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Behavioral Intervention to Reinforce Correct Youth Employee Behavior at a Nonprofit Boy

Scout Summer Camp

Joshua Kallen

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Summary

Context Reinforcement programs is one of many ways to effect change in employee behavior in most businesses.

Objective To test the role of team reinforcement programs in employee rule conformance using a quasi-experimental design.

Design Quasi-experimental, across groups study.

Population and Setting A convenience sample of 42 youth staff members between the ages of 14 and 20 were measured for 4 weeks on three core behaviors using varying methods. All subjects were located in one summer camp in near proximity of each other. These 42 youth were divided into eight teams by their housing arrangements. These numbers only slightly changed throughout the four week period with some youth staff members taking weeks off of work for various reasons.

Main Outcome Measures Levels of rule adherence were compared to qualitative previous levels from the last 5 years.

Results Before the intervention began (in previous summers), the staff members showed extinction of adherence to the three target behaviors as the 4 week period. After the intervention and throughout the entire testing period the subjects maintained a high rate of responding and did not display any signs of extinguishing behaviors.

Conclusions Results support the conclusion that the reinforcement program held control over the behaviors in the three target areas. The lack of an extinction curve suggests that the reinforcement program was more effective than aversive control in maintaining target behaviors of employees.

Behavioral Intervention to Reinforce Correct Youth Employee Behavior at a Nonprofit Boy Scout Summer Camp, A Case Study

Performance Management (PM) is an approach to performance improvement based in the science of human behavior. Daniels (1989) defined PM as "a systematic, data-oriented approach to managing people at work that relies on positive reinforcement as the major way to maximizing performance" (p.4). Performance Management interventions have been found to improve workplace performance and job satisfaction of volunteers and paid employees across many behaviors and employment settings (Bateman, Ludwig, 2004; Camden, Price, Ludwig, 2011; Mawhinney, Fellows-Kubert, 2008).

Literature Review

Performance Management interventions vary, but often involve one or more of the following components: goal setting, feedback, and reinforcement. Camden, Price, and Ludwig (2011), implemented a reward program created to increase the attendance rate of a 38 person staff at a grocery store with. The implementation included creating and training a point system where employees could evaluate their progress to a goal. Points were given for good attendance practices and deducted for poor attendance practices. Feedback was delivered weekly in a public display of progress to goal. Once a goal was reached, a tangible reinforcer was given to the employees that completed the goal. The study employed an ABA reversal design. The results of the intervention showed a reduction to an average of 4.25 shifts missed per week from 8 shifts during baseline. During reversal, the missed shifts increased to an average of 6 shifts missed per week. In addition to these results, researchers noted that the practice of leaving early also was reduced during intervention periods.

In another study targeting attendance, Markham, Scott, and McKee (2006) implemented an attendance-based recognition program across four cut and sew plants using three as different levels of control groups, and one plant as an experimental group. The study lasted a full year to account for seasonal variability. The experimental group completed three surveys, received task clarification, feedback on progress, individual attention, public recognition, tangible reinforcers, and supervisor recognition. Control group I received only notices of their absenteeism every two months with their paychecks. Control group II completed the surveys only without any other treatment. Control group III was monitored with no treatment program or surveys administered. The results of the attendance data indicated a decrease in absenteeism in the experimental group. In addition, employees indicated that they liked the program and felt it worked. The program also showed an increase in the perception that employee attendance was rewarded, as based on the survey results.

These studies and others concerning performance management have provided a strong framework for designing treatment packages to improve a variety of job performances. However, little research has been conducted on improving performance when (a) employees consist of both paid and volunteer individuals; or (b) when employees live and work in the same place, as is the case in many camp settings.

This study used a low cost point system to improve behaviors considered important by managers of a weekly summer camp. This study extends the existing literature in many ways, including that it targeted performance improvement in a mixed group of professional and volunteer participants, and that those employees resided at the place of employment. The study also utilized reinforcement cohorts to minimize effort on the part of the

managers implementing the procedure. Finally, because the intervention took place at a summer camp, it gave researchers additional control of both leisure activities and workplace activities.

