelman, 1995). These authors, as
well as Stancliffe (1995), state that "yea-saying" and "nay-saying" can be alleviated using an "either/or" format during the interview.

Another potential problem with staff and client interviews is informant variance (Fisher et al., 1996; Green, Reid, White, Halford, Brittain, & Gardner, 1988; Houghton, Buzz-Bronicki, & Guess, 1987; March, 1992; Northup, George, Jones, Broussard, & Vollmer, 1996; Parsons & Reid, 1990; Stancliffe, 1995; Windsor, Piche', & Locke, 1994). These investigators have shown that staff accounts of client preference and choice are poor predictors of information gathered from clients. Other investigators, however, report that informant variance is minimal and that staff and client reports match more closely (Foxx, Faw, Taylor, Davis, & Fulia, 1993; Newton, et al., 1993; Smith, Iwata, & Shore, 1995).

Picture Presentations

Picture presentations (e.g. pictures, videos, or slides) are sometimes used to facilitate choice-related interviews or to more directly obtain information about preference and choice. For example, Houghton et al. (1987) utilized picture presentations to facilitate their research involving structured and unstructured activities with students with severe disabilities. During the structured condition, students were presented with pictures and asked to express a preference or choice. March (1992) paired
photographs with questions about preferences for daily life activities. Foxx et al. (1993) used photographs during the interview of several adults with mild mental retardation about their lifestyle preferences (e.g. place of residence, hygiene, type of bedroom). In addition, Neumayer et al. (1993) facilitated interviews on leisure-related peer preference choices of individuals with Down Syndrome with the use of videotape presentations. Finally, Brown, Belz, Corsi, and Wenig (1993) suggested the use of a picture menu of activity options to assist individuals to understand choices.

Advantages and Disadvantages of Picture Presentations

Picture, video, and slide presentations are advantageous in that they are cost- and time-efficient, enhance the interview process, may be useful with those with poor expressive language, can be used at any time throughout the interview process, and are effective when determining preference directly (Rudrud, Wendelgass, Markve, Ferrara, & Decker, 1982). Disadvantages include unknown predictive and construct validity, futility for persons with poor receptive skills, and susceptibility to random guessing (Ferrara, Rudrud, Wendelgass, & Markve, 1985).

Technological Mechanisms

Technological assessments designed to facilitate the expression of preference and choice for an item or activity often consist of switches attached to a computer, tape
recorder, or other device. For example, Sandler and McLain (1987) trained children with multiple disabilities to use pressure-sensitive switches to indicate preferences for stimulation (e.g., food, praise, visual, auditory, or vestibular). Dattilo (1987) described a procedure whereby children with severe disabilities were taught to discriminate between two computer-interfaced switches of differing textures. When a particular switch was activated, clients received auditory (music), visual (video scenes), or tactile (vibration) stimulation.

Dattilo (1987) and Dattilo and Mirenda (1987) extended the use of this technology to assess preferred leisure activities. Students were provided with a choice between leisure activities: listening to music, watching action videos, activating a blender and drinking a portion of a milkshake, watching a slide show, or feeling a vibration from a vibrating pad. In both studies, Dattilo demonstrated that the preferences of persons with severe disabilities can be assessed and analyzed systematically.

Finally, in three studies, Kennedy and Haring (1993) taught four students with profound multiple disabilities to use switches to request a change in recreational stimuli. During study one, most and least preferred stimuli were assessed via a microswitch communication system. During study two, the students learned to control the stimulus presentation via the microswitch. This resulted in more defined differentiation among preferred and nonpreferred
stimuli as measured by the time spent viewing the stimuli and general alertness. During study three, each student used the switch to control the stimulus presentation when socially interacting with nondisabled peers. These investigators demonstrated that a person with a severe disabilities can exhibit stimulus preference, control stimulus presentation, and choose and control stimuli presentation in different settings.

Advantages and Disadvantages of Technological Mechanisms

Advantages of technological assessment include its usefulness with persons with disabilities, application toward the expression of preference and personal choice, and maintenance of focused attention (Parette & VanBiervliet, 1990). Some possible disadvantages include high cost, potential stigmatization of the client, presence of untrained staff who cannot or will not use the necessary equipment, the need to frequently train staff, and potentially poor matching of client needs with technological options (Garner & Campbell, 1987).

Direct Observation

Approach and Instruction to Choose

One method of assessing preference and choice is to measure approach toward a particular item. For example, Pace, Ivancic, Edwards, Iwata, and Page (1985) evaluated individuals with profound mental retardation as to their preferences for 16 stimuli. Each of eight sessions
contained 20 trials, "during which four predetermined stimulus items were presented five times each in a counterbalanced order" (p. 250). With one exception, each stimulus was presented ten times and approach or no approach within five seconds was recorded. Prompts to sample the stimulus were included to ensure that unfamiliarity with the stimulus was not contributing to a lack of approach. In addition, Belfiore, Browder, and Lin (1993) assessed preference by presenting activities via instructors. An activity was defined as preferred if the person initiated, or staff members prompted, the activity and the person maintained manipulation of it for at least 15 seconds.

Another routine way to assess preference and choice is through pair-wise comparisons, in which a person with disabilities is presented with two stimuli and asked to choose one. For example, Mithaug and Hanawalt (1978) and Mithaug and Mar (1980) presented two objects representing one of six prevocational tasks. Clients were verbally instructed to choose one of the tasks from the randomly presented pairs. More and less preferred tasks were later paired and presented to clients to validate their initial choices. Another method allows the clients to choose a preferred item by pointing. Parsons et al. (1990, 1993) and Reid and Parsons (1991), assessed preference for food and drink items by allowing persons to point to one item of a pair over several pairings.
Rating Systems

Rating systems have also been proposed to observe and record aspects of preference and choice for persons with disabilities. For example, Goode and Gaddy (1976) suggested that persons familiar with a particular client could rate, on a continuum, that client’s preferences for preferred or dispreferred items. Campbell and Fletcher (1993) used the Campbell Observation Form to record nonverbal expressions of personal preference and caregiver responses. Finally, Ip, Szymanski, Johnston-Rodriquez, and Karls (1994) used the Observation Sheet for Challenging Behaviors and Choices to record challenging behaviors and staff implementation of choice.

Advantages and Disadvantages of Direct Observation

Direct observation is a versatile method that has several advantages for assessing preference and choice. These include cost- and time-efficiency, simplicity, utilization of materials available within the immediate environment, use with trained and untrained staff, use with unlimited stimuli, and applicability to those with multiple disabilities (Pace et al., 1985). Disadvantages of direct observation include difficulty with persons with sensory disabilities, and potential unwillingness of staff members to conduct ongoing assessments. In addition, the reliability and validity of direct observation methods regarding preference, choice, and choice availability remain unclear.
In general, the advantages of the assessment procedures discussed here have far outweighed the disadvantages. As well, the assessment techniques used for this population have contributed to important research findings regarding interventions. Following is a discussion about choice intervention techniques for individuals with disabilities.

Interventions

Two types of treatment interventions specific to choice have been emphasized. The first type of intervention involves teaching choice-making skills to clients. The second type of intervention involves training direct-care staff members to increase opportunities for client choice.

Teaching Choice-Making Skills to Clients

Several researchers have focused on teaching clients the skills necessary to make choices. For example, Reiter (1991) demonstrated the success of a program implemented to teach residents skills for increasing control over their daily lives. Skills and competencies for vocational and social independence were taught, and residents were allowed a choice of various educational and recreational activities according to their individual inclination. This author concluded that residents could successfully learn skills necessary to increase independence in daily living activities. Gee, Graham, Goetz, Oshima, and Yoshioka (1991) taught clients to activate a call switch to communicate their choice to continue interrupted routines. Bambara and
Ager (1992) taught adults with moderate disabilities to self-manage their leisure activities using picture cards to schedule events. In addition, Belfiore et al. (1993) taught clients to say "no" when presented with nonpreferred activities and to select preferred activities. Kennedy and Haring (1993) taught clients to press a microswitch to control various preferred recreational stimuli. Finally, Foxx et al. (1993) successfully taught six adults with mild mental retardation to ask questions and clarify information received about lifestyle preference availability from group home personnel.

Training Direct-Care Staff To Increase Client Choice

Several investigators have implemented training programs to improve staff member skills regarding choice availability and persons with disabilities. For example, Peck (1985) taught teachers and aides to increase choice availability and respond to, comply with, imitate, or elaborate social and communicative behaviors on the part of students. The author designed a one-hour inservice program consisting of videotapes of teacher-student interactions and discussions of how to best accomplish these goals. Modeling and practice of these procedures toward these goals were also instituted. Results indicated substantial increases in student social and communicative behavior as well as teacher-generated opportunities for student choice. Haring, Neetz, Lovinger, Peck, and Semmel (1987) trained teachers
via self-instruction manuals to use four incidental teaching methods, including providing more opportunities for choice (defined as "the clear presentation of two or more objects or tasks from which the student is asked to select" (p. 220). The authors videotaped and coded incidental teaching interactions during daily transitional periods, and found that teacher-generated opportunities for student communication increased substantially during the intervention.

