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Effects of Supervisor's Presence on Staff Response to Tactile Prompts and
Self-Monitoring in a Group Home Setting

by

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

List of Figures	ii
Abstract	iii
Chapter One: Introduction	1
Chapter Two: Method	8
Participants and Settings	8
Materials	11
Target Behaviors and Data Collection	12
Interobserver Agreement	13
Social Validity Questionnaire	15
Experimental Design and Procedure	15
Baseline/Pre-Training Assessment	16
Training	16
Post-Training Assessment	17
Supervisor Present + MotivAider On	17
Supervisor Absent + MotivAider Off	18
Supervisor Absent + MotivAider Off	18
Supervisor Present + MotivAider On + Feedback	18
Chapter Three: Results	19
Chapter Four: Discussion	26
References	32
Appendices	
Appendix A: Social Validity Questionnaire	39

List of Figures

Figure 1. Results of staff management package + feedback	20
Figure 2. Results of staff management package	21

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ABSTRACT

Staff management research in group home settings has involved direct observation of staff performance during pre-treatment and treatment conditions. Collecting accurate research data is crucial to analyze treatment effects; however, reactivity to being observed has been cited as a limitation in several studies. The current study evaluated the use of a tactile prompt, self-monitoring, and feedback to increase positive interaction in a group home setting. Direct support professional staff were trained on the purpose and use of the MotivAider which provided tactile prompts to remind them to engage in positive client interaction. Reactivity was assessed by having a confederate observe staff positive interaction when the supervisor was present and when the supervisor was absent. The effects of supervisor presence were evaluated using an alternating treatment within a multiple baseline across participants' research design. Results showed that 2 of 4 participants increased positive interactions only when a supervisor was present and 2 other participants increased positive interaction only after receiving feedback.

Chapter One

Introduction

Staff management has been an area of interest for many years. Studies of staff management procedures have been conducted in residential settings (Green, Reid, Perkins, & Gardner, 1991; Harchik et al., 2001; Harchik, Sherman, Sheldon, & Strouse, 1992; Mozingo, Smith, Riordan, Reiss, & Bailey, 2006; Parsons, Reid, & Green, 1996; Parsons, Reid, & Green, 1993; Richman, Riordan, Reiss, Pyles, & Bailey, 1988), vocational settings (Fleming & Sulzer-Azaroff, 1992), hospital settings (Alavosius & Sulzer-Azaroff, 1990), nursing homes (Acro & Du Toit, 2006; Burgio et al., 1990); classrooms (Coddling, Feinberg, Dunn, & Pace, 2005; De Pry & Sugai, 2002; Gross & Ekstrand, 1983; Reinke, Lewis-Palmer, & Martin, 2007; Scheeler & Lee, 2002), retail stores (Pampino, MacDonald, Mullin, & Wilder, 2003), banks (Crowell, Anderson, Abel, & Sergio, 1988), restaurants (Austin, Weatherly, & Gravina, 2005), family home (Harris, Peterson, Filliben, Glassberg, & Favell, 1998), community settings (Cooper & Browder, 2001), state institutional settings (Hutchinson, Jarman, & Bailey, 1980; Reid, Schuh-Wear, & Brannon, 1978; Wilson, Reid, & Korabek Pinkowski, 1991), and prisons (Bassett & Blanchard, 1977). Each has provided valuable information related to how staff performance can be improved and maintained beyond the typical classroom setting where initial training is usually provided. Much of this research has been conducted in residential settings for persons with developmental disabilities (DD).

Residential group home settings remain a frequent placement for people with DD. The staff in such settings provides skill acquisition training to increase independence and quality of life for people who require staff support to manage daily routines and schedules. Supports also revolve around inclusion on many levels (home, work, recreational) as well as coordinating a multitude of services available to help the person with DD achieve as much independence as possible. Staff interaction with residents with DD then is critically important to achieve the best outcomes with the residents. Although frequent positive interaction and rapport-building activities are often included in behavior support plans, residential providers have reported difficulties in motivating their staff to increase interaction with the people they work with (Green et al., 1991; Parsons, Cash, & Reid, 1989; Quilitch, 1975; Richman et al., 1988; Wilson, et al., 2006). There is a clear need for strategies to improve staff performance in residential settings.

Researchers have shown that a number of strategies may be successful for increasing staff positive interactions with residents with DD. These strategies include performance feedback from supervisors (Arco & Du Toit, 2006; Austin et al., 2005; Coddling et al., 2005; Cook & Dixon, 2005; Crowell, et al., 1988; Gross & Ekstrand, 1983; Hagermoser Sanetti, Luiselli, & Handler, 2007; Pampino et al., 2003; Reinke et al., 2007), self-monitoring (Amato-Zech, Hoff, & Doepke, 2006; Burgio et al., 1990; Doerner, Miltenberger, & Bakken, 1989; Harris, 1986; Petscher & Bailey, 2006; Richman et al., 1988), and various prompting strategies, including the use of electronic devices (Amato-Zech et al., 2006; Petscher & Bailey, 2006; Scheeler & Lee, 2002).

Performance feedback occurs when supervisors observe desired job related behaviors from staff and provide specific praise (and possibly other incentives) for the performance. For example, Coddling et al. (2005) used performance feedback as an intervention in a classroom setting. Teachers worked with students with behavior support plans. The authors met with the teacher after class to review the components of the behavior plan implemented by the teachers and to provide feedback on all the components observed during the class. Results of this study show the intervention improved treatment integrity and the results were maintained up to 15 weeks. Other researchers have evaluated performance feedback as an intervention with staff working with individuals with DD. For example, Doerner et al. (1989) and Suda and Miltenberger (1993) showed that staff positive interactions with group home residents and workshop participants increased when they received feedback on their performance.

