Curbing Noncontractual Absences in a Mental Health Setting Through the Application of Contingent Rewards

Craig A. Crawford
Western Michigan University

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CURBING NONCONTRACTUAL ABSENCES IN A MENTAL HEALTH SETTING THROUGH THE APPLICATION OF CONTINGENT REWARDS

by

Craig A. Crawford

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
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CURBING NONCONTRACTUAL ABSENCES IN A MENTAL HEALTH SETTING THROUGH THE APPLICATION OF CONTINGENT REWARDS

CRAIG A. CRAWFORD, M.A.
Western Michigan University, 1986

In this study, the effects of contingent rewards on attendance behavior of direct care staff in a psychiatric institution were investigated. The intervention consisted of a letter of commendation and an opportunity to win a lottery for the staff exhibiting perfect attendance for a two week pay period. A multiple baseline analysis of three units failed to show significant declines in absenteeism although there were areas of significant improvement.
ACKNOWLEDGMENTS

I wish to express my sincere appreciation to Dr. Robert Orlando and Katherine Smits for their encouragement and advice in preparing this thesis. I owe a "tip-o-the-hat" to Dr. James Coleman for his cooperation and assistance at the site of the study. I would also like to express my deepest gratitude to Dr. Jack Michael whose patience, expertise and guidance has made this thesis possible. And to the many others who in one way or another, have made this study possible, I thank them deeply.

Craig A. Crawford
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<table>
<thead>
<tr>
<th>TABLE OF CONTENTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>ii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>iv</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>v</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>METHOD</td>
<td>14</td>
</tr>
<tr>
<td>Subjects</td>
<td>14</td>
</tr>
<tr>
<td>Procedure</td>
<td>15</td>
</tr>
<tr>
<td>RESULTS</td>
<td>19</td>
</tr>
<tr>
<td>DISCUSSION</td>
<td>26</td>
</tr>
<tr>
<td>APPENDIX</td>
<td>32</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>34</td>
</tr>
</tbody>
</table>
LIST OF TABLES

1. Average Number of Occurrences of Sick Time Usage for a Two Week Pay Period for Conditions A, B, C, and D ............................... 20

2. Average Number of Staff with Perfect Attendance for a Two Week Pay Period for Conditions A, B, C, and D ................................. 23

3. Average Percentage of Staff Using Sick Leave for a Two Week Pay Period for Conditions A, B, C, and D ................................. 25
LIST OF FIGURES

1. Number of Occurrences of Sick Time Usage
   Per Unit Per Pay Period for Experimental
   and for Previous Year .......................... 21

2. The Number of Staff with Perfect Attendance
   Per Unit Per Pay Period for Experimental
   and for Previous Year .......................... 24

3. The Percent of Staff Who Used Sick Time
   Per Unit Per Pay Period for Experimental
   and for Previous Year .......................... 26
INTRODUCTION

Absence, contrary to popular romantic opinion, at least in the eyes of the personnel director, does not make the heart grow fonder. Absences occur when a worker decides to engage in nonwork activity during a scheduled work period (Allen, 1981b). With the continual increase in percent of employees taking sick leave on any given day from 4.3% in 1967 to 5% in 1973 (Strait, 1975) to 6.5% in 1983 (Steers & Rhodes, 1984), industry is faced with an ever growing problem. In fact, in a poll of industries, 79% stated that unscheduled absenteeism was their most serious disciplinary problem (Baum, 1978). They also state that an unpredicted absence is a much more handicapping occurrence than a predicted one (Costello, 1975).

The cost per absence in terms of wages, fringe benefits, overtime requirements and production loss in the United States has been estimated to be $66 per day (Steers & Rhodes, 1978; Steers & Rhodes, 1980). With an average of 5.1 days absent per employee per year, the United States loses between 400-520 million workdays annually (Knowles, 1975; Smith, 1981). The estimates for the yearly cost to national industries is between $20-35 billion (Atkin & Goodman, 1984; Hedges, 1977; Kuzmits, 1981).
1977; Steers & Rhodes, 1978; Steers & Rhodes, 1980). Luthans and Martinko (1976) and Steers and Rhodes (1984) estimate that the gross national product would increase by over $10 billion dollars if the number of absences were to decrease by just 1 (one) day per employee over the course of a year. Thus, however calculated, the costs to industry (and society) from absenteeism are high.