With respect to inservice programs, Parsons and Reid (1990) implemented a staff-training program to allow residents more choice-making opportunities. First, the investigator provided a rationale for assessing participant preferences and provided a handout that outlined the assessment procedure. Second, the investigator modeled the assessment procedure and observed the staff member conducting a practice session. Finally, the investigator provided feedback about the staff members' performance. The results indicated that staff members could obtain valuable information about client choices and increase opportunities to express choice.

Parsons et al. (1993) conducted a similar study using an inservice training program to provide staff with a rationale for providing choice as well as verbal and written descriptions of choice presentations. A rationale for increasing choice opportunities was discussed, and staff members were provided with written instructions on providing
direct-choice presentations. Then, a verbal description of direct-choice presentations was given and the investigator modeled the direct choice procedures during a role-play situation. Feedback was provided and staff members practiced choice presentations until they could demonstrate proficiency. Results indicated a substantial increase from baseline in the number of choice presentations given by staff as well as choices made by clients.

Finally, Ip et al. (1994) implemented an intervention program in which staff members were trained to identify target activities regarding client preference and choice. The results indicated that staff members could quickly learn and effectively use a choice provision intervention to increase choice availability. Following the implementation of this procedure, the severity and frequency of maladaptive behaviors were reduced, although only about half of the clients experienced increased opportunities for choice.

Sigafoos et al. (1993) increased choice availability and turn-taking for snack and leisure activities for five adults with severe disabilities. A verbal and written description of the intervention steps were provided to staff during a 15-minute presentation. Staff members then watched a demonstration of the steps before implementing the procedure themselves and receiving feedback about their performance. Rehearsal and feedback continued for one week after the inservice. The results showed that, after the training was implemented, the number of choice-making
opportunities increased. These results also suggested that, with minimal training, direct-care staff members can be taught to provide more choice-making opportunities. In addition, with minimal training, staff could generalize these strategies to unfamiliar clients and across a wide range of community activities.

Advantages and Disadvantages of Elements of Training Programs

A proficient staff training program should include verbal and written instruction, performance modeling and practice, and feedback components. Verbal instruction as a means of teaching choice-making skills to staff has many advantages. Verbal instruction can occur on a one-to-one basis or within a group situation and lends itself to the opportunity for question-and-answer periods. Used alone, however, verbal instruction often does not produce satisfactory levels of skill acquisition on the part of the staff trainee (Reid, Parsons, & Green, 1989).

The primary advantage of written instruction is that it can be presented in a variety of formats, including self-instructional manuals, published papers or books specific to that training topic, performance checklists, or pictures. A further advantage is that it reduces or eliminates the need for an on-site trainer as written instruction provides a complete description of specific job tasks and can serve as a permanent referent for staff members. However, written material must be understandable and specific. Also, if written instruction is the sole training mechanism, it
provides limited or no opportunity for clarification and
discussion between trainer and trainee (Reid et al., 1989).

As a second important component to a proficient staff
training program, performance modeling and practice have
several advantages and disadvantages. The primary advantage
of modeling is that the investigator can demonstrate a
procedure in person. Furthermore, when viewed first hand,
staff members can readily comprehend what the procedure
entails. Performance modeling can also be conducted via
film or video. One primary advantage of performance
practice is that it provides the trainer with clarification
as to whether the trainee has learned the necessary skills.
Additionally, a staff member can gain confidence in his or
her ability to implement a particular procedure. One
potential drawback to performance modeling is that an
investigator must be available to perform the task
proficiently and feel comfortable when offering feedback to
trainees about their performance (Reid et al., 1989). A
disadvantage to performance practice is that only a few
trainees can be trained at one time. In addition, certain
staff members may feel uncomfortable performing the
necessary skill in front of the trainer, especially if their
level of proficiency is questioned. Finally, feedback is an
effective means of improving a staff member's performance,
although receptiveness may be a problem (Reid et al., 1989).
Future Directions

In reviewing the literature on preference, choice, and choice availability for persons with disabilities, several common themes emerge with respect to future directions. For example, many researchers have stated a need to transfer the techniques and technologies developed in their studies to natural service delivery programs (e.g., Dyer et al., 1990; Garner & Campbell, 1987; Guess et al., 1985; Parette & VanBiervliet, 1990; Parsons & Reid, 1990; Parsons et al., 1993; Reid & Parsons, 1991; Steege, Wacker, Berg, Cigrand, & Cooper, 1989).

In addition, future research must examine how preference, choice, and choice availability can best be generalized to a variety of environmental contexts, treatment programs, and daily activities (e.g., Lamore & Nelson, 1993; Sigafoos & Dempsey, 1992). Furthermore, future research must address interventions that teach choice-making skills and provide choice availability so that clients may practice these skills (Bannerman et al., 1990; Houghton, et al., 1987; Reid & Parsons, 1991; Shevin & Klein, 1984; Sigafoos & Dempsey, 1992). Finally, researchers need to identify the exact elements and mechanisms of an intervention program that lead to enhanced or deterred choice (Ip et al., 1994; Meyers & Evans, 1993; Shevin & Klein, 1984).
The Current Study

The present study empirically investigated the effects of staff training to increase resident choice availability in three areas: eating, leisure, and personal hygiene. The effects of this training on adaptive and maladaptive behaviors for residents diagnosed with mild, moderate, or severe mental retardation were evaluated using empirical rating scales.

This preliminary study was more comprehensive than the studies reviewed here and advances research in this area in several important ways. First and foremost, this study utilized sophisticated measures such as the Resident Choice Assessment Scale (RCAS; Kearney et al., 1995b). The RCAS is an advanced measure of choice availability within the living environment of persons with disabilities. In addition to the RCAS, a modified version of the Vineland Adaptive Behavior Scale (VABS-M) and the Vineland Maladaptive Behavior Scale (VMBS) were utilized across time as pre- and post-intervention and follow-up measures. The VABS-M and VMBS are advanced measures of communication, socialization, daily living skills and maladaptive behaviors. These measures were completed by direct-care staff members serving in two treatment and two control group homes.

Using a specific protocol, all direct-care staff members in the treatment group underwent a staff training program to increase choice availability for residents.
Three areas important to daily living were evaluated here (i.e., eating, leisure, and personal hygiene), whereas most previous studies have evaluated one area. Direct-care staff members had the opportunity to practice techniques learned during role-playing scenarios. Direct-care staff members of the control group received a placebo treatment that was not expected to be effective. This preliminary study also made use of a repeated measures design to assess, across time, the viability of the intervention received by the treatment group.

The following hypotheses were tested:

Hypothesis 1: Staff member training will produce increased choice making opportunities.

Some literature indicates that training direct-care staff to incorporate opportunities for increased choice-making can effectively lead to more choice-making opportunities for residents (Parsons et al., 1993; Parsons & Reid, 1990; Reid & Parsons, 1991; Sigafoos & Dempsey, 1992; Sigafoos et al., 1993).

Hypothesis 2: Increased opportunities for choice are associated with improved levels of adaptive behavior.

The results of several studies demonstrate strong support for the notion that opportunities for increased choice making are rarely detrimental and often lead to increased adaptive behaviors, enhanced daily living skills, improvements in communication skills and socialization, and increased participation in activities (Bambara et al., 1994;
Dattilo & Rusch, 1985; Dhooper et al., 1989; Dunlap et al., 1994; Kearney et al., 1995a; Kearney et al., in press; Kennedy & Haring, 1993; Mc Knight, et al., 1996; Mc Knight & Kearney, 1994; Mithaug & Mar, 1980; Parsons et al., 1990; Rice & Nelson, 1988; Reiter, 1991). The present hypothesis proposed that greater opportunities to choose various personal- (e.g., clothing) and group-oriented (e.g., recreation) activities is directly related to improvements in adaptive behaviors.

**Hypothesis 3: Increased opportunities for choice are associated with decreased levels of maladaptive behavior.**

The literature regarding the relationship between choice and maladaptive behaviors is mixed. Some research indicates that maladaptive behaviors are exhibited less frequently with increased choice-making opportunities (Dunlap et al., 1994; Dyer et al., 1990). Other studies, however, have found no reduction in problematic behaviors when choice was offered (Fine et al., 1990). It is not yet clearly understood why these different effects are seen.

The present hypothesis proposed that greater opportunities to choose various personal- (e.g., clothing) and group-oriented (e.g., recreation) activities is directly related to improvements in maladaptive behaviors.
CHAPTER 2

METHOD

Participants

This study was approved August, 1995, by the Institutional Review Board at the University of Nevada, Las Vegas. The direct-care staff members and residents of the four ICF/MR homes involved in this study were recruited from only one organization in the greater Las Vegas area.

