Efficacy of a Systematic Process for Designing Function-Based Interventions for Adults in a Community Setting

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Abstract: This study examined the efficacy of a systematic process for matching behavioral interventions to assessed function(s) of problem behavior with adults with developmental disabilities in a community-based day program. Previous applications of the technique were found to be effective with school-age students in classroom settings. Participants were three adults (ages 48–63) with developmental disabilities who displayed long-standing inappropriate social interactions. The study was conducted in two phases. In Phase 1, descriptive FBAs were conducted. Each FBA included structured interviews and direct observations that were used to identify the functions of target behaviors. In Phase 2, function-based interventions were systematically constructed for each participant, and then implemented for an extended period (8 weeks) within ongoing activities at their day program. The mean response rates of appropriate social interaction increased immediately when intervention was introduced, whereas the mean response rates of inappropriate social interaction decreased. Data on treatment integrity (level of implementation) were collected for every session and documented that the interventions were implemented with high levels of fidelity. In addition, staff gave the function-based interventions high acceptability ratings, indicating they viewed the interventions as socially valid and preferable to the procedures they used before intervention.

Direct service providers are continually challenged to provide positive and socially acceptable support to individuals who have severe disabilities and behavioral problems. Sometimes these behavioral problems are so serious that the individuals exhibiting them have difficulty acquiring important independent living skills, such as appropriate social interactions. As a result, they may be ostracized by their peers (Carr, 1977; Carr et al., 1994; Durand, 1990, 1999; Durand, & Carr, 1991; Durand & Merges, 2001).

Fortunately, over the last three decades, substantial progress has been made in the delivery of behavioral support strategies for persons with such significant challenges. These advances have focused on Functional Behavioral Assessment (FBA) and function-based intervention. In this approach, interventions are developed based on a prior identification of the antecedent conditions that set the occasion for a problem behavior and the consequences that reinforce it. Resulting interventions aim to improve the antecedent conditions, withhold or minimize reinforcement when problem behavior occurs, and provide reinforcement for more desirable, alternative behaviors (Sugai et al., 2000).

The earliest function-based intervention research was conducted in residential and community-based settings, but soon spread to schools as well. Several reviews of this work (e.g., Conroy, Dunlap, Clarke, & Alter, 2005; Fox & Gable, 2004; Fox, Conroy, & Heckman, 1998; Gresham, Watson, & Skinner, 2001; Hanley, Iwata & McCord, 2003; Hechkman, Conroy, Fox, & Chait, 2000, Lane, Umbrt, & Beebe-Frankenberger, 1999; Sasso, Conroy, Stichter, & Fox, 2001) have been published. The general consensus is that assessment-based interventions consistently produce positive results. However, regardless of setting, there has also been a consistent lack of clarity about how FBA data are used to construct interventions. This omission threatens progress in both research and practice. For example, several researchers have suggested

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that the failure of school teams to effectively use FBA data may be due, in part, to a lack of definitive procedures for developing Behavior Intervention Plans (BIPs) (Jolivette, Scott, & Nelson, 2000; Scott et al., 2005; Van Acker, Boreson, Gable, & Potterton, 2005).

To address this problem, Umbreit, Ferro, Liaupsin, and Lane (2007) describe a systematic process and set of methods for developing intervention components that are directly linked to the FBA data. Some recent research (Lane et al., 2007; Lane, Weisenbach, Little, Phillips, & Wehby, 2006; Liaupsin, Umbreit, Ferro, Urso, & Upreti, 2006; Stahr, Cushing, Lane, & Fox, 2006; Umbreit, Lane, & Dejudd, 2004; Wood, Umbreit, Liaupsin, & Gresham, 2007) using this process and set of methods has already reported positive results. However, all of these studies were conducted with school-age students in academic settings.