Method

Participants and Setting

The summer camp where the study was conducted was located approximately 4 miles from a large population center in Southwest Michigan. The property was 200 acres of hills, lakes, and woods interrupted only by a few paths and roads. The camp features many staff cabins, clearings for youth to set up tents, dining facilities, and a variety of outdoor education and activity centers. The staff at the summer camp has daytime duties starting at 7:45AM and ending at 9PM with breaks for meals and several small breaks as determined by their supervisors. The staff cabins are located ten minutes away from the job site, and that distance is travelled several times a day by all staff members. The camp serves over 2000 youth each year that travel from Michigan and surrounding states.

The camp typically runs for five weeks including a staff week where setup and training occurs. Each week the staff receives a day off from Saturday at 11am to Sunday at 11am. At the end of the five weeks the staff stays an additional 3 days to clean up the camp and return things to the idle state.

The summer camp featured seven large and four small staff cabins. The seven large cabins were each designated a team, and the four small cabins were also combined into one team. All reinforcement was to be delivered to either the whole team or none of the team. This was to encourage collaboration within teams and to organize reinforcement delivery.

The participants varied across many factors. The group of 42 staff members was made of 7 women and 35 men. The ages varied from the age of 14 to 20. The participants' education ranged from some high school to some college. The participants' professional experience ranged from 0 to 4 years' experience. The participants all came from various cities in Michigan.

Of the total number, 28 participants had worked at the summer camp the previous year. 14 of those had worked at the summer camp for two years prior. At the beginning of the testing period many social groups and professional teams had been established and were not related to the housing arrangements or the intervention team assessment. The participants' arrangement is shown in Figure 1.