In the treatment group, six direct-care staff members, some with high school educations and some with limited college educations, rated eight residents. Residents in the treatment group were aged 25.9-51.8 years and diagnosed with mild (n=1), moderate (n=5), or severe (n=2) mental retardation according to DSM-IV guidelines. All residents in the treatment group were male. Each resident resided in an intermediate care facility for individuals with mental retardation (ICF/MR) in the state of Nevada for a mean of 6.08 years. The ICF/MR facility is a small group home that houses eight or less residents and has a staff-resident ratio of 1:3. The ICF/MR facilities involved in this study housed six residents.
In the control group, five direct-care staff members, some with high school educations and some with limited college educations, assessed ten residents using the same assessment measures in the same manner as the treatment group. The residents were aged 20.9-42.3 years and diagnosed with mild (n=4) or moderate (n=6) mental retardation. Seven residents in the control group were male and three were female. The average length of stay in the ICF/MR was 10.67 years.

Initially, six direct-care staff members in the treatment group homes and five direct-care staff members in the control group homes participated in the study during the pre-intervention session. The direct-care staff members in the treatment groups participated in all sessions of the study. However, as the study progressed, three staff members from the control group homes dropped out of the study. By Session I, one direct-care staff member in the control group refused to further participate in the study, citing stress. By Session V, two direct-care staff members quit working for the ICF/MR, leaving two direct-care staff members in the control group homes to rate the residents during Session V and post-intervention and follow-up sessions.
Instruments

The following measures were utilized:

The Resident Choice Assessment Scale (RCAS); the RCAS (see Appendix C) is a 25-item measure of choice availability within a living environment for persons with disabilities. Each item is based on a Likert-type scale of 1 to 7 (i.e. never to always) with higher scores indicating more choice availability. Items reflect opportunity for choice in personal- and group-oriented activities. The RCAS is presented as a practical method to evaluate choice availability and provide suggestions for modification within a living environment (Allan & Bergan, 1993; Kearney et al., 1995a, 1995b; Kearney et al., in press). Previous studies have reported test-retest reliability to be .91 and interrater reliability to be .84 (e.g., Kearney et al., in press).

The Vineland Adaptive Behavior Scale - Modified (VABS-M); the VABS-M (see Appendix D) was modified from the original Vineland Adaptive Behavior Scale (VABS), a 297-item measure, to a 37-item measure of adaptive behaviors. Unlike the original VABS, which assesses four domains of adaptive behavior, the VABS-M assesses three domains that focus on basic skills. Areas include communication (e.g., demonstrates understanding of the meaning "no"), daily living (e.g., washes and dries face without assistance), and socialization (e.g., says "please" when asking for
something). The VABS was modified for the purposes of this study to contain items most relevant to a population diagnosed with moderate mental retardation. Previous studies have reported test-retest reliability to be .88 and interrater reliability to be .74 (e.g., Sparrow, Balla, & Cicchetti, 1984).

The Vineland Maladaptive Behavior Scale (VMBS); the VMBS (see Appendix E) is a 36-item questionnaire designed to assess problematic behaviors (e.g., has temper tantrums, wets bed). Previous studies have reported test-retest reliability to be .88 and interrater reliability to be .74 (e.g., Sparrow et al., 1984).

Procedure

Treatment Group

The primary investigator personally distributed a written informed consent form to direct-care staff members (see Appendix A), the guardian of the resident, or the resident if he/she were his/her own guardian (see Appendix B). For those individuals who were guardians and could not be contacted in person, a telephone call was conducted and verbal consent was obtained and documented in writing on the informed consent form by the primary investigator. The issue of confidentiality was explained to each staff member, guardian, and/or resident individually. The direct-care staff members in the treatment group participated in Sessions I through V.
One month prior to Session I, the pre-intervention session was conducted. During this session, the RCAS, VABS-M, and VMBS were distributed in person to all direct-care staff members of the treatment group homes. Due to a time constraint and direct-care staff member absenteeism, the measures were dropped off to each individual staff member and collected seven days later. All direct-care staff members completed the dependent measures for all residents. Questions regarding the RCAS, VABS-M, and VMBS were answered promptly by the investigator. The investigator also provided a telephone number so that direct-care staff members could contact the investigator if they had further questions regarding the dependent measures. The investigator explained to each staff member that their names and the names of the residents would be held in confidence. At the conclusion of the pre-intervention session, the consent forms were collected by the investigator. Written informed consent forms for the direct-care staff members who were absent during the initial session were collected seven days later along with the completed dependent measures. Upon conclusion of the pre-intervention session, Session I was scheduled for 30 days later.

Session I - Lecture Format

Session I educated and informed all direct-care staff members about increased choice availability and its effects on adaptive and maladaptive behaviors in persons with disabilities. The investigator presented staff members with
research findings (e.g., Dattilo & Rusch, 1985; Dyer et al., 1990; Kennedy & Haring, 1993; Parsons et al., 1990; Rice & Nelson, 1988) and a definition of choice (see Appendix F). Staff members provided their definition of choice and adaptive and maladaptive behaviors. Questions were answered by the primary investigator, and an explanation of the ensuing sessions was given at the end of Session I. Session II was scheduled for seven days later.

Session II - "What If" Scenarios

During Session II, "What If" scenarios were presented to direct-care staff members as a group. Staff members were asked to describe a procedure required of residents and what opportunities were provided for choice-making. These scenarios involved eating, leisure, and personal hygiene activities that the resident and staff member might engage in together. For example, during the eating scenario, the investigator asked the direct-care staff members, "What if it is the resident’s turn to set or clear the table and they refuse to do so when asked?" "What if an argument erupts at the table and the resident chooses to leave the table and does not finish dinner?" and "What if mashed potatoes are served for dinner and the resident becomes upset and demands peas?" Staff members provided answers for each scenario. The primary investigator then described ways to increase choice during each scenario.

During the leisure scenario, the investigator asked the direct-care staff members, "What if it is the resident’s
turn to participate in the leisure activity and they refuse to do so when asked?,” “What if an argument erupts over the television show and the resident chooses to leave the room?” and “What if the resident becomes upset and demands to watch a television program of their choosing?” Staff members provided answers for each scenario. The primary investigator then described ways to increase choice during each scenario.

During the personal hygiene scenario, the investigator asked the direct-care staff members, “What if the resident has a doctor’s appointment the following morning but adamantly refuse to shower or bathe?,” “What if the resident is fearful of razors and does not want to shave?,” and “What if the resident becomes aggressive and self-injurious when told to brush their teeth?” Staff members again provided answers for each scenario and the primary investigator described ways to increase choice. The investigator answered direct-care staff members’ questions. Session III was scheduled for seven days later.

Session III - Role Play with Staff Members

During Session III, all direct-care staff members teamed together to role play activities involving eating, leisure and personal hygiene. Each direct-care staff member took turns role playing themselves as well as a "resident." The investigator instructed the direct-care staff member and the "resident" to engage in one activity involving eating, leisure, and personal hygiene. For example, during the
eating scenario, the staff member was directed to ask the "resident" to clear the dinner table. During the leisure scenario, the staff member was directed to have the "resident" work on a puzzle. During the personal hygiene scenario, the staff member was directed to ask the "resident" to conduct their nightly hygiene procedure from start to finish.

The investigator directly observed the procedure and identified and documented the amount of choice-making opportunities that were offered. The investigator then verbally instructed the direct-care staff member to improve choice-making availability in necessary areas. For example, during the eating scenario, staff members were instructed to give the "resident" the choice of what order to clear the table. The staff member, however, did not provide the "resident" a choice of when to clear the table. During the leisure scenario, the staff member allowed the "resident" to choose the puzzle but did not allow the "resident" the freedom to choose where the puzzle was to be completed (e.g., resident’s bedroom versus dining room table). During the personal hygiene scenario, the staff member allowed the "resident" a reasonable time to complete their nightly hygiene but did not allow the "resident" a choice as to the order of the nightly routine. The investigator verbally reinforced staff member efforts and provided feedback as to staff member performance. The investigator then requested that each direct-care staff member and "resident" repractice
the activities by reversing roles while implementing the
suggested ways to increase choice availability. The
investigator answered all questions posed by the direct-care
staff members. Session IV was scheduled for seven days
later.

Session IV - Role Play with Residents

Session IV involved staff member-actual resident role
playing scenarios within the group home. Staff members
instructed residents to engage in one activity involving
eating, leisure, and personal hygiene. The investigator
observed each procedure and noted the amount of choice-
making opportunities given to the resident and those times
when the staff member did not allow the resident to make a
choice. For example, during the eating activity, the staff
member was directed to give the resident the choice to set
or clear the dinner table. The investigator observed the
staff member to allow the resident to choose to clear the
table and what order the table would be cleared but provided
no choice as to when the table would be cleared.

