

The Effect of a Self-Management Training Program on Employees of a Mid-Sized Organization

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ABSTRACT. The effectiveness of an eight-week self-management training program presented to thirty-five employees of a mid-sized organization was analyzed. It was predicted that employees would be able to improve self-selected work related problems through self-management training. Thirty-three subjects implemented individual self-management projects that consisted of identifying, monitoring, implementing an intervention, and planning for maintenance on a work related target issue. Of these 33 subjects, 31 reported successful self-management programs. Additionally, the experimental subjects were compared to nine subjects in a control group on measures of attendance and self-efficacy. Results on these measures were mixed. Implications of the research findings for the design, implementation, and evaluation of in-service training programs in business organizations

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KEYWORDS. OBM, HRM, training, self-management, attendance, self efficacy, social validity

Many American organizations have undergone significant changes since the 1980s, due to increased competition in global markets and work environments. Flatter, less hierarchical organizations are often the result of this competition. The effect of downsizing and restructuring often includes reductions in management personnel and increased responsibility imposed on employees.

Because of these workplace changes, several investigators have emphasized the importance of implementing effective training programs that teach critical job related skills (e.g., Goldstein, 1989; Goldstein & Gilliam, 1990; Offerman & Gowing, 1990; Thayer, 1989; Wexley, 1989). Every year, training and development programs are implemented in most private and public organizations to teach or improve various skills in order to improve on-the-job performance. Organizational expenditures reportedly exceed \$30 billion dollars on formal training and approximately \$180 billion on informal on-the-job training annually (Carnevale, Gainer, & Villet, 1990).

Interestingly, according to Wexley (1989), most training programs are utilized simply because they are well advertised and marketed, not because they are the result of "technique based on rigorous empirical research." Tannenbaum and Yukl (1992), in their review of training research reported in *Annual Review of Psychology*, stress the need for more research devoted to determining how, why, what, and for whom training works.

Applied behavior analysis, with its strong empirical base, describes how the environment interacts with the person to affect behavior and provides a convincing explanation of how the environment can be constructed or modified to bring about behavior change. Applied behavior analysis is also sometimes referred to as operant conditioning, behavior modification, or reinforcement theory. Over the past twenty years, numerous studies have tested the efficacy of applied behavior analysis or organizational behavior management (OBM) in the workplace. The success of the approach has been well documented (e.g., Andrasik, Heimberg, & McNamara, 1981; Andrasik & Heimberg, 1982; Frederiksen, 1982a, 1982b; Frederiksen & Johnson, 1981; O'Brien, Dickinson, & Rosow, 1982; Redmon, 1991).

Among the behavioral approaches developed to facilitate behavior change in organizations are behaviorally based training programs. Latham (1989) makes the point that behaviorally based training is exceptional among organi-

zational training approaches because it is characterized by systematic and carefully controlled research and evaluation methods.

A sub-area of applied behavior analysis that appears to hold promise for improving performance in organizations is self-management training (Frayne & Latham, 1987; Gaetani, Johnson & Austin, 1983; Lamal & Benfeld, 1978; Latham & Frayne, 1989; Luthans & Davis, 1979). Self-management theory holds that by arranging environmental contingencies, establishing specific goals, and producing consequences for their actions, people can be taught to exercise more control over their lives (Brigham, 1982; Kanfer, 1980). The first step in effective self-management is the selection and specification of a problem behavior by an individual. Upon identifying a target behavior for change, the individual monitors the target behavior, works out a plan for change, applying basic behavioral principles, readjusts the plan as necessary, and plans for maintenance (Watson & Tharp, 1993).

The self-management approach also represents a small but possibly important departure from traditional organizational behavior management interventions. In OBM, a change agent is often employed to design and execute a behavior change program. In a self-management approach, the individual assumes the major responsibility for self-change operations, thus potentially reducing the need for reliance upon an outside source to facilitate and monitor the behavior change.