This behavior impacts profit, production schedules, and product quality, e.g., it is advisable not to purchase an automobile manufactured on a Monday or Friday because there is a good chance that the purchased product will be of inferior quality because it was probably assembled by a part-time worker or by a department that was short staffed (Luthans & Martinko, 1976; Strait, 1975). Absenteeism can, at times, have deleterious consequences in terms of performance for individuals, their coworkers and the organization itself. Sick leave uses are followed by consequences that can affect the worker's own job or career, his/her coworkers' workload, and the costs within the organization.

Absenteeism is an amorphous problem; it is often difficult to pinpoint what percentage is avoidable or preventable. Since it is a joint function of motivation to attend and ability to attend, the employer is faced with the task of determining where on the following continuum each occurrence falls--sick and unable to
attend: A-------------B: not sick, absence is purely up to the individual. The location on the continuum would vary according to impairment and job requirements, e.g., a sprained knee would fall closer to B for a sedentary job as opposed to a job requiring heavy exertion. Strait (1975) and Steers and Rhodes (1980) estimate that 30-40% of all absences are discretionary in the sense that the individual could, if he wanted to, come to work. A loose indicator of this is that any absence episode that lasts three or more days is likely to denote a valid illness while single-day-absences may be indications of discretionary absences (Kuzmits, 1977).

Even under ideal conditions, a certain amount of absenteeism is inevitable (Strait, 1975) so the aim of any attendance improvement program is to curb use of noncontractual sick leave. If and when the industry accomplishes this, the overall savings will be immense.

Attempting to curb the absenteeism problems with a punitive system for unacceptable sick leave usage is extremely difficult at best because of the lack of accurate and reliable information (Strait, 1975). Employers cannot discern what is a legitimate excuse and what is not, and thus, they are not certain when the administration of punishment is appropriate. As a rule, if an employee is truly ill or there are circumstances which prevent him from being present, an employer would
not want to punish this (Knowles, 1975). Unfortunately, it is not cost effective to verify the validity of a worker's excuse (Atkin & Goodman, 1984).

Historically, employer attempts to identify absence-prone workers have been common (Atkin & Goodman, 1984). This approach assumes that absence-proneness is a trait, and since 10% of the work force is responsible for 90% of the absenteeism (Garrison & Muchinski, 1977), this must be considered. However, the core of employees responsible for absenteeism changes from period to period and many organizations experience periods of relatively high and relatively low unscheduled absence taking (Atkin & Goodman, 1984). There are also seasonal effects that must be taken into consideration, e.g., common vacation periods or weather (both good and bad). Thus, the shorter the duration of time under consideration, the more likely one will find that a small percentage of workers is responsible for the large percentage of sick leave usage. In other words, there may be periods where a given employee is absent-prone, but it usually averages out over the long run.

But, past history of absenteeism is the best predictor for future absenteeism. It is a better predictor than job attitude, job satisfaction, job involvement, and supervisory satisfaction: \( r = .62 - .70 \) (Breugh, 1981; Steers & Rhodes, 1980). Keller (1983) also found that tenure,
marital status, group cohesiveness, self-esteem and an internal health locus of control were not accurate predictors of absenteeism. He discovered that the only variables that were positively related to absenteeism were prior absenteeism and sex. Sex is an issue only in the sense that the mother of a child is more likely to stay home if the child is ill.

When one examines the existing conditions in society, it is curious that absenteeism is not a greater problem. The typical worker in the United States is in an environment which gives a whole system of cues telling the individual to strive for more time away from the job setting. The rewards often used are increased opportunities to be away from the job. Over the past 20 years, the fringe benefit package shows that vacation time has increased and daily work hours have been reduced (Costello, 1975). On top of this, there are now mandatory coffee breaks, increased lunch hours, and guaranteed sick leave. Add to this the lowering of mandatory retirement age and it appears that absenteeism is simply a relatively illegitimate way of conforming with society's notion that the more successful a person is, the more time away from the job he/she has.

To affect attendance behaviors, the consequences must be contingent upon attendance. It is therefore important to note that, in most companies, pay is usually not
contingent upon attendance behavior. With guaranteed sick pay, a worker will be paid whether he comes to work or not. Usually the only attendance requirement is that an employee is at work to pick up his/her paycheck.