During the leisure activity, the staff member was
directed to ask the resident to choose a television program
(e.g., in lieu of a puzzle). The staff member attempted to
give the resident a choice of which television program to
watch but when the resident made no choice, the staff member
made the choice for the resident.

During the personal hygiene activity, the staff member
was directed to give the resident the choice to conduct
their nightly hygiene procedure from start to finish. The investigator observed the direct-care staff member giving the resident minimal choice as to when the activity would occur but allowed the resident to choose his personal effects (e.g. underwear, socks, shirt).

The investigator then met with the staff members away from the residents. During this meeting, the investigator discussed ways to increase choice availability, specifically discussing those times when the staff member did not allow the resident to make a choice. The staff members then repracticed the activity with the resident and allowed for more choice-making opportunities in those areas requiring improvement. For example, during repractice of the eating activity, the staff member provided choice as to when the table would be cleared. During repractice of the leisure activity, the resident continued to refuse to choose a television program. During repractice of the personal hygiene procedure, the direct care staff member gave the resident the choice of when the activity would occur. The investigator answered questions posed by the staff members and residents. Session V was scheduled for seven days later.

Session V - Review

The final session focused on a review of Sessions I-IV. The investigator reviewed staff member performances in all areas and encouraged staff members to continue to allow for increased choice availability. The investigator clarified
the definition of choice availability and re-explained research findings regarding choice and its effects on adaptive and maladaptive behaviors. A question-and-answer session followed.

A post-intervention session was scheduled for seven days after Session V, during which time the RCAS, VABS-M, and VMBS were readministered to all direct-care staff members. The RCAS, VABS-M, and VMBS were again readministered 30 days after this post-intervention session. Due to a time constraint and direct-care staff member absenteeism, the measures were dropped off to each individual staff member and collected seven days later during the post-intervention and follow-up sessions. Again, a telephone number was provided so that the direct-care staff members could contact the investigator if they had any questions regarding the dependent measures.

Control Group

The control group received Sessions I and V only. One month prior to Session I, the RCAS, VABS-M, and VMBS were distributed in person to all direct-care staff members in control group homes. Due to a time constraint and direct-care staff member absenteeism, the measures were dropped off to each individual staff member and collected seven days later. As with the treatment group, a telephone number was provided so that the direct-care staff members could contact the investigator if they had any questions regarding the dependent measures. All direct-care staff members completed
the dependent measures for all residents. Questions regarding the RCAS, VABS-M, and VMBS were answered promptly by the investigator. The investigator explained to each staff member that their names and the names of the residents would be held in confidence. At the conclusion of the pre-intervention session, the consent forms were collected by the investigator. Written informed consent forms for the direct-care staff members who were absent during the initial session were collected seven days later along with the completed dependent measures.

Data Analysis

Mean ratings for each resident were derived at each interval for each dependent measure by averaging the direct-care staff members' ratings. Change scores were derived from the difference in dependent measure mean scores across intervals. Change scores were calculated by subtracting a resident's mean score during the follow-up session from the same resident's mean score for the pre-intervention session. Change scores were also calculated by subtracting mean scores during (1) the follow-up session from post-intervention, and (2) post- from pre-intervention sessions.

Because of the limited sample size, a conservative statistical method of t-tests with Bonferroni correction was used. T-tests for independent sample means were performed on the total scores for the RCAS, VABS-M, and VMBS at pre-intervention to determine if the groups differed prior
to treatment. In addition, t-tests for independent sample means were performed for all sets of change scores for each of the three dependent measures (e.g., RCAS, VABS-M, and VMBS). Thus, a total of twelve t-tests were conducted. A post hoc Bonferroni procedure was used to control for Type I error and determine if a significant finding was robust. The significance level was set at $p < .0042$ after the post hoc Bonferroni procedure.

In addition, Pearson product moment correlations were performed to determine interrater reliability for each dependent measure during pre- and post-intervention and follow-up for the treatment group. Pearson product moment correlations were also performed to determine interrater reliability for each dependent measure during pre-intervention for the control group. Correlational data were derived from ratings of two direct-care staff members randomly selected for each interval.
CHAPTER 3

RESULTS

Part I: Resident Choice

This section focuses on the effects of staff member training on increased choice-making opportunities for group home residents. It was hypothesized that staff member training would produce increased choice-making opportunities and thus higher RCAS scores. Total mean RCAS scores for pre-intervention, post-intervention and follow-up are presented in Appendix G. Treatment group RCAS scores (M = 4.61, SD = .843) were not significantly different than control group (M = 5.15, SD = .403; t (16) = -1.66, p > .10) RCAS scores at pre-intervention.

RCAS change scores

Treatment group RCAS change scores were initially found to be significantly higher than control group RCAS change scores (t (16) = 2.62, p < .05) at pre-intervention to post-intervention. Thus, the treatment group (M = 0.38, SD = .275) reported more improved resident choice across time from pre- to post-intervention than the control group (M = -0.19, SD = .613). However, this was not significant following a post hoc Bonferroni procedure.

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The treatment group RCAS change scores ($M = -0.04$, $SD = 0.153$) were also initially found to be significantly more positive than control group RCAS change scores ($M = -0.29$, $SD = 0.288$; $t(16) = 2.43$, $p < .05$) from post-intervention to follow-up. However, this was not significant following a post hoc Bonferroni procedure.

Treatment group RCAS change scores ($M = 0.34$, $SD = 0.267$) were significantly higher than control group RCAS change scores ($M = -0.48$, $SD = 0.624$; $t(16) = 3.77$, $p < .01$) from pre-intervention to follow-up. This was true even following post hoc testing using the Bonferroni procedure. Therefore, the treatment group, compared to the control group, reported a significant improvement in resident choice from pre-intervention to follow-up. The control group showed deteriorated resident choice as the study progressed.

Part II: Adaptive Behavior

This section focuses on the effects of staff member training on levels of adaptive behavior. It was hypothesized that greater opportunities for choice would be directly related to improvements in adaptive behavior. Total mean VABS-M comparison scores for pre-intervention, post-intervention and follow-up sessions are presented in Appendix H. Mean VABS-M scores at pre-intervention were not significantly different between treatment ($M = 50.80$, $SD = 5.56$) and control groups ($M = 59.43$, $SD = 5.22$; $t(16) = -1.50$, $p > .10$).
VABS-M change scores

VABS-M change scores for the treatment group ($M = -1.13, SD = 4.69$) were no different than the control group ($M = 1.17, SD = 5.95$) at pre- to post-intervention and post-intervention to follow-up ($M = .084, SD = 5.55$ and $M = 2.40, SD = 5.74$). From pre-intervention to follow-up, the treatment group VABS-M change scores ($M = -1.04, SD = 2.44$) were significantly lower than control group VABS-M change scores ($M = 3.57, SD = 5.44; t(16) = -2.39, p < .05$). However, this difference was not found to be significant following a post hoc Bonferroni procedure.

Part III: Maladaptive Behavior

This section focuses on the effects of staff member training on levels of maladaptive behavior. It was hypothesized that greater opportunities for choice would be directly related to improvements in maladaptive behavior. Total mean VMBS scores for pre-intervention, post-intervention and follow-up intervals are presented in Appendix I. Mean VMBS scores at pre-intervention were not significantly different between the treatment ($M = 17.50, SD = 8.55$) and control groups ($M = 13.82, SD = 5.23; t(16) = 1.07, p > .10$).

VMBS change scores

Treatment group VMBS change scores ($M = 4.71, SD = 4.30$) were significantly higher than the control group ($M = -1.02, SD = 4.31; t(16) = 2.80, p < .05$) from pre- to
post-intervention. However, this finding was not significant following a post hoc Bonferroni procedure. Treatment group VMBS change scores ($M = -1.88$, $SD = 3.20$) were significantly lower than the control group ($M = 5.40$, $SD = 5.89$; $t (16) = -3.34$, $p < .01$) from post-intervention to follow-up. However, this finding was not significant following a post hoc Bonferroni procedure. The treatment group VMBS change scores ($M = 2.83$, $SD = 2.34$) were not significantly different than those of the control group ($M = 4.38$, $SD = 7.56$) from pre-intervention to follow-up.
CHAPTER 4

DISCUSSION

In the present study, direct-care staff members who received training to increase choice availability reported improved levels of resident choice across time. This difference was most evident from pre-intervention to follow-up. In contrast, staff members who received no training to increase resident choice reported a decline in choice as the study progressed. Training in the treatment group was not associated, however, with improved levels of adaptive or maladaptive behavior. These latter findings were different from several previous studies related to choice and behavior (Carr & Carlson, 1993; Dunlap et al., 1994; Ip et al., 1994; Kearney et al., 1995a; Kearney et al., in press; Mc Knight & Kearney, 1994).