The self-management approach is also distinguished from many other behavioral interventions because of the use of self-monitoring as the primary data collection method. Kazdin (1974) argues that self-monitoring has the potential to provide more complete data than an outside observer could because the self-monitor is aware of the full range of his/her target behaviors, as compared with a sample of behaviors that an observer might witness. Barlow, Hayes, and Nelson (1984) also make the point that self-monitoring can be used to collect information on a wider range of problems, i.e., cognitive or covert targets, than those that are accessible to external observers. On the other hand, it must be recognized that the data generated by self-monitoring are a form of verbal behavior that may or may not accurately represent the participants' target behavior. The accuracy of self-monitoring can be increased by using clear and specific behavioral definitions, using frequent reporting intervals, collecting convergent evidence, and reducing the explicit and implicit demands on the participants to produce positive data (Babor, Brown, & Del Boca, 1990; Jaccard & Wann, 1995). Nonetheless, without independent observers to confirm the reliability of the data, self-monitored data must be viewed with caution, and their interpretation carefully considered.

It is likely that training in self-management will be more important in future organizational environments characterized by less formal supervision

and more employee involvement (Beer & Walton, 1990; Frayne, 1991; Komaki, Coombs, & Shepman, 1991; Latham, 1989; Tannenbaum & Yukl, 1992). For example, Komaki, Coombs, and Shepman (1991) and Latham (1989) suggest teaching self-management skills as a means of dealing with work challenges confronting the twenty-first century such as the predicted reductions in management personnel due to downsizing.

Two important field studies have been conducted examining the efficacy of an organizational training course in self-management. Frayne and Latham (1987) conducted an 8-week training course (1-hour sessions) on the self-management of attendance with unionized state government employees (e.g., carpenters, electricians, and painters). Training participants also received eight 30-minute weekly one-on-one sessions. Because increasing attendance was the main focus of this study, only employees who had used 50% or more of their sick leave were invited to participate. Improved attendance and enhanced self-efficacy were reported as the key outcomes of the training intervention.

Latham and Frayne (1989) conducted a follow-up and replication of their earlier study. Follow-up measures were administered to the original group and the 20 control group participants from the original study received self-management training. The dependent measures were the same as used with the original group. Improved attendance and enhanced self-efficacy were maintained over nine months in the original experimental group. As with the original group, the control group improved attendance and self-efficacy in this replication study.

Although Frayne and Latham (1987) and Latham and Frayne (1989) demonstrated that an organizational training course in self-management was effective for increasing attendance and enhancing self-efficacy, some important questions remain. Because attendance was selected by others as the target behavior for intervention, it could be argued that a basic feature of self-management was compromised, that is, the target behavior of the intervention was not self-selected. A self-management approach typically encourages individuals to choose their own goals and design their own strategies to meet them (e.g., Brigham, 1989; Watson & Tharp, 1993; Yates, 1985). Further, because Frayne and Latham (1987) and Latham and Frayne (1989) conducted individual one-on-one meetings along with their self-management training, it could be argued that these weekly meetings, not the self-management training, were responsible for the improved attendance.

The efficacy of a self-management training course as a strategy for teaching employees to deal with general work related problems has not been tested. Examining the effects of a behavioral self-management course would clarify whether it would be a viable method for employees to address many of the challenges and changes which accompany organizational change. By

allowing employees to select their problem behaviors, many work related problems presumably could be targeted, e.g., human relation issues, stress management issues, time management issues. Only by examining a broader spectrum of behaviors in the organization can the utility of the self-management training approach be evaluated.

The purpose of the present experiment was to further investigate the utility of behavioral self-management training in an organizational setting by providing employees the opportunity to choose a work related problem behavior to target for intervention. The practical significance of undertaking this study was threefold. First, it would further clarify whether training in self-management in an organizational setting is viable as a general approach for resolving work related problems. Second, it would further elucidate behaviors other than attendance amenable to self-management training in an organizational setting. Third, it would show whether a self-management training course presented in 16 hours, without weekly 30-minute one-on-one sessions, can effectively change behavior.

METHOD

Setting

The self-management training course was conducted in a mid-sized organization in the Pacific Northwest. Training was conducted in facilities at the company's headquarters during the summer and early fall.