The purpose of this study was to examine whether this methodology would also be effective with adults in a non-school (day program) environment. The study was conducted in two phases. In Phase 1, descriptive FBAs were conducted. Each FBA included structured interviews and direct observations that were used to identify the functions of target behaviors. In Phase 2, function-based interventions were systematically constructed for each participant, and then implemented for an extended period within ongoing activities at their day program.

General Method

Participants and Setting

The study was conducted in an adult day program housed in a commercial storefront in an urban strip mall. Other businesses located nearby included a small restaurant, a loan corporation, and a chiropractor’s office. The program site, financially supported by a statewide private for-profit agency, provided services for approximately 15 adults with developmental disabilities. The hours of service were Monday through Friday from 8:00 am to 4:00 pm. The day program incorporated a structured schedule of on-site activities, community events, and individualized instruction plans for each adult participant.

Participants in this study included three adult men with developmental disabilities who attended the day program and five direct support staff members, one man and four women. All participants with developmental disabilities had the diagnosis of moderate mental retardation; their IQs ranged from 35–55 (Ysseldyke & Algozzine, 1995). Each also displayed at least one chronic problem behavior that was identified as some form of inappropriate social interaction. In each case, inappropriate interaction might include some form of aggression, self-injury, or destruction of property.

Louis, age 48, frequently displayed socially inappropriate interactions with others by thrusting his hand or fist into others’ faces or upon others’ upper bodies. He also occasionally displayed self-injurious behavior, hitting himself in the head, when verbally corrected for socially inappropriate interactions.

John, 48, typically interacted with others by repeatedly mentioning and/or questioning about past or future events. This reportedly occurred at a steady rate of 20 isolated conversational attempts per hour. Sometimes, John, like Louis, would hit himself when his attempts at social interaction were disregarded or ignored, occasionally directing self-deprecating expletives.

Max, age 63, was often verbally or physically aggressive. He would shout “no” loudly, push others out of his way, or throw an object in response to almost anyone who approached him with a greeting, question, or offer of participation.

Five support staff served as on-site direct caregivers. They ranged in age from early 20s to late 40s and had varying levels of experience, education, and training. All staff had completed agency-required trainings such as CPR, First-Aid, and pre- and in-service guidance regarding the individual needs of each participant. However, only three staff members had received any behavioral intervention training.

Louis, John, and Max were not taking any psychotropic medication during the study. Because their problem behaviors were long-standing and occurred frequently (at an overall average rate of 12 events per hour or once every 5 minutes), the support staff had developed informal methods of intervention. Per the support staff members’ own admissions,
these procedures were implemented inconsistently.

Behavioral Definitions

Dependent variables were the target and replacement behaviors exhibited by Louis, John, and Max. Target behaviors were forms of inappropriate social interaction that differed by operational definition and sometimes were paired with forms of aggression, self-injury, or property destruction. Examples of the replacement behaviors included appropriate social interactions such as greeting others calmly with a verbal, physical, or low-tech communication aid, or rejecting participation in a new activity by using verbal communication skills. Table 1 lists the operational definitions of these behaviors for each participant.

Phase 1: Functional Behavioral Assessment

Procedure

A descriptive FBA was conducted for the target behavior identified for each participant. Each FBA included structured interviews and direct observations that were used to identify the function(s) of the target behaviors.

Structured informant interviews were conducted with each of the five key workshop staff using the Preliminary Functional Assessment Survey (Dunlap et al., 1993). The survey includes 22 items designed to produce information about the antecedents and consequences that occasion or maintain challenging behaviors. Specific items provide information about (a) the antecedent conditions under which the behavior is and is not likely to occur, (b) the frequency with which the behavior occurs, (c) the possible influence of skill deficits or medical conditions, and (d) the consequences that may affect the occurrence of the behavior. Completion of the interviews with each staff member took approximately 2 h.