It should be noted that the longer the latency between response and consequence, the less impact the consequence has on the target behavior, and the more impact it has on other behaviors which it follows more immediately. The paycheck, as a reinforcer, is provided long after the target behavior has occurred, and yet it still imposes a certain amount of control on attendance behaviors. If it didn't, many trivial behaviors would be reinforced when the pay check is delivered. This type of indirect-acting effect allows the human species to be controlled by remote contingencies as though they were immediate (Michael, 1985). This implies that attendance can be partially under the control of the paycheck as well as any other positive or negative consequence the employer chooses to introduce.

Carefully designed studies where variables have been controlled show clearly that the more liberal benefit policies a company has the more absences it will experience when compared to firms with restricted benefit programs (Gaudet, 1963). Chronic absentees, however, already exhibit a pattern of behavior suggesting that the organizational reward system is not particularly salient to
their basic needs. They have sacrificed company incentives, e.g., higher pay for more time away from the job. They are by definition, those who have failed to respond to the customary incentives (e.g., wages, supervisory or peer pressures, and intrinsic rewards from role performance) established by the organization (Baum, 1978).

Historically, employers have looked for correlations between different cognitive factors and attendance (Garrison & Muchinski, 1977; Shore, 1975). Once these uncontrollable characteristics have been determined, they then shift the responsibility to the employee to correct these problems. However, if an individual employee is at fault, then the control of unscheduled absences is relatively simple: selection and correction (or weeding out) of the chronic absentees. But, if poor management is creating the problem, then the solution is more difficult: supervisors must be retrained and policies changed.

A frequently analyzed controlling variable affecting attendance is job satisfaction with the notion being that, if the work is rewarding, people will turn up to enjoy the satisfaction. Unfortunately, even with this loose definition, usually the highest correlation found is r=.40 and it is normally much lower (Fichman, 1984; Nicholson, 1977; Steers & Rhodes, 1978). Despite these and numerous other past attempts to determine the controlling variables, work
setting absence remains a social fact in need of a theory.

There have been many studies completed in the past attempting to determine effective techniques for curbing unscheduled absences from the work setting. Hedges (1977) found that awarding employees with perfect attendance extra vacation time was effective. However, if the desired outcome is decreased time away from the job, it seems that this intervention is not achieving its ultimate goal.

In another study, every day that an employee was in attendance, he was given a chance to draw a playing card from a deck. At the end of one week, whoever had the best poker hand won $20. They used an ABA design and found that the absence rate went from 3.01% to 2.46% to 3.02% (Pedalino & Gamboa, 1974).

In one incentive program, Wallin and Johnson (1976) held a lottery for every worker who had perfect attendance for a month with the winner receiving $10. They found that absences decreased by 30.6% which resulted in a savings of $3109 a year for the company.

Kent, Mallott, and Greening (1977) were faced with a high "no-show" rate for volunteer workers in a food cooperative. The percent of the committed hours actually worked was as low as 58% during the baseline condition. By introducing three sequential independent variables
(public display of percent of committed hours actually worked, public display and food credit, and food credit and posted display of food credit), the percent of committed hours actually worked was 62.0, 93.5, and 94.0 respectively.

The reward plans that some companies have introduced are based on an actual payment to employees for not using their sick leave. Panyan and McGregor (1976) found that by paying employees $10 for each unused sick day at the end of the year up to $60, the number of sick days used per year declined from a baseline of 3.59 to 2.24 after the first year of implementation to 1.58 during the second year.

Orpen (1978) utilized a reward system whereby South African fabric workers were given a fifty cent bonus for each week that an employee worked without an unexcused absence. An ABAB schedule was used and the absence rates were 3.94, 2.56, 3.74, and 2.01 respectively.

One company reduced employee absences by 34% by offering them cash rewards for perfect attendance (Grove, 1968). They gave $100 or 40 hours of pay for perfect attendance, or $50 or 20 hours of pay for only one absence during the course of the year.

One hypothesis is that as workers achieve higher levels of income, they can more afford to be away from work (Chelius, 1981). However, when Allen (1981a)
reviewed attendance data from established paper industries, he found absence rates are significantly higher in those plants with low wages. He found that a 1% increase in wages corresponded with a 1.2 - 2.1% decline in absences. But, Allen (1981b) also discovered that the more liberal an attendance plan, the more likely there will be an increase in absences.

The effects of negative consequences placed on those employees who over-utilized their sick leave have also been investigated. Gaudet (1963) cited one research project where a utility company placed their workers on probation for the first six months of employment and they were not paid for their absences. The new employees averaged two absences for the first six months and 4.1 for the next six where they were paid for absences. The 4.1 absences per six months corresponded exactly to the overall employee absence rate.

