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The Effects of Goal Setting and Supervisory Feedback on Staff Performance in a Human Service Setting

Michael D. Mack

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THE EFFECTS OF GOAL SETTING AND SUPERVISORY FEEDBACK ON STAFF PERFORMANCE IN A HUMAN SERVICE SETTING

by

Michael D. Mack

A Thesis Submitted to the Faculty of The Graduate College in partial fulfillment of the requirements for the Degree of Master of Arts Department of Psychology

Western Michigan University Kalamazoo, Michigan August 1991
THE EFFECTS OF GOAL SETTING AND SUPERVISORY FEEDBACK ON STAFF PERFORMANCE IN A HUMAN SERVICE SETTING

Michael D. Mack, M.A.
Western Michigan University, 1991

Goal setting and supervisory feedback were examined to determine their relative effects on the performance of direct care staff. The performance of five staff from a day treatment program for developmentally disabled adults was measured. The specific performance measure of interest was staff implementation rates of daily training programs with clients. The results demonstrated that adding performance feedback to goal setting had minimal impact on staff performance. Yet, goal setting alone as an initial technique was effective in improving the performance of staff. Unfortunately, the long-term effects of goal setting alone may be less desirable than these initial data indicate. The subjects exposed to goal setting alone reported a higher level of dissatisfaction with the condition and indicated that goal setting without performance feedback produced increased stress.
ACKNOWLEDGMENTS

I wish to express my sincere appreciation to my advisor, Dr. William Redmon, for his guidance, encouragement, and patience throughout my course of study.

Acknowledgment is in order for my colleague and friend, Mark LeSage, who provided invaluable assistance and moral support during this project.

Finally, my deepest thanks and appreciation are extended to my wife Susan and our children, Jennifer, Joseph, and Michael. Their sacrifice and encouragement were essential throughout my graduate studies.

Michael D. Mack
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The effects of goal setting and supervisory feedback on staff performance in a human service setting

Mack, Michael David, M.A.
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CHAPTER I

INTRODUCTION

Organizational Behavior Management (OBM) techniques have contributed a great deal to staff management in the human services. These techniques are designed to improve productivity and cost-efficiency and are especially important in view of ongoing budget constraints, increasing costs of service delivery, and demands for accountability from funding agencies (Frederiksen & Riley, 1984). These demands are illustrated by recent actions by Medicaid which funds many treatment programs for individuals diagnosed as developmentally disabled. Medicaid reimbursement auditors routinely examine the level of services delivered by agencies and may decertify programs when evidence of noncompliance is found. Decertification leads to termination of Medicaid reimbursement and, in some cases, eliminates the bulk of program income (Harrington & Swan, 1990; O'Neill et al., 1990; Swan, Harrington, & Grant, 1989).

The effects of OBM techniques such as goal setting and supervisory feedback on staff performance in human service settings have been documented in numerous studies (Alavosius & Sulzer-Azaroff, 1986; Calpin, Edelstein, &
Redmon, 1988; Ivanicic, Reid, Iwata, Faw, & Page, 1981; Page, Iwata, & Reid, 1982). Before reviewing the results of these studies, however, a description of common procedures is necessary.

Goal setting refers to a statement which specifies a level of performance toward which an individual or group will work. Specifically, a goal is a stimulus that precedes work behavior and acquires discriminative control over that behavior. Consequently, future presentations of that goal statement should occasion a repetition of that work behavior (Fellner & Sulzer-Azaroff, 1984). Some aspects of goal setting such as the specificity, difficulty, and method of goal development mediate the effectiveness of the technique. In general, goals which are specific, difficult, and assigned by supervisors are most effective in improving staff performance (Calpin et al., 1988; Fellner & Sulzer-Azaroff, 1984).

Feedback has been defined as any information given to an individual or group regarding the quantity and/or quality of their recent work performance (Balcazar, Hopkins, & Suarez, 1986; Calpin et al., 1988). Although simply defined, the application of feedback in the work place is complicated by its multi-dimensional nature. Balcazar et al. (1986) identified several characteristics of feedback which have been associated with consistent
favorable effects on staff performance. Consistent positive outcomes have been observed where feedback is provided by immediate supervisors, given to individuals as opposed to groups, and delivered immediately following performance.

Some studies have examined performance feedback alone (Alavosius & Sulzer-Azaroff, 1990), others have examined goal setting alone (Latham & Kinne, 1974), and some have assessed the combined effects of goal setting and performance feedback (Calpin et al., 1988). The present study will focus on the combined effects of goal setting and performance feedback.