Each assessment also included a minimum of four 30-45 min observational sessions (ABC data; Bijou, Peterson, & Ault, 1968) during ongoing activities in the day program. During these sessions, an observer recorded the antecedent conditions that preceded the con-

### Table 1

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<thead>
<tr>
<th>Target Behavior Inappropriate Social Interaction</th>
<th>Replacement Behavior Appropriate Social Interaction</th>
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<tr>
<td>Louis</td>
<td>Placing his hands in others’ faces, making a fist and placing it near to or on other’s shoulders, or kissing others’ heads, arms, or hands without their permission.</td>
</tr>
<tr>
<td>John</td>
<td>Making impertinent statements (e.g., about past or future holidays, events) and/or asking repetitive questions about future events (e.g., upcoming holidays, team meetings, parties).</td>
</tr>
<tr>
<td>Max</td>
<td>Shouting loudly enough to be heard throughout entire day program space, yelling “no,” “get away,” or other negative responses to questions, hitting and/or pushing another person, and grabbing an object out of another’s hands.</td>
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*Though both Louis and John’s behaviors were sometimes coupled with displays of self-injury, for clarity of data collection, only the listed behaviors in Table 1 were counted.*
sequences that followed each occurrence of a target behavior. The structured observations occurred at various times during the day, based upon each participant’s daily routine. This allowed for adequate observation of relevant antecedent and consequent conditions.

For Louis, the interviews and observational data indicated that he usually received attention or a new activity when he engaged in socially inappropriate behavior. When staff saw Louis perform these behaviors, they either gave immediate verbal reminders to refrain and shake hands instead, or offered him something tangible such as a game, puzzle, or art craft. Additionally, other day program participants, mostly females, were the objects of his social attempts. These women usually reacted with a physical response, such as a smile, a shudder, or even a verbalized retort, such as “go away,” or “no kissing” when Louis approached them. In contrast, Louis’s socially appropriate actions were mostly overlooked.

John’s FBA data indicated similar trends in consequences. At times, the staff listened and responded to his frequent comments about a past or future event. For example, John might have said, “My team meeting’s coming up soon. You gonna’ be there? My mom and case manager will be there, won’t they? Can I call my case manager?” Or, though it was only September, he may have made repeated and frequent statements about future holidays, such as “Thanksgiving and Christmas are gonna’ be here soon.” At other times, staff either ignored his comments, or used a mild reprimand (e.g., “John, we’ve already talked about this. Please have a seat”), or offered him new activities.

Staff reported “Max wants everything on his own terms,” that he rarely participated in group activities, and that he shouted “no” loudly when they tried to include him or encourage him. Therefore, they usually left him alone, with one staff stating, “We’d like to see him involved in more activities but never know what kind of response we’ll get.” Max sat at a table facing the wall and often had many of his preferred activities on hand, like favorite magazines, markers, and puzzles. Others approached him from behind, tapping his back or shoulder while offering a new activity or simply saying hello. Max’s explosive responses were most often treated gingerly, with acknowledging statements like, “Okay Max, I get the picture. I’ll leave you alone. You can join the activity later, if you’d like.” During the assessment process, after two of these displays, no one, neither staff nor participants, interacted with him for the rest of the observational session (approximately 45 minutes).

To identify the function(s) of each participant’s target behaviors, the staff and first author jointly examined the interview results and A-B-C data and used the Function Matrix (Umbreit et al., 2007). The Matrix is a six-celled visual tool that organizes information into (a) two columns identifying positive or negative reinforcement and (b) three rows identifying specific types of consequences. The tool prompts users first to decide if the student is gaining access to something (positive reinforcement) or escaping/avoiding something (negative reinforcement). The user then identifies more specifically whether the student is gaining or escaping attention, tangibles/activities, or sensory consequences. Multiple functions are possible.

Using the Matrix, the first author and staff determined that Louis’s inappropriate social interactions enabled him to gain both attention and access to preferred activities. The same functions were identified for John’s inappropriate social interactions. However, for Max, inappropriate social interaction enabled him to avoid attention and non-preferred activities, and simultaneously gain access to preferred activities.

