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Abstract

The paper describes a program, used by three women living in a community based apartment, to develop social relationships within the community. With staff helping them use a set of "community network strategies", the tenants increased the size of their social networks and engaged in more frequent community based activities. Gains were generally maintained during the follow up period. The article emphasises the importance of people with disabilities having lives that include enduring friendships with people in addition to paid staff, as only then will they be likely to experience the kinds of social relationships which are so valuable to all members of society. **Keyword: Friendship**

Using a Social Guide to Improve Social Relationships of People with Severe Disabilities

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Staff members of community-based residential pro-grams serving individuals with intellectual disabilities often have difficulty helping participants develop social relationships with community members. A "social guide model" taught staff of an apartment-based residential program to use a set of "community network strategies" to improve the social relationships of three women with disabilities. Results demonstrated a functional relation-ship between staff members' use of the strategies under the supervision of the social guide model and increases in the size of participants' social networks and the frequency with which they experienced social integra-tion. The intervention also was associated with a higher weekly rate of introduction of new network members and a higher rate of socially integrated activities per network member per week. Gains generally were main-tained during a follow-up period, with a regular staff member assuming the role of social guide.

DESCRIPTORS: applied behavior analysis, com-munity-based programs, mental retardation, quality of life, residential programs, social interaction

Outcomes related to the social relationships of people with disabilities are commanding attention as impor-tant indicators of quality of life (Haring, 1991; Ken-nedy, Horner, & Newton, 1989, 1990; O'Connor, 1983; Rowitz, 1985). An existing body of research demon-strates a beneficial relationship between social support and both mental and physical health (e.g., Berkman & Syme, 1979; DiMatteo & Hays, 1981; House, Landis, & Umberson, 1988; Kaplan, Roberts, Camacho, & Coyne, 1987; Leavy, 1983; Orth-Gomér & Johnson,

1987; Welin et al., 1985), and personal and professional values assert that improving the social relationships of individuals with disabilities is a worthy goal in and of itself (Stainback & Stainback, 1987; Strully & Strully, 1985).

Most research that has focused on the social relation-ships of individuals with disabilities who live in com-munity-based residential settings has been descriptive. Although some of these studies have used detailed behavioral observation coding to record fine-grained social interactions among individuals with disabilities (Butler & Bjaanes, 1978; Landesman-Dwyer, Berkson, & Romer, 1979; Romer & Heller, 1983), the majority have been concerned with broader aspects of social relationships, and have produced information using less structured direct observation methods, interviews, and questionnaires. Although some encouraging aspects of the social life of individuals with disabilities have been noted (Edgerton, 1988; Krauss & Erickson, 1988; Mest, 1988), a large proportion of these studies, particularly those that have focused on individuals with severe disabilities, have not been so heartening. For example, lack of friends, few social activities, and loneliness are among the problems faced by participants in commu-nity-based residential programs (Crapps & Stoneman, 1989; Kregel, Wehman, Seyfarth, & Marshall, 1986; Rosen & Burchard, 1990; Schalock & Lilley, 1986; Sullivan, Vitello, & Foster, 1988). Even when social contacts between participants and individuals other than a best friend or family member do occur, they often do not endure (Kennedy et al., 1989). This may explain why some participants primarily rely on resi-dential staff for social support (Malin, 1982; Rosen & Burchard, 1990).

Some inquiries have gone beyond descriptions of social life, and have employed and evaluated strategies designed to improve aspects of social relationships. For example, friendship awareness activities and peer tutor programs have been implemented in school settings (e.g., Fritz, 1990; Haring, Breen, Pitts-Conway, Lee, & Gaylord-Ross, 1987; Shores, 1987), and a few experi-mental studies have been conducted in residential set-tings. Such studies have included teaching social behav-

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iors in an institutional setting (Dong, 1977; Singh & Winton, 1983), fostering social integration and friendship in the local community (Cooley, Singer, & Irvin, 1989; Newton & Horner, in press), increasing social initiations and reciprocal interactions in the natural home (James & Egel, 1986), and training peer tutors to teach community skills to individuals with disabilities (Blew, Schwartz, & Luce, 1985).