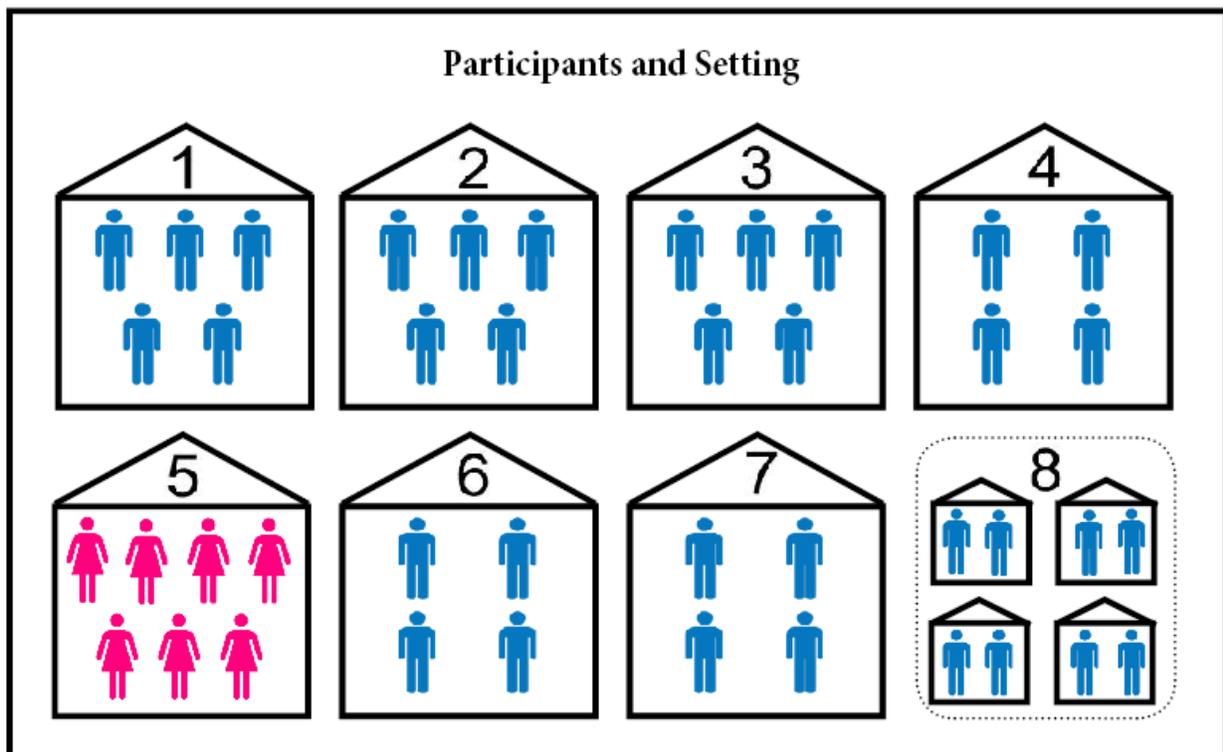


Figure 1
Housing arrangements and gender of participants

Modification Needs Analysis

In January of 2011 the management team of Rota Kiwan Scout Reservation was preparing to manage their summer camp staff when they began investigating the possibility of a behavioral intervention to improve key behaviors. The management team identified six behaviors that could use improvement to help the bottom line of improving the environment for the young boys that stayed at the camp.

The behaviors the management team listed were:

Behavior 1: Showing up to flags on time.

- **Rationale:** Employees need to be demonstrating role-model behavior and be enthusiastic in the morning to help the campers be enthusiastic.
- **Alternative behavior:** Sleeping in.

Behavior 2: Going to their cabins by curfew.

- **Rationale:** Employees need to get enough sleep to be enthusiastic throughout the day.
- **Alternative behavior:** Hanging out with friends in other cabins.

Behavior 3: Visiting a campsite after programs end.

- **Rationale:** Employees should take this opportunity to meet and bond with campers, improving the camper experience.
- **Alternative behavior:** Hanging out with friends somewhere else, like in a cabin.

Behavior 4: Learning campers' names.

- **Rationale:** Employees that learn campers' names will interact with the campers and be able to communicate with them more easily.
- **Alternative behavior:** Socializing with other staff members instead of campers.

Behavior 5: Using "active" methods of teaching, including having campers participate by action based learning techniques

- **Rationale:** Campers have more fun when they are "doing" things as opposed to being lectured to.
- **Alternative behavior:** Lecturing.

Behavior 6: Turning in various paperwork

- **Rationale:** We need certain paperwork, at certain times, throughout the day.
- **Alternative behavior:** Regular routine sans-paperwork.

Researchers and managers met and discussed the rationale for these behaviors, possible organizational solutions, and how management controlled what happened before, during, and after the behaviors. After the meeting, the team determined that behaviors 4, 5, and 6 were difficult to either measure or influence within the confines of this project. The team chose behaviors 1, 2, and 3 as being good candidates for the behavioral intervention.

Dependant Variables

Behavior 1: Showing up to a routine meeting on time. Each day, the employees are expected to arrive to a meeting before the start of the meeting. Absence from this meeting impacts staff morale, camper morale, and did not demonstrate the proper image to the customers. The alternative behavior to attending this meeting was to continue to sleep for an additional 30 minutes each day.

Behavior 2: Being in their cabins at curfew. Employees are expected to visit and remain in their cabins after a scheduled curfew each day. The rationale is that employees need to get enough sleep to be enthusiastic throughout the day and attentive to their jobs as counselors and teachers. The alternative behavior to being in their cabins at curfew is to socialize with other staff members in the facility or in other cabins.

Behavior 3: Visiting the customer housing during a specific time of day. Employees are expected to visit customer housing to check in. The purpose of this is to display good customer service skills by attending to the customers' needs. The alternative behavior to visiting customers' housing is to begin relaxing and engaging in after-work activities.

After defining the three behaviors, the managers ranked the behaviors based on importance. Our team of Organizational Behavioral Psychologists worked with the managers to allocate points for the intervention to each behavior.

Employee Presentation/Buy-In Meeting/Reinforcement Selection Meeting

One week prior to the start of the intervention, our team held a meeting with the managers and participants. The meeting lasted 30 minutes and was incorporated into their normal training schedule at the beginning of the summer. We functionally defined the three target behaviors by describing exactly what the behavior was, how we would measure

them, and the level of responding that would incur reinforcement. At the end of the meeting there were few questions. At the conclusion of the question and answer segment, a reinforcement survey was distributed and collected with their choices of three reinforcement options (chosen by management) with an option to suggest a fourth reinforcement option.