Phase 2: Function-Based Intervention

In Phase 2, the FBA data were used to design a function-based intervention for each participant (Louis, John, and Max). The resulting interventions were then implemented for an extended period (8 weeks) during ongoing activities in the day program.

Procedure

Function-based interventions for each participant were developed using the Function-Based Intervention Decision Model (Umbreit et al., 2007). This Model begins the intervention development process by posing two questions: (a) “Can the individual perform the replacement behavior?” and (b) “Do the antecedent conditions
represent effective practice?” The answers to these questions lead to four possible outcomes. Each outcome identifies which of three intervention methods, individually or in combination, is appropriate for a given situation.

If the individual cannot perform the replacement behavior but the antecedent conditions represent effective practice, then Method 1: Teach the Replacement Behavior is used. If the individual can perform the replacement behavior, but the antecedent conditions do not represent effective practice, then Method 2: Improve the Environment is used. If the answer to both questions is No, then both Methods must be applied. Finally, if the answer to both questions is Yes, Method 3: Adjust the Contingencies is used.

Each intervention method has common components: Antecedents are adjusted to increase the likelihood the replacement behavior will occur, and reinforcement is provided when the replacement behavior occurs and withheld (extinction) when the target behavior occurs. The intervention methods differ in the ways specific antecedent and consequent variables are manipulated.

Because Louis could not easily produce socially appropriate interactions and antecedent conditions did not represent best practice, the support team (first author and staff) chose Methods 1 and 2 that emphasized teaching the replacement behavior and improving the environment. John also could not fluently display his replacement behavior, and antecedent conditions also needed improvement. Therefore, Methods 1 and 2 were also selected. Max, on the other hand, was able to interact appropriately with others, but some environmental variables were problematic. Therefore, the best choice was Method 2, which emphasized improving the environment. Using these Methods, the staff and first author designed individualized intervention components for each participant. These components are presented in Tables 2–4.

Behavioral Definitions and Measurement

The same behavioral definitions used in Phase 1 (see Table 1) were used in Phase 2. Data on the dependent measures, the inappropriate and appropriate social interactions, were collected by the event recording method. During the baseline and intervention conditions, one 20–30 min session was conducted each day for each participant. The pertinent observational sessions, determined by the staff during the
initial FBA, were those periods with the greatest occurrence of the target behaviors.

**Design**

A multiple baseline across subjects design was used. All participants were in the same setting, and the collection of baseline data for each participant began at the same time. However, the individualized interventions were introduced at different points in time for each participant. Specifically, the respective interventions began in Session 5 for Louis, in Session 13 for John, and in Session 18 for Max. After five weeks (25 sessions), follow-up data were collected once per week for an additional five weeks.

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<th><strong>TABLE 3</strong></th>
<th>Function-based Intervention for John</th>
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<td><strong>Method Elements</strong></td>
<td><strong>Intervention Components</strong></td>
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| Adjust the antecedent conditions so new behaviors are learned and aversive conditions are avoided. (Method 1) | 1. Interact with John with 1:1 conversation for at least 3 minutes and use picture cards to help John discuss and create his daily schedule.  
2. Provide John the opportunity to assist with morning scheduling group for all day program participants using his photo cards, allowing John to present and discuss daily activities and events.  
3. Keep John’s augmentative communication aid, his photo/schedule box, accessible.  
4. Remind John to create and discuss activities from his daily schedule.  
5. Provide current events, topics, and activities and update picture activity cards as needed.  
6. Verbally interact with John after each appropriate social interaction.  
7. Ignore John when he engages in inappropriate social interactions. Then, after a minute, direct him to his picture photo box or daily schedule to discuss the day’s events. |
| Adjust the antecedent conditions so the conditions that set the occasion for the target behavior are eliminated and the replacement behavior is more likely to occur. (Method 2) |  |
| Provide positive reinforcement for the replacement behavior. Withhold the consequence that previously reinforced the behavior when it occurs. |  |