Research on the effects of performance feedback has shown it to be effective in other settings as well. For example, Pampino et al. (2003) looked at weekly versus daily feedback (along with task clarification, goal setting, and access to preferred tangibles contingent on goal attainment) with staff in a retail framing and art store setting. In addition to finding that the procedures were effective, they found that participants preferred daily feedback as opposed to weekly feedback. In another investigation, Arco and Du Toit (2006) evaluated the effects of feedback on the performance of staff in a nursing home setting and found improved performance when feedback was part of a staff management intervention. In yet another setting, Austin et al. (2005) used task clarification, graphic feedback, and verbal feedback to improve completion of closing

tasks at a restaurant. Hagermoser Sanetti et al. (2007) found that a combination of verbal and graphic performance feedback increased treatment integrity of behavior support plans in a public elementary classroom setting. In one other investigation of feedback as a staff management procedure, Crowell et al. (1988) showed that the use of task clarification, feedback, and praise as a staff management package increased customer relations target behaviors of bank tellers. These studies demonstrate the utility of performance feedback in a wide variety of different employment settings.

Another strategy for promoting staff positive interactions with residents is the use of self-monitoring. In self-monitoring, staff observe and record their own behavior on the job as a way to increase desirable behaviors. Self monitoring has been found to be a valuable staff management strategy in a number of studies. For example, self-monitoring and supervisor feedback were the focus of a study conducted by Richman et al. (1988). The authors found that on-task and on-schedule staff behaviors substantially increased with the introduction of a self-monitoring strategy using individualized shift schedule cards. Staff behaviors further increased when self-monitoring was combined with supervisory feedback. Doerner et al. (1989) found that the use of a goal setting, self-monitoring, self-evaluation, and self-praise staff management package increased staff positive interaction with clients living in group homes. Across these studies, staff self-monitoring has resulted in improved performance when used alone (Richman et al., 1988) or when used in conjunction with other procedures (Doerner et al., 1989).

In addition to self-monitoring and the use of performance feedback, another staff management strategy is the use of prompts (Amato-Zech et al., 2006; Petscher & Bailey,

2006; Scheeler & Lee, 2002). Recent research has evaluated the use of tactile prompts to cue the staff to perform a specific job task. For example, Petscher and Bailey (2006) conducted a study using a vibrating pager to prompt instructional staff in a classroom setting to implement a token economy. Another component to the intervention was the use of a self-monitoring system to improve the behavior of staff. Results of this study show the introduction of the tactile prompt followed by the introduction of self-monitoring produced clear increases in target behaviors.

Another tactile prompting device is called the MotivAider. This device emits a pulsating vibration following a continuous or fixed-time schedule that is programmable to meet specific needs. Amato-Zech et al. (2006) evaluated the MotivAider in an elementary school with three students. The study included the use of the MotivAider and a paper-and-pencil recording system to self-monitor the students' on-task behavior. When the MotivAider vibrated, the students checked whether they were paying attention at that moment. The results showed that on task behavior increased of 35% during intervention. There are no other studies conducted using vibrating prompts as a staff management procedure.

Although only a few studies have evaluated tactile prompting, the results are promising. The use of a vibrating pager may be an effective way to promote successful performance by staff in a variety of settings.

While a number of staff management strategies have been proven effective, a common limitation cited in many staff management studies involves the possible effect of reactivity as a variable influencing the outcome. That is to say, the improvement in staff

performance may be due to the presence of the supervisor or data collector rather than the staff management procedure itself (e.g., Bassett & Blanchard, 1977). Few studies have evaluated the effects of reactivity. Brackett, Reid, and Green (2007) conducted a study in a vocational setting evaluating job coaches' behavior when a supervisor was conducting conspicuous versus inconspicuous observations. They found that the job coaches engaged in a higher percentage of correct behavior when they knew they were being observed than when they did not know they were being observed. Because staff behavior was likely to have been influenced by conspicuous observation the authors implemented a self-recording procedure to promote staff behavior when were not being observed. The results showed that their performance increased when they engaged in self-monitoring even when there was no conspicuous observation.

The results of Bracket et al. clearly showed the effects of supervisor presence on staff performance. This finding is potentially significant as all previous research has demonstrated the effectiveness of staff management procedures while a data collector or supervisor was present as a possible confounding variable. It is not known how well staff would have performed in the absence of an observer. Because the Bracket et al. study is the only experimental demonstration of the effects of supervisor presence on staff behavior, the purpose of the proposed study was to replicate the research conducted by Brackett et al. (2007) in a group home or cluster setting with individuals with DD. This study evaluated the influence of a cost effective staff management package involving self-monitoring and tactile prompts during supervisor present and supervisor absent conditions to evaluate the effectiveness of the procedures and the possible reactivity that

would result with the supervisor present. An additional condition involving supervisor feedback was implemented for participants who did not benefit from the staff management package.

Chapter Two

Method

Participants and Settings

Four direct support professional staff were recruited from area group homes. The group homes housed up from 6 to 8 persons with DD. Staff to client ratios varied from 1:2 to 1:3 throughout the day. Staff participants were recruited based on their shifts so that training given to some staff did not influence other staff who had not yet received training. Consent to participate was obtained prior to the initiation of the study.