The survey results suggested that a pizza delivered to the cabin was the most desirable result, followed by sleeping in an extra half hour on Saturday, and a fast check out on Saturday. The managers determined that of the novel ideas from the suggestion portion of the survey there were no feasible ideas for additional means of reinforcement that could be used for all participants. The results of the survey are represented in Figure 2. The preferences indicated by the survey results were immediately implemented into the intervention design.

After the surveys were tallied and the preferences implemented into the intervention design, a final meeting was held where the expectations were clarified and the chosen reinforcers were revealed. At this point, we noticed that the participants began designing strategies for achieving the most points possible, indicating a certain level of excitement and anticipation of the intervention.

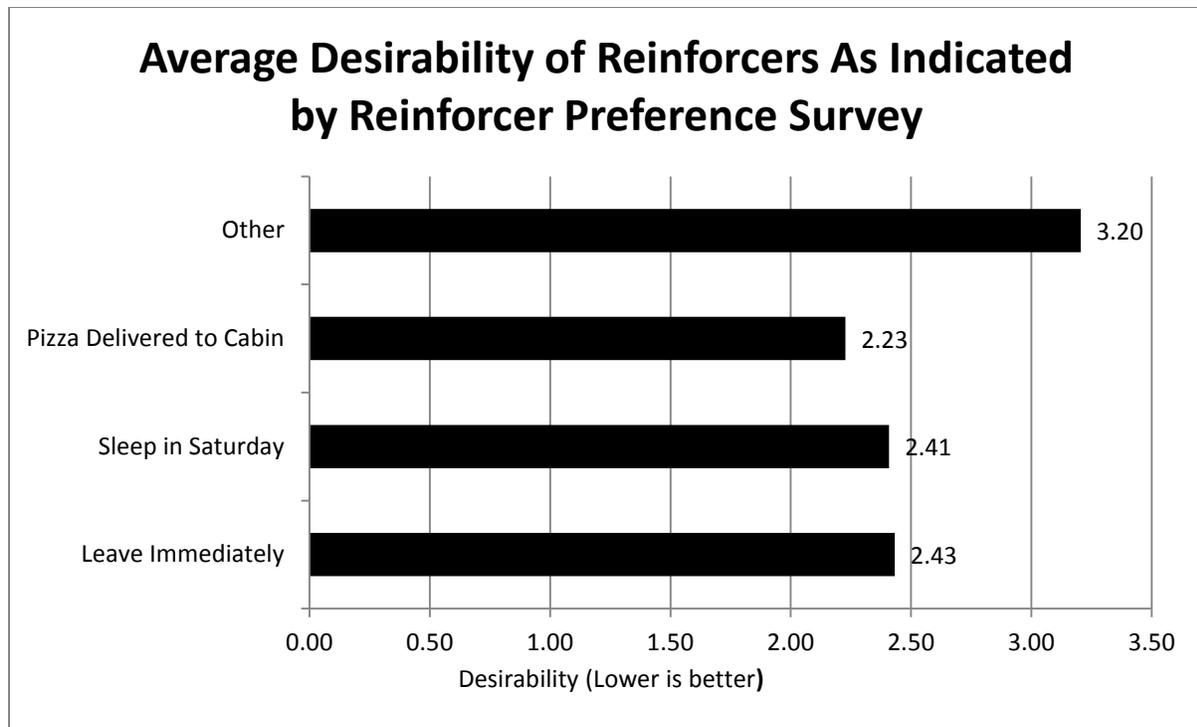


Figure 2
Average Desirability of Reinforcers as Indicated by Reinforcer Preference Survey

Measurement

Each target behavior had a different means of measurement as the behaviors varied across location and setting.

The first behavior of showing up to the morning meeting on time was measured by a tally of names of all employees by a consistent recording manager that was able to do so. This was made easier over time as the manager began to recognize the employees and was able to quickly find missing people.

The second behavior of visiting a campsite at night after work was measured by managers visiting campsites randomly. Because the managers knew which campsite was assigned to each participant, it was easy to tell if a participant was attending the campsite

where they should be. The managers then notified the head manager that aggregated all of the data.