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<th><strong>TABLE 4</strong></th>
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<td><strong>Method Elements</strong></td>
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| Adjust the antecedent conditions so the conditions that set the occasion for the target behavior are eliminated and the replacement behavior is more likely to occur. | 1. Reposition Max’s desk/seating so it faces the day program group.  
2. Approach Max from the front to ask him a question or offer a new activity.  
3. Provide new activities in a group setting.  
4. Offer a choice of doing something new at least twice per session.  
5. Acknowledge and respect Max’s negative responses when delivered calmly and politely and let him continue with what he is doing.  
6. If Max inappropriately interacts with someone, remind him by modeling a calm way of responding, and then leave him alone. |
| Provide appropriate reinforcement for the replacement behavior. |  |
| Withhold the consequence that previously reinforced the behavior when it occurs. |  |
tional three weeks. During the baseline and intervention phases, each participant was absent on occasion (Louis in sessions 7 and 18; John in sessions 1, 4, 7, and 9; and Max in sessions 1, 6, and 12).

Interobserver Agreement (IOA)

To assess IOA, a second observer independently collected data for 50% of Louis’s baseline conditions, 50% of his intervention conditions, and 100% of his maintenance conditions; for 63% of John’s baseline conditions, 25% of his intervention conditions, and 100% of his maintenance conditions; and for 50% of Max’s baseline conditions, 50% of his intervention conditions, and 100% of his maintenance conditions.

Percentage of IOA was calculated by dividing the lower frequency of occurrences by the higher frequency and multiplying the result by 100%. During baseline conditions, IOA for the target behavior ranged from 92–100%; for the replacement behavior, it was 100% across participants. During intervention sessions, IOA was 100% for the target behavior, and ranged from 95–100% for the replacement behavior. During the maintenance conditions, all IOAs were at 100%.

Treatment Integrity

The degree to which the interventions were implemented as intended was assessed in every baseline and intervention session. The first author directly observed every session and, after each, used a checklist to identify whether each of the six or seven required components (see components presented in Tables 2–4) was properly implemented during the session. The percentage of treatment integrity was obtained by dividing the number of implemented components by the total number required. Baseline treatment integrity was expectedly low because most of the intervention components were not yet introduced or implemented by the support staff during these sessions.

During baseline sessions, treatment integrity was 7% for Louis, 8%, for John, and for 5% for Max. During intervention sessions, treatment integrity was 91% for Louis, 98% for John, and 100% for Max. During the main-

tenance sessions, treatment integrity remained high (88% for Louis, 98% for John, and 100% for Max). IOA for treatment integrity was assessed by having a second observer independently score 25% of the sessions from each phase for each participant. To calculate IOA for treatment integrity, the number of items scored identically was divided by the total number of items scored, and the result was multiplied by 100%. During all baseline conditions, IOA for treatment integrity was 100%. During the intervention conditions, it was 96% for Louis and 100% for both John and Max. During maintenance conditions, it was again 100% for all the participants.

Social Validity

The Treatment Acceptability Rating Form-Revised (TARF-R; Reimers, Wacker, Cooper, & DeRaad, 1992) was used to assess social validity. This instrument includes a total of 17 items, with multiple items addressing each of the following areas: reasonableness, effectiveness, side effects, disruptiveness/time required, cost, and willingness. Each item was rated on a 7-point Likert-type scale. Scores can range from 17 to 119, with higher scores representing greater acceptability. Social validity assessment was directed at both the baseline and the intervention conditions. Specifically, prior to baseline data collection and again upon completion of intervention data collection (after Session 25), four of the five staff members independently completed the TARF-R. The first set of scores was directed at the procedures used prior to and during baseline. The post-intervention scores assessed the function-based interventions that were developed using the Decision Model.

