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An Evaluation of Staff Reactivity Following Performance Feedback and Self-Monitoring Procedures in a Group home Setting

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An Evaluation of Staff Reactivity Following Performance Feedback and Self-Monitoring
Procedures 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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Abstract

Research has investigated staff management procedures that produce treatment adherence and maintenance over time. Treatment integrity is one of the most important aspects of staff management; without adequate treatment adherence, behavior analysts are unable to determine whether treatment is effective, function has been identified, or intervention revisions are needed. The literature on staff management procedures has demonstrated that performance feedback and self-monitoring are effective procedures for increasing treatment integrity of behavior plans in the presence of the observer, however, few studies have evaluated the effectiveness of these procedures when the observer is absent. This study evaluated the effectiveness of performance feedback and self-monitoring procedures and the level of reactivity to the presence of an observer exhibited by staff trained to implement individualized behavior plans. The results showed that staff performance increased with the intervention almost exclusively in the conspicuous observation condition.

Chapter 1: An Evaluation of Staff Reactivity Following Performance Feedback and Self-Monitoring Procedures in a Group home Setting

Researchers have stressed the importance of evaluating not only client behavior, but also staff behavior to determine the effectiveness of behavior intervention procedures (Kissel, Whitman, & Reid, 1983). Many intervention procedures that have been shown to result in meaningful behavior change in controlled settings are not implemented with fidelity in the natural setting (McIntire, Gresham, DiGennaro & Reed, 2007). This finding is disconcerting, as research in the area of treatment integrity and staff management has shown that there is an association between treatment integrity and client behavior (DiGennaro, Martens, & Kleinmann, 2007). More research is needed in the area of staff management to determine the most effective and efficient way to train and manage staff to implement behavior interventions with fidelity.

It is important to outline the differences between staff training procedures and staff management procedures. Staff training procedures are used to teach staff a new skill set, whereas staff management procedures are utilized to maintain staff performance of the skills they have been taught. Researchers have evaluated both staff training and staff management procedures to ensure that behavior analysts utilize the most effective approaches to yield the most positive results. Staff training has proven less difficult to evaluate than staff management. Staff training entails utilizing a behavioral training procedure that is effective at teaching skills to fluency, efficiently (Miltenberger, 2008). Staff management, which often is more difficult to achieve, is

the process of maintaining the skill set learned through staff training. Behavior skills training (BST) is the most commonly used form of staff training procedures and is the preferred method of training in much of the staff management research, (Coddling, Feinberg, Dunn & Pace, 2005; Coddling, Livanis, Pace & Vaca; 2008; Mowery, Miltenberger, & Weil, 2010) as it is time efficient, trains skill sets to fluency, and may generalize across settings and populations. BST has been used to train staff and teachers to implement behavior interventions and procedures such as discrete trial training (Sarokoff & Sturmey, 2004) and functional analyses (Iwata et al., 2000).

Two staff management procedures that are commonly used to increase implementation of behavior interventions are self-monitoring and performance feedback techniques. Self-monitoring is the process of an individual observing and recording his or her own behavior (Cooper, Heron, & Heward, 2007). Self-monitoring has been shown to be an effective way to change one's own behavior (Brackett, Reid, & Green, 2007; Carr, Taylor & Austin, 1995).

Self-monitoring has been used to increase the treatment integrity of a variety of staff behaviors such as implementing a token economy (Plavnick, Ferreri, & Maupin, 2010), increasing staff on-task behavior (Richman, Riordan, Reiss, Pyles & Bailey, 1998), increasing the independence of supported workers (Brackett et al., 2007), and increasing and modifying the interactions between staff and residents with developmental disabilities (Burg, Reid, & Lattimore, 1979; Mowery et al., 2010).

The second commonly used staff management procedure, performance feedback, consists of the individual implementing the behavior intervention receiving specific praise, contingent on correctly implemented components and descriptive corrective feedback immediately following incorrectly implemented components (Coddling et al., 2005).

Performance feedback is one of the most commonly used staff management procedures and is often used in a staff management package in combination with other staff management programs. Performance feedback is commonly used due to the extensive research on its effectiveness at aiding in the acquisition of skills, promoting maintenance and the high social acceptability ratings of this procedure (Coddling et al., 2005). Research has evaluated the effectiveness of different topographies of feedback; Green, Rollyson, Passante and Reid (2002) found that direct supervisor feedback is more effective than indirect supervisor feedback at changing employee behavior. Other research has evaluated verbal feedback combined with visual feedback and results revealed that the combination of verbal and visual feedback is more effective at altering behavior than verbal feedback alone (Sanetti, Luiselli & Handler, 2007).

DiGennaro et al. (2007) used a combination of goal setting and performance feedback procedures to increase treatment integrity exhibited by four special education teachers of procedures to decrease disruptive behaviors of four children in a classroom setting. Coddling et al. (2005) used feedback to increase the treatment integrity of 5 multi-component behavior plans in the school setting, showing an increase in treatment integrity from 100% of teacher implementers. Roscoe, Fischer, Glover and Volkert (2006) found that performance specific-instruction had a greater effect on skill acquisition than contingent money. Coddling et al. (2008) added to the literature on performance feedback procedures by increasing the number of treatment components staff were required to implement. Previously, many studies that had investigated treatment integrity and performance feedback have required teachers and/or staff to implement few (e.g., 1-5) treatment plan components (Brackett et al., 2007; Mowery et al., 2010; Parsons & Reid, 1995).