Nancy was a 22-year old female with 1 year and 5 months experience working with people with DD. She gained this experience working at her current place of employment. Nancy had a high school education. The group home she worked in had four bedrooms, one wheelchair accessible bathroom, a living room, dining room, family/activities room, and a screened in outdoor patio/lanai area. There were five adults living there during the course of the study. There were two single occupancy bedrooms and two rooms were shared by four residents. Three used wheelchairs for mobility, one person used a walker to assist with mobility, and the fifth person was ambulatory. Two people were non-vocal and used gestures and simple sign language to communicate wants and needs; a third was non-vocal and used a communication board to spell out what she wanted to say; a fourth person had approximately 30 recognizable words in his verbal repertoire but primarily used gestures and simple signs to communicate to others,

and the fifth person was non-vocal with very limited gestures she used to communicate to others. All required assistance from staff to meet their daily living needs. The living room, dining room, family/activities room, lanai area, and backyard were areas designated for leisure activities to occur. Some staff interactions in this home were positive while others had infrequent positive interaction and were limited to meeting basic care needs of the persons living in the home.

Luke was a 33-year old male with 3 years experience working with people with developmental disabilities, all at his current place of employment. He was a college graduate. Luke worked in a group home that had four bedrooms, two were single occupancy rooms while the other two were double bedrooms. The people who lived there were all male with age ranging from 11 years to 26 years of age. They were all mobile and had some form of communicating their wants and needs. Three of the people living in this home were non-vocal and used gestures and simple signs to communicate choices. All were capable to accessing preferred items and activities. The areas Luke was observed included the dining room, family room, lanai, and backyard. The backyard was included because leisure activity choices include backyard activities such as playing basketball, riding bikes, and playing soccer. Positive interactions observed were typically minimal. Conversations were typically between staff working the same shift.

Lisa was a 21-year old female with 10 months experience working with people with DD. She obtained a medical tech certificate post high school graduation. Lisa's group home location had three bedrooms and two bathrooms. The people who lived in

this home were all male, two were ambulatory and two used a wheelchair for mobility. A fifth male resident moved in to the home in the middle of the study. He was ambulatory. One was non-vocal and the other four males had receptive and expressive communication skills. Areas designated for observations include the family room, kitchen/dining room, and lanai.

Flora was a 26-year old female with a total of 3 years experience. She had been employed at her current place of employment for 1 year. Flora had a high school diploma. Flora's work site was a home that had four bedrooms. The people who resided at this home were non-ambulatory and required the use of a wheelchair for mobility. In addition, the people at this home were non-vocal, had extensive medical needs, and required staff supports to manage their daily routine. A common eating area that also functioned as an activity and positioning was the area designated for positive interactions to be observed and recorded by the supervisor and/or confederates. The bedrooms, bathroom, and laundry room were located in another area of the house. The residents all shared bedrooms. Staff were infrequently engaged in positive interactions with the residents in this house. Typically, conversations were between other staff working the same shift or others visiting the homes.

The supervisor for this study was the principal investigator. She is a Board Certified Associate Behavior Analyst and has worked in that capacity for three years at the same place of employment where the participants were recruited. The behavior analyst and group home manager worked directly with the staff and facilitated staff meetings together.

Materials

The materials included the MotivAider vibrating device (www.motiv-aider.com; Amato-Zech et al., 2006). The MotivAider is an electronic vibrator (does not beep) that can be programmed to vibrate on a continuous or intermittent schedule and is small enough to be attached to waistbands or placed in pockets. It weighs 2.9 oz. and measures 2.5 inches in height, 2.3 inches in width, and 0.6 inches in depth. Signal duration can also be programmed for 2, 3, or 4 seconds. It uses one AA battery. For the purposes of this study, the MotivAider was programmed to vibrate every 1 minute and worn by Flora from 1:00 – 2:00pm; Nancy from 3:15 – 4:15pm; Luke from 4:30 – 5:30pm; and Lisa from 6:00 – 7:00pm. The MotivAider was also worn by the confederates; however, it was programmed to deliver a signal for data collection purposes every 15 seconds.

Clipboards or binders were used by all participants including the confederates. A self-monitoring checklist and a reference list were included on the clipboards or in the binders. Program specific data sheets were those that were in place in the residence independent of this study and were also used by staff participants. The self-monitoring checklists were divided into 1-minute increments for a total of 60 intervals with time corresponding to the agreed-upon leisure time hour. During intervention phases, the staff were expected to self-record whether positive interaction occurred or not during the interval. Staff were informed that their self-monitoring data sheets would be collected the next day or as soon as possible. Because staff were trained to engage in positive interactions with residents, a reference sheet listing examples of positive interactions was placed on the data collection clipboards or binders for review. It guided staff behavior in

response to different situations from which positive interaction could be initiated. A data sheet was also provided to the confederate during intervention phases. The confederate recorded the occurrence of target behaviors following 15-second interval recording for up to 30 minutes.

Although the characteristics and capabilities of people with DD differed from home to home, the expectation for staff to interact with them was the same across homes and individuals. Target behaviors (described below) were all possible within the context of leisure time activities.

Target Behaviors and Data Collection

Positive interaction was assessed in all conditions. Positive interaction was defined as a comment (e.g., responding to a question from a client using more than one word); positive comment (e.g., “Looking good!” and “Nice outfit today!”); praise (e.g., “That’s great!” and “I like how you take your dishes to the sink after meals!”); and leisure activity involving client interaction (i.e., engaging in a game of checkers, playing a game of cards, etc.). Praise could also include providing physical contact such as pats on the back or high fives. The number of clients present in the room was also noted on the data sheet.