Two relatively new ideas for improving the social life of people with disabilities are citizen advocacy relationships (e.g., Widrick, Hasazi, & Hasazi, 1990) and "circles of friends" (Forest, 1991; Perske, 1988), which foster personal relationships between individuals with disabilities and persons without disabilities. Although such ventures have undergone little experimental analysis, there is anecdotal evidence of their effectiveness (e.g., Hasazi, 1991). A variation on this idea involves employing a subset of residential support staff as "connectors," whose main responsibilities are to help participants develop social relationships (O'Brien & O'Brien, 1991). The following study provides an experimental analysis of the effectiveness of one such community connector (or, as termed here, a "social guide" [Forest, 1989]) in improving the social relationships of three individuals with disabilities.

Method

Participants and Setting

The staff members and three participants of a local apartment-based residential support program volunteered to participate in the study. Demographic data regarding the participants are provided in Table 1.

Dependent Variables and Measures

Social network size and composition. A participant's social network was defined as the people with whom the participant engaged in one or more activities in a given time period, excluding any residential support staff and other residential program participants (Newton, Stoner, Bellamy, et al., 1988; Wilcox & Bellamy, 1987).

Each member of a participant's social network was classified as belonging to one of three mutually exclu-

sive categories: a "family member," a "nonfamily significant other," or "another person." A family member was any relative of the participant. A nonfamily significant other was any person (other than a family member) who had been designated as a "significant other" by the participant, or by the participant's parent, guardian, advocate, or residential support staff, at the time of the participant's most recent individualized support plan (ISP) meeting. (The participating residential program uses its ISP process to identify significant others with whom the participant would like to spend more time). "Another person" identified any person other than a family member or a nonfamily significant other (e.g., a neighbor). Thus "social network composition" referred to the number of people within each of these three social network member categories.

Social integration. An instance of "social integration" occurred whenever a participant engaged in an activity with a social network member (e.g., House, Umberson, & Landis, 1988; Kennedy et al., 1989). The measure of social integration was the number of activities a participant experienced with social network members in a given time period.

Measurement

Measures were gathered via the Valued Outcomes Information System (VOIS) (Boles, Horner, & Bellamy, 1988; Newton & Horner, in press, Newton, Stoner, Bellamy, et al., 1988; Newton et al., 1987). VOIS is used by more than 250 residential programs in Oregon as a basis for planning, providing, and evaluating residential services based on the degree to which program participants experience "valued outcomes," such as physical integration, social integration, and independence in the context of daily activities (McMullen, 1991; Newton, Horner, & Lund, 1991; Newton, Stoner, Bellamy, et al., 1988).

Within VOIS, Activity Tags are used by staff members to schedule participant activities each week; to note whether the scheduled activities were, in fact, experienced by the participants; and to record which valued outcomes, if any, were experienced by the participants in the context of the activities. (The valued outcomes

Table 1
Demographic Characteristics of Participants

Participant	Age	Sex	Diagnosis and instrument	Years in institution	Communication (speech)
1	36	F	"Severe MR" Vineland SQ* = 25	16	Speech very difficult to understand
2	35	F	"Severe MR" Vineland SQ = 28	10	Speech very difficult to understand
3	30	F	"Moderate MR" WISC-R IQ = 42	0	Speech easily understood

* Social quotient.

are independent. For example, a participant experiences physical integration by engaging in a community-based activity, such as buying a snack at a convenience store; social integration, however, involves extended personal interaction, such as having coffee with a friend, either at home or in the community.)

The Activity Tag allows staff to schedule an activity between a participant and another person by writing the person's name on the tag, which serves as a prompt for staff to arrange the activity. When unplanned social integration occurs (e.g., when a staff member and a participant chance to meet a friend at the mall and decide to have lunch or go shopping together), the staff member records the person's name on a tag after the activity, thus noting the instance of social integration and the network member. The Activity Tags were used in this study to obtain a measure of the frequency of participants' social integration with family members, nonfamily significant others, and other people each week.