McIntire et al. (2007) conducted an analysis of school-based interventions and found that there were high probabilities of treatment error in almost half of the school-based intervention articles published between the years of 1991 and 2005. This analysis contains alarming results for the field of behavior analysis, as a great amount of time and resources are spent on the behavior intervention plans by parents, teachers, staff, the government, and behavior analysts. These may be wasted resources if the interventions are not implemented with integrity. Furthermore, interventions that are not implemented with integrity are likely to take more time to generate behavior change. Research has focused on staff training and staff management procedures, however the extent to which staff management procedures are implemented with integrity when the observer is not present needs to be further evaluated.

Reactivity refers to a behavior change occurring as a result of observation (Miltenberger, 2008). Recently, investigators have begun to evaluate the role of reactivity in behavior interventions. Recent research suggest that in some cases behavior changes that have been observed in the area of staff management may be a product of reactivity, in particular that behavior change only occurs in the presence of the observer (Bracket et al., 2007; Mowery et al., 2010).

Reactivity is a phenomenon that has long been observed, however, its effects on implementer performance is rarely directly studied in the research literature. Carr et al. (1995) demonstrated the magnitude of reactivity effect on behavior during an undergraduate course demonstration. At the beginning of the demonstration, students were asked to self-record the frequency of eye blinks in a two-minute interval. Students were then asked to calculate the rate per minute of eye blinks. Next, students were separated into groups of three; each group had two observers recording the frequency of eye blinks in a two-minute interval for the third group

member. The rate was then calculated and compared to the previous self-recording rate. The results showed that 100% of students experienced a behavior change due to reactivity. These rates were also compared to the population's average number of eye blinks per minute, again all students varied from the average as a result of reactivity to the observers. This demonstration, though simple, shows the degree to which behavior is susceptible to reactivity and further supports the notion that staff reactivity needs to be further investigated in order to determine the most effective way to manage staff performance.

Mowery et al. (2010) evaluated the use of tactile prompts in combination with self-monitoring techniques to increase positive interactions between staff and clients. Results of this study demonstrated that for half of the participants, tactile prompts and self-recording increased their positive interactions from baseline levels. Mowery et al. further added to the literature by evaluating the role of observer reactivity. The results of this evaluation showed that none of the staff increased positive interactions when the observer was absent. These findings are inconsistent with the findings of Petscher and Bailey (2006) that the use of tactile prompts and self-monitoring procedures were effective at increasing the treatment integrity of procedures implemented by teachers in a school-based intervention. This discrepancy in the literature is likely due to the lack of evaluation of the role of reactivity in the Petcher and Bailey study.

In a recent review of the literature evaluating performance feedback as a staff management procedure Miltenberger, Hanratty, and Florentino (2011) reported that from the years 2006 through 2010, only 2 of a total of 22 studies published in the Journal of Applied Behavior Analysis assessed reactivity (Brackett et al. 2007; Coddington et al., 2008). Miltenberger et al. suggest that assessment of reactivity is important for future research in staff management to

determine whether staff behavior changes, resulting from feedback and other interventions, persist in the absence of supervision.

Brackett et al. (2007) investigated the effects of performance feedback and self-monitoring on maintaining treatment integrity by job coaches working with supported employees. Investigators trained staff at an adult day training facility to increase client independence when cleaning up the workstation and decrease the level of prompting from staff. The level of prompting was measured both in conspicuous and inconspicuous observations sessions. The results showed that the staff engaged in the correct behavior only when a conspicuous observer was present. A third phase using a self-recording procedure was then implemented; results showed an immediate increase in correct behavior of staff during self-monitoring. These results indicate that self-monitoring techniques may function similarly to reactivity in that they increase treatment adherence in the absence of an observer, however, this hypothesis requires further evaluation. In this study, the participants turned their self-monitoring forms into the researchers, thus, knowing that the researchers were evaluating their self-monitoring may have contributed to reactivity. It is not clear whether changes in behavior during the self-monitoring phase were due to self-monitoring or to reactivity. Future research should evaluate the effects of self-monitoring when participants do not turn in the self-monitoring forms to the researchers. If staff performance stays high in this condition, it would suggest self-monitoring contributed to treatment integrity and rule out the effects of reactivity.

The second study that directly evaluated the effects of reactivity was conducted by Coddling et al. (2008). They evaluated the effect of performance feedback on treatment integrity of 5 teachers implementing behavior plans with their students. Teachers in this study had previously been trained on the behavior support plans and were expected to have been

implementing the procedures from the start of the study. To better assess treatment integrity Coddling et al. broke down the behavior support plans into 10 to 13 individual components. This study assessed the treatment integrity of both antecedent manipulations and consequence strategies; results of this study indicated that performance feedback increases the treatment integrity of both antecedent and consequence strategies. The results of this study show that the teachers performed well in the feedback phase regardless of whether an observer was present in the classroom. These results are not consistent with the results of Brackett et al. (2007) and Mowery et al. (2010) that have shown that staff exhibited low levels of treatment integrity during sessions when they were unaware that the observer was present.