The choice of punishers is critical when it comes to absenteeism. The typical approach is the use of suspension as a penalty for the chronic offender (Shore, 1975). Common sense would indicate that this is a strange way to convince the worker that regular attendance is important. Furthermore, disciplinary layoffs may actually be negative reinforcement (increased absenteeism to terminate the aversive consequences of the work place). There are also several potentially harmful side effects that a company
would want to avoid.

Sanctions enforced by a firm have caused employees to alter the form rather than the level of absences: they substitute longer absences for shorter ones and certified for uncertified leaves. In other words, they beat the system. Since verification is a near impossible task, workers can alter the employer observable behavior to that of expected norms without ever changing the target behavior. For example, rigorously enforced sanctions frequently cause employees to resort to longer medically-related absences to escape the consequences of the disciplinary system (Baum, 1978).

Not only does a heavy reliance on formal rules inhibit innovative and spontaneous behavior, but also limits the worker's performance to minimally acceptable levels (Nord, 1969).

What is needed then is a technique that will achieve a balance between reinforcers and punishers, will keep the worker on the job and working productively, and will keep him/her from abusing sick leave.

Since reward systems are not usually effective where chronic absentees are concerned, some form of punishment is usually necessary (Shore, 1975). However, such negative control should be used with caution. A simple statement relaying the criterion for dismissal when an employee is on the verge of that criterion is all that
should be made. These sanctions are effective with the chronics as the use of positive reinforcement is traditionally not, that is, management cannot entice these workers to stay on the job, but can force them (Baum, 1978). One should also note that the negative control only becomes operationalized once the worker has failed to respond to the existing reinforcement.

But, before negative control is utilized, it behooves an industry to devote more energy to finding positive ways of influencing peoples' behavior. This would entail more than verbal encouragement as behavioral intensity cannot be maintained for any length of time by shouting, "Get in there and keep fighting." After awhile, people begin to ask, "Why am I fighting so hard?" and instead of being cooperative, they become resistant (Costello, 1975).

Oftentimes, irrespective of how the management changes the work environment and makes the work more novel and stimulating, it is the attention to which the employees respond at first (Costello, 1975; Gaudet, 1963). If an industry looks at a particular group of people as a group and alters their conditions, the mere fact that they were looked at may increase the value of the activity to the employee. Any intervention can be interpreted as management taking an interest in workers and the desired outcome will initially be observed. Unfortunately, this effect soon wears off if a substantial incentive system is
not brought into play (Costello, 1975).

A reward system does not need to be something elaborate or costly to be effective (Baum, 1978). However, one must keep in mind that the rewards must be meaningful and offset the competing rewards for absenteeism, and the criterion for earning the reward must be faithfully applied to the majority of all the employees. The system simply must establish an environment where workers can acquire desired behaviors via shaping and maintain them through schedules of reinforcement. Positive reinforcement is said to have occurred when a stimulus is made contingent upon exhibition of a given behavior and the established contingency tends to increase the probability that the target behavior will occur again in the future (Schmitz & Heneman III, 1980).

The ultimate goal is that the reward system (pay, promotion, praise, etc.) will become effective to the point where workers will behave in a way indicative of the fact that it is in their best interest to attend regularly (Lawler III & Hackman, 1969). This should occur without the invocation of sanctions.

The main objective of any employee attendance scheme is to get and keep all employees on the job. The present study was no exception: the attempt was to develop an effective intervention which would lead to a meaningful reduction in unauthorized absenteeism.
METHOD

Subjects

There were 58 subjects involved in this study all of whom were direct care staff on three wards of a children's psychiatric hospital. All together, there were 25 males and 33 females with an age span of 26-58 years.

On unit one, there were three personnel changes during the baseline and two during the intervention period. The average number of males was 4.4 and 5.0 for baseline and intervention periods respectively. For females, it was 13.9 and 13.6 respectively. The age span for this unit was 31-53 years.

On unit two, there were five personnel changes during the baseline and none during the intervention period. The average number of males was 5.7 and 6.0 for baseline and intervention periods respectively. For females, it was 11.7 and 13.0 respectively. The age span for this unit was 28-56 years.