The third behavior of being inside their housing after curfew was measured by managers traveling quickly and efficiently from cabin to cabin recording all participants inside their cabins. Upon arrival to the cabin the participants are informed of their progress for the week so far and their eligibility to get additional reinforcement throughout the week. An example of the recording chart is shown in Figure 3.

Date	Sat			Sunday			Monday			Tuesday			Wednesday			Thursday			Friday	Total	Rewards:		
	Flags	Visit	Bed	Flags	Visit	Bed	Flags	Visit	Bed	Flags	Visit	Bed	Flags	Visit	Bed	Flags	Visit	Bed			Flags	100	150
June 3rd																							
Team 1	0	5	20	10	5	20	10	5	20	10	5	20	10	5	20	10	5	20	10	165			
Team 2	0	5	0	10	0	20	10	5	20	10	5	20	10	5	20	10	5	20	10	140			
Team 3	10	5	20	10	5	0	10	5	20	10	5	20	10	5	0	10	5	0	10	115			
Team 4	10	5	0	0	5	20	10	5	20	10	5	20	10	5	20	10	5	0	10	125			
Team 5	10	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	15			
Team 6	10	5	20	10	5	20	10	0	20	0	0	0	0	0	0	0	0	0	10	100			
Team 7	10	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	15			
Team 8	10	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	15			

Figure 3
Sample recording chart of weekly progress of points and rewards

The measurements were compiled daily in order to give feedback to the participants. Oral feedback was given daily during cabin checks and graphic feedback was given at the end of each week in a group meeting. An example of the graphic feedback is shown in Figure 4.