One limitation to the Coddling et al. (2008) study is that, though teachers were unaware of the days and times inconspicuous observation sessions would be conducted; the teachers were made aware at the start of the study that inconspicuous observations were going to be conducted periodically through a one way observation window in the classroom. The teachers' awareness that inconspicuous observations would take place may have had an effect on the results of the study. It is likely that treatment integrity would have been low during inconspicuous observations if teachers were blind to the purpose of the study.

The purpose of the current study is to replicate Coddling et al. (2008) to determine whether the awareness to the purpose of the study and the possibility of inconspicuous observations increased treatment integrity during inconspicuous observations. To answer this question, staff will not be aware that inconspicuous observations will be conducted. Furthermore, this study will use a self-monitoring procedure to evaluate whether it functions similarly to reactivity (i.e., Brackett et al. 2007). Additionally this study evaluated client behavior in both conditions in all phases to further add to the literature.

Chapter 2: Method

Participants and Setting

The participants in this study included five staff members at a group home in South Florida who work with adults diagnosed with developmental disabilities. All the staff members involved in the study were female between the ages of 21 and 35. The staff members had worked in the group home for over 1 year (between 1 and 5). All staff members had previously completed the 20-hour behavior assistant training course and had behavior assistant certifications to meet the Florida's med-waiver requirements. All staff members were trained on the behavior plans of each of the client participants. The adult clients taking part in this study were three females, Lucy, Bonnie, and Stephanie who were diagnosed with developmental disabilities and resided in a group home in South Florida. Lucy was a 39 year-old woman with a primary diagnosis of Autism with a secondary diagnosis of moderate mental retardation. Lucy's verbal behavior consisted of limited tacts, echoics, and prompted mands. Lucy's problem behaviors included verbal outbursts, elopement, rectal/vaginal digging, and self-injury. It was reported that Lucy often eloped when in the community or on a walk. It was also reported that Lucy had eloped from her ADT and was found 30 min later at a nearby convenience store. Bonnie was a 43 year-old woman with diagnoses of Rhetts's syndrome and severe mental retardation. Bonnie was non-verbal and relied on her PECS chart or leading someone by the hand to an item/activity to communicate. Bonnie's problem behaviors consisted of inappropriate toileting, pica, and entering unsafe areas. Stephanie was a 21 year-old female with a diagnosis of Autism. Stephanie's verbal behavior consisted of echoics, mands for escape ("go away" "no" "stop"), and

1 sign for access “please.” Stephanie’s problem behaviors consisted of rectal digging, pica, property destruction, and aggression towards others.

Materials and Equipment

Individual behavior plans. Following the Functional Behavior Assessment (FBA) individual behavior plans were developed for each of the three client participants. Each individual behavior plan contained problem behavior consequence procedures, antecedent manipulations and/or skill acquisition procedures, and a replacement behavior consequence procedure. For Lucy the behavior plan procedures targeted elopement, stopping, and mands for escape. For Bonnie the behavior plan procedures targeted entering unsafe areas, stopping at the stop sign independently, and mands for access. For Stephanie the behavior plan procedures targeted aggression, independently waiting, and mands for escape. The behavior plan procedures were to be implemented during specific activities, a specific number of times per day, or contingent on the clients’ behaviors.

Treatment integrity data sheets. The treatment integrity data sheets were one to two pages in length. Each data sheet contained a) operational definitions of each target behavior b) operationally defined procedures c) observer rating scale and d) a section for the observer to collect frequency data on each of the targeted behaviors.

The observer rating scale consisted of three options, *implemented correctly*, *implemented incorrectly*, or *no opportunity*. Procedures were marked *implemented correctly* if the staff implemented the procedures exactly as written when the behavior occurred or when the behavior plan stated that the procedure was to be implemented. The procedure was marked as *implemented incorrectly* if the procedure was not implemented exactly as written or if the procedure was not implemented at all following an opportunity, during the activity, or when the

behavior plan stated it was to be implemented a specific number of times. *No opportunity* was marked if there was no opportunity to implement the procedure, either when the behavior did not occur during the observation session or when the antecedent was not present (i.e., a specific activity outlined in the behavior plan).

Social validity questionnaires. A 6-item question social validity questionnaire was provided to each of the staff participants. The social validity questionnaire measured the acceptability and perceived effectiveness of each of the three procedures used in this study (BST, Performance Feedback, and Performance Feedback and Self-Monitoring). Additionally the self-monitoring forms measured the perceived effectiveness of the procedures on the behaviors targeted for increase and decrease as well as their belief of behavior plan treatment integrity during inconspicuous sessions.

Dependent Variables and Data Collection

Data were collected on the implementation of behavior plan components. A minimum of three target behaviors was measured for each staff participant. Behavior plan procedures consisted of antecedent manipulations, target behavior consequence strategies, and replacement behavior consequence strategies that were developed by the investigator following a functional assessment. The dependent variable was the percentage of correctly implemented behavior plan components (i.e., number of correct components divided by the number of opportunities). Each plan was individual to each client. All staff member participants were trained on each of the three individual behavior plans. The behavior plans that were developed focused on decreasing the problem behaviors exhibited by the clients in the group home, teaching replacement behaviors, and antecedent manipulations that would decrease the likelihood of the problem behaviors occurring.

The data were collected at the group home during hours when the behavior plan components were to be implemented. Both the principal investigator and an inconspicuous observer (confederate) collected data in the group home.