On unit three, there were nine personnel changes during the baseline and two during the intervention period. The average number of males was 15.0 and 13.3 for baseline and intervention periods respectively. For females, it was 6.0 and 6.0 respectively. The age span for this unit was 26-58 years.
Procedure

The design used for this study was that of a multiple baseline. The introduction of the independent variable was staggered by two pay periods for each of the three units to achieve the multiple baseline design and the change between baseline and intervention periods was analyzed. A baseline was two weeks in duration.

The dependent variable analyzed in this study was the frequency of sick leave occurrences. If an employee used any sick leave during his/her scheduled eight hour shift (regardless of the length of time used), this was counted as one incident.

The basic contractual controls of sick leave usage were that the worker could use approved sick leave for an illness or injury, appointments with a professional medical practitioner, death of a relative, or illness or injury to an immediate family member. The employee was not required to verify his sick leave unless s/he had abused sick leave in the past six months, been hospitalized, used three or more consecutive sick leaves, or several other situation-specific circumstances which are outlined in Appendix A. If an employee did not comply with these guidelines, the agency could utilize the following sequential consequences: verbal counselling, a written reprimand, suspension, and finally dismissal.

These contingencies were in effect during both the
baseline and intervention periods.

During the intervention period, two additional independent variables were introduced if the worker had not used any sick leave for an entire pay period: (1) A letter of commendation from the agency director in his/her paycheck thanking the person for his/her conscientious attendance behavior. (2) Each employee who utilized no sick leave the previous pay period had his/her name placed in a lottery for a chance to win a free car wash, free movie pass, or two weeks free at a local health spa from various area merchants who had donated services or products to the facility for this purpose. An employee was eligible for the drawing each time s/he met the criterion of no sick leave usage.

The study relied on word of mouth for the education of the employees to the new existing contingencies. This appeared to be fruitful as staff from all three units were knowledgeable within the first few days of the introduction of the intervention on Unit 1. This method was selected over informing the subjects to avoid any undermining of the investigation. It was considered a possibility that a formal presentation of the contingencies might trigger a mild protest in the form of absences. This possibility had to be taken into consideration due to the somewhat hostile covert behavior towards management.
The employees kept track of their own attendances or absences on an individual time sheet. Their immediate supervisor was responsible for verifying and then signing the time sheet once every two weeks. The data were transferred to an official attendance record which was from where the study data were obtained. The employees' names were covered while the data were recorded so that the workers' confidentiality was ensured.

Since absenteeism can be affected by seasonal factors, the data from the corresponding period from the previous year were recorded for a comparison. Analyzing the previous year's attendance records was important since absence rates in a given time period can be predicted from absence rates in prior periods. Since absence tendencies change with the season, an experimental change is only meaningful if the seasonal changes are taken into consideration.

On June 16, 1985, there was a contract change which included sick leave policy. The length of time that an employee could be on probation for past sick leave abuses was modified from 180 to 90 days. It also made it possible for the employer to invoke a ninety calendar day probation period during which time the employee could be required to provide medical verification for sick leave usage if the agency had reasonable grounds to suspect that the employee was culpable. However this was never invoked
during the study.
RESULTS

Table 1 shows the average number of employee absences per pay period for the following conditions: baseline, intervention, and the corresponding periods for the previous year. The average is broken down per unit with the changes and differences between the changes shown for the different conditions. The actual breakdown per pay period is presented in Figure 1.

A statistical analysis of the data did not reveal a significant differences between the means (alpha < .05). The changes in the number of occurrences of sick time usage were as follows: Unit 1 showed a decrease of 2.88 (t=1.58, p>.05) from baseline (C) to intervention (D) while the corresponding periods from the previous year (A and B respectively) showed a decrease of 1.35. The difference between the changes in the previous year and experimental condition was 1.53 (t=.53, p>.05). Unit 2 had an average decrease from A to B of 1.91 but only declined .53 (t=.36, p>.05) from conditions C to D. The difference between the changes was -1.42 (t not computed). Unit 3 revealed an increase of .79 in the number of sick leave occurrences from A to B and a decrease of 1.29 (t=.81, p>.05) from C to D. The change from A to B and C to D was 2.08 (t=.76, p>.05).
Table 1

Average Number of Occurrences of Sick Time Usage for a Two Week Pay Period for Conditions A, B, C, and D.¹