Reliability of Measures

Social network. Each time a participant engaged in a socially integrated activity, a staff member wrote the name(s) of the social network member(s) on an Activity Tag. The reliability assessment of the social network measures was conducted by comparing the network member names that were written on 64 pairs of Activity Tags that had been independently coded by two residential program staff. (This represented 3% of the total Activity Tags that staff members completed, otherwise without independent coding, as a function of using VOIS in the context of ongoing residential support during the time the study was in effect.) These independently coded Activity Tags were provided to the authors for analysis. An agreement was scored each time the name(s) of the social network member(s) were written on both tags. A disagreement was scored each time a given name appeared on one tag but not the other. The overall percentage of agreement for social network members was found by dividing the number of agreements by the number of agreements plus disagreements, and multiplying the result by 100. The average interobserver agreement for social network members was 96%.

Social integration. The reliability of the social integration measures was assessed using two strategies. The first strategy, which merely was procedural, required that all staff who (a) had been employed by the program for at least 45 days and (b) had provided direct service to program participants obtain a passing score on an Activity Tag "competency exam." The exam assessed the degree to which a staff member correctly coded Activity Tags by noting whether an activity was physically integrated, socially integrated, and so on (Newton, Stoner, & Moskowitz, 1988). Three times over the course of the study, the scores of all competency exams

that had been completed by program staff members to date were examined. Ninety-eight percent (48 of 49) of these competency exam checks revealed that staff had achieved criterion scores of 85% or better.

Reliability of the social integration measures also was directly assessed via the 64 pairs of Activity Tags that had been independently coded by residential staff members and provided to the authors. Each program was responsible for demonstrating that at least one of its staff members had achieved the status of "master coder." A master coder was the term used to refer to any staff person who had demonstrated mastery in coding Activity Tags by scoring 95% or better on one of three versions of the competency exam. Once a master coder had been established (which occurred prior to the onset of the baseline condition of the study), the degree of interobserver agreement between Activity Tags coded by this master coder and tags independently coded at the same time for the same participant activity by another staff member was assessed. The overall percentage of agreement for social integration was computed by dividing the number of agreements by the number of agreements plus disagreements, and multiplying the result by 100. The average interobserver agreement for social integration was 100%.

Experimental Design and Procedures

The study included a multiple baseline across participants to examine the effectiveness of procedures designed to improve the social networks and social integration of the three participants.

Prior to the onset of the baseline condition, the residential program had hired a staff member to function as a "social guide." This individual was to help participants develop social relationships and to teach other residential staff to develop and support such relationships. However, the program manager reported that she was not sure how best to use the social guide to improve the social life of participants. Project staff offered to provide training to the social guide, and the program accepted the offer and obtained informed consent for the residents' participation.

Baseline. During the baseline condition the program's social guide continued to function under the direction of the residence's program manger. During this condition the residential program provided project staff with all of the VOIS Activity Tags that were completed each week for each participant. The baseline condition was in effect for 3 weeks before the onset of the social guide modeling condition.

Social guide modeling. The social guide modeling condition involved having a project member (the "social guide model") demonstrate the role of a social guide and transfer the responsibilities associated with that role to the residential program's social guide. In general, the social guide was to be the one person responsible for coordinating the implementation of spe-

cific strategies (called "community network strategies") hypothesized to increase the social networks and social integration of the participants.

These strategies consisted of (a) planning procedures and (b) day-to-day programmatic procedures. Planning procedures were designed to help the program manager, the social guide, and the other staff to use their weekly staff meetings as a forum for discussing how a participant's social life could be improved, what weekly social life "goals" could be set, and what tasks could be assigned to residential staff members to further those goals (e.g., using an Activity Tag to schedule an activity between a participant and a community member, discussing the activity with the participant and the network member, and arranging logistical support for the activity as necessary). Day-to-day programmatic procedures were those procedures that could be used on a daily basis to improve the social life of participants. These day-to-day programmatic procedures were grouped into four categories.

The first category of programmatic procedures involved changing the activity patterns of the participants so as to facilitate their engaging in preferred activities that would result in social integration. Examples of specific procedures within this category included supporting in-home "repeater activities" that involved regular gatherings between a participant and one or more community members in the context of a specific activity that the participant was perceived to like (e.g., renting and showing a video at home); supporting community repeater activities (e.g., helping the participant to join and attend a club, church, or other community organization that provided community-based activities at regular intervals); and supporting other community activities that might result in incidental (unplanned) social integration (e.g., shopping, eating at a restaurant, attending a concert).