Staff behaviors. Data were collected based the percentage of correctly implemented behavior plan components. The investigator developed a treatment integrity data sheet for each behavior plan following the functional assessment and development of the behavior intervention plan. The investigator and confederate collected data on procedures *implemented correctly, implemented incorrectly, or no opportunity*. The investigator calculated the percentage of correctly implemented behavior plan components by dividing the number of correctly implemented components by the number of opportunities and then multiplying the sum by 100.

Client behaviors. Prior to conducting the functional assessment the investigator interviewed staff members and caregivers to determine problem behaviors of concern for each of the participants. Lucy's target behavior was elopement. Elopement was defined as, any attempt or actual occurrence of leaving an area that has been designated as "safe" by caregivers and or staff, including walking away from staff when outside/outing without verbalizing that she is leaving or walking away from staff following a prompt to "stop." Functional assessment procedures indicated that the maintaining consequence for elopement was escape. Entering unsafe areas was targeted for Bonnie. This behavior was defined as any attempt or actual occurrence of entering an area that has been deemed unsafe for Bonnie to be in alone, including the kitchen when the stove was on or staff were cooking (utensils out) or the medication area when medications were out. Aggression towards others was targeted for Stephanie. This behavior was defined as any attempt or actual occurrence of pushing, pinching, scratching, hitting, kicking, head-butting, punching, stomping or throwing items at another individual.

Interobserver Agreement

Interobserver agreement data on staff behavior were collected during 33% of conspicuous observations. IOA for this study was 97.5%. The percentage of agreements was calculated by taking the number of agreements on the correctly implemented behavior plan components divided by the number of opportunities and then multiplied by 100. Frequency IOA data was calculated by dividing the lower frequency count by the larger frequency count and then multiplying the sum by 100. Though frequency calculations are not the most sensitive measures of IOA, they are appropriate for client behaviors as they are a secondary behavior of interest.

Experimental Design and Procedures

A multiple baseline design across behavior plans was used to evaluate the effectiveness of the staff management procedures. For each client participant a baseline, BST, performance feedback phase, and performance feedback and self-monitoring phase was implemented. An alternating treatments design was used to evaluate the level of reactivity exhibited by each staff in the study in conspicuous and inconspicuous observation conditions.

Functional assessment. The investigator conducted a functional assessment for each client referred to the study. The investigator conducted structured interviews with the staff and group home manager using a functional assessment interview format to aid in identifying specific problem behaviors, antecedents/setting events, times of day, and hypothesized consequence for the problem behaviors described. The investigator then conducted direct observations in the group home during the times of the day that the staff and group home manager indicated that problem behavior typically occurred. The investigator used a descriptive ABC data collection method in the group home to record the antecedents, problem behavior, and specific description of the consequence following the target behavior. Each client participant's

problem behavior was observed by the investigator a minimum of 10 times to establish patterns in the antecedents and consequences and assure the function had been sufficiently identified prior to developing a behavior intervention plan.

Baseline. Baseline observations were conducted by the researcher and occurred during the times of day that the clients' target behaviors typically occurred and the staff' behaviors were expected to occur, from the time the clients returned home from the ADT until after dinner. The staff were not notified when these observation sessions were conducted. Both inconspicuous and conspicuous observations (described below) were conducted during the baseline condition.

Training. The behavior skills training took place at the group home with the staff prior to the first intervention observation. A behavioral skills training model consisting of instruction, modeling, rehearsal, and feedback was used with the staff. The investigator described the intervention procedures to the staff. The investigator then modeled the behavior for the staff by role-playing as the staff and requesting the staff to role-play as the client. The investigator then asked that the staff rehearse each intervention component, having the investigator role-play as the client. The staff was then provided with descriptive feedback on his/her performance. The staff was praised for components that were implemented correctly and provided with corrective feedback for those components that were either implemented incorrectly or not at all. The staff was required to demonstrate the skills with 100% accuracy during two consecutive role-plays prior to the implementation of the intervention phase. Both inconspicuous and conspicuous observations were conducted following training to assess the need for additional staff management procedures to increase treatment integrity of program procedures. No feedback was given to the staff following observations in the group home during the BST training condition.

Performance feedback and conspicuous observations. Conspicuous observation sessions were conducted by the primary investigator; these observations occurred at the same hours as baseline. The investigator provided the staff with descriptive feedback on their performance immediately following a behavior or the opportunity for them to engage in a behavior. If it was not possible to provide feedback immediately the staff were provided with feedback at the end of the observation period. The feedback consisted of both descriptive praise for correctly implemented steps and corrective feedback for components that were either implemented incorrectly or not implemented at all. For example, if a behavior intervention plan that consisted of a) the staff putting up a stop sign during medication dispensing, b) blocking the individual from entering the area, and c) prompting the client to mand for the item/activity she wanted and the staff only implemented step A, the investigator would have provided the following feedback. The investigator would have a) praised the staff for putting the stop sign up when medication was being dispensed, b) described that the staff did not block the client from entering the unsafe area, and c) informed the staff that when the client attempted to enter the unsafe area she was not prompted to mand for the item/activity that she wanted and instruct them to do so in the future.

Performance feedback and inconspicuous observations. Inconspicuous observation sessions occurred during each phase of the study. The inconspicuous observer was an individual who worked in the group home with a client that was not part of the study. Therefore, the staff were unaware that this individual was trained on the behavior plans that were to be implemented for this study. These observations were conducted during the same times of the day as the conspicuous observations however, the days that the observations were conducted were chosen

at random. Feedback on staff performance was not provided during these observation sessions. Staff and clients were unaware that inconspicuous observations were being conducted.