Data were collected for up to 30 minutes, during the designated leisure hour, Monday through Friday. The participants were scheduled to work a minimum of 2 days and up to 4 days during the week. The 30 minutes varied within the hour. For example, one session was held 4:00 – 4:30pm while another session was held between 4:25 – 4:55pm. Leisure time was scheduled during the hour and data were collected in common

areas such as the living room or lanai where leisure activities occurred. The leisure activity also occurred in the backyard to accommodate choices. The supervisor and/or confederate independently recorded whether positive interaction occurred during this time period. Partial interval recording in 15-second increments was used. A “+” was scored if positive interaction occurred and a “0” was scored if positive interaction did not occur during each interval. When staff left the room or leisure area for a work-related reason (e.g., assisting a client with toileting), data collection paused and resumed when staff returned. The primary observer used a signal such as stretching arms or scratching head to communicate to the second data collector to pause and to resume recording target behaviors. Data collection also paused when the person with developmental disabilities exhibited problem behaviors and resumed when the episode ended.

Activities that were observed to occur during the leisure hour included dancing to music, playing a game (Connect 4, Uno), singing to music, playing basketball, drawing, and watching spots on TV to name a few. Leisure time meant that no demands were placed and the people living in the home were free to access preferred activities or received assistance in accessing preferred activities. Some demands were placed when the person was asked to make choices regarding what they would like to do; however, training included following through with verbal praise on making a good choice or some other positive comment about the choice made.

Interobserver Agreement

31% of the assessments in baseline and intervention phases included observation and data collection by an independent observer (a confederate) in order to evaluate

interobserver agreement. The independent observer was a fellow graduate or undergraduate student recruited from the Applied Behavior Analysis Masters Program. Confederates presented themselves as “social work” students who are volunteers for the same agency that employed the staff participants. They told the staff and people living in the homes if appropriate that they were learning about developmental disabilities and wanted to find out about satisfaction with community placement. The focus was on the people living at the homes and not on the staff participants or other staff. The confederates recorded data on the whether the participants engaged in positive interaction without them knowing it. Two confederates were present in all three conditions to assess interobserver agreement; however, the supervisor also recorded data when permitted and served as a second data collector to assess interobserver agreement. The percentage of agreement was calculated for all observations by dividing the number of intervals with agreements for the target behavior by the number of intervals with agreements plus disagreements. An agreement was scored for an interval when both observers agreed that the target behavior occurred or did not occur. Percentage of agreement for each observation in baseline and intervention conditions was averaged to produce a mean for each condition. An interobserver agreement mean of 97% (range 81% to 100%) was obtained for intervals of positive interactions in 29% of total baseline sessions. An interobserver agreement mean of 87% (range 72% to 99%) was obtained for intervals of positive interactions during a total of 33% of sessions during the staff management intervention.

The primary data collector was either the supervisor or one of the confederates. It was not always possible for the supervisor to be the primary data collector, especially in the no supervisor present condition.

Social Validity Questionnaire

A social validity questionnaire, consisting of 6 questions answered with a 5 point Likert Scale, was given to the participants after the study (see Appendix A). The questions asked the participants to rate the helpfulness of the procedures, the nature of their positive interactions before and after the study, the importance of supervisor presence on their interactions with clients, and whether they would recommend the staff management procedures to others.

Experimental Design and Procedure

At least one confederate was on site in the group homes at different times prior to the implementation of training. Staff were told that the confederates were social work students learning about developmental disabilities and community placement and that they would be observing the individuals with disabilities. Baseline assessment was conducted by the confederate without the knowledge of the participant. Following baseline for each participant, training in an office setting was conducted on the importance of, and how to increase, positive interactions with clients. The purpose and use of the MotivAider was also discussed. The study utilized an alternating treatments design (presence or absence of the supervisor and baseline probe) within a multiple baseline across participants design. An ABAB design was used to evaluate the effects of

feedback for one participant. The participants were blind to the purpose of the study but briefed at its completion.

Baseline. Assessments of participants' positive interactions in the group homes were recorded through data collection by the confederate. Participants did not receive feedback on their performance during these assessments. Baseline data collection continued until there were at least 3 stable data points in the supervisor absent condition and 2 stable data points in the supervisor present condition. Obtaining baseline data in the supervisor present condition was necessary to compare to the supervisor present condition when the staff management package was implemented. The supervisor did not collect any data in this condition. The supervisor appeared to be doing other routine tasks in the area, similar to the Brackett et al. (2007) study.

Training. The supervisor conducted individual training by first discussing the importance of positive client interaction outlined in individual behavior plans. The supervisor then introduced the MotivAider for staff to use as a reminder to interact with the clients in a positive manner. Next the supervisor demonstrated a number of examples of positive interactions and asked the participant to rehearse a number of different positive interactions during role plays with the supervisor portraying a client. Each participant demonstrated a high rate of positive interactions (up to 8 per minute) during the role plays indicating that positive interaction skills were already a part of their repertoire. In addition, a reference list of positive interactions was given to staff so it was available for staff to use in their interactions with clients. Staff were informed the MotivAider was programmed to vibrate every minute to remind them to interact with

clients in a positive manner. However, they were also informed that they should provide positive interaction more often than once per minute. Staff were also informed that the supervisor would be on site sometimes to monitor positive interaction with clients. Finally, staff were informed that feedback would not be provided by the supervisor at each of these observation sessions. Only one training session was provided in an office area and lasted approximately 1 hour and 30 minutes.