The second category of day-to-day programmatic procedures involved "matching" the activity interests of a participant with the activity interests of other people. For example, if a participant liked fishing, staff members would try to identify one or more friends, neighbors, or other community members who also liked to fish and might be interested in fishing with the participant. The third category of procedures involved altering staff members' daily support services so as to include efforts to help a participant engage in "social reciprocation," such as helping a participant to initiate, reciprocate, or reinforce an instance of social integration with a community member (e.g., inviting a friend to dinner, sending a thank-you note or making a telephone call to a friend who had recently engaged in an enjoyable activity with the participant, treating a friend to ice cream, providing the transportation to a baseball game).

The last broad category of programmatic procedures involved teaching participants independently to per-

form activities, or parts of activities, that might result in social integration (e.g., traveling to a friend's house).

During this condition, the social guide model demonstrated the use of the community network strategies at the program's weekly staff meetings and during other on-site technical assistance visits. She provided approximately two technical assistance telephone calls per week. At the onset of the social guide modeling condition, the project also made a contribution of $90 to the program to be used by the staff and the participants in any way they thought would be beneficial to the social life of the participants. The social guide modeling condition lasted 10 weeks.

In accordance with the multiple baseline design, the residential program staff (with the help of the social guide model, the social guide "trainee," and the program manager) focused the community network strategies on each of the three participants in turn. During this condition the program continued to provide a project member with all Activity Tags that were completed each week for each participant.

Social guide follow-up. At the end of the social guide modeling condition, the social guide model stopped attending the program's staff meetings and stopped providing on-site technical assistance, and the individual who had been hired as the program's social guide functioned in that role without support from the project. During this condition the program continued to provide a project member with all Activity Tags that were completed for each participant during the 12-week social guide follow-up condition.

Results

Social Network

As shown in Figure 1, there was a functional relationship between residential staff members' use of the community network strategies under the direction of the social guide model and the size of participants' social networks (i.e., the number of people, other than staff and fellow program participants, with whom they engaged in one or more activities each week). When these data were categorized by type of social network member, they revealed that Participants 1 and 2 had, on average, more family members, nonfamily significant others, and other people in their social networks during the social guide modeling condition than during baseline, and that Participant 3 had more family members and other people in her social network during the social guide modeling condition.