The following section addresses the similarities and differences of the present study compared to other studies with respect to choice. A discussion then ensues regarding adaptive and maladaptive behavior, suggestions for assessment and treatment, limitations of the current study, and future research.
Resident Choice

The results of this study support some previous research findings related to training staff to increase choice for persons with developmental disabilities (Ip et al., 1994; Parsons et al., 1993; Parsons & Reid, 1990; Sigafoos et al., 1993). These studies are similar to the present study in several important ways. First, each study used a training program to teach choice and demonstrated that opportunities for choice could be given to persons with developmental disabilities.

Furthermore, feedback regarding staff member performance was provided and choice opportunities were practiced until proficiency could be demonstrated (e.g., Parsons et al., 1993; Sigafoos et al., 1993). In addition, Ip et al. (1994) used a repeated measures design to demonstrate that staff members could quickly learn to effectively present choice-making opportunities in an ICF/MR setting. Like the present study, it was demonstrated that, with minimal training, direct-care staff members could be taught to provide more choice-making opportunities in a short period of time.

These studies also differ from the present study in several important ways. First, Parsons and colleagues evaluated only one or two choice opportunities (e.g., meal-related, turn-taking during snack and leisure), whereas the present study provided choice opportunities in three areas. Also, Ip et al. (1994) focused solely on reducing
"challenging behaviors." Adaptive behaviors were not examined as they were here.

The present study also did not include certain components included in other studies. For example, Parsons et al. (1993) included a social validity comparison component to demonstrate that choice could be observed and evaluated by parties not involved in treatment. In addition, Sigafoos et al. (1993) used a generalization probe to show that staff members could apply choice-making and turn-taking strategies with unfamiliar clients and across a range of community activities. Both studies also included an interobserver agreement component. Finally, Parsons et al. (1990, 1993) and Sigafoos et al. (1993) provided opportunities for choice in a setting other than an ICF/MR. The present study was conducted solely within ICF/MR settings.

Adaptive and Maladaptive Behavior

The results of some studies have indicated that the ability to exercise choice-making opportunities enhances adaptive behavior (Dunlap et al., 1994; Sigafoos et al., 1993). As well, previous literature has sometimes indicated that levels of maladaptive behavior decrease or stay the same with increased choice opportunities (Carr & Carlson, 1993; Dyer et al., 1990). However, in the present study, increased opportunities for choice were not associated with improvements in adaptive or maladaptive behavior.
There are several possible reasons why staff member training to increase choice opportunities did not lead to improved resident behavior. First, there may be no relationship between choice and levels of adaptive and maladaptive behavior for persons with developmental disabilities in less restrictive environments (e.g., ICF/MR settings). In addition, it may be that direct-care staff members in the treatment group homes provided more choice opportunities only in the presence of the primary investigator. This may have confused residents and neutralized behavior improvements.

Possible bias in staff member ratings may also explain the lack of differences regarding adaptive and maladaptive behavior. For example, residents in the treatment group were slightly more likely to be diagnosed with severe mental retardation than the control group, who displayed more mild mental retardation. Perhaps staff members in the treatment group, compared to the control group, had more rigid beliefs about abilities of their residents and failed to report actual improvements in adaptive behavior. Moreover, residents in the treatment group tended to be male, whereas residents in the control group represented a greater mixture of males and females. Possibly, fighting among male residents in the treatment group was perceived by staff members to be more severe than it actually was. Thus, actual improvements in maladaptive behavior in the treatment group may have been discounted.
Another possible reason for the results here was that direct-care staff members of the control group homes reported somewhat improved levels of behavior by virtue of their exposure to Sessions I and V and the dependent measures. Staff members may have surmised that the present study evaluated choice and levels of adaptive and maladaptive behaviors, and artifactually reported improvements in behavior across time. This would not explain, however, the decline in RCAS scores.

Furthermore, treatment group staff members and residents were burdened with partaking in the "What If" and role-play scenarios; these were comprehensive, time-consuming, and subject to distractions from other residents' behavior. Residents were also sometimes reluctant to adhere to staff members' expectations during these activities. Possibly, staff members provided biased ratings of adaptive and maladaptive behavior based on their general perception of all residents as a whole and not the rated ones in particular.

Finally, treatment group staff members were more intensely involved with the residents because of the scenarios and may have devised their own opinions as to why residents performed the way they did. For example, one resident participating in the eating scenario was heavily medicated and staff attributed any behaviors to his medication. This may have lowered the reported VABS-M ratings for this individual. Conversely, control group
staff members were not involved in the "What If" and role-play scenarios and may not have been as influenced by these extraneous variables.

Assessment Implications

The present study has several assessment implications. First and foremost, this study suggests that choice-making opportunities for persons with developmental disabilities can be assessed using a questionnaire (Kearney et al., 1995b). This preliminary study is one of the first to utilize a sophisticated measure to directly assess the effects of training direct-care staff members to increase choice availability for persons with developmental disabilities in ICF/MR settings. The RCAS, in general, showed strong Interrater reliability across time (mean r = .83). According to Kearney et al. (1995b), use of the RCAS from a caregiver perspective is a cost-effective method for evaluating choice availability. Across time, the RCAS allows for an assessment of specific residential choices that may require future modification and lead to improved choice opportunities within an ICF/MR setting.

Another assessment implication involves the use of the VABS-M and VMBS. The VABS-M was modified from an interview to a report format. Although the VABS-M showed strong Interrater reliability across time (mean r = .78), one concern is that the modification of this measure was not
valid and negatively impacted the sensitivity of the measure.

Although the VABS-M was modified to contain items most relevant to a population diagnosed with moderate mental retardation, another concern is that the measure was not sensitive enough to measure levels of adaptive behaviors for this population. Modifying this assessment measure from its original version may have decreased the likelihood that the measure would truly assess those adaptive behaviors exhibited within the ICF/MR setting. Other questions may have more appropriately fit the skill level of those individuals residing in this type of setting. For example, to assess communication skills, it may have been more appropriate to include more sophisticated items such as:
"States own first and last name when asked," "Tells popular story, fairy tale, lengthy joke, or television plot," or "States telephone number when asked," to reflect the skill level of the residents. More sophisticated items to assess daily living skills could have included: "Puts shoes on correct feet without assistance," "Answers telephone appropriately," or "Fastens seat belt in automobile independently." Finally, to better assess socialization skills, items such as "Labels happiness, sadness, fear, and anger in self," "Ends conversations appropriately," or "Controls anger or hurt feelings when denied own way" could have been used. The VABS-M, however, showed strong interrater reliability across time.
Another concern was that the VMBS was not sensitive enough to measure levels of maladaptive behaviors in residents. Perhaps items such as "Sucks thumb or finger," or "Is unaware of what is happening in immediate surroundings," would have more appropriately matched behaviors exhibited by individuals diagnosed with profound mental retardation. Also, modification may have reduced its interrater reliability (mean r = .52).

Treatment Implications

This present study has several implications for treatment development. First, verbal instruction, modeling opportunities, practicing activities involving choice, and feedback about performance can be important components for increasing choice-making opportunities. These treatment components may also be important for generalizing choice to other contexts. For example, staff members may provide choice opportunities during activities where choice was not offered before. Moreover, role playing choice opportunities allows for confirmation that staff members understood the techniques learned. Role play may also condition staff and residents to implement and engage in choice behaviors following treatment.

Finally, another treatment implication may be that Sessions I and V were not needed. Perhaps provisions for choice can be taught without reviewing previous studies and concepts learned. It may be possible that the "What If" and
role-play scenarios are the vital components for training staff to increase choice opportunities.

Limitations

Limitations of the present study must be acknowledged. First, direct-care staff members are relied upon to make accurate judgments regarding resident choice and may not fully understand how to present choice opportunities, thus requiring further training. Training is time-consuming and requires an effort on the part of staff who are often burdened with other work responsibilities. Moreover, the individual components of treatment that may have affected levels of adaptive and maladaptive behavior were not assessed directly.

Treatment could have been strengthened with the addition of two components: a historical component and a choice comparative component. The addition of a component emphasizing the historical lack of choice for persons with developmental disabilities could provide an overview of how choice opportunities have been denied for this population during past decades. The addition of a component emphasizing the difference in caregiver and resident choice-making opportunities on a daily basis could further educate staff about the lack of choice availability for this population.

Second, the "What If" scenarios involved in the study could have more appropriately reflected scenarios specific
to a certain ICF/MR setting. For example, the scenarios presented to the direct-care staff members were more limited than those scenarios that actually occurred within the ICF/MR setting. During a meal, if a resident desired a certain food item, they were free to fix that item. If a resident refused to engage in a leisure activity (e.g., television viewing), they were already free to do so. In addition, residents were already free to choose any clothing item they desired.