Performance feedback and self-monitoring. Due to reactivity to observation being exhibited by the staff during the performance feedback phase, a self-monitoring plus performance feedback phase was implemented following the performance feedback phase. A BST training consisting of instructions, modeling, rehearsal, and feedback was conducted prior to the implementation of the self-monitoring phase to ensure the staff were able to use the self-monitoring form correctly. During this phase the staff were given a self-monitoring form and directed to document their performance every 30 min. The self-monitoring form was developed as a task analysis for the behavior plan components. The staff was directed to mark each component as either, “C” implemented correctly, “I” Implemented incorrectly or not implemented, or “N/A” no opportunity. The staff were asked to use the self-monitoring form, however, the investigator explained to the staff that these forms would not be collected or viewed by the investigator. Rather they were to be used as tools to aid the staff in remembering the behavior plan procedures and tracking their own performance. However, following the initial day of self-monitoring staff were no longer using the self-monitoring forms consistently as they felt they did not have to. Therefore, the primary investigator prompted the staff to use their self-monitoring forms at the beginning of each observation session. This instruction began during the 40th observation session. Both conspicuous and inconspicuous observations were conducted during the self-monitoring plus performance feedback phase and performance feedback was again, only delivered during the conspicuous observations sessions. The primary observer and research assistant collected data on the use of the self-monitoring forms during both inconspicuous and conspicuous observations.

Chapter 3: Results

Treatment integrity percentages were similar across all staff members; no individual staff member performed at higher or lower level. Additionally, approximately the same amount of data was collected on each of the staff members. The results are shown in Figure 1. The data showed an improvement in staff performance from baseline following BST during both conspicuous and inconspicuous observations however; a greater increase in treatment integrity was seen in the conspicuous observation sessions. This effect however did not maintain, likely due to the staff not receiving feedback on their performance. For Lucy's staff the means for baseline conspicuous, baseline inconspicuous, post-BST conspicuous, and post-BST inconspicuous are 6%, 0%, 54% and 9%. For Bonnie's staff the means for baseline conspicuous, baseline inconspicuous, post-BST conspicuous, and post-BST inconspicuous are 23%, 30%, 58%, and 37%. For Stephanie's staff the means for baseline conspicuous, baseline inconspicuous, BST conspicuous, and BST inconspicuous are 0%, 1%, 66%, and 6%. A decrease in problem behavior from baseline was observed in both inconspicuous and conspicuous sessions however, the problem behavior remained at higher levels during the conspicuous condition for all clients (see Figure 2).

During the performance feedback phase, treatment integrity increased or remained the same during conspicuous observations and did not increase during inconspicuous observations. As in the previous phase treatment integrity was much higher during conspicuous observations than during inconspicuous observations (Figure 1). For Lucy, the mean was 60% for

conspicuous observation and 9% for inconspicuous observations. For Bonnie, the mean was 78% for conspicuous observation and 63% for inconspicuous observations. For Stephanie, the mean was 94% for conspicuous observation and 8% for inconspicuous observations. Though the data show that the increase in treatment integrity maintained for Bonnie during inconspicuous observations it is important to note that on session 28 the staff reported that they had added to the investigator's procedure. This change may have had an effect on the level of treatment integrity observed for Bonnie's plan in the inconspicuous observation sessions. Client problem behaviors decreased for Bonnie and Stephanie during both inconspicuous and conspicuous observations however the level of problem behaviors remained lower in the inconspicuous observation sessions (Figure 2). For Lucy, the frequency of elopement remained at the same levels as the BST phase.

Due to a reactivity effect being observed during the performance feedback phase an additional phase of performance feedback and self-monitoring was implemented. The data show an increase in treatment integrity for Lucy and Bonnie during the performance feedback and self-monitoring phase. Once prompting was initiated during session 40 for Lucy treatment integrity reached 100% during conspicuous observation sessions. For Bonnie staff implemented the plan with treatment integrity of 100% during 4 out of the 5 observation sessions of this phase. For Stephanie the staff implemented the behavior plan with the same level of treatment integrity as the performance feedback phase. As in the previous phase, treatment integrity was much higher during conspicuous observations than during inconspicuous observations. For Lucy, the mean was 88% for conspicuous observation and 10% for inconspicuous observations. For Bonnie, the mean was 93% for conspicuous observation and 51% for inconspicuous observations. For Stephanie, the mean was 92% for conspicuous observation and 8% for inconspicuous

observations. During this phase, client behavior decreased in the conspicuous condition across all participants. Client behavior only decreased in the inconspicuous condition for Lucy.

The social validity questionnaire contained six statements and staff were prompted to rate each statement. All staff “strongly agreed” that the BST, performance feedback, and self-monitoring procedures each were individually effective at increasing their ability to understand and implement the procedures. All staff also “strongly agreed” that they would continue to implement the procedures and use the self-monitoring forms. Last and, most importantly, all staff either “strongly agreed” or “agreed” that they implemented the procedure with the same accuracy when the primary investigator was not in the home as they did when the primary investigator was observing.