The data in Figure 1 permit an "overlap" of social network members across weeks and conditions of the study. That is, an individual who was counted as a member of a participant's social network during a single baseline week may also have been counted as a member of the social network during other weeks of the baseline condition, and during other weeks of the other condi-
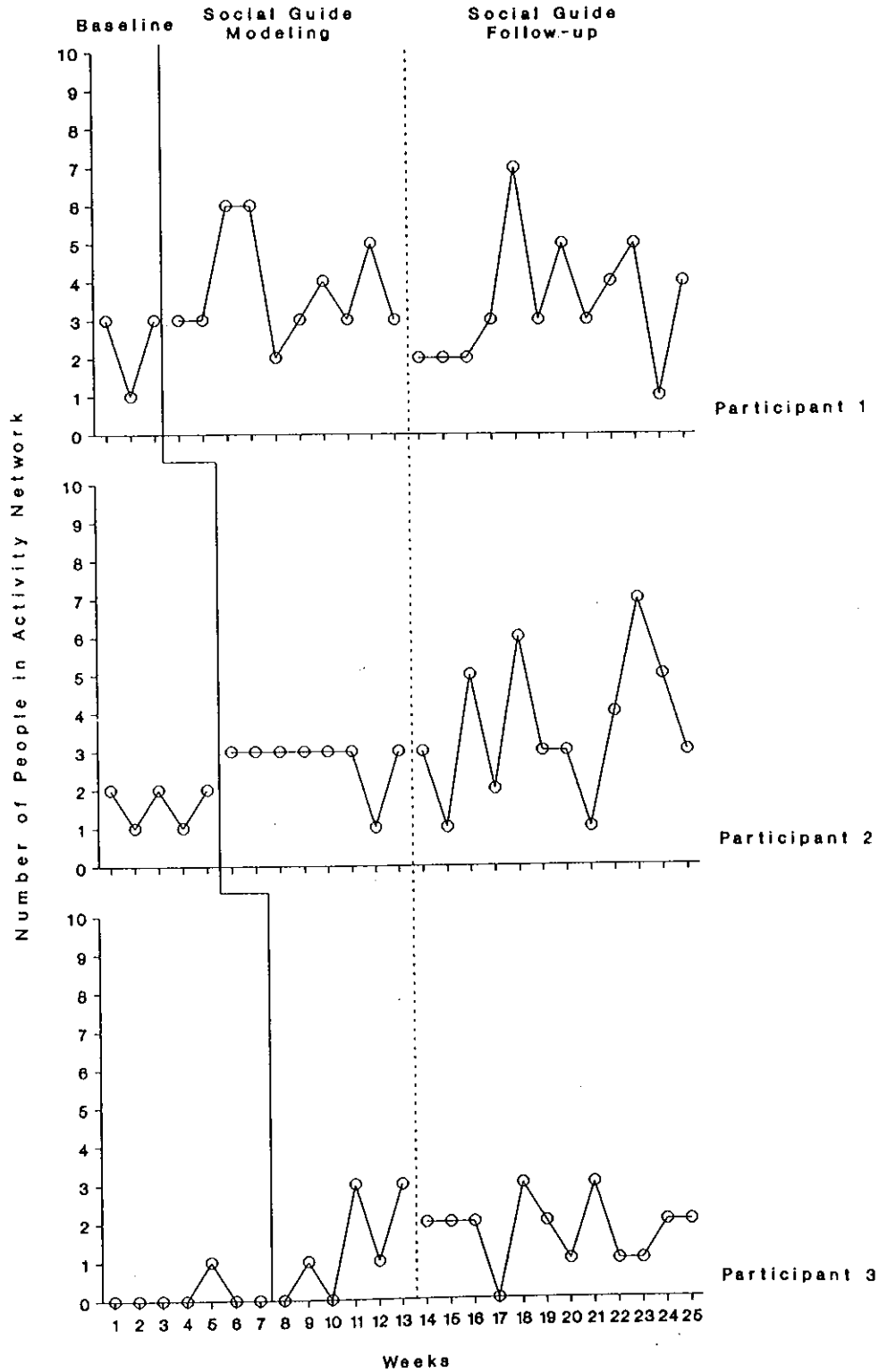
Newton and Horner

Figure 1. Number of people other than staff and fellow program participants with whom participants engaged in one or more activities.

tions of the study, provided he or she engaged in one or more activities with the participant during those weeks. Figure 2 removes such overlapping network members by presenting a cumulative record of the number of different ("new") social network members with whom participants engaged in at least one activity across successive weeks and conditions.

For example, as Figure 2 shows, Participant 1 engaged in at least one activity with 23 different social network members across all three conditions: 6 different members during baseline, 9 different members (for a total of 15) during social guide modeling, and 8 different members (for a total of 23) during social guide follow-up. (Note, however, that she may have experienced social integration with one or more of these "new" network members *prior to* the onset of the baseline condition.) Although the difference in the rate at which new members were added to a participant's social network each week across conditions was very small, the participants added, on average, more new social network members per week during the social guide modeling condition than during baseline.

Social Integration

Figure 3 shows similar results with respect to social integration. There is a functional relationship between the social guide modeling condition and increases in the number of activities experienced with social network members. Although the data are variable, gains made in the social guide modeling condition were slightly bettered, on average, during the social guide follow-up condition.

When these data were categorized by type of social network member, they revealed that Participants 1 and 2, on average, engaged in more activities with family members, nonfamily significant others, and other people during the social guide modeling condition than during baseline, and that Participant 3 engaged in more socially integrated activities with family members and other people. Further analyses of the data showed that the social guide modeling condition resulted in participants experiencing, in general, more activities per social network member per week than during the baseline condition.