<table>
<thead>
<tr>
<th>Condition</th>
<th>Average frequency of sick time usage</th>
<th>Difference between baseline and intervention</th>
<th>Differences between the changes in the previous year and experimental condition</th>
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<tr>
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<tr>
<td>A</td>
<td>9.90</td>
<td>1.35</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>8.55</td>
<td></td>
<td>1.53</td>
</tr>
<tr>
<td>C</td>
<td>11.60</td>
<td>2.88</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>8.72</td>
<td></td>
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<tr>
<td><strong>Unit 2</strong></td>
<td></td>
<td></td>
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<tr>
<td>A</td>
<td>7.83</td>
<td>1.95</td>
<td></td>
</tr>
<tr>
<td>B</td>
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<td>D</td>
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<td></td>
<td></td>
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<tr>
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<tr>
<td>B</td>
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<td>C</td>
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<td>1.29</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>7.28</td>
<td></td>
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¹ A = previous year period corresponding with baseline, B = previous year period corresponding with intervention, C = experimental baseline, D = experimental intervention. Data are broken down per unit.
Fig. 1. Number of occurrences of sick time usage per unit per pay period for experiment and for previous year. The sequence of conditions for all units is indicated above the top set of axes.
Table 2 displays the average number of staff who had perfect attendance for a two week pay period under the above conditions. Figure 2 represents the findings for each pay period. When looking at the average number of employees who went an entire pay period without using sick time, one finds the following: In Unit 1, there was an increase from C to D of 2.70 (t=2.91, p<.05) while the change from A to B was 1.46. The difference between the changes was 1.24 (t=.81, p>.05). Unit 2 exhibited an increase of 1.88 (t=2.37, p<.05) from C to D and increased by 1.17 from A to B. The difference between (C-D)-(A-B) was .71 (t=.56,p>.05). Unit 3 displayed an increase of 1.43 from A to B, but had a decrease of .43 (t=.68, p>.05) from C to D for a difference of -1.86 (t not computed).

Table 3 indicates the average percentage of staff using sick leave per pay period per unit for all conditions. Unit 1 reveals an average decrease of 5% from condition A to B and 13% (t=2.6, p<.05). The difference from C to D and A to B was 8% (t=.91, p>.05). Unit 2 manifests a 9% decrease from A to B and 4% from C to D (t=.70, p>.05). The difference between the changes was -.05 (t not computed. Unit 3 had a decreases of 3% from A to B and 5% from C to D (t=1.62, p>.05). The differences between the experimental conditions and prior corresponding period was .02 (t=.34,p>.05). Figure 3 shows the breakdown of percentages per pay period for each
Table 2
Average Number of Staff with Perfect Attendance for a Two Week Pay Period for Conditions A, B, C, and D.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Average number of employees without sick time usage</th>
<th>Difference between baseline and intervention</th>
<th>Difference between the changes in the previous year and experimental condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>11.90</td>
<td>1.46</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>13.36</td>
<td></td>
<td>1.24</td>
</tr>
<tr>
<td>C</td>
<td>10.20</td>
<td></td>
<td>2.70</td>
</tr>
<tr>
<td>D</td>
<td>12.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>13.16</td>
<td></td>
<td>1.17</td>
</tr>
<tr>
<td>B</td>
<td>14.33</td>
<td></td>
<td>.71</td>
</tr>
<tr>
<td>C</td>
<td>13.00</td>
<td></td>
<td>1.88</td>
</tr>
<tr>
<td>D</td>
<td>14.88</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>15.28</td>
<td></td>
<td>1.43</td>
</tr>
<tr>
<td>B</td>
<td>16.71</td>
<td></td>
<td>-1.86</td>
</tr>
<tr>
<td>C</td>
<td>15.57</td>
<td></td>
<td>-.43</td>
</tr>
<tr>
<td>D</td>
<td>15.14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*A = previous year period corresponding with baseline, B = previous year period corresponding with intervention, C = experimental baseline, D = experimental intervention. Data are broken down per unit.*
Fig. 2. The number of staff with perfect attendance per unit per pay period for experiment and for previous year. The sequence of conditions for all units is indicated above the top set of axes.
Table 3

Average Percentage of Staff Using Sick Leave for a Two Week Pay Period for Conditions A, B, C, and D.\textsuperscript{a}