Several studies have examined the combined effects of goal setting and performance feedback. Calpin et al. (1988) investigated the effects of feedback alone and feedback plus goal setting. Self-monitoring checklists were used by mental health clinicians as a form of performance feedback. The proportion of work hours spent in direct client contact was the dependent variable. The results indicated that feedback in the form of a self-monitoring data sheet was the major contributor to an increase in direct client contact hours. Goal setting alone was found to have minimal effect on staff performance. However, the authors warned that definitive
conclusions regarding these techniques should not be reached without further comparative studies.

Fellner and Sulzer-Azaroff (1985) examined the effects of goal setting in combination with supervisory performance feedback on the safety practices of workers in a paper mill. The dependent measures were safe worker practices, worker injuries, and the costs of operating the goal setting program. Worker opinions of the goal setting and feedback program were solicited through a questionnaire distributed after the study was complete. The results indicated that feedback alone, which was implemented in a previous study, significantly improved worker safety performance. The addition of goal setting to feedback resulted in a slight improvement in safe practices by workers but no further reductions in worker injuries. Goals were met 64% of the time when set by the workers and 47% of the time when they were assigned. The authors warned that despite the limited effect of the goal-setting program when added to performance feedback, the results were not conclusive.

In another study (Kim & Hamner, 1976), goal setting was provided for four groups of workers while feedback was provided to three of these groups. The subjects were employees at four separate plants at a telephone company. All were involved in service work in one of five job
classifications. The dependent measures were cost performance, absenteeism, safety, and service performance. Three of the groups were exposed to some form of feedback as well as goal setting, while a fourth group was exposed to a goal-setting-only condition. The results indicated that the goal-setting-only group was the only group which failed to meet the performance cost objective and was less effective than the other three groups. Furthermore, the goal setting-only-group failed to meet the safety objective and exhibited poorer safety performance than the other three groups which were exposed to feedback. Service performance and absenteeism measures were less conclusive with goal setting alone having higher service performance than the other three groups, and absenteeism rates remaining virtually unchanged across all four groups. The authors concluded that goal setting combined with performance feedback is superior to goal setting alone in improving worker performance.

The above studies demonstrate the superiority of performance feedback over goal setting, but the authors caution that more research is needed. The present study was designed to extend the literature regarding the individual effects of goal setting and the combined effects of goal setting plus performance feedback in a human service setting. The setting was a day treatment program.
for developmentally disabled adults. The performance of classroom staff, specifically the rate of Medicaid reimbursable training programs implemented with clients, was studied. Self-monitoring, goal setting alone, and the combination of goal setting and performance feedback were investigated.
CHAPTER II

METHODS OF STUDY

Setting

The Center for Developmentally Disabled Adults provides day rehabilitation and skills training services and is operated through Western Michigan University (Kalamazoo) and a local community advisory board. The advisory board consists of members who are volunteers, professionals, and consumers from Kalamazoo County. Funding for the Center is provided from federal, state, and local funds, with a majority of the funding being reimbursement billing through the federal Medicaid program.

The Agency's service delivery is based on Medicaid as the third party funding source. As such, Medicaid allowable curricular content is the focus of the clinical and service delivery system. Medicaid billable service delivery skill areas are: social, behavioral, physical functioning, expressive and receptive language, self-care, and community living skills.

The program is located at a former elementary school which contains three classrooms used primarily for daily programming. Each room is approximately 20 meters by 20
meters with one wall of outside windows and one wall with inside windows facing a hall adjoining the rooms. Each room contains various smaller wall dividers for privacy. Generally, 10 to 12 clients and 2 staff members are assigned to each room.

The client population consisted of 35 individuals who were diagnosed as severe to profoundly retarded. Both males and females between the ages of 29 and 76 attended this program with most evidencing behavioral, medical, or adaptive disabilities. A majority of the clients were dependent or partially dependent on staff for maintenance of basic self-care needs (e.g., toileting, feeding, dressing). The primary diagnosis for all the clients was profound retardation with a variety of secondary diagnoses, including speech/hearing impaired, mental illness, and cerebral palsy. Four clients had frequent episodes of aggressive and/or self-injurious behavior.