Discussion

The results of this study demonstrate a functional relationship between staff members' use of the community network strategies under the supervision of the social guide model and increases in participants' weekly social network size and social integration. The social guide modeling condition also was associated with a slightly higher weekly rate of introduction of "new" network members (i.e., network members not encountered in the preceding weeks and conditions), and a higher rate of activities per network member per week.

In the follow-up condition these gains generally were

maintained across participants for weekly social network size, weekly rate of social integration, and the average number of activities per network member per week.

Generality of Findings

An obvious issue is the external validity, or generality, of these findings. Because the study used a single-case experimental design with volunteer participants, no valid inferences can be made about the extent to which the use of the social guide and the community network strategies, would be effective if applied by other staff members at other residential programs with other people who have other levels of disability. Nevertheless, the outcome of the study suggests at least two profitable lines of inquiry: (a) refinement of the role of a social guide, and (b) assessment and measurement of social stability, social validity, and social support.

Role of a Social Guide

In this study, the social guide was a single staff person. However, it is possible that rotating the social guide role across staff members or using multiple staff members as social guides could result in equal or better outcomes for participants.

It is also possible that one or more volunteer community members could serve as a social guide with equal or more effectiveness than staff members. Although most residential programs probably would relish the idea of having a volunteer social guide, it may be difficult to establish such a link. Thus an important line of research concerns how to "recruit" volunteer social guides who can join the social network of an individual with severe disabilities and help him or her meet people who may become stable network members.

Measurement Issues

Social stability. Quantitative measures such as social network size and rate of social integration (including the rate of social integration with network members deemed to be significant others) should be supplemented with measures of the quality of social relationships experienced by participants. One important qualitative aspect of social life may be the stability of social relationships. Thus another productive line of inquiry might be a description of factors that account for the stability that some individuals with disabilities may already be experiencing in their relationships with some community members. Such information, particularly when gathered in the context of a truly longitudinal study, might be useful in helping other participants (and community members) develop stable, dependable social relationships with individuals who are important to them.