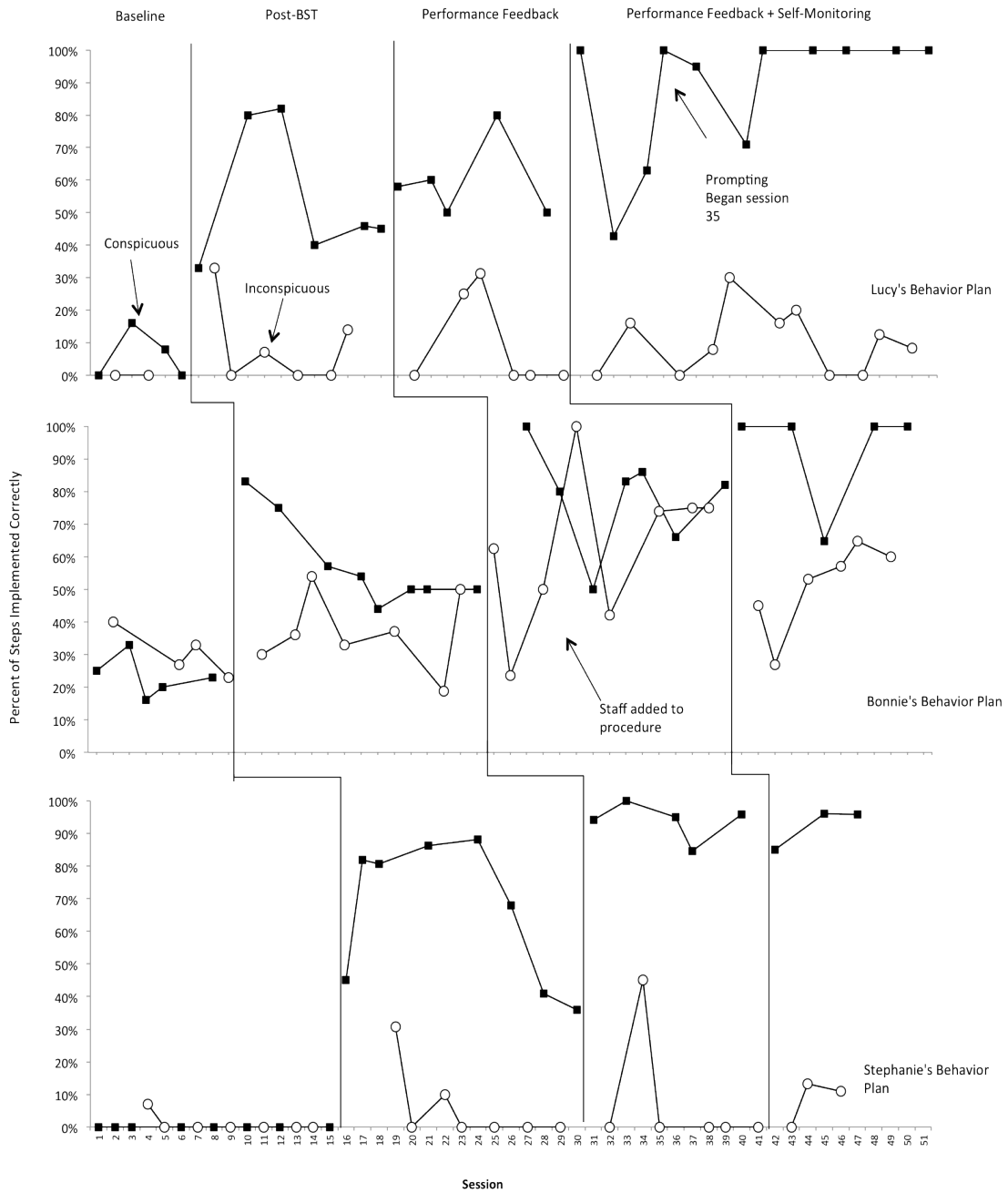


Figure 1. Percentage of behavior plan steps implemented correctly during each staff management phase across all behavior plans.