The program was administered by a Coordinator who was supervised by the Director of the Agency. The Coordinator managed the staffing and the daily operation of the program. The clinical staff consisted of one Therapist who provided various assessment, program development and clinical monitoring services. The classroom teaching staff consisted of five Therapist Assistants (T.A.) who carried out the majority of the teaching activities and collected
data for all curriculum areas. Therapist Assistants (T.A.) also provided for client self-care maintenance. Paid work-study staff and various practicum and volunteer staff supported the T.A. staff in the daily operation of the classrooms.

Subjects

The T.A.'s were the focus of the service delivery system since they provided the majority of the billable services for the program. Table 1 summarizes descriptive information for the T.A. staff.

<table>
<thead>
<tr>
<th>Table 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff Characteristics at Day Treatment Program (N=5)</td>
</tr>
<tr>
<td>Age: average - 30 years</td>
</tr>
<tr>
<td>range - 22 to 43 years</td>
</tr>
<tr>
<td>Education:</td>
</tr>
<tr>
<td>2 college undergraduate degrees</td>
</tr>
<tr>
<td>3 High School degrees</td>
</tr>
<tr>
<td>No. Years at Agency: average - 2.2 years</td>
</tr>
<tr>
<td>range - 1 to 4 years</td>
</tr>
<tr>
<td>Client Experience: average - 3.4 years</td>
</tr>
<tr>
<td>range - 2 to 5 years</td>
</tr>
</tbody>
</table>

The T.A.'s at this program site were selected for inclusion in this study because of their poor monthly Medicaid billing record compared to the agency's other two program sites. These T.A.'s had approximately 20% fewer
billable days per month which represented thousands of dollars of lost funding for the agency. Management at this site had been unable to improve the monthly Medicaid performance of the T.A. staff and had expressed an interest in participating in the study.

Service Delivery Description

Training sessions were implemented throughout six-hour days, Monday through Friday. The average number of training programs implemented daily for each client ranged from 1 to 4. The length of training programs ranged from 15 to 45 minutes, with training group sizes ranging from 1 to 6 clients per T.A. Observable and measurable data as well as anecdotal program notes were collected on each client’s performance for each training program. These data were either entered on, or transferred onto, specific data/review sheets and given to a therapist monthly for clinical review and supervision documentation.

Dependent Measures

The percentage of scheduled programs implemented by each T.A. staff per day served as the dependent measure. The data collected for each client on each training program implemented served as the primary outcome measure. In the case of group programs, one training session was counted
for each client engaged. The program implementation rate was computed by totaling the number of training sessions actually implemented per day and dividing it by the number of training sessions assigned per day for each T.A. staff. Daily and weekly percentages were computed and graphed for each T.A. The graphed data were not available to the staff. Staff vacations, sick days, holidays, and client absences were not counted as opportunities to implement daily programs and were not computed in daily rates.

Data Collection

Two different methods of data collection were applied: archival and self-recording. Archival baseline data were obtained from data/review sheets utilized throughout the agency on all programs implemented for all clients. These data were representative of client progress in specific programs and were in the form of the percentage of correct trials, duration, or frequency recording. Staff routinely collected daily data on the monthly data collection/review sheet used for documentation of services rendered. Data were collected as long as the program was scheduled to be implemented. These sheets were pulled from the client files and used to calculate percentages. A program was scored as implemented if data were recorded on the monthly data/review sheets for that program.
A daily self-recording data sheet (Figure 1) was utilized in all other conditions. The self-recording data sheet consisted of daily blocks of time on which a schedule of daily programs and corresponding clients were entered. A box for each program completed was checked and the sheet was deposited in a drop box at the end of each working day. Changes in the schedule could be made according to absent clients, unusual classroom events, or other daily deviations.

Interobserver Agreement

Independent observations were conducted twice a day for all conditions excluding archival baseline. An independent observer monitored randomly selected one-half hour intervals. Observation intervals were selected from morning only and afternoon only groups of staff-specific programs. The observer was naive to treatment conditions throughout the study. The observer was given a two to three word descriptor of the program to be observed and was instructed to determine if scheduled programming occurred or not. The observer monitored the staff/client interaction via the hall windows of each of the classrooms throughout the 30-minute interval.

Percentages of occurrence, nonoccurrence, and overall agreement were computed by dividing the number of observer
**Figure 1.** Daily Self-recording Data Sheets Utilized by Subjects.
agreements by the number of agreements plus disagreements, then multiplying by 100. An agreement on program implementation occurrence was recorded when the observer noted that programs reported as completed by the subjects were observed. An agreement on program implementation nonoccurrence was recorded when the observer noted that programs reported as not completed by the subjects did not take place.