Post-Training Assessment. Post training assessments were conducted in the participant's assigned group home or cluster. Data were collected in the same manner, time, and place as in baseline. During this phase, staff positive interactions were measured in three conditions to evaluate the presence of a supervisor and the use of the MotivAider. In each post-training condition, the confederate was present with one of the following conditions in effect; supervisor present and MotivAider on, supervisor absent and MotivAider on, and baseline probe. The first data point for each participant was the supervisor present and MotivAider on condition to compare baseline performance to performance in this condition immediately after training. If an improvement was noted, the order of the three conditions (described below) was determined through a draw from a hat.

Supervisor Present + MotivAider On. In this condition, the MotivAider was activated while the supervisor was on site in the same room or area of the residence as the participant.

Supervisor Absent + MotivAider On. In this condition, the staff wore the MotivAider at the specified time; however, the supervisor was not present during this time period.

Supervisor Absent + MotivAider Off. In this condition the staff was observed by the confederate at a time when neither the supervisor was present nor MotivAider activated (equivalent to baseline conditions).

Supervisor Present + MotivAider On + Feedback. When increases in positive interaction were not observed, an additional *feedback* phase was added. A feedback phase was provided by the supervisor to 2 participants who met this criterion. In the feedback phase the supervisor was present with the participant wearing the activated MotivAider. The supervisor provided feedback to the staff person approximately every 1 minute. If the participant had just engaged in positive interactions, the supervisor provided descriptive praise. If the participant missed opportunities to engage in positive interactions, the supervisor provided instructions, telling the participant how he or she could have engaged in a positive interaction appropriate to the situation.

Chapter Three

Results

Results are shown in Figures 1 and 2. During baseline, participants engaged in low levels of positive interactions when the supervisor was present and when the supervisor was absent. With the implementation of the staff management package, two participants (Lisa and Flora) engaged in an increased level of positive interactions but only when the supervisor was present. Positive interactions were not consistently higher when the supervisor was absent even when the MotivAider was activated. Two participants (Nancy and Luke) did not increase positive interactions until feedback was provided by the supervisor.

The top panel of Figure 1 shows the results for Nancy. During baseline, Nancy engaged in a mean of 5% (range 2% to 10%) of intervals of positive interactions when the supervisor was absent and a mean of 3.5% (range 0% to 7%) when the supervisor was present. During the staff management package phase, positive interactions were at a mean of 9.3% (range 2% to 21%) of intervals during the supervisor present condition. During the one baseline probe, Nancy engaged in 1% of intervals of positive interactions. Because there was scant increase in positive interactions with the staff management package, feedback was added. Nancy engaged in positive interactions during 40% (range 23% to 64%) of intervals during the first feedback phase, 13% (range 12% to 16%) of

intervals during the return to no feedback, and 51% (range 39% to 73%) of intervals when the final feedback phase was conducted.

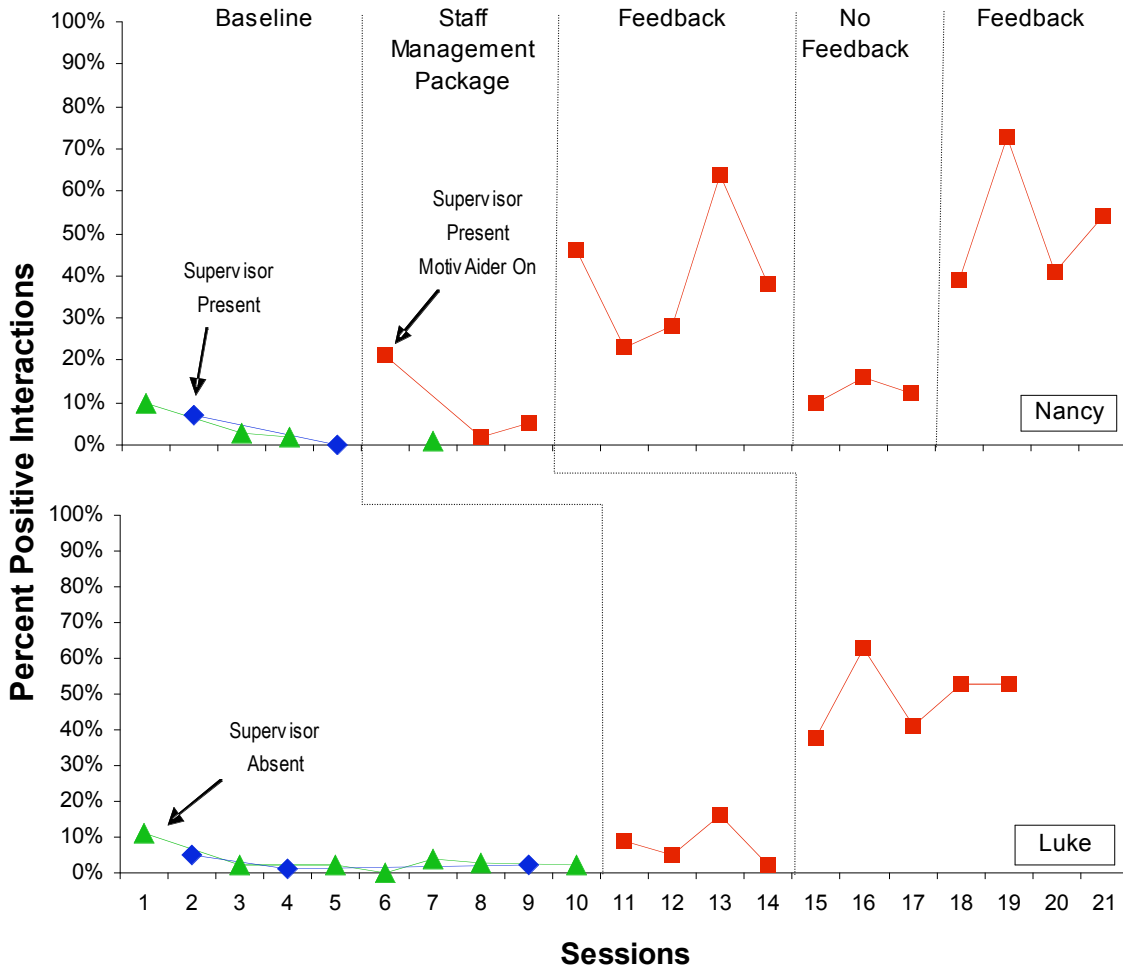


Figure 1. Results of staff management intervention package + feedback.