In the final analysis, however, only when social networks are small, rates of social integration are minimal, and social stability with important network members is negligible will a "more-is-better" approach to analyzing
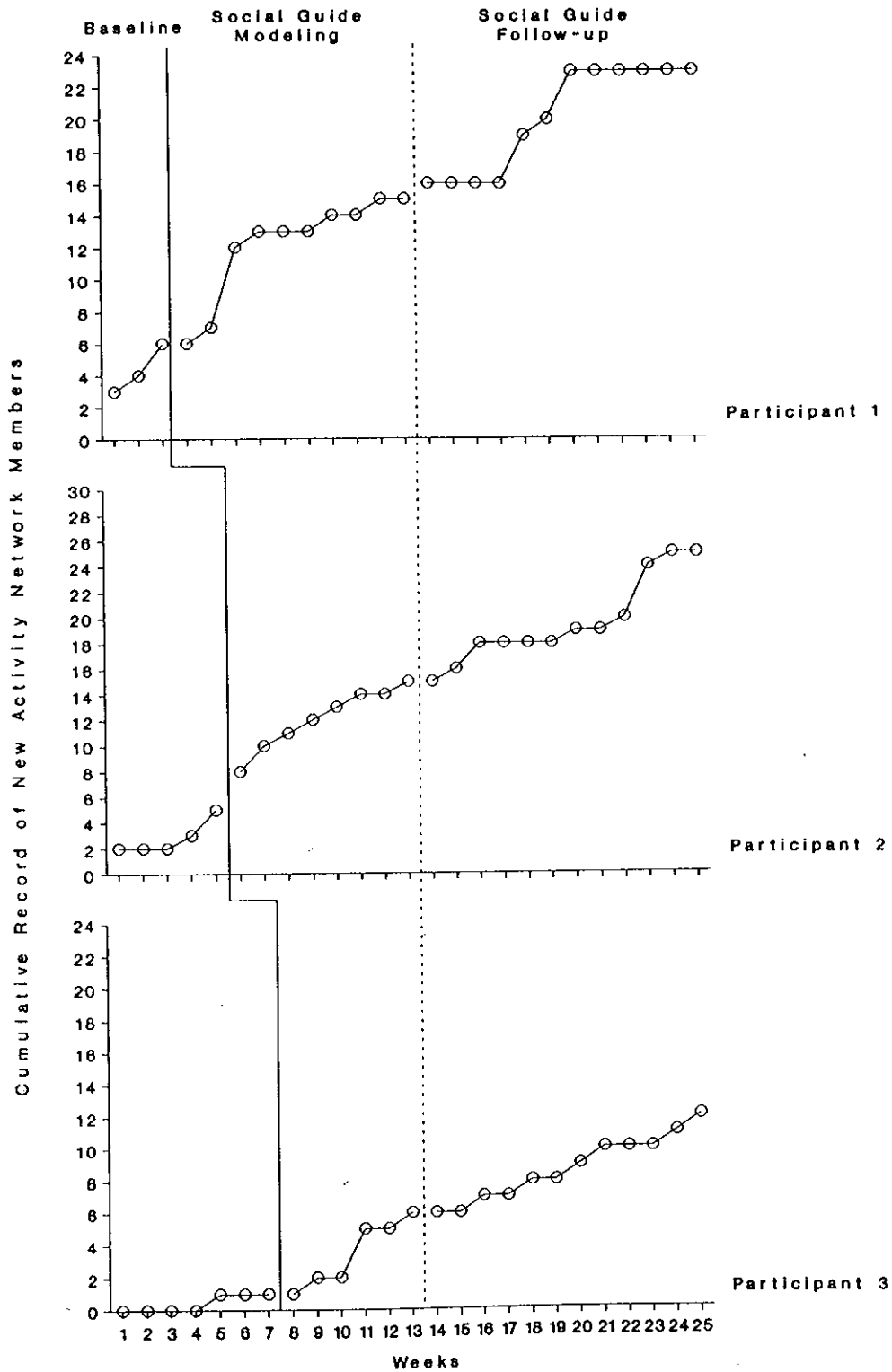
Figure 2. Cumulative number of "new" social network members with whom participants engaged in one or more activities, excluding staff and fellow program participants.
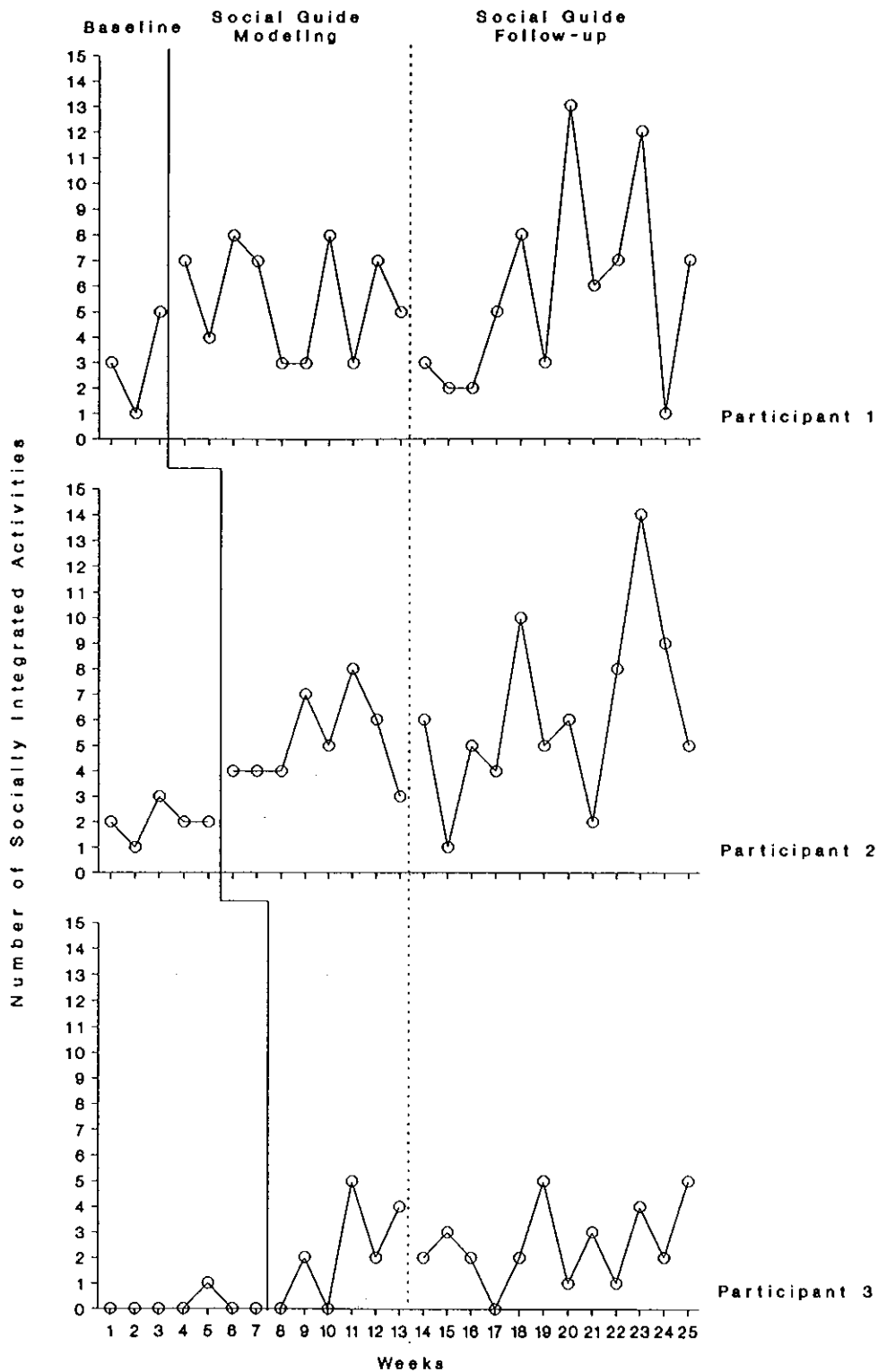
Figure 3. Number of activities participants experienced with social network members, excluding staff and fellow program participants.