Results

Figure 1 shows the rate of appropriate and inappropriate social interactions per hour for Louis, John, and Max (session lengths varied from 20–30 min, necessitating the conversion to rate data). A clear functional relationship is apparent. Louis’s rate of appropriate behavior changed from a baseline average of 5 occurrences per hour (SD = 1.15, range = 4–6 per hour) to a mean of 10.53 per hour (SD = 3.19, range = 4–14 per hour) during intervention
Figure 1. Rate of appropriate and inappropriate social interactions per hour.
per hour; Maintenance: M = 13.33; SD = 2.49; range = 3–12; Intervention: M = 1.07; range = 0–2 per hour; Maintenance: M = 0; SD = 0; range = 0 per hour).

Finally, the data for Max’s appropriate and inappropriate interactions indicate a similar trend across study conditions. Appropriate interactions increased (Baseline: M = 2.29; SD = 1.82; range = 0–6; Intervention: M = 11.5; SD = 2.98; range = 6–16 per hour; Maintenance: M = 10; SD = 2; range = 8–12 per hour), while inappropriate interactions decreased (Baseline: M = 5.71; SD = 2.49; range = 3–12; Intervention: M = 1; SD = 1.07; range = 0–2 per hour; Maintenance: M = 0; SD = 0; range = 0 per hour).

Figure 2 shows these same data presented as a percentage of opportunity. Data presented for each session is the percentage of social interactions that were appropriate. For Louis, appropriate interactions increased from an average of 26% during baseline to 87% during the intervention phase and 89% during follow-up. For John, these levels changed from 35% during baseline to averages of 85% (intervention) and 82% (maintenance). Max’s percentages of appropriate behavior increased from an average of 24% during baseline to 93% during intervention and 100% during maintenance.

Social validity ratings using the TARF-R (Reimers et al., 1992) also showed a consistent pattern (see Figure 3). In each participant’s case, higher scores were given to the function-based intervention than to the practices in effect during baseline. Scores regarding Louis’s intervention increased from a mean preliminary score of 4.5 (out of 7) to a mean post-survey score of 5.5, a 22% increase. For John, the average scores increased from 4.4 to 6.2, a 41% increase. For Max, the mean scores increased from 5 to 6.6, a 32% increase.

Discussion

This study demonstrated the efficacy of a systematic process for matching behavioral interventions to the assessed functions of target behaviors of adults with developmental disabilities in a community-based day program. Specifically addressed were whether the interventions would produce positive results, including decreases in target behaviors and increases in replacement behaviors, and whether consumer ratings would indicate acceptable social validity.

Mean response rates of all the subjects’ replacement behaviors increased immediately when intervention was introduced, whereas the mean response rates of their target behaviors decreased. In addition, staff gave the interventions high acceptability ratings, signifying they viewed the interventions as being socially valid and preferable to the procedures they used before intervention. These findings clearly indicated positive behavioral changes for all subjects as measured in their day program setting. Data on treatment integrity (level of implementation) collected for every session documented that the interventions were implemented with high levels of fidelity. Therefore, a clear functional relationship was established between the independent variables (each subject’s individually designed intervention) and the dependent variables (appropriate and inappropriate social interactions).

These data provide strong support for the Decision Model (Umbreit et al., 2007), indicating it can be effective when used to develop individualized interventions for adults with developmental disabilities in community-based settings. The findings contribute to an increasing body of literature examining the positive effects of applying this systematic process to design function-based interventions (e.g., Lane et al., 2007; Lane et al., 2006; Liaupsin et al., 2006; Umbreit et al., 2004, 2007).
Figure 2. Percentage of appropriate responses.
Wood et al., 2007). The study further strengthens existing research by exploring the applicability of the Decision Model not only with a different population, but by its investigation in an alternative environment, i.e., a community-based day program. Previous studies were conducted with children, either typically developing students with behavioral problems or those with emotional and behavioral disorders, and all were conducted in school settings.