The second panel of Figure 1 shows the results for Luke. During baseline, he engaged in a mean of 2.7% (range 1% to 5%) of intervals with positive interactions when the supervisor was present and a mean of 4% (range 2% to 11%) when the supervisor was absent. When the staff management package was implemented, Luke increased intervals

of positive interactions to a mean of 7.8% (range 2% to 16%) in the supervisor present condition. Because his scores were not substantially increased over baseline, the feedback phase was added. With feedback, Luke's level of positive interactions increased to a mean of 53% (range 38% to 63%).

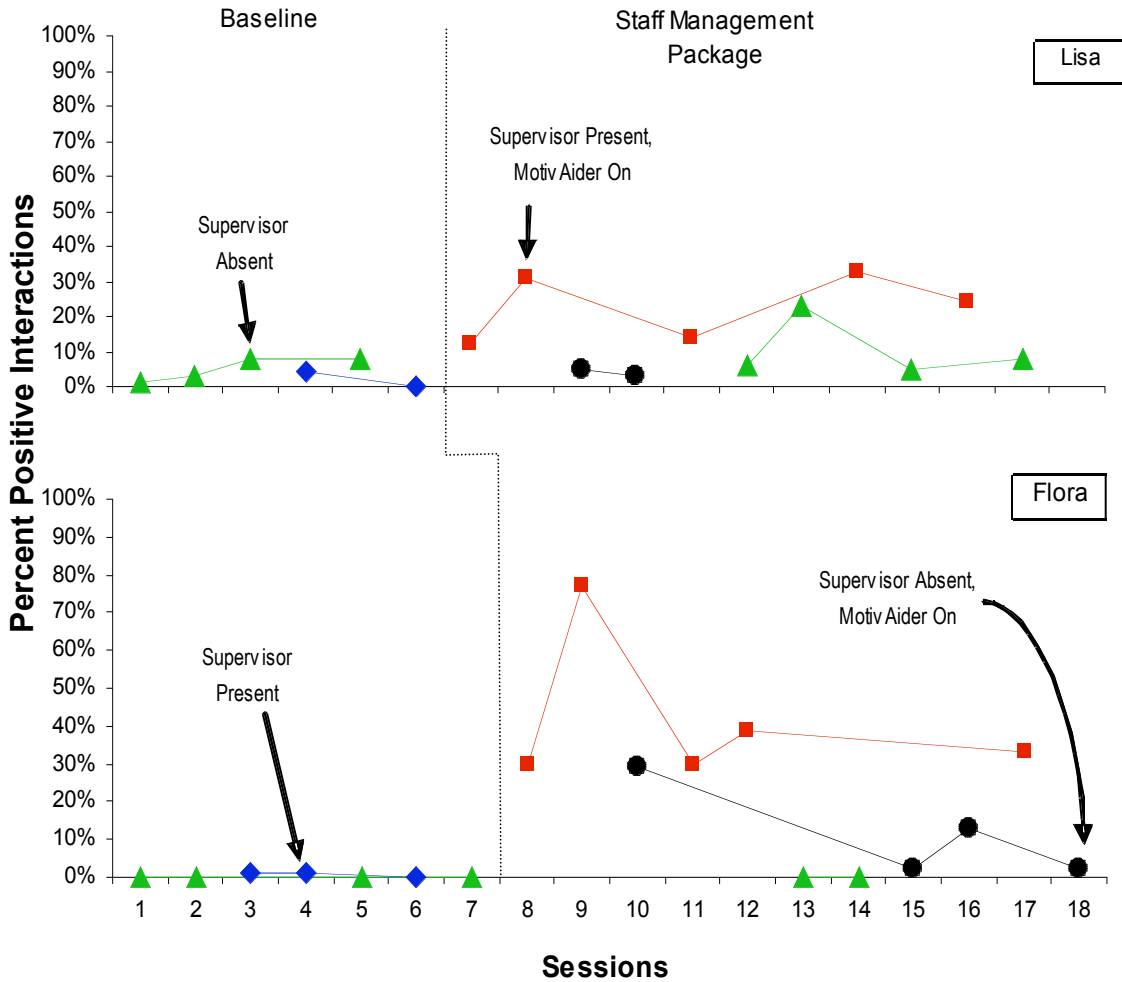


Figure 2. Results of staff management intervention package.

The first panel of Figure 2 shows Lisa's results. During baseline, she engaged in a mean of 2% (range 0% to 4%) of intervals of positive interactions when the supervisor was present and a mean of 5% (range 1% to 8%) when the supervisor was not present. When the staff management package was implemented, Lisa engaged in a mean of 23% (range 12% to 33%) of intervals of positive interactions in the supervisor present condition and a mean of 4% (range 3% to 5%) in the supervisor absent condition. Baseline probe sessions were held post training and Lisa's levels of positive interactions at a mean of 11% (range 5% to 23%).