<table>
<thead>
<tr>
<th>Condition</th>
<th>Average percentage of staff using sick leave</th>
<th>Difference between baseline and intervention</th>
<th>Difference between the changes in the previous year and experimental condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>.35</td>
<td>.05</td>
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<tr>
<td>B</td>
<td>.30</td>
<td>.08</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>.43</td>
<td>.13</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>.30</td>
<td></td>
<td></td>
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<tr>
<td>Unit 2</td>
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<td></td>
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<tr>
<td>A</td>
<td>.31</td>
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<td></td>
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<td>B</td>
<td>.22</td>
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<td>-.05</td>
</tr>
<tr>
<td>C</td>
<td>.25</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>.21</td>
<td></td>
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</tr>
<tr>
<td>Unit 3</td>
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</tr>
<tr>
<td>A</td>
<td>.28</td>
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<td></td>
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<tr>
<td>C</td>
<td>.26</td>
<td></td>
<td>.05</td>
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<tr>
<td>D</td>
<td>.21</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\textsuperscript{a}A = previous year period corresponding with baseline, B = previous year period corresponding with intervention, C = experimental baseline, D = experimental intervention. Data are broken down per unit.
Fig. 3. The percent of staff who used sick time per unit per pay period for experiment and for previous year. The sequence of conditions for all units is indicated above the top set of axes.
unit.
DISCUSSION

This study fell short of obtaining a significant decrease of noncontractual staff absences through the use of contingent rewards. There were several significant declines in sick leave uses from baseline to experimental conditions. However, when comparing the results to the previous year to offset any potential seasonal factors, no statistically significant changes were observed.

In this study, employees were given a letter of commendation from the facility director for perfect attendance, and had an opportunity to be selected as the recipient of various inexpensive gifts. If the independent variables had been effective, the decreases in the experimental condition would have been significantly larger than in the previous year.

Using two independent variables for a study presents a problem when endeavoring to identify the controlling variables. One is unsure if the combination of the two demonstrated the effect or if merely one variable was the controller and the other neutral or even possibly punitive in nature. This is especially true when trying to use praise when the praiser is not necessarily established as a source of social reinforcement. With the somewhat anti-management attitude of the workers, it is possible
that the letter of commendation actually had a negative impact on the dependent variable. Further research is necessary to resolve this issue.

Theoretically, the fact that management was taking an active interest in the behavior of its employees should have initially resulted in a positive change if management had been established as a source of social reinforcement. The employees at this institution did not realize who was implementing the study and therefore conversed freely about the intervention with the experimenter. They were under the impression that management had initiated and was running the interventions. Based on many of the statements and overt behaviors, it seems unlikely that management was a solid source of conditioned reinforcement.

In the breakroom, the general consensus of the employees was that this attempt to get the staff to conform to management's wishes was "stupid," "idiotic" and a "waste of time." On two occasions, staff who had received the letter of commendation the day before called in sick because they thought the whole idea was "silly." The employees with whom the experimenter spoke stated that, if the working conditions were improved, their attendance record would also.

The number of staff per unit varied during the experiment as there were transfers and new employees.
Unfortunately, the exact number of changes was not available to the experimenter as names had to be withheld from the available records to insure confidentiality. However, no staff changes occurred that would have resulted in an employee going from one condition to another. That is, no transfers occurred that would have brought one employee from a baseline condition to an intervention condition: there were only homogeneous changes. There was one staff hired into the intervention condition in Unit 1.

One way to compensate for the variation in staff is to investigate the actual percentages of staff using sick leave. There was only one significant decrease in the three units after the intervention was introduced. However, when comparing the differences from the previous year, no significant changes were noted.

The procedure of this study had a basic flaw: once a worker had used sick leave in the pay period, s/he had lost the opportunity to receive the independent variable. In this study, perfect attendance was specifically rewarded without making a significant impact on the target behavior. Perhaps a system whereby the employee could earn credit for the days s/he attended work would prove more effective.

These results indicate that the independent variable did not have a significant impact on attendance behavior.
However, one must remember that the competing reinforcers are rather strong. When one looks at the employee option, it is curious that there isn't more sick leave abuse taking place. In the present experiment, the staff member had the option of attending work when scheduled and receiving a letter congratulating him/her for "conscientious behavior" and a chance to win a movie pass, or having a day away from the work setting with guaranteed wages.