Subjects

Subjects were solicited by sending a memo to all employees describing a training program in self-management, explaining that the training was sponsored by the organization's training and development department and offered on company time. The memo also stated that participation was voluntary but stressed that only persons who could commit themselves to eight weekly two-hour sessions should enroll in the training.

All subjects received a certificate-of-completion upon course completion. A duplicate copy of this certificate was sent to the Human Resources Department for inclusion in their personnel files.

Of the 78 individuals volunteering for the training, 50 subjects were randomly selected to participate in the study. Forty employees were randomly assigned to four training groups of ten and notified of their training dates. Of those who started the training, thirty-five employees (twenty-seven females and eight males) attended the eight-week training course and completed the

training. Five employees dropped out of the training because of work schedules and work demands that conflicted with the training meeting times. The remaining 10 employees constituted the control group. Nine control subjects completed the pre- and post-intervention questionnaires. Training was made available to participants in the control group at a later date. The human subjects protocol used in this experiment met all APA standards and was approved by the university's Institutional Review Board (IRB).

Intervention

The independent variable was an 8-week (2-hours per week) training course in self-management described in the procedures section. The self-management course was facilitated by the principal investigator.

Dependent Measures

All data collected in this study were coded and secured to insure confidentiality. Upon collecting the data it was placed in a large envelope, sealed and given to a research assistant who conducted the computer data entry.

Self-Management Projects. The baseline and intervention data from the participant's self-management projects were the primary dependent variables. Throughout the design and execution of the projects, it was emphasized that the projects were solely for the participants' own benefit. Further, the importance of accurate and objective information was stressed, and the participants were assured that the topics and results of their projects were completely confidential. The individual self-management projects were collected at the completion of each training course. These data provided a specific measure of individual behavior change.

Attendance. Because low job attendance or absenteeism is a chronic problem in organizations, costing U.S. organizations an estimated \$30 billion annually (Steers & Rhodes, 1984), it is a major concern of organizations. Attendance measures were taken to determine if self-management training would improve the trainee's attendance. Daily attendance records, from one month before the self-management training course began until the first session and also from the last session until one month after the training ended, were obtained from participants' personnel files. Attendance records for the control group were collected for the same period of time coinciding with the pre-intervention period for the first group and the post-intervention period for the fourth group.

Self-Efficacy Measure (SEM). The Self-Efficacy Measure (SEM) was designed for this study and was a three-item, five-point Likert type self-report questionnaire administered to the trainees on the first training session, during

the last training session, and again one month later. Because self-efficacy is a measure of confidence in the ability to control one's own behavior with regard to a specific task (Bandura, 1986), the questions were constructed specifically pertaining to self-management. People in the control group completed the SEM as part of a packet they received through intercompany mail. Instructions and confidentiality were explained. Control subjects completed this questionnaire twice, at pre-intervention time for the first experimental group and at post-intervention time for the fourth experimental group.

Reaction Measure. Reaction measures were taken because it was important to determine if the trainees liked the self-management training. Participant reaction is often a critical factor in the continuance of a training program (Goldstein, 1993). The Reaction Measure (RM) was a five-item, five-point Likert style questionnaire administered to the trainees during the last training session and again one month later.

Design

The research used a pre-post between groups design with replications. There were four training groups that received uniform content in self-management training at different times. The training courses were staggered; a new class started every two weeks. The control group was pre-tested at the beginning of the training for the first group and post-tested at the end of the training for the last group.

The individual self-management projects all used independent AB designs. The project targets differed for each subject and intervention procedures began at different times for each subject. The individual intervention procedures did not begin until a stable baseline had been established.

Procedures

The experimental groups met once a week for eight weeks; each session was two hours long and covered the general content presented below. Participants were asked to attend every training session, keep daily records on a self-management project, and write a final summary of their individual self-management project which was due at the eighth week meeting. Further, trainees were asked to attend a brief follow-up session one month after the completion of training in order to complete the follow-up questionnaires. One month after conducting the self-management training course, archival data were collected from the personnel department regarding employees' attendance records.