During the review session, direct-care staff members were also distracted by impending daily responsibilities, making them anxious to end the session and less inclined to fully attend to the process. In one home, for example, staff members were preparing to move residents to other rooms. In another home, staff member movement out of the ICF/MR setting distracted the remaining staff’s attention.

Furthermore, the sampling procedure in this study was limited. The direct-care staff members and residents of the four ICF/MR homes involved in this study were recruited from only one organization in the greater Las Vegas area. A more representative sample was unavailable due to lack of cooperation from other ICF/MR facilities. A larger sampling of direct-care staff members and residents may have strengthened the chance to support the hypotheses tested here.

Finally, a larger and more equivalent sampling size of residents would have provided a better analysis of the
effects of increased choice opportunities for persons with different severities of mental retardation. The present study predominantly contained individuals diagnosed with moderate mental retardation. Moreover, as previously noted, there were limitations regarding the assessment measures.

Future Research

Because the availability of choice-making opportunities has recently been identified as a potentially important aspect affecting quality of life for persons with disabilities, future researchers of choice should focus on several important areas. First, a focus should be made on refining choice assessment and intervention protocols to best evaluate resident choice opportunities in the ICF/MR setting. It is necessary to use methods of assessment that are quite sensitive to resident ability to make decisions regarding choice in several areas, not just those regarding communication, socialization, daily living skills, and adaptive and maladaptive behavior.

In addition, it seems warranted to examine the types of choice opportunities given persons with disabilities across a broad range of settings, times, and people. For example, researchers could examine how preference, choice, and choice availability are generalized to a variety of environmental contexts such as day treatment programs and a broader range of daily activities. As well, future researchers should examine when and how residents choose not to make choices.
and consider direct reports from residents regarding choice and its impact on behavior.

With respect to intervention methods, future researchers should focus on implementing protocols that address choice-making skills and provide choice opportunities so that residents may practice learned skills. Future researchers also need to identify the exact elements and mechanisms of intervention programs that lead to enhanced or deterred choice and focus on specific factors that lead to improved quality of life for this population.

Furthermore, researchers should focus on choice-related interventions that are less time-consuming for direct-care staff members. As well, researchers should examine ways to teach all types of caregivers to increase choice availability. This is so because a broad spectrum of caregivers are often involved in the daily care of persons with developmental disabilities.

Final Comments

When surveying the transformation that service delivery programs have undergone in the past forty years, it seems important to focus on future provisions for choice, choice availability, preference, and quality of life factors for persons with developmental disabilities. Because choice is currently considered an important factor affecting quality of life, it may have further implications for studying the
psychological well-being of individuals with developmental disabilities.

Researchers should continue to focus on training caregivers to provide choice, enhancing independent choice for persons with mental retardation, and developing assessment and intervention techniques in vivo across a broad range of environments. This study is one of the first to explore in vivo training of direct-care staff members to increase choice opportunities in a broad range of activities for persons with developmental disabilities residing in ICF/MR settings. Future researchers should enhance the techniques utilized here.
APPENDIX A

WRITTEN INFORMED CONSENT
Informed Consent

(Facility) Staff Member

I, _______________________________ hereby agree to participate in training for the research project on the relationship between choice availability and adaptive and maladaptive behavior.

I understand that the study involves training staff members of (Facility) to increase resident choice availability through the use of role playing and modeling of choice availability.

It has been explained to me that the purpose of the study is to learn more about the relationship of choice availability and its effects on adaptive and maladaptive behavior in persons with disabilities in the group home setting.

I understand that participation will help benefit others in the future.

Dr. Christopher Keamey and Tami Jo Me Knight have offered to answer any questions I may have about the study and what is expected of me. I have been assured that all information will be kept confidential, but understand that videotaped information will be used for educational purposes and hereby consent to any videotaping necessary for this research study.

I understand that I am free to withdraw from participation in this study at any time.

I _______________________________ have read and understand the foregoing information and agree to participate in this study.

Date _____________ Signature _______________________

If you have any questions, call Dr. Christopher Keamey or Tami Jo Me Knight at 895-3305.
APPENDIX B

WRITTEN INFORMED CONSENT
Informed Consent

Disabilities

I, _______________________________ hereby agree to allow the resident with disabilities of (Facility), for whom I retain guardianship, to serve as a subject in the research project on the relationship between choice availability and adaptive and maladaptive behavior.

I understand that the study involves training staff members of (Facility) to increase resident choice availability through the use of role playing and modeling of choice availability.

It has been explained to me that the purpose of the study is to learn more about the relationship of choice availability and its effects on adaptive and maladaptive behavior in persons with severe disabilities in the group home setting.

I understand that participation will help benefit others in the future.

Dr. Christopher Kearney and Tami Jo Mc Knight have offered to answer any questions I may have about the study and what is expected of the resident for whom I obtain guardianship. I have been assured that all information will be kept confidential, but understand that videotaped information will be used for educational purposes and hereby consent to any videotaping necessary for this research study.

I understand that the resident with disabilities, for whom I retain guardianship, is free to withdraw from participation in this study at any time.

I have read and understand the foregoing information and agree to allow ____________________ to participate in this study.

Date _____________ Signature ___________________________

If you have any questions, call Dr. Christopher Kearney or Tami Jo Mc Knight at 895-3305.
APPENDIX C

RESIDENT CHOICE ASSESSMENT SCALE
RESIDENT CHOICE ASSESSMENT SCALE

CLIENT: ___________________________ DATE: ________________

Please circle the number that best answers the following questions:

1. Does the client choose the time he/she wakes in the morning?
   - Never
   - Almost
   - Half the Time
   - Usually
   - Almost
   - Always

   1  2  3  4  5  6  7

2. Does the client choose his/her bedtime?
   - Never
   - Almost
   - Half the Time
   - Usually
   - Almost
   - Always

   1  2  3  4  5  6  7

3. Is the client’s bedroom door locked at night?
   - Never
   - Almost
   - Half the Time
   - Usually
   - Almost
   - Always

   1  2  3  4  5  6  7

4. Does the client choose his/her own clothes in the morning?
   - Never
   - Almost
   - Half the Time
   - Usually
   - Almost
   - Always

   1  2  3  4  5  6  7

5. Does the client choose his/her roommate (if not in a private room)?
   - Never
   - Almost
   - Half the Time
   - Usually
   - Almost
   - Always

   1  2  3  4  5  6  7

6. Does the client choose the time he/she takes a bath/shower?
   - Never
   - Almost
   - Half the Time
   - Usually
   - Almost
   - Always

   1  2  3  4  5  6  7

7. Does the client choose the time he/she brushes his/her teeth?
   - Never
   - Almost
   - Half the Time
   - Usually
   - Almost
   - Always

   1  2  3  4  5  6  7

8. Does the client have a choice at mealtimes (e.g., ham vs. steak)?
   - Never
   - Almost
   - Half the Time
   - Usually
   - Almost
   - Always

   1  2  3  4  5  6  7

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9. Does the client have a choice as to when he/she eats (e.g., 6:00 or 6:30)?

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10. Does the client choose his/her own activities at day treatment?

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11. Does the client choose his/her own recreational activities?

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12. For group activities, does the client choose whether or not he/she participates?

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13. May the client take walks outside by himself/herself?

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14. Is the client allowed to be in his/her bedroom alone during the day/evening?

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15. Is the client allowed to move about the building/home as he/she chooses?

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16. Does the client have a choice as to whether he/she has visitors?

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17. Does the client participate in preparation of meals?

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18. Does the client participate in clean-up after meals?

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19. Does the client participate in doing his/her laundry?

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20. Is the client responsible for all or part of clean-up of his/her bedroom?

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21. Does the client choose whether he/she will receive therapy services (e.g., speech, physical, occupational)?

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22. Does the client choose which television program he/she would like to watch?

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23. Does the client choose which radio program he/she would like to listen to?

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24. Does the client choose which activities he/she will participate in during the weekend?

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25. Does the client choose which type or style of adaptive equipment or prosthetic devices he/she utilizes (e.g., wheelchair, braces)?