the effectiveness of an intervention suffice. This means, of course, that we need measures that have increasing social validity.

Social validity. Any questions about how, or whether, to change the social life of a participant with disabilities should be governed ultimately by the type of social life the person with disabilities prefers or "needs," and his or her degree of satisfaction with, and opinions about the adequacy of, current social relationships. Thus we need to understand what kind of life (including social life) an individual wants. In the case of individuals with severe intellectual disabilities it may be necessary to rely on parents, guardians, or advocates to identify desirable changes in social life. Their ability to do this might be facilitated if residential providers had procedures for describing and assessing the social support currently being experienced by a participant.

Social support assessment. Perhaps the most important, but elusive, aspect of anyone's social life is the social support he or she experiences. In a sense, social support describes the "impact" that social integration with social network members has on one's life. Social support is what social network members give to and get from each other—for example, material aid, behavioral assistance, intimate interaction, guidance, feedback, and positive social interaction (e.g., Barrera & Ainlay, 1983; Gottlieb, 1978).

From this perspective, social networks, social integration, and the stability of social relationships could be regarded as independent variables that make it possible for a person to gain the kind and amount of social support that he or she wants or needs. If it were possible to gather valid and reliable information concerning the type, amount, and effectiveness of the social support experienced by a person with severe disabilities, such information might suggest how staff could provide better support: for example, by helping the participant to add a new network member who could provide a specific type of desired social support; by increasing the rate of social integration with a current network member who is known to be good at providing a specific type of social support, but whose relationship with the individual has lacked stability; by helping the individual to join a generic community support group that specializes in providing the kind of social support desired by the individual; and so on. Any research that developed procedures for accurately assessing the social support provided to (and by) individuals with severe disabilities, and their degree of satisfaction with such support, would help focus efforts to make desired changes in the person's social life.

Improving the social life of people with severe disabilities is an area that is likely to be of continuing concern. Only when people with disabilities have lives that include enduring friendships with people in addition to the dedicated staff who are paid to provide them

with support are they likely to experience the kinds of social relationships that are so valuable to all members of society.

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