A total of 156 observations were conducted with an overall mean agreement of 87%; the range was 79% to 97%. Interobserver agreement on occurrence of program implementation was 73% for 74 observations; the range was 22% to 91%. Interobserver agreement on non-occurrence was 99% for 82 observations; the range was 94% to 100%.

Staff Satisfaction

A staff satisfaction survey was administered after the study to assess how the treatment conditions affected the staff. The effectiveness and usefulness of the program and frustrations associated with the various treatment conditions were assessed. A list of statements included in the questionnaire is presented in Table 2.
Table 2

Statements Included in Staff Questionnaire

<table>
<thead>
<tr>
<th>Statement</th>
<th>True Statement</th>
<th>Don't Know</th>
<th>False Statement</th>
<th>Don't Care</th>
<th>Strongly Agree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getting feedback on your performance was an encouragement to stay on task.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having goals set by your supervisor was better than getting feedback from your supervisor.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having a daily schedule to follow was important in implementing all/most of your sessions each day.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At any time during the study were you frustrated or upset in the way the supervisor managed your performance.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Coordinator Training

The Coordinator was provided a one-hour introductory training session which outlined the literature base, critical definitions, and research methods of the study. The Coordinator also was provided a 30-minute training session immediately prior to both goal setting and goal setting plus performance feedback conditions. During these sessions the definitions of goal setting (Fellner & Sulzer-Azaroff, 1984) and performance feedback (Balcazar et al., 1986), as outlined in the introductory session, were restated. The training sessions also utilized hypothetical
data for modeling and role-playing both treatment conditions by the Coordinator. The role-play involved examples of good and poor goal setting or performance feedback followed by practice examples for the Coordinator. Training was conducted by the primary investigator.

Procedures

Archival Baseline

Daily data were gathered from the monthly data/review sheets utilized by the agency for documentation of program implementation. Data on programs assigned to the subjects for the two months immediately preceding self-recording treatment conditions were analyzed.

Self-recording

The staff were informed as to the purpose of the study at a regularly scheduled staff meeting, and the staff were told that the study was intended to assist them in daily program implementation and documentation in the classroom. Informed consent was obtained (see Appendix A for consent form and Appendix B for the letter of approval from the Human Subjects Institutional Review Board); and a letter from the Executive Director of the agency insuring confidentiality was provided to each staff member. A schedule/self-recording data sheet was developed with each staff
member by the Coordinator of the program site (Figure 1). The self-recording data sheets consisted of a daily calendar with one-half hour intervals listed for each day. Eight one-half hour intervals divided into two-hour blocks of time (9:30-11:30am and 12:30-2:30pm) were listed. These intervals were blank and staff were directed to write in their current daily programming schedule. A self-recording checklist was provided on the sheet for staff to use to check off training sessions implemented. These self-recording data sheets were updated as needed according to the programming needs of the clients. The self-recording data sheets were collected on a daily basis; staff submitted the sheets in a drop box at the end of each day. The percentage of training sessions implemented was computed from the data captured on the sheets.

Goal Setting

The Coordinator of the site and the primary investigator established an 80% weekly program implementation rate as the goal for the staff. The Coordinator met privately with specified staff and assigned the goal. In assigning the goal, the Coordinator stated,

In order to meet Medicaid requirements, you will need to complete 80% of training sessions each week. I am confident that you can reach this goal and that it will help our clients. You have been doing a great job already so let’s work
together to meet this goal. Again, the goal is 80% of training sessions implemented each week.

Staff were instructed to continue to utilize the self-recording data sheets and to submit them in the drop box daily. Goal setting was conducted between 9:00 a.m. and 10:00 a.m. each Monday of the self-recording conditions.