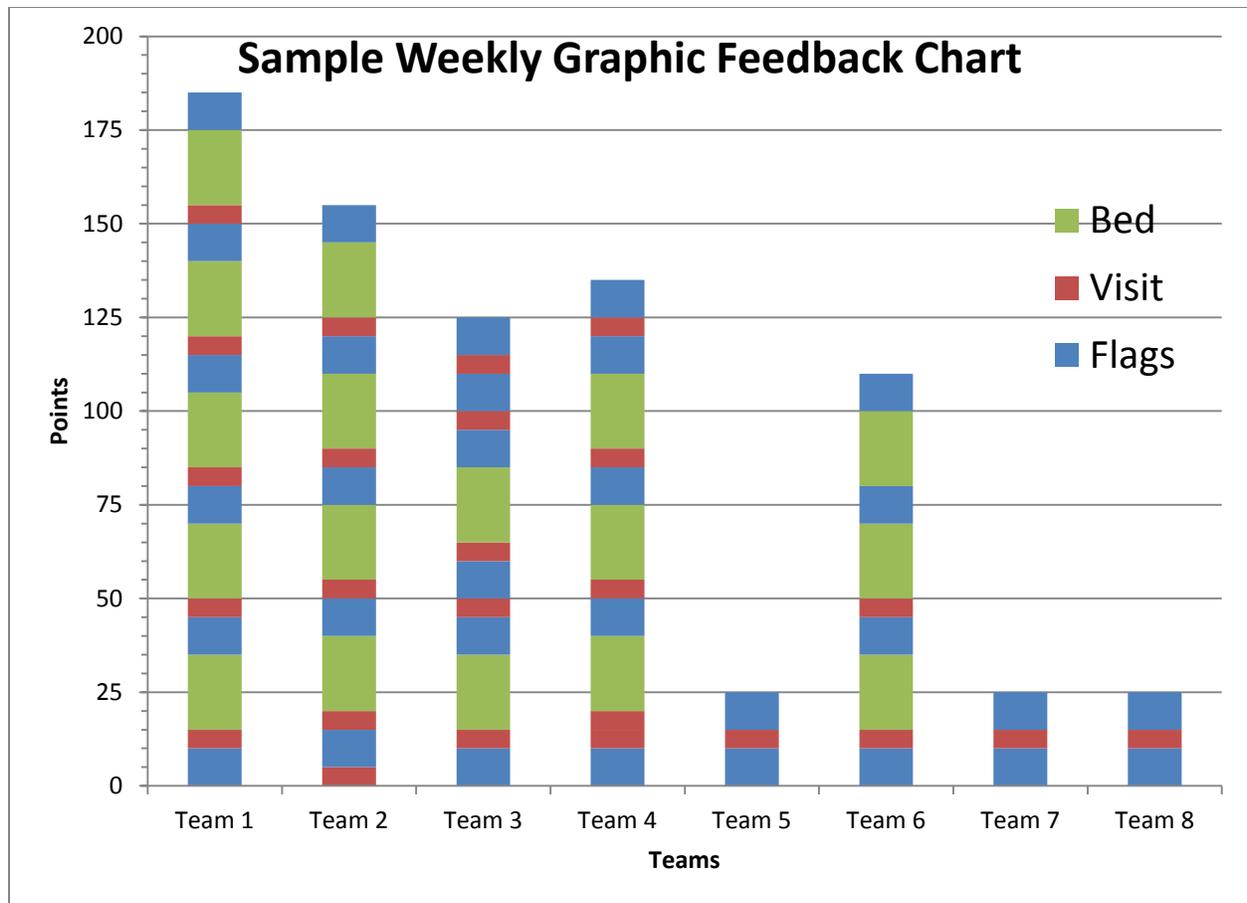


Figure 4
Sample Weekly Graphic Feedback Chart

Inter-Observer Agreement

Inter observer agreement was determined through a daily quantitative tally of all staff members compared to the list made by the designated recording manager. Inter observer agreement was conducted by the head manager also visiting campsites randomly to find if managers and staff members were adhering to the intervention guidelines in reporting data.

Inter observer agreement was conducted by an overlap in several cabin checks by different managers on the same night. Data was compared to assure that there were no mistakes. Any irregularities in observation was investigated and corrected.

Research Design and Intervention

The goal of the intervention was to improve the performance of the staff members in the three target areas and through that make the staff more efficient and catering to the customers' needs. The intervention was a point system and reinforcement program in which participants earned points for the three different behaviors. The behavior of being in cabins by curfew was given 20 points, the behavior of attending the morning meeting was given 10 points, and the behavior of visiting a campsite in the evening was given 5 points to be used in the reinforcement chart. Upon completion of the intervention goal, the reinforcement was delivered at the end of the week. Each group was given points based on the behavior completed.

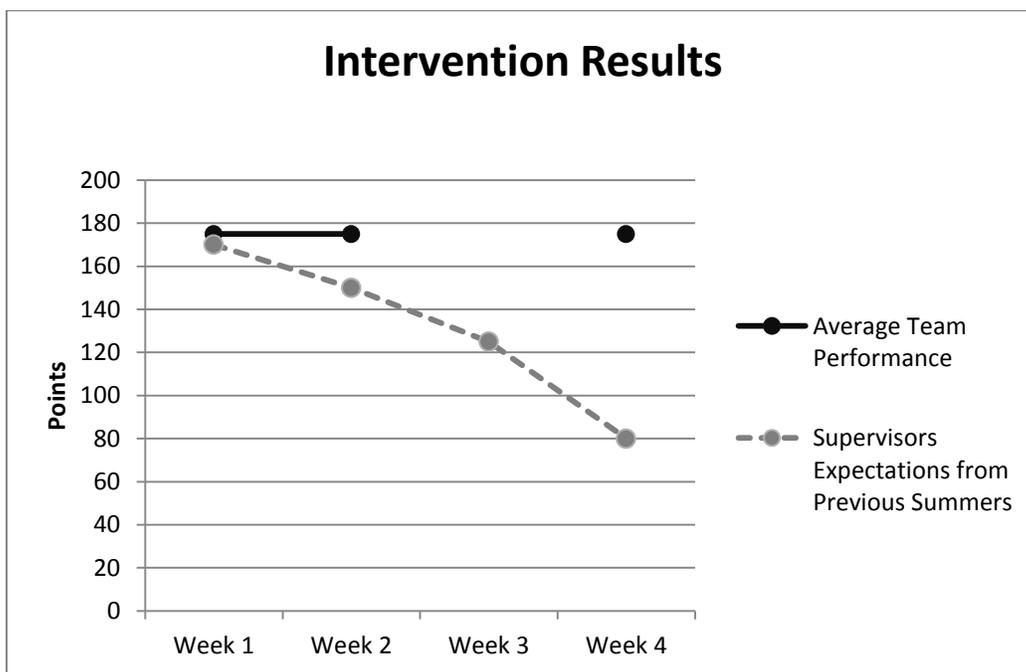
Analysis

In order to evaluate the effectiveness of this treatment, we held three personal interviews with managers from previous years. Managers were asked questions about the three target behaviors and their history. The managers gave us anecdotal data that we averaged and used as a baseline for our study.