This study also emphasized the importance of treatment acceptability. Whether an intervention is considered appropriate, effective, fair, and socially valid has become a critical part of effective behavioral intervention (Finn & Sladeczek, 2001; Horner, Carr, Halle, McGee, Odom, & Wolery, 2005; Newcomer & Lewis, 2004; Reimers et al., 1992). In fact, Horner et al. listed assessment of social validity as one of the indicators of quality in single-subject research. The present results included data on the application of the TARF-R (Reimers et al.) with direct care personnel. Although this particular survey has been featured extensively in treatment acceptability research, it has most often been used with parents of children with behavioral disorders (Finn & Sladeczek, 2001).

The frequent measurement of treatment integrity and the high level that was documented were significant. Horner et al. (2005) suggested that fidelity of implementation is of great concern in single-subject research when interventions are delivered over time. Effective analysis of behavior depends on accurate measurement of both the dependent and the independent variables. Data from the present study indicate that frequent measurement of the fidelity of implementation was highly desirable.

In function-based intervention research, it is common to conduct an experimental analysis after the FBA but prior to full-scale implementation of an intervention. That did not happen in this study because the staff had reported that aggressive and self-injurious behaviors and property destruction sometimes accompanied these participants’ target behaviors.

Participants’ age is noteworthy. Louis and John were both 48 years old. Max was 63. Each had engaged in inappropriate social interaction for many years. It is particularly encouraging that behavioral improvements occurred immediately, in each case, when an appropriate function-based intervention was introduced.

This study included only three participants. Additionally, the interventions focused only on one particular type of behavior, social interactions. Adults who have developmental disabilities and behavioral problems are considered to be a low-incidence population. Therefore, large subject pools are not available. Effectiveness of the intervention methods studied here with other adults who display other behavioral repertoires remains a question for further research.

When using a multiple baseline design, it is important to identify subjects who are functionally similar yet independent of one another. Although this appears to have occurred in the present study, the fact that the subjects were from a low-incidence population makes it difficult to be certain this criterion was met. Another potential disadvantage when using the multiple baseline design across subjects is that covariance among subjects may emerge if individuals learn vicariously through the experiences of others. Though this was not apparent in this study, it is a potential limitation that must be acknowledged.

The present study focused on improving the quality of life for adults with cognitive...
disabilities. The decrease in exhibition of their problem behaviors and increase in the presentation of positive replacement behaviors demonstrated a significant improvement in each participant’s social interactions. Additional studies of this approach with other adults with developmental disabilities would seem warranted.

Though this study highlighted the application of the Decision Model (Umbreit et al., 2007) to match interventions to functions of target behaviors, the lack of social skill curricula for adults with developmental disabilities emerged as an underlying issue. Although some researchers have studied social skill instruction for adults with developmental disabilities (e.g., Bidwell & Rehfeldt, 2004; Griffiths, Feldman, & Tough, 1997; LeBlanc, Hagopian, & Maglieri, 2000), none has incorporated FBA data into their research. More work is needed on how best to embed age-appropriate social skill instruction within the typical routine in an adult day program. This study demonstrated that if social skill instruction can be matched to a function-based intervention, the results could be extremely beneficial, not only to the individuals served but also to the direct care workers. More research is needed to explore the generalization of these skills to different settings and circumstances, e.g., in individual homes or with other friends and family members.

Results of this study unmistakably indicated that the process used produced positive intervention strategies that were easily maintained by direct support staff. As such, the Decision Model (Umbreit et al., 2007) became a useful guide for using FBA data to develop BIPs for individuals served by the agency. This study incorporated a maintenance period of three weeks. Future research could better examine the long-term generalization of new behaviors, as well as support staff’s continued implementation of intervention strategies, when longer maintenance sessions are included. Clearly, additional studies will be needed to firmly establish this approach as a successful practice in the field of developmental disability support services.

Finally, continued assessment of social validity is of great importance not only to individuals with developmental disabilities, but also to their caregivers and direct care workers. Future research about the social relevance of treatment goals could greatly impact an individual’s quality of life. If local, state, and national agencies were exposed to more studies of effective intervention, overall systems of support services could be positively influenced to better serve the complex needs of this under-researched population.

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