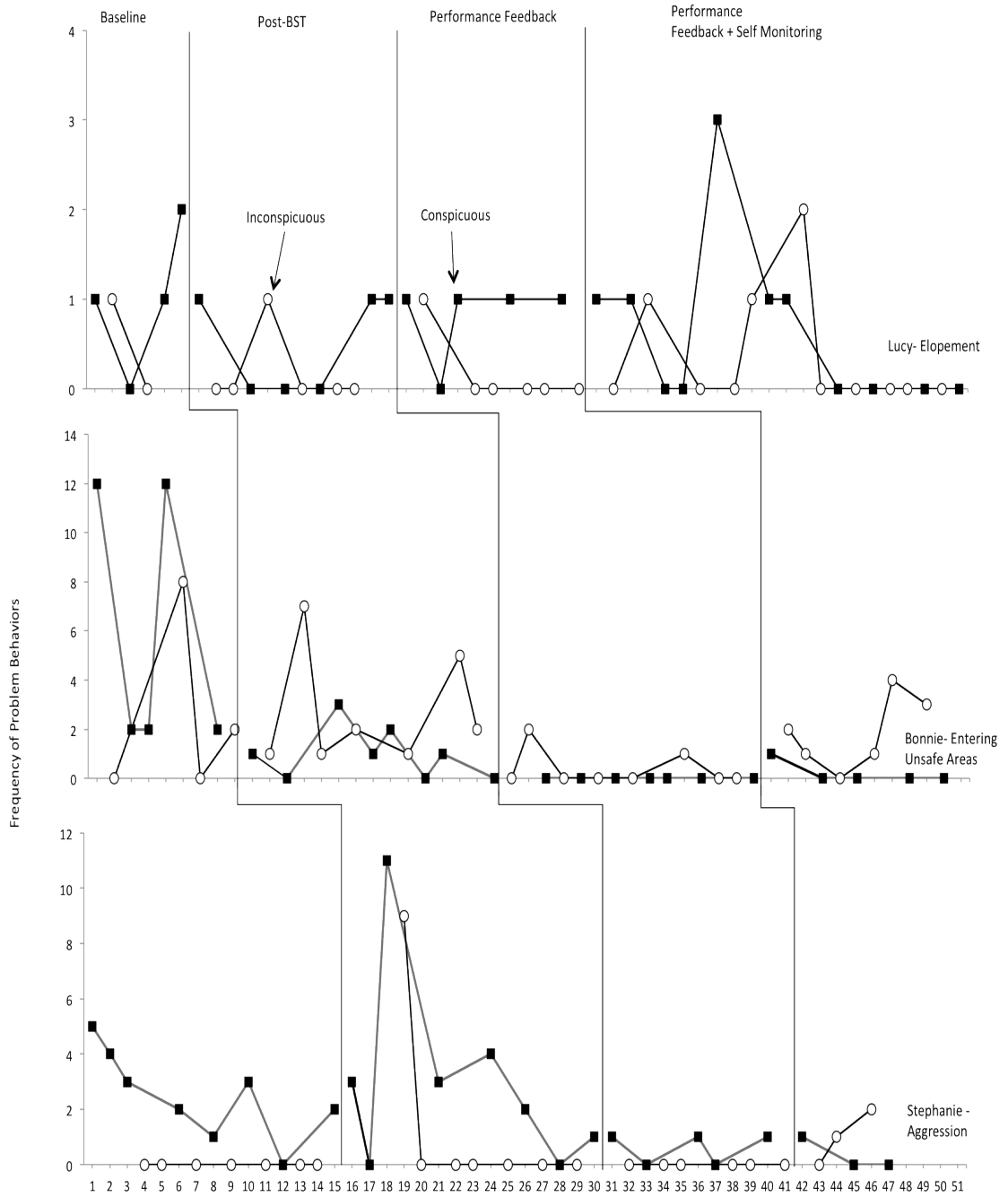


Figure 2. Frequency of problem behaviors during each staff management procedure phase across all behaviors.

Table 1

Average Frequency of Demands Placed during Conspicuous and Inconspicuous Baseline, Post-BST, Performance Feedback, and Performance Feedback and Self-Monitoring Phases for Stephanie

Conspicuous/ Inconspicuous	Staff Management Procedure			
	Baseline	Post- BST	Performance Feedback	Performance Feedback and Self-Monitoring
Conspicuous	2	5	4	5.6
Inconspicuous	.16	.16	.2	.66

Chapter 4: Discussion

Results of this study indicate that treatment integrity post-BST resulted in an increase but it did not result in sustained performance in conspicuous or inconspicuous conditions. Furthermore, performance feedback and self-monitoring procedures increased treatment integrity during conspicuous observations only, except for Bonnie's behavior plan. These results are consistent with the findings of Mowery et al. (2010) and Brackett et al. (2007) who showed that staff carried out procedures with fidelity only when they were observed by a supervisor. However, the results are inconsistent with the findings of Coddling et al. (2008) who did not observe reactivity to observation among teachers in the classroom. The different finding may be explained by the fact that, in Coddling et al., the teachers were told that a supervisor might be observing them at any time from behind a one way observation window, and thus the claims they can make about reactivity are limited. The findings are also inconsistent with the results of Brackett et al. who showed that self-monitoring increased performance in the supervisor's absence. It is likely that self-monitoring did not increase staff performance in the current study because, unlike the Brackett et al. study, the supervisor never looked at the self-monitoring forms. These results should be taken into consideration when evaluating research on staff management procedures that does not assess the efficacy of the procedures during inconspicuous assessment.

Figure 2 shows that for Lucy and Stephanie problem behaviors occurred at a higher frequency in the conspicuous condition for all phases until self-monitoring was introduced and

staff were implementing the procedure with near 100% integrity. The lower levels of problem behaviors observed for Lucy and Stephanie are a result of the procedure and the lack of treatment integrity as both of their procedures required the staff to implement skill acquisition procedures that would have provided an opportunity for problem behavior to occur. Lucy's problem behavior was elopement, which occurred when she was outside or in the community. Due to the need for inconspicuous observations one of the steps of Lucy's behavior plan was to take Lucy outside or on a walk once per day. This would allow the inconspicuous observer to assess Lucy when she was in a situation in which elopement was likely to occur. Due to the low levels of treatment integrity for Lucy in the conspicuous condition, Lucy was very rarely taken outside creating fewer opportunities for elopement to occur during inconspicuous observations.