Results

In discussions with managers before the intervention, the main circumstance they wished to avoid was a decrease in behavior over the summer. In previous years, the rate of adherence to rules began high and lowered as time went on over the four week summer.

Across the 4 weeks of the study a clear change in performance was observed. Immediately after the second participant meeting, behavior frequency shot to 100. Throughout the next four weeks, with few exceptions, behaviors remained at the high level of responding. Due to natural breaks in schedules, some participants had decreased participation in the behaviors that did not affect the reinforcement schedule. These breaks included sick days, planned absences, and emergency responses deemed important by the management team. During the third week of the intervention a large storm interrupted camp and made it impossible to proceed as planned for that week. The next week the intervention continued to show a high level of responding.



Both the managers and participants were pleased with the increased amount of reinforcement provided by the program and showed interest in continuing the program for subsequent years.

Discussion

Beneficial Impacts

The staff of the summer camp valued the intervention because of the increased natural reinforcement from the campers and the management team for adhering to rules and being more alert throughout the day. In addition, they enjoyed the reinforcement opportunities and a way to demonstrate to management that they were high performing. Lastly, the teams bonded heavily and met each other with great enjoyment every day. They cooperated in achieving the goals by reassuring each other and motivating each other to participate in the behaviors.

The campers benefitted from the intervention because they were met with a staff that was more engaging, energized, and punctual. The management reported several instances of praise for staff attendance in the qualitative evaluations. Though no data was taken, the management suggested that the staff was more alert and more active throughout the weeks because of the curfew adherence.

The management enjoyed the use of reinforcement rather than punishment in motivating the target behaviors. In the past they used mainly punishment contingencies to control the target behaviors. This allowed them to be more positive with the employees and create a better working environment for all employees. The managers were satisfied with the reports of high staff morale. They were very encouraged and looked forward to working with the same staff in the future.

The team of behavior analysts gained valuable practice working in a novel setting. They helped construct, implement, and modify the intervention over time. The intervention gave the team exposure with important community members and business professionals.

Limitations

The first limitation was that it was difficult for the managers of the camp to proudly withhold reinforcement to one group and allow the others to enjoy it. To solve this dilemma, our team suggested ad-hoc makeup events (including service or a small task) in order for those teams that only missed one section to complete additional tasks in order to achieve the highest goal. This was always made on a one-to-one basis and each participant was given only one chance to make up a missed behavior.

Other limitations included means by which to account for people that took days or weeks off in the system. The managers worked around this issue by giving points to the whole group (by cabin) instead of by individual participant.

The last limitation was in the behavior of visiting campsites after work ended. Recording for this behavior was much more spotty due to lack of observer reinforcement. For this reason, if an observer did not notice anything especially out-of-bounds, all participants were given full marks for this category.

Future Applications

In employment situations involving shared housing and attendance requirements, a team-based reinforcement program has been demonstrated to be an efficient and consistent way to maintain high levels of responding. Managers that are concerned about behavior extinction or aversive control being a necessary evil of their workplace should consider a reinforcement plan to increase employee behavior.

In any performance management intervention, manager buy in is important in order to insure a long-lasting and successful program. The usage of teams in this intervention demonstrated the value of more simple data collection and reinforcement.

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Appendix:

Please rank the following rewards for good behavior in the order of most desirable (1) to least desirable (4). If you would like, you may fill in the fourth item as "Other" or just leave it blank. These rewards would be given once a week.

___ Express staff check out on Saturday

___ Sleep an extra hour Saturday Morning

___ Pizza Delivered Friday Night at 9PM to your cabin

___ Other: _____