Screening

The informed consent form was reviewed and signed by all subjects prior to completing the questionnaires. All fifty subjects agreed to participate in the training and were included in the study.

Training Sessions

Generally, a great deal of the classroom time was dedicated to lecture-type presentations. However, approximately one-third of the meeting time was devoted to the discussion of self-management problems, trouble-shooting, distinguishing between behaviors controlled by consequences versus antecedents, and discussing various self-change procedures. A workbook written by the principal investigator containing self-management information, activities to be used during the training sessions, and homework assignments was distributed to the participants. Participants were asked to read it weekly and to bring it to the training sessions every meeting. A facilitator's manual accompanied the workbook and provided the script for the weekly lessons.

Week 1: *Orientation and Behavioral Definitions.* The objective of this session was: to administer the informed consent form and the Self-Efficacy Measure (SEM); to provide the student with orientation information and the underlying assumptions and rationale for the behavioral approach; and to introduce the concept of behavioral definitions.

Week 2: *Self-Monitoring.* The objective of this session was to provide the trainee with information on techniques for record keeping and measurement and to explain the self-management project. Participants were assured that successful completion of the training did not require successful resolution of their work-related target issue. Participants were advised to begin recording baseline data at this time.

Week 3: *Self-Assessment and Behavior Principles I.* The objective of this session was to present the concept of hypothesis testing and the analysis of self-recorded data and to present definitions and examples of operant learning, self-management, positive reinforcement, negative reinforcement, punishment, and extinction.

Week 4: *Intervention Strategies and Graphing the Data.* The objective of this session was to present examples of self-management intervention and to demonstrate plotting data on a graph. Many participants began intervention procedures on their self-management projects at this time.

Week 5: *Behavior Principles II.* The objective of this session was to present definitions and examples of discriminative stimuli, stimulus control, schedules of reinforcement, the Premack principle, and shaping.

Week 6: *Respondent Conditioning, Behavioral Contracts, and Maintenance.* The objective of this session was to present a definition and examples

of respondent conditioning. Behavioral contracts and maintenance of behavior change were discussed.

Week 7: Relapse Prevention and Project Write-Up. The objective of this session was to discuss the analysis and write-up of the self-change project and to discuss relapse prevention.

Week 8: Review and Wrap-Up. The objective of this session was to present a course review and to discuss the results of the self-management projects. In addition, the two post-intervention questionnaires, Self-Efficacy Measure (SEM) and the Reaction Measure (RM), were administered.

Trainees were told of the time and location of the follow-up session scheduled in four weeks. Participants were given the certificate-of-completion and a copy was sent to the human resources department for inclusion in their personnel files.

Follow-Up. One month after the final session, subjects were asked to complete the follow-up questionnaires (SEM, RM).

RESULTS

Self-Management Projects. The self-management project was comprised of a written summary of the process of targeting and executing a work-related behavior change program, accompanied by baseline and intervention data graphically displayed on a chart. Participants were asked to provide a specific definition of the behavior targeted for change, provide data gathered from self-monitoring, state the intervention strategy, and present the results and discuss the project. Of the 35 trainees who completed the training, 33 handed-in self-management projects. The two trainees who did not hand-in their self-management projects left on vacation at the end of training and reported that they did not have time to complete the summary report of the project.

A sign test was performed on the data from individual self-management projects. The sign test (Blalock, 1979) is a non-parametric test for change scores. Mean baseline and mean intervention scores were computed on the individual self-management projects. Success on the self-management project was defined as a mean change from baseline of 50% or greater in the desired direction. A percentage change criterion was used because of the wide range of dependent variables selected by the participants. The value of 50% was selected as a level that was likely to represent a meaningful change. Of the 35 trainees completing the training, 31 self-management projects were successful ($p < .001$), supporting the hypothesis that trainees would be able to improve their targeted work-related problems through self-management training.

Figures 1 and 2 represent examples from two of the self-management projects. Figure 1 shows a graph of the baseline and intervention data from a self-management project of an employee who targeted increasing the number

FIGURE 1. The Number of Compliments Delivered During Baseline and Intervention.