Likewise, Stephanie's plan included placing a specified number of demands on Stephanie during one session. The primary investigator and inconspicuous observer began collecting data on the frequency of demands placed on Stephanie during conspicuous and inconspicuous observation sessions. The average frequency of demands placed on Stephanie during baseline conspicuous and inconspicuous were 2 and .16. The average frequency of demands placed on Stephanie during post-BST conspicuous and post-BST inconspicuous were 5 and .16. The average frequency of demands placed on Stephanie during Performance Feedback conspicuous and Performance inconspicuous were 4 and .2. Finally an average of 5.6 demands were placed on Stephanie during self-monitoring conspicuous and .66 during self-monitoring inconspicuous. These findings are important to note as Stephanie's problem behavior continued to decrease to lower levels during conspicuous sessions when there was a higher frequency of demands. It is also possible that both Lucy and Stephanie's procedures required more response effort from the staff than did Bonnie's plan. Furthermore, Bonnie's procedure did not require the staff to go

outside, as Lucy's did and Bonnie's problem behavior did not result in possible injury to the staff as Stephanie's aggression did.

As previously mentioned, Figure 1 shows an increase in staff performance in the inconspicuous condition for Bonnie in the performance feedback phase. This increase, the only instance of increased performance during inconspicuous observation, may be due to staff's modification of the procedure. Staff added to the procedure on session 28 without speaking to the primary investigator. The staff informed the investigator on the next session that they had changed a picture of the stop sign placed in the doorways to unsafe areas and added a "go" side to the sign to signal that Bonnie was allowed to enter. Once this change was made staff began implementing the procedure with more integrity in the inconspicuous condition of the performance feedback phase. The staff maintained high performance in this condition, however, once the self-monitoring phase was introduced staff performance decreased in the inconspicuous condition. It is unclear if it was habituation to the new sign or the addition of the self-monitoring procedures that resulted in a decrease in performance in the inconspicuous condition. Treatment integrity was also higher for Bonnie's behavior plan during baseline; this is likely due to the higher levels of problem behavior that occurred. The higher frequency of problem behavior required staff to respond in some way to the behavior.

Social validity data were collected following the completion of data collection but prior to the participants being debriefed. All staff involved in the study were provided with a social validity questionnaire and four out of the five staff members returned the questionnaires to the primary investigator

The current study has a few limitations that should be discussed. First it is important to note that the primary investigator contracted with the group home but was not affiliated with the

company that ran the group home. It is possible that the results of this study would have been different had the primary investigator been affiliated with the management of the group home and had some authority over the staff. In this case, the feedback provided to the staff may have functioned more effectively as a reinforcer. The staff were aware that the primary investigator could not provide them with any other consequences (e. g., raises, better hours, better schedule, disciplinary actions, etc.) contingent on performance and, due to confidentiality, the primary investigator was not able to inform the manager about their performance. Future research should evaluate reactivity and staff performance when the primary investigator providing the feedback has a position of authority.

Another limitation that should be addressed is the lack of IOA data collected during inconspicuous observations. Due to the nature of the study it was not possible to have another observer present during inconspicuous observations to collect data without staff knowing that they were being observed. However, all IOA data collected during conspicuous observations were collected by the primary investigator and the research assistant (inconspicuous observer) and, based on the high reliability between the two data collectors, we can be more confident that data collected during inconspicuous observations sessions were equally reliable.

Finally the fact that staff added to Bonnie's procedure on session 28 needs to be addressed. The primary investigator was unaware of the change until after staff had begun implementing the new procedure. Although the change was not planned, the data reveal better performance during inconspicuous observations. Thus, this issue may be a topic for further investigation. Once the staff added to the procedures it is possible that they found the procedure less aversive or implementation more reinforcing when they had something invested in it, and thus began implementing the plan with higher levels of integrity. Future research should evaluate

the effects of choice making and staff input into the development of behavior plans and the effect it might have on staff performance.

In summary, the findings of this study point to the importance of evaluating reactivity to observation in staff management research. Because staff often work without a supervisor present, it is important to collect data on their performance when they do not know they are being observed. In this way, researchers can get a truer picture of the effects of their staff management efforts. The results of this study and those of Brackett et al. (2007) and Mowery et al. (2010) suggest that staff are more likely to perform their duties with fidelity when a supervisor is present and may not perform adequately or at all when a supervision is not present. These findings point to the need for future research on enhancing fidelity among staff in the absence of supervision. Such research might focus on intermittent supervision, unannounced supervision, or supervisor observation through one way observation windows at unannounced times. Researchers might also evaluate the use of video cameras in the group home (or classroom) that provide live feed that supervisors can access remotely to provide intermittent, unannounced observations.

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Appendices

Appendix A: Social Validity Questionnaire

Social Validity Questionnaire

Client: _____

For each item you need to indicate the extent to which you agree or disagree with each statement. Please indicate your response to each item by circling one of the five responses to the right of the corresponding statement.

- | | | | | | |
|---|----------------|-------|---------|----------|----------------|
| 1. The training consisting of instruction, modeling, role-play and feedback was effective at increasing my understanding and ability to implement the procedures correctly. | Strongly Agree | Agree | Neutral | Disagree | Strongly Agree |
| 2. The feedback was effective at increasing my understanding and ability to implement the procedures correctly. | Strongly Agree | Agree | Neutral | Disagree | Strongly Agree |
| 3. The self-monitoring forms were effective at increasing my understanding and ability to implement the procedures correctly. | Strongly Agree | Agree | Neutral | Disagree | Strongly Agree |
| 4. I will continue to use the self-monitoring form in the future. | Strongly Agree | Agree | Neutral | Disagree | Strongly Agree |
| 5. Overall I found this intervention to be effective and will continue to implement the procedures in the future. | Strongly Agree | Agree | Neutral | Disagree | Strongly Agree |