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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL SCORE:** __________  **ITEM MEAN SCORE:** __________
APPENDIX D

VINELAND ADAPTIVE BEHAVIOR SCALE - MODIFIED
VINELAND ADAPTIVE BEHAVIOR SCALE - MODIFIED

Subject number: _______________ Date: _______________

Please score the following behaviors as either (0) no, never, (1) sometimes or partially, or (2) yes, usually:

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demonstrates understanding of the meaning &quot;no&quot;</td>
<td></td>
</tr>
<tr>
<td>2. Listens attentively to instructions</td>
<td></td>
</tr>
<tr>
<td>3. Demonstrates understanding of the meaning of &quot;yes&quot; or &quot;okay&quot;</td>
<td></td>
</tr>
<tr>
<td>4. Follows instructions requiring an action and an object</td>
<td></td>
</tr>
<tr>
<td>5. Uses first names or nicknames of siblings, friends, or peers or states their names when asked</td>
<td></td>
</tr>
<tr>
<td>6. Indicates preferences when offered a choice</td>
<td></td>
</tr>
<tr>
<td>7. Spontaneously relates experiences in simple terms</td>
<td></td>
</tr>
<tr>
<td>8. Speaks in full sentences</td>
<td></td>
</tr>
<tr>
<td>9. Relates experiences in detail when asked</td>
<td></td>
</tr>
</tbody>
</table>

Total communication score

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Washes and dries face without assistance</td>
<td></td>
</tr>
<tr>
<td>2. Cares for all toileting needs without being reminded and without assistance</td>
<td></td>
</tr>
<tr>
<td>3. Indicates wet or soiled clothing by pointing or vocalizing</td>
<td></td>
</tr>
<tr>
<td>4. Cares for nose without assistance</td>
<td></td>
</tr>
<tr>
<td>5. Bathes or showers self unassisted</td>
<td></td>
</tr>
<tr>
<td>6. Bathes self unassisted</td>
<td></td>
</tr>
<tr>
<td>7. Feeds self with spoon without spilling</td>
<td></td>
</tr>
<tr>
<td>8. Brushes teeth without assistance</td>
<td></td>
</tr>
<tr>
<td>9. Uses spoon, fork, and knife competently</td>
<td></td>
</tr>
<tr>
<td>10. Uses stove or oven for cooking</td>
<td></td>
</tr>
<tr>
<td>11. Dresses self completely, including tying shoelaces and fastening all fasteners</td>
<td></td>
</tr>
<tr>
<td>12. Prepares food that requires mixing and cooking without assistance</td>
<td></td>
</tr>
<tr>
<td>13. Gets drink of water from tap unassisted</td>
<td></td>
</tr>
<tr>
<td>14. Makes own bed and changes bedding routinely</td>
<td></td>
</tr>
<tr>
<td>15. Uses stove or microwave oven for cooking</td>
<td></td>
</tr>
</tbody>
</table>

Total daily living skills score
1. Has a preferred friend of either sex
2. Looks at face of caregiver
3. Responds to voice of caregiver and another person
4. Shows affection toward familiar people
5. Has a group of friends
6. Shows interest in novel objects or new people
7. Follows community rules
8. Shows interest in activities of others
9. Laughs or smiles appropriately in response to positive statements
10. Imitates simple movements of others, such as clapping hands or waving goodbye, in response to a model
11. Uses appropriate table manners without being told
12. Shows a preference for some friends over others
13. Says "please" when asking for something

Total socialization score
APPENDIX E

VINELAND MALADAPTIVE BEHAVIOR SCALE
MALADAPTIVE BEHAVIOR SCALE

Subject number: ____________ Date: ____________

Please score the following behaviors as either (0) no, never, (1) sometimes or partially, or (2) yes, usually:

1. Sucks thumb or fingers
2. Is overly dependent
3. Withdraws
4. Wets bed
5. Exhibits an eating disturbance
6. Exhibits a sleeping disturbance
7. Bites fingernails
8. Avoids school or work
9. Exhibits extreme anxiety
10. Exhibits tics
11. Cries or laughs too easily
12. Has poor eye contact
13. Exhibits excessive unhappiness
14. Grinds teeth during the day or night
15. Is too impulsive
16. Has poor concentration and attention
17. Is overly active
18. Has temper tantrums
19. Is negativistic or defiant
20. Teases or bullies
21. Shows lack of consideration
22. Lies, cheats, or steals
23. Is too physically aggressive
24. Swears in inappropriate situations
25. Runs away
26. Is stubborn or sullen
27. Is truant from school or work
28. Engages in inappropriate sexual behavior
29. Has excessive or peculiar preoccupations with objects or activities
30. Expresses thoughts that are not sensible
31. Exhibits extremely peculiar mannerisms or habits
32. Displays behaviors that are self-injurious
33. Intentionally destroys own or another's property
34. Uses bizarre speech
35. Is unaware of what is happening in immediate surroundings
36. Rocks back and forth when sitting or standing

Total score

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PROTOCOL

PRE-INTERVENTION SESSION:

Administration of the Resident Choice Assessment Scale, Vineland Adaptive Behavior Scale - Modified, and Vineland Maladaptive Behavior Scale as pre-intervention measures one month prior to the study.

SESSION I: Lecture Format (30 days later)
SESSION II: "What If" Scenarios (seven days later)
SESSION III: Role play with Staff Members (seven days later)
SESSION IV: Role Play with Residents (seven days later)
SESSION V: Review (seven days later)

POST-INTERVENTION: Administration of the RCAS, VABS-M, and VMBS seven days after Session V.

FOLLOW-UP: Administration of the RCAS, VABS-M, and VMBS one-month following post-intervention.

Independent Variable: Direct-care staff member training.

Dependent Variables: The Resident Choice Assessment Scale, modified version of the Vineland Adaptive Behavior Scale, and the Vineland Maladaptive Behavior Scale.

Hypothesis: Staff member training will result in improved levels of choice availability and adaptive and maladaptive behaviors in group home residents with mental retardation.

<table>
<thead>
<tr>
<th>TREATMENT GROUP</th>
<th>CONTROL GROUP</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 2 group homes</td>
<td>N = 2 group homes</td>
</tr>
<tr>
<td>RCAS and Vineland = Pre/Post, Follow-Up</td>
<td>RCAS and Vineland = Pre/Post, Follow-up and Sessions I and V only</td>
</tr>
</tbody>
</table>

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SESSION I: LECTURE
(30 - 45 minutes)

INTRODUCTION:

"Hi, my name is Tami Jo Mc Knight. I am here today to talk with you about the choices made on a daily basis by you and the individuals you work with - both fellow co-workers and residents."

"First, I would like to talk about choice and what it means. Choice is defined as the right or act of choosing, selecting an alternative, or making a preference or judgment."

(Write definition on the blackboard)

"In other words, people choose when, where, what, and how to run their life. Every aspect of life."

"By now you’re probably asking yourself, why are we doing this? I feel it is important to provide education and information about recent research findings and how they might impact the group home setting."

"Does anyone here know the definition for adaptive behavior? (allow for answers) Good!"

"Who can give me some examples? (allow for answers) Great! Adaptive behavior is defined as behavior that is appropriate. (Write definition of the blackboard) (Review of research relevant to choice, preference, and choice availability) Greater opportunity to choose personal variables such as clothing and activities is directly related to improvements in adaptive behavior such as social interaction. Researchers have found that persons with severe disabilities were much happier and more attentive to their work when they were able to choose or were assigned tasks that they preferred."

"Does anyone know what maladaptive behavior is? (allow for answers) Right! Can anyone give me some examples of maladaptive behavior? (allow for answers) Good! Maladaptive behavior is defined as inappropriate behavior. (Write definition on the blackboard) (Review of research relevant to choice, preference, and choice availability) The behavior decreases when choice is allowed. Thus, making choices reduces the need to communicate desired choices by exhibiting inappropriate behavior, such as aggression and yelling. In conclusion, research shows that there is a difference in behavior, adaptive versus maladaptive behavior, when persons with severe disabilities are able to make choices."
(SESSION I)

"At this point, your probably saying to yourself, okay, research shows that there is a difference in behavior due to the ability to make choices? So what? Are there any questions?"

(Allow for questions and answers)

"I want to stop here and I would like for you to think about what we've discussed. Next week, for Session II, we will work on some 'What-If' scenarios that might occur when working with the residents."

"Following that, for Session III, we will role play some situations that you might encounter while working with the residents. Each of you will be given the chance to play the staff member and the resident."

"For Session IV, we will work directly with the residents to improve upon what we've learned during our role playing session. During this time, we will also spend some time away from the residents refining our techniques."

"For Session V, we will review what we have learned from all of the previous sessions."

"I want to thank you for allowing me to talk to you, and I will see you next week."
SESSION II: "What If" Scenarios involving choice making
(1 hour) - Each section will allow for questions and answers
"What if" scenarios involving: Eating Leisure
I. Eating
   A. "Can you describe the mealtime procedure and what is required of the residents during this time?"
   B. "What opportunities are there to make choices? Why? Why not?"
   C. Explain to staff ways to increase choice availability. "Choice can be increased by giving the resident some options and allowing that resident to choose one of the options during the mealtime procedure. By allowing the resident to select or make a preference you can increase choice. Or, simply allow the resident to make their own choices, unassisted by staff, during this time. For example, the resident could choose what types of drinks are served for dinner. Or, the resident could be given a choice to serve two out of three drink choices for dinner. Specific behaviors can be recognized as choice-making behaviors. These behaviors include nonverbal cues such as eye blinks, eye contact, arm movements, smiles and other body movements. Behaviors can also be recognized by verbal intonations. For example, a grunt could signify the desire for a slice of meat. A screech could signify dissatisfaction with the salad."