Finally, the second panel of Figure 2 shows Flora's results. Flora engaged in a mean of 0.7% (range 0% to 1%) of intervals with positive interactions with supervisor present and 0% of intervals when the supervisor was absent during baseline. In the staff management phase, Flora engaged in a mean of 42% (range 30% to 77%) of positive interactions when the supervisor was present, an increase of 41.3% compared to baseline. When the supervisor was absent, Flora engaged in a mean of 12% (range 2% to 29%) of positive interactions. Her level dropped to 0% of positive interaction intervals when two baseline probe sessions were conducted.

Social validity was also assessed with the use of a questionnaire given to the participants and was not anonymous. Responses were scored on a Likert Scale ranging from 1 to 5. Nancy rated the staff management intervention a 2 in increasing her positive interaction with people she works with. In addition, she did not indicate a difference in the level of positive interactions before or after the staff management intervention was implemented rating each a 4). Nancy rated the presence of a supervisor as making no

difference at all. She would not continue using the intervention on the job and rated her recommendation for other group homes to implement the staff management intervention as a 2. Because scant increases in positive interactions were observed when the supervisor was present and the MotivAider was on, a feedback phase was necessary to increase her levels to a higher rate. When the feedback was withdrawn, Nancy's level of positive interaction dropped to closer to her baseline levels even when the supervisor was present. In this case, she accurately self-reported that a supervisor on site did not make a difference in her positive interactions with people living in the group home.

Luke found the staff management intervention extremely helpful and rated his level of positive interactions prior to its introduction as a 3 and after it was implemented as a 4. He said that having a supervisor on site made a big difference in his positive interactions with people he works with and said he would recommend that other group homes also implement the staff management intervention. When asked if he would continue to use this intervention on the job, Luke said that he was not at all likely. He commented that he could also learn more if another staff was using it. Overall, he commented that this staff management intervention was a good thing and helped the people he works with feel good about themselves. When compared to the results of his positive interactions, Luke's positive interactions were not significantly more when the staff management package was implemented. Like Nancy, a feedback phase was also added and more positive interactions were observed as a result. The supervisor's presence after training was conducted did not make a considerable difference in

providing more positive interactions and it was only after feedback was added that the higher levels occurred.

Lisa rated the helpfulness of tactile prompts and self-monitoring a 4. She rated her positive interactions with people with developmental disabilities residing at her place of work a 4 before the introduction of the staff management intervention and a 5 after its introduction. She rated the supervisor's presence making a big difference in her positive interactions. Finally, Lisa reported that she is likely to continue using the staff management intervention on the job and highly recommends that other group homes also implement the staff management intervention. An increase in positive interactions was observed after training was conducted. Her data also show that more positive interactions were observed when the supervisor was on site while the MotivAider was activated. The levels in the supervisor absent condition and baseline probes were lower.

Flora found the staff management intervention extremely helpful (a score of 5). She rated her positive interactions a 3 prior to its introduction and rated herself a 5 after the staff management intervention was implemented. Interestingly, Flora reported that she did better when the supervisor was not on site and rated this question a 2 (supervisor presence did not make a big difference). She was not likely to continue to use this staff management intervention on the job and recommended its use at other group homes "only if they are willing to do it." Flora's positive interactions were almost non-existent prior to training. Levels were indeed higher when the staff management package was implemented. Her data also suggest that when the supervisor was absent, her level of positive interaction were at lower rates (she did not do better).

Based on the answers provided by the participants, it is not clear why the participants agreed to take part in this study. They did not state needing improvements in this area of their job performance.

Chapter Four

Discussion

Overall, the results of this study showed that the staff management package (training to increase positive interaction and the use of tactile prompts via the MotivAider) increased the occurrence of positive interaction Lisa and Flora had with people with developmental disabilities but did not significantly improve the performance of Nancy and Luke. Furthermore, the increase in positive interactions for Lisa and Flora only occurred when a supervisor was present. When they were observed in the absence of a supervisor, positive interactions were much lower. Feedback was added with Nancy and Luke when there was minimal change in their positive interactions during the staff management intervention compared to baseline. It was only after feedback was introduced that a significant increase in their positive interactions was seen.

It is a noteworthy finding from this study that none of the four participants increased their positive interactions with clients to any meaningful degree following staff training and the use of the tactile prompt and self-monitoring when a supervisor was not present. Even though they demonstrated the skills during training and wore the MotivAider to prompt their behavior when working with their clients, they failed to increase their positive interactions when they did not know they were being watched. For staff training and management procedures to be valuable they must produce changes in staff behavior that persist in the absence of direct supervision. Given that staff are

frequently present with their clients while a supervisor is not (especially during night shifts), it is important for staff management procedures to work in the absence of the stimulus control of a supervisor's presence. It is equally important for staff management procedures to be cost effective.

One of the strengths of this study was the use of confederates for data collection. The confederates were present in the group home to collect data on staff interactions with their clients without any awareness by the staff that they were being observed. The use of confederates allowed us to collect data on the "true" level of positive interactions that was not influenced by the confounding presence of a data collector. Considering that the vast majority of staff management studies utilize individuals present in the site who are known by the staff to be collecting data on staff behavior, the results of these studies are likely confounded to some degree by reactivity to the presence of the data collectors. This study and the study by Brackett et al. (2007) are the only studies to our knowledge to use surreptitious data collection. Future research on staff management should use similar forms of data collection. This type of data collection, termed *in situ* assessment, is used widely in other research areas such as child safety skills training (e.g., Miltenberger, 2008). In safety skills training studies, children are observed without their knowledge to determine whether they will use the safety skills when a parent, teacher, or other adult is not present. In this way the safety skills are not under the stimulus control of the presence of an observer, parent, or teacher. It is important for staff management research to continue to use confederates to conduct *in situ* assessments to determine whether staff continue to use important skills in the absence of an observer or supervisor.