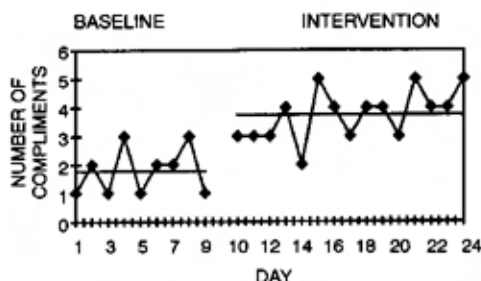
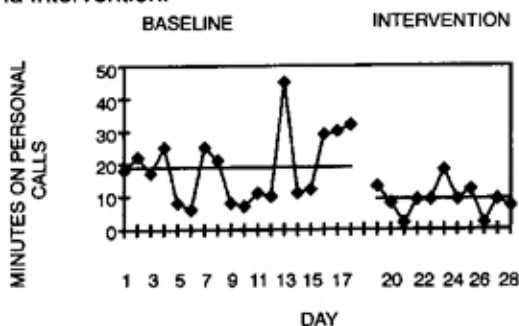


FIGURE 2. The Number of Minutes Spent on Personal Phone Calls During Baseline and Intervention.



of compliments he gave to his co-workers. Self-management intervention consisted of giving compliments to coworkers to acknowledge a job well done. At baseline, this person averaged giving two compliments per day ($M = 1.78$). During intervention, this person doubled the number of compliments he delivered, increasing to 3.73 per day.

Figure 2 shows a graph of the baseline and intervention data from a self-management project of an employee who targeted decreasing the time spent on personal phone calls. Self-management intervention consisted of ending the personal phone call after five minutes and arranging evening and weekend call backs. This person decreased the length of personal phone calls from an average of approximately nineteen minutes ($M = 18.89$) during baseline to an average of nine minutes ($M = 9.18$) a day during intervention. A complete list of the self-management projects, the behaviors measured, and the results for the thirty-three employees is presented in Table 1.

Self-Efficacy Measure (SEM). A factor analysis was conducted on the

TABLE 1

<u>Titles of the Self-Management Projects</u>	<u>Behavior Measured</u>	<u>Results: Means</u>
Social Skill Issues:		
Increasing Assertiveness	Initiating discussions with boss	Baseline: .47 responses/day Intervention: 3.21 responses/day
Increasing Assertiveness	Speaking up to boss and coworkers about excessive assignments	Baseline: .80 responses/day Intervention: 3.3 responses/day
Increasing Assertiveness	Speaking up with coworkers when confronted and in social gatherings	Baseline: 1.4 responses/day Intervention: 3.14 responses/day
Increasing Assertiveness	Saying "no" excessive requests	Baseline: .67 responses/day Intervention: 1.5 responses/day
Increasing Assertiveness	Speaking up when confronted	Baseline: 0 responses/day Intervention: 2.5 responses/day
Increasing Assertiveness	Avoidance responses to work assignment requests	Baseline: 1.17 responses/day Intervention: .25 responses/day
Increasing Question Asking	Questions asked of conversant in social situations	Baseline: .6 questions/day Intervention: 8.45 questions/day
Increasing Question Asking	Questions asked to clarify work assignments	Baseline: 4.2 questions/day Intervention: 7.29 questions/day
Increasing Paraphrases	Paraphrasing when work assignment ambiguous	Baseline: 3.6 paraphrases/day Intervention: 3.8 paraphrases/day
Increasing Positive Comments	Pleasant greetings and responses to staff	Baseline: 1.33 comments/day Intervention: 2.8 comments/day
Increasing Positive Comments	Compliments and thanks delivered to coworkers	Baseline: 0 comments/day Intervention: .86 comments/day
Increasing Positive Comments	Compliments delivered to staff	Baseline: 1.78 comments/day Intervention: 3.73 comments/day
Increasing Positive Comments	Complimenting problem employee for good work	Baseline: 2.8 comments/day Intervention: 5.4 comments/day
Decreasing Socializing	Time spent socializing on non-work issues	Baseline: 19.54 min/day Intervention: 7.52 min/day
Decreasing Personal Phone Calls	Time spent on personal phone calls	Baseline: 18.89 min/day Intervention: 9.18 min/day
Decreasing Negative Responses to Work Issues	Negative responses to work situations	Baseline: 1.33 responses/day Intervention: .38 responses/day
Decreasing Negative Responses to Coworkers	Ignoring/walking away from complaining coworkers	Baseline: 1.4 responses/day Intervention: 3.87 responses/day