**Goal Setting Plus Supervisor Feedback**

The 80% weekly program implementation goal was restated by the Coordinator on the first Monday morning of this condition and staff were exposed to performance feedback. These sessions occurred during the usual time that goal setting was conducted. In providing goal setting plus feedback, the Coordinator (a) stated the 80% goal for weekly program implementation, (b) made a statement regarding the staff’s actual performance for the week ("You completed X% of sessions last week."), and (c) delivered praise if the staff met or exceeded the stated performance goal ("Great job!!! Keep up the fantastic work!!!"), or a constructive remark describing how to improve his or her performance and offering assistance if the staff did not meet or exceed the stated performance goal ("You need to begin earlier in the morning." "How can I help?"). Feedback was given individually, in a private or semi-private area, with the self-recording data sheets from the previous week available for review.
Experimental Design

All five subjects were exposed to the archival baseline and self-recording baseline conditions. Two subjects received the intervention in ABC sequence with exposure to both baseline conditions (A), goal setting alone conditions (B), and goal setting plus supervisory feedback conditions (C). A third participant was exposed to the goal setting plus supervisory feedback condition following the archival and self-recording baseline conditions. The two remaining subjects were exposed only to the archival and self-recording baseline conditions in the study.
CHAPTER III

RESULTS

The results of self-recording, goal setting, and goal setting plus feedback for each of the subjects are depicted in Figure 2. The percentages of scheduled sessions implemented per week are displayed. Phase means and ranges are displayed for each participant in Table 3.

Table 3

<table>
<thead>
<tr>
<th>Subject</th>
<th>Archival Baseline</th>
<th>Self-Recording</th>
<th>Goal Setting</th>
<th>Goal Setting and Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% Mean Range</td>
<td>% Mean Range</td>
<td>% Mean Range</td>
<td>% Mean Range</td>
</tr>
<tr>
<td>#1</td>
<td>54 25-76</td>
<td>56 42-77</td>
<td>78 59-100</td>
<td>72 45-88</td>
</tr>
<tr>
<td>#2</td>
<td>50 33-68</td>
<td>56 40-71</td>
<td>81 71-98</td>
<td>70 33-86</td>
</tr>
<tr>
<td>#3</td>
<td>59 33-85</td>
<td>78 38-100</td>
<td>not exposed</td>
<td>89 75-98</td>
</tr>
<tr>
<td>#4</td>
<td>69 44-93</td>
<td>89 75-100</td>
<td>not exposed</td>
<td>not exposed</td>
</tr>
<tr>
<td>#5</td>
<td>63 22-85</td>
<td>86 46-100</td>
<td>not exposed</td>
<td>not exposed</td>
</tr>
</tbody>
</table>

The archival baseline data indicated low levels of implementation rates, averaging 59%, with a range of 50% to 69%. Following implementation of self-recording, implementation rates averaged 73%, with a range of 56% to 89%.
Figure 2. Percent of Programs Implemented Each Week for Baseline (Archival), Self Recording, Goal Setting, and Goal Setting plus Feedback for Subjects 1, 2, 3, 4, & 5.
Two subjects showed dramatic improvement during the self-recording condition. Subjects 4 and 5 averaged 69% and 63% implementation rates, respectively, during archival baseline. Performance improved to average levels of 89% and 86% implementation rates, respectively, during self-recording conditions. Subject 4 improved across time during the self-recording condition with an increase in the average implementation rate from 81% to 91% from the first five weeks to the last five weeks of the condition. Subject 5 maintained high levels of implementation rates across the same periods of time, 93% and 91% respectively. This performance was at or above the levels of the other subjects by the end of the study. These subjects were not exposed to other experimental conditions.

Two subjects demonstrated considerable improvement during treatment conditions. Subject 1 showed minimal improvement from archival baseline to self-recording conditions, increasing from 54% to 56%; in the goal setting condition implementation rates improved to 78% and were maintained at 72% during the goal setting plus feedback condition. Subject 2 evidenced a slight improvement from archival baseline to self-recording conditions, from 50% to 56%; during goal setting conditions this implementation rate improved to 81% and dropped to 70% during combined goal setting and feedback conditions. The average
implementation rates during goal setting plus feedback conditions for both subjects were adversely affected by one poor week. This was Christmas week and it reduced the average implementation rates for this combined condition by 7% overall for both subjects.

The intervention also produced marked changes in the performance of Subject 3 whose performance improved from the archival baseline condition to self-recording condition (from 59% to 78%). Also for Subject 3, during the goal setting plus feedback condition, implementation rates improved to 89%. This subject was not exposed to the goal setting condition without feedback.

The results of the staff acceptability questionnaire are presented in Table 4.