The findings of this study expand on the Brackett et al. (2007) study by showing that the presence of a supervisor had an effect on staff performance for two participants. For Lisa and Flora, even without any feedback or a history of feedback, higher rates of positive interaction were seen when the supervisor was present as compared to other conditions. Although Nancy and Luke did not increase positive interaction with the staff management procedures, even when a supervisor was present, we speculated that positive interactions might increase in the supervisor's presence once there was a history of feedback from the supervisor. To investigate this possibility, an ABAB design was used with Nancy to evaluate feedback and to see if positive interactions would be maintained in the absence of feedback. However, even with a history of supervisor feedback, Nancy did not show an improvement in positive interaction when feedback was removed.

All four staff in this study demonstrated increases in positive interactions by the end of the study. Anecdotally, these particular staff demonstrated different styles at increasing positive interactions. For example, Luke was observed to rotate attention to persons in his immediate area while Nancy focused on one person at a time. In the final data points for Luke, he positioned himself in between the people he was supervising and went from one person to the next engaging them in conversation or an activity and providing verbal and physical praise.

It would be interesting to find out whether better results would have been achieved if more than one staff used the MotivAider. If multiple staff used the MotivAider they may have provided each other with support to interact with the people they serve with in a positive manner. Perhaps utilizing lead staff to model the desired

staff behavior could be useful in promoting behavior change in other staff. Another interesting research question is whether adding one or more intermittent supervisor feedback sessions post training would promote the desired staff performance of providing more positive interactions.

The results of the social validity questionnaire showed that each of the four participants rated their positive interactions before intervention as fairly high (when in reality they were quite low). Based on their perception that they already engaged in high levels of positive interactions, it is not clear why they agreed to participate in this study with a stated goal of increasing positive interactions. It would be interesting to find out reasons why participants agree to take part in a study involving staff management procedures. Perhaps selecting only those who are motivated to make some improvements in job related tasks would produce different results.

There were several challenges faced by the author in conducting this study. First, due to a number of logistical problems and unavoidable conflicts, data collected in some sessions could not be used. In one case, the group home manager/supervisor was present in a no supervisor condition, thus violating the integrity of the condition. In another case, the MotivAider should have been on for a “supervisor absent and MotivAider on” condition, but the participant forgot to bring the device to work for that session. One data point could not be used because the activity was not a leisure activity and instead consisted of a self-care activity. Decisions to exclude data were made by authors of this study when the integrity of the condition was violated.

An additional challenge faced by the author was the possibility of observer drift. Observer drift was noted with data collectors who had similar training in another project and may have been one possible explanation for some low interobserver agreement scores (i.e., less than 90%). Another factor that may have contributed to relatively lower interobserver agreement scores, mainly during intervention, was that the MotivAiders worn by the two observers were not perfectly synchronized. Starting and stopping the MotivAiders at exactly the same time was not easily done and may have contributed to slight differences in the interval data collected by the two observers.

A final challenge in conducting this study involved the logistics of getting the confederates and participants together at the right times. Confederates were required to travel to the different sites and coordinate with each other for reliability sessions. Not all opportunities to collect data could be utilized due to schedule conflicts. Furthermore participants were not always where they needed to be and therefore some sessions could not be conducted. Communication with the managers or scheduling coordinators with the primary author of this study was not consistent and switching participants to work at another site or perform another duty (van runs) resulted in canceled sessions.

In spite of the challenges faced by the author in conducting this study, the study produced interesting and important findings. The results of this study demonstrated that staff management procedures consisting of prompts and self-monitoring may not be effective in promoting desired staff behavior in a group home setting, even though other studies suggest that they may be effective (Petscher & Bailey, 2006; Scheeler & Lee, 2002)). These procedures did not work for any of the four participants in this study unless

a supervisor was present on site, and even then it was effective for only two of the four. These are discouraging findings suggesting that it may be difficult to motivate staff to engage in relatively simple positive interaction with clients when they do not know they are being watched (i.e., unless a supervisor is present). Although feedback was effective when implemented with two of the participants, the effects did not persist when feedback was withdrawn for Nancy. Although the demonstration that feedback was effective was valuable, the fact that the behavior did not persist in the absence of feedback suggests the need for better staff management strategies that can motivate staff performance in the absence of a supervisor who must be present to deliver feedback.

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Appendices

Appendix A: Social Validity Questionnaire

Thank you for participating in a study evaluating a staff management package to increase positive client interaction. Please take a few minutes to complete this questionnaire about your experience.

1. How helpful was the use of tactile prompts, self-monitoring, and supervisor feedback to increase your positive interaction with your clients?

1 2 3 4 5

Not at all helpful

Extremely helpful

Comments:

2. How would you rate your positive interaction with clients prior to the introduction of this staff management package?

1 2 3 4 5

Very few positive interactions

Many positive interactions

Comments:

3. How would you rate your positive interaction with clients after you started using the staff management package?

1 2 3 4 5

Very few positive interactions

Many positive interactions

Comments:

4. Do you feel that having a supervisor on site makes a difference in your positive interactions with residents?

1 2 3 4 5

Made no difference
at all

Made a big difference

Comments:

5. How likely are you to continue to use this staff management package on the job?

1 2 3 4 5

Not at all likely

Extremely likely

Comments:

6. Would you recommend that other group homes implement this package?

1 2 3 4 5

Not at all recommended

Highly recommended

Comments:

Thank you!