   "What if it is the resident’s turn to set/clear the table and they refuse to do so when asked?"

   Allow the resident to choose when they want to set/clear the table. They do not have to act immediately. Give them options. Allow them the right to choose; give them preferences. For example, they can set the table now or anytime before dinner. If the resident does not know how to tell time, ring a bell five minutes before dinner is ready to signal the resident that dinner is about ready. Or, if the resident does know how to tell time, let them know what time dinner will be ready. Let them know that it is their choice when they want to set the table as long as it is any time before the time indicated.

   "What if an argument erupts at the table and the resident chooses to leave the table and does not finish their dinner?"

   Allow the person to make this choice.
(SESSION II)

"What if mashed potatoes are served for dinner? The resident becomes upset and demands peas?"

Allow the resident to choose whether or not to eat the mashed potatoes.

(allow for questions and answers)

II. Leisure

A. "Can you describe a leisure activity and what is required of the residents during this activity?"

B. "What opportunities are there to make choices? Why? Why not?"

C. Explain to staff ways to increase choice availability. "Choice can be increased by giving the resident some options and allowing that resident to choose one of the options during the leisure activity. By allowing the resident to select or make a preference you can increase choice. Or, simply allow the resident to make their own choices, unassisted by staff, during this time. For example, the resident could choose what game to play during the activity. Or, the resident could be given a choice between two activities. Specific behaviors can be recognized as choice-making behaviors. These behaviors include nonverbal cues such as eye blinks, eye contact, arm movements, smiles and other body movements. Behaviors can also be recognized by verbal intonations. For example, a grunt could signify a dislike for a certain activity. A screech could signify satisfaction with an activity."

"What if it is the resident’s turn to participate in the leisure activity and they refuse to do so when asked?"

Allow the resident to choose when they want to participate in the activity. They do not have to act immediately. Give them options. Allow them the right to choose; give them preferences. For example, a resident can choose to watch television. If the resident does not want to watch television, he or she could choose to read a book or do a puzzle. Let the resident know that it is their choice to participate or not participate in the activity.

"What if an argument erupts over the television show and the resident chooses to leave the room?"

Allow the person to make this choice.
"What if the resident becomes upset and demands to watch a television program of their choosing?"

Allow the resident to choose whether or not to participate in the activity.

(allow for questions and answers)

II. Personal Hygiene

A. "What are the required procedures for residents regarding personal cleanliness?"

B. "What opportunities do they have to make choices? Why? Why not?"

C. Explain to staff ways to increase choice availability. "Choice can be increased by giving the resident some options and allowing that resident to choose one of the options during the hygiene procedure. By allowing the resident to select or make a preference you can increase choice. Or, simply allow the resident to make their own choices, unassisted by staff, during this time. For example, the resident could choose what type of toothpaste they want to brush their teeth with. Specific behaviors can be recognized as choice-making behaviors. These behaviors include nonverbal cues such as eye blinks, eye contact, body movements or smiles/frowns. Behaviors can also be recognized by verbal intonations. For example, laughter could signify satisfaction with brushing one's hair. A groan could signify dissatisfaction with the brand of toothpaste."

"What if the resident has a doctor's appointment the following morning but they adamantly refuse to shower/bathe?"

Allow the resident to refuse to shower or bath. Attempt to explain to the resident reasons needed for the shower/bath. Again allow the resident to make the choice. Praise other residents for complying to the request. Inform the resident that the doctor's appointment will be rescheduled and explain the consequences of missing the appointment. Again allow the resident to choose. (Perhaps set up a reward or praise those who comply.)

"What if the resident is fearful of razors and does not want to shave?"
Model the use of the razor for the resident. This may take several opportunities. Throughout the activity allow the resident to choose to shave themselves or have the staff member do this.

"What if the resident becomes aggressive and self-injurious when told to brush their teeth?"

Allow the resident to forego brushing their teeth for the moment. After the resident has calmed down, try again to get the resident to brush their teeth. Inform the resident that it will be done before they go to bed but that they can choose when this will be.

(allow for questions and answers)
SESSION III:  Role play with Staff Members

(1 hour and 30 minutes)

Pair staff members. For each role play, instruct one staff member to be the resident and one to play themselves. Alternating role play will take place during repractice.

I.  Eating

A.  Instruct the staff member to have the "resident" set the table (or clear the table). Instruct the staff member who is playing the "resident" to engage in noncompliant behavior.

B.  Observe the procedure and amount of choice-making opportunities that are available.

C.  Talk to the staff member away from the "resident". If staff appear to be having difficulty allowing the "resident" to make his/her own choices, coach the staff member to improve specific choice availability. If staff's performance is good, verbally reinforce staff's efforts. Let them know what they did right. Allow for questions and answers.

D.  Repractice

II.  Leisure

A.  Instruct the staff member to have the "resident" work on a puzzle. Instruct the staff member who is playing the "resident" to engage in noncompliant behavior.

B.  Observe the procedure and amount of choice-making opportunities that are available.

C.  Talk to the staff member away from the "resident". If staff appear to be having difficulty allowing the "resident" to make his/her own choices, coach the staff member to improve specific choice availability. If staff's performance is good, verbally reinforce staff's efforts. Let them know what they did right. Allow for questions and answers.

D.  Repractice
(SESSION III)

III. Personal Hygiene

A. Instruct the staff member to have the "resident" conduct the nightly hygiene procedure from start to finish. Instruct the staff member who is playing the "resident" to engage in noncompliant behavior.

B. Observe the procedure and amount of choice-making opportunities that are available.

C. Talk to staff away from the "resident". If staff appear to be having difficulty allowing the "resident" to make his/her own choices, coach the staff member to improve specific choice availability. If staff's performance is good, verbally reinforce staff's efforts. Let them know what they did right. Allow for questions and answers.

D. Repractice
SESSION IV: Role Play With Residents

(1 hour) Staff w/ Residents

I. Eating

A. Instruct the staff member to have the resident set the table (or clear the table). Begin with getting the dishes from the kitchen.

B. Observe the procedure. Note the amount of choice-making opportunities given to the client. Note the times when the staff member does not allow the resident to make choices. Observe all of the interactions between the staff member and the residents closely.

** (meet away from residents - provide feedback to the staff members regarding their performance. Allow for questions and answers.)

C. Repractice

II. Leisure

A. Instruct the staff member to have the resident choose a television program.

B. Observe the procedure. Note the amount of choice-making opportunities given to the client. Note the times when the staff member does not allow the resident to make choices. Observe all of the interactions between the staff member and the residents closely.

** (meet away from residents - provide feedback to the staff members regarding their performance. Allow for questions and answers.)

C. Repractice

II. Personal Hygiene

A. Instruct the staff member to have the resident conduct the hygiene procedure from start to finish.

B. Observe the procedure. Note the amount of choice-making opportunities given to the client. Note the times when the staff member does not allow the resident to make choices. Observe all of the interactions between the staff member and the residents closely.
(SESSION IV)

** (meet away from residents - provide feedback to the staff members regarding their performance. Allow for questions and answers.)

C. Repractice

Talk to all staff members away from all residents (30 minutes)

I. Eating

Talk to the staff member away from the resident. If staff appears to be having difficulty allowing the resident to make his/her own choices, coach the staff member to improve specific choice availability. Determine specifically what needs improvement and ascertain how this can be accomplished. If staff's performance is good, verbally reinforce staff's efforts. Let the staff member know what they did right.

Return for repractice.

II. Leisure

Talk to the staff member away from the resident. If staff appears to be having difficulty allowing the resident to make his/her own choices, coach the staff member to improve specific choice availability. Determine specifically what needs improvement and ascertain how this can be accomplished. If staff's performance is good, verbally reinforce staff's efforts. Let the staff member know what they did right.

Return for repractice.

II. Personal Hygiene

Talk to the staff member away from the resident. If staff appears to be having difficulty allowing the resident to make his/her own choices, coach the staff member to improve specific choice availability. Determine specifically what needs improvement and ascertain how this can be accomplished. If staff's performance is good, verbally reinforce staff's efforts. Let the staff member know what they did right.

Return for repractice.
SESSION V: Review

(45 minutes)

I. Review everything to date

II. Review staff member performance
   A. Verbally reinforce staff member efforts.
   B. Encourage staff to increase choice availability if necessary.

III. Clarify choice availability and its effect on adaptive and maladaptive adaptive behaviors.

IV. Questions and Answers

Administer RCAS, VABS-M, and VMBS as the post-intervention measure seven days after Session V and 30 days after post-intervention to the treatment and control groups.
Figure 1

RCAS scores

<table>
<thead>
<tr>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
</table>

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APPENDIX H

FIGURE 2
Figure 2

VABS-M scores

Pre

Interval

Post

Pu

40  50  60  70

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Figure 3

VMBS scores

Interval

Pre

Post

Ful

10
14
18
22
26

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References