Table 4
Results of Staff Questionnaire

<table>
<thead>
<tr>
<th>Item</th>
<th>Staff Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance feedback was encouraging</td>
<td>2 agreed, 1 disagreed</td>
</tr>
<tr>
<td>Goal setting was more helpful than feedback</td>
<td>2 agreed, 1 did not respond</td>
</tr>
<tr>
<td>At any time during the study were you upset/frustrated</td>
<td>2 yes, during goal setting</td>
</tr>
<tr>
<td>A daily schedule was important</td>
<td>5 out of 5 agreed</td>
</tr>
</tbody>
</table>
Four out of five subjects agreed that receiving feedback on their weekly performance was helpful in staying on task, while all five subjects thought that having a daily schedule and using self-recording was beneficial in implementing all or most of their assigned programs. One subject exposed to performance feedback recommended publicly-posted group performance feedback as opposed to the private feedback provided. Finally, the two subjects who were exposed to goal setting alone reported being frustrated or upset because of the lack of feedback on the goals set. Goal setting alone appeared to be an aversive condition for these subjects.
CHAPTER IV

DISCUSSION

Overall the results of this study indicate that goal setting alone was effective in improving the performance of three direct care staff. These findings contradict previous findings (Calpin et al., 1988; Kim & Hamner, 1976) regarding the effectiveness of this technique. These results support the conclusion by Fellner and Sulzer-Azaroff (1986) that goal setting alone when introduced before performance feedback may produce greater improvements in staff performance than when it is introduced after performance feedback.

Although possible long-term effects of goal setting alone conditions may be less than these initial data indicate, the subjects exposed to goal setting alone reported a higher level of dissatisfaction and commented on the aversiveness of goal setting without feedback.

The results of this study appear to contradict the Calpin et al. (1988) and Kim and Hamner (1976) findings that goal setting and performance feedback enhance the effectiveness of each other. Yet, it appears that goal setting and/or feedback techniques may be less efficacious
in the absence of some type of organization, such as a
daily staff schedule. A schedule provides patterns of
staff/client interactions across the programming day which
are observable as well as quantifiable. Without a sched­
ule, variable staff/client interaction patterns are
difficult to track and measure. Goal setting and/or
performance feedback may be less effective in any applied
setting which does not have a daily schedule as a prereq­
uisite organizational intervention.

Unusual and cyclical patterns of performance were
indicated in the data. At the beginning of each month,
data sheets, attendance records, and other paperwork were
collected for administrative purposes. One or two days of
low rates of program implementation per month occurred at
this time. Also, during holidays, center-wide activities
took place in lieu of regular training programs. This
occurred during the final week of the study and dropped the
average implementation rates for that treatment condition
considerably. These patterns of program implementation
should be accepted as appropriate and should not reflect on
the efficacy of the treatment conditions.

There were several factors relating to the staffing
which occurred during the study. The most significant
factor was the sudden change in the Coordinator who
provided the goal setting and performance feedback sessions
to the subjects. The change occurred in the 20th week of the study with the resignation of the Coordinator and her replacement by another professional staff at the program site. The new Coordinator was trained utilizing the protocol previously used and immediately assumed responsibility for the goal setting and feedback sessions with the appropriate subjects. The data do not reflect this change in the Coordinator through any significant increase or decrease in staff performance at the time of the turnover.

Another staffing factor was possible communication among subjects in the study working in the same classroom. Generally, two staff were assigned to each room and worked under similar conditions. Some subjects who worked in the same room were exposed to identical conditions while other subjects working in the same room were not. The patterns of Subjects 4 and 5 appear to be evidence of a possible carryover effect across these subjects. Subjects 4 and 5 did work in separate rooms and had minimal contact with one another throughout the day. Nonetheless, the improvement of these subjects without intervention from the Coordinator could represent a subtle carryover effect which was difficult to detect. Another possible carryover effect may have occurred between subjects who were exposed to experimental conditions and Subjects 4 and 5. The improvement of Subjects 4 and 5 without intervention may have been the
result of carryover from the exposed subjects in their classroom.

The Coordinator spent an average of 5 to 10 minutes per week per staff member providing goal setting and/or performance feedback. These sessions became a weekly routine for the Coordinator and were done at minimal cost to the agency. The daily self-recording sheets proved to be burdensome in that they duplicated an existing data collection system. This was done because the existing data collection system would have provided monthly as opposed to weekly data for performance feedback purposes. The self-recording data system was costly in terms of the staff and supervisory time needed to collect and analyze the data, especially considering the duplication in data collection systems. The approximate cost in staff time needed to complete the daily data sheets was three hours per week per staff. Supervisory time needed to collect, compute, and analyze the daily data for weekly goal setting and performance feedback sessions was approximately five hours per week. This time demand could have been virtually eliminated by using monthly goal setting and feedback sessions because the data collection, computation, and analysis by month is routinely completed by the staff for clinical supervision purposes.
Despite the improvements in the rates of training program implementation, the overall Medicaid reimbursement rate was not affected (Table 5).