Although the data reported here do not demonstrate it, past studies have shown that an organization can benefit by implementing a reward system for attendance. An inexpensive and simple program can yield significant results if the benefits for the employees are meaningful. In the present study, rewards were used that were not powerful enough to compete with the existing conditions. Further research which dispenses with the letter of commendation and uses something more valuable for the prize of the lottery could prove fruitful.
APPENDIX

The following is a photocopy of pages 64-65 of the contract between the State of Michigan and Michigan Council 25 AFSCME AFL-CIO institutional unit for 1983-1986. The pages cover the existing contingencies for sick time usage for the institutional employees.
negotiable. Overtime rates shall apply to all hours in excess of eighty (80) in a work period and to all hours in excess of ten (10) worked outside the regular daily flextime schedule.

Section O. Compensatory Time.

Employees may choose either to receive cash payment or with departmental approval compensatory time for holiday hours worked in excess of eighty (80) in a pay period. Employees may accumulate up to a maximum of sixty (60) hours of such compensatory time. Employees who wish to use such compensatory time may do so only with prior approval of their supervisor.

Such compensatory time must be utilized before the employee can use annual leave except where an employee at the applicable Annual Leave "cap" would thereby lose annual leave. Departmental practices in the administration of compensatory time shall continue unless altered in secondary negotiations.

Upon separation for any reason the employee shall be paid for all unliquidated compensatory time.

ARTICLE XVI
ADMINISTRATION OF HOLIDAYs AND LEAVE BENEFITS
Section A. Sick Leave Application.

Sick leave may be used by an employee for:
1. Illness, disability, or injury of the employee, or exposure to contagious disease endangering the health of the employee or any of which necessitates the employee's absence from work;
2. Appointments with doctor, dentist, or other professional medical practitioner to the extent of time required for such appointments when it is not possible to arrange such appointments for non-duty hours;
3. Absence necessitated by the death of a relative or person for whose financial or physical care the employee has been principally responsible; or
4. In the event of illness or injury in the immediate family which necessitates the employee's absence from work. Immediate family shall be spouse, parent(s) or foster parent(s), children or step-children, brother(s), sister(s), parent(s)-in-law, grandparent(s), grandchildren, or any person(s) for whose financial or physical care the employee is principally responsible.

All sick leave used shall be certified by the employee and verified by such other evidence as required by the Employer. Falsification of such evidence shall be cause for discipline up to and including dismissal. Verification beyond certification by the employee shall be required under the following conditions:
1. When an employee has been counseled (oral and written) and disciplined for excessive use or abuse of sick leave within the preceding 180 (one hundred eighty) calendar days. Once an employee has been disciplined, except under unusual circumstances, the employee shall only use sick leave for the reasons listed in 1-4 above for ninety (90) calendar days.
2. When the employee has been hospitalized for any reason.
3. When an employee has been continuously absent on sick leave for three (3) or more work days.
4. When an employee has been absent as a result of an accident or injury.
5. When an employee has requested annual leave and been denied and subsequently requests utilization of sick leave for the corresponding time.
6. When an employee claims illness on the day of the change of assignment.
7. When an employee's sick leave credits have been reduced to eight (8) hours or less for reasons other than leaves of absence, worker's compensation, death in the family, or verified job related injuries. Employees whose sick leave balance remains at eight (8) hours or less shall, except under unusual circumstances, only use sick leave for the reasons listed in 1-4 above.
8. When the absence of a considerable number of employees on a shift indicates a concerted effort among the employees at the Agency, the Appointing Authority shall request medical certification immediately.
9. In the Department of Corrections, the existing secondary agreement shall remain in effect unless altered by further secondary negotiations.

Medical verification shall consist of a written statement from the employee's physician indicating the date seen by the physician, verifying the illness or injury of the employee, the specific diagnosis and prognosis and the employee's ability to return to normal duties and the date of such return. Such records are, by their very nature, confidential and such confidentiality must be preserved and protected. Where the employee claims that such verification might compromise the confidential nature of the illness or disability, the employee may submit such verification directly to the Appointing Officer in the Department of Mental Health; the Facility Director in the Department of Social Services and Public Health; the Agency Superintendent in the Department of Education; the Appointing Authority or Deputy in the Departments of Corrections, Natural Resources, and Labor; the Commanding Officer of the Personnel Division in the Department of Police.

Section B. Annual Leave Application and Scheduling.

Sick leave may be used for the reasons listed in 1-4 above for ninety (90) calendar days. Requests for vacation commencing on or between April 1 and March 31 shall be received by the Personnel Office no later than May 15 of the preceding calendar year.
BIBLIOGRAPHY


Garrison, K. R., & Muchinski, P. M. (1977). Evaluating the concept of absentee-proneness with two measures of


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