Table 5

<table>
<thead>
<tr>
<th>Month</th>
<th>Baseline</th>
<th>Treatment Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#1 #2</td>
<td>#3 #4 #5 #6 #7</td>
</tr>
<tr>
<td>Percent</td>
<td>59 67</td>
<td>68 71 72 74 65</td>
</tr>
</tbody>
</table>

This is likely the result of the inclusion of only a small number of clients in the daily program schedule. The number of programs implemented with a few specific clients was increased while other clients had the same or fewer programs implemented because they were not included in the staff schedules. Five clients were, historically, not included in the daily staff schedules for reasons which are not readily apparent. In order to effect an increase in overall number of Medicaid billable days, a strategically planned daily schedule including all clients must be implemented.

The results of the acceptability questionnaire indicated a potential hazard in implementing goal setting conditions absent supervisory feedback. Subjects perceived that the absence of feedback indicated that they were not attaining the goal when, in fact, they were. Moreover, the
subjects began to take anecdotal data on their weekly performance to prove that they had met the stated goal. Consequently, goal setting without performance feedback was an aversive condition for staff. All the subjects agreed that self-monitoring via the self-recording data sheets was important in managing their own behavior absent other conditions. Two out of three subjects reported that feedback given to them on their performance by the Coordinator was encouragement to stay on task.

Possible future research in this area should focus on the long-term effects of goal setting alone on staff performance. It is possible that staff performance will degrade over an extended period of time under these conditions due to the lack of pairing of goals with performance feedback. The effects of self-monitoring alone is another area of possible extension. Specifically, research should assess variables that affect the efficacy of self-monitoring (e.g., prerequisite skills that staff need). A final research focus should include the effect of delays in supervisory feedback (daily, weekly, monthly) on staff performance. Feedback provided on a monthly basis without a corresponding decline in staff performance may improve the applicability of this technique across settings.
This study attempted to expand the literature regarding the effects of goal setting alone and goal setting plus performance feedback. While the results indicated that goal setting alone can significantly improve staff performance, staff acceptance of this technique absent performance feedback cannot be assumed.
Appendix A

Informed Consent
INFORMED CONSENT FOR PARTICIPATION IN AN INVESTIGATION

You are required to participate in a research study entitled, "The Effects of Self-Monitoring and Supervisory Feedback on Staff Performance in a Human Service Setting." The research is being conducted by Michael Mack as a part of the requirements for a Master's Thesis at Western Michigan University. The purpose of this research is to test the effectiveness of a performance feedback system in improving the implementation rate of client training sessions by staff at the Center for Developmentally Disabled Adults.

Participation in this project is required as a part of your job. However, you have the option to withhold permission for use of your data as a part of this research study. A memo from the Executive Director of the agency provides assurance that this information will not, in any way, affect your employment status. By signing this document, you will be giving us permission to use the data collected as a part of this project for scientific presentations and/or other research purposes.

The research data generated by this project will be maintained separate from the personnel file and the data will be viewed only by the researcher (Michael Mack) and his thesis advisor (Dr. Redmon). These data will be maintained for an indefinite period of time in order to substantiate the research, but will be used for no other purpose.

There are no risks to you from participating in this research project. Any information obtained in the course of the research will be held in the strictest of confidence by the researchers.

If you have questions now or at anytime, you may contact Michael Mack at 388-3435 or Dr. William Redmon (faculty advisor) at 387-4485.

Signature Date

Signature of Investigator Date
Appendix B

Human Subjects Institutional Review Board Approval
Date: July 17, 1990
To: Michael Mack
From: Mary Anne Bunda, Chair
Re: HSIRB Project Number 90-04-13

This letter will serve as confirmation that the changes requested by the board regarding your research protocol, "The Effects of Self-monitoring and Supervisory Feedback on Staff Performance in a Human Service Agency", have been received. The revisions are satisfactory, and your protocol been approved as expedited.

The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the approval application.

You must seek reapproval for any change in this design. You must also seek reapproval if the project extends beyond the termination date.

The Board wishes you success in the pursuit of your research goals.

cc: William K. Redmon, Psychology Department

Approval Termination ___________July 17, 1991__________
BIBLIOGRAPHY