TABLE 1 (continued)

<u>Titles of the Self-Management Projects</u>	<u>Behavior Measured</u>	<u>Results: Means</u>
Scheduling/Organizing Issues:		
Increasing Filing	Time spent reorganizing files	Baseline: 0 min/day Intervention: 22.44 min/day
Increasing Filing	Time spent filing	Baseline: 10.33 min/day Intervention: 25 min/day
Increasing Computer Time	Time on computer learning programs	Baseline: 4.29 min/day Intervention: 23.18 min/day
Increasing Computer Time	Time practicing computer skills	Baseline: 0 min/day Intervention: 12.27 min/day
Increasing Use of Daily Organizer	Entries and prioritization of work in organizer	Baseline: .7 entries/day Intervention: 2.5 entries/day
Increasing Use of Daily Organizer	Entries in organizer	Baseline: .6 entries/day Intervention: 4.86 entries/day
Increasing Completion of Unfinished Work	Time spent on work backlog	Baseline: 0 min/day Intervention: 46 min/day
Increasing Writing	Time spent writing department procedures	Baseline: 45 min/day Intervention: 162.5 min/day
Increasing Phone Calls Returned	Percentage of phone calls returned	Baseline: 45% returned/day Intervention: 87% returned/day
Health/Self-Improvement Issues:		
Increasing Exercise	Time spent exercising	Baseline: 17.14 min/day Intervention: 17.22 min/day
Increasing Exercise	Time spent exercising	Baseline: 0 min/day Intervention: 6.65 min/day
Increasing Water Consumption	Cups of water consumed	Baseline: .54 cups/day Intervention: 2.83 cups/day
Increasing Recording for Medical Problems	Recording food, medication, time in notebook	Baseline: 1 recording/day Intervention: 3.08 recordings/day
Increasing the Completion of Domestic Chores	Tasks completed	Baseline: 2.8 tasks/day Intervention: 7.25 tasks/day
Decreasing Snacking	Snacks eaten	Baseline: 1.13 snacks/day Intervention: .25 snacks/day
Decreasing Fat Gram Consumption	Fat grams consumed	Baseline: 65.89 grams/day Intervention: 41.82 grams/day

three-item SEM Cronbach's alpha for the SEM was .74. Mean self-efficacy scores are presented in Table 2. The Self-Efficacy Measure is presented in Table 3.

A one-way ANOVA was computed across groups at pre-intervention on the Self-Efficacy Measure (SEM); significant differences were not found. To

TABLE 2. Means and Standard Deviations for Questionnaires and Attendance

	GROUP 1			GROUP 2			GROUP 3			GROUP 4			CONTROL GROUP	
	PRE	POST	F-UP	PRE	POST	F-UP	PRE	POST	F-UP	PRE	POST	F-UP	PRE	POST
	M/SD	M/SD	M/SD	M/SD	M/SD	M/SD	M/SD	M/SD	M/SD	M/SD	M/SD	M/SD	M/SD	M/SD
SELF-EFFC	11.88 (1.55)	13.00 (1.31)	12.62 (1.30)	11.56 (1.42)	12.56 (1.13)	12.33 (1.12)	11.56 (2.01)	12.78 (1.30)	12.67 (1.12)	10.33 (1.32)	11.78 (1.92)	12.00 (1.41)	11.78 (1.99)	11.33 (2.34)
RE-ACT	--	22.37 (4.27)	21.13 (4.12)	--	21.56 (2.07)	22.11 (2.42)	--	22.78 (2.22)	23.44 (1.24)	--	21.56 (4.98)	22.56 (3.17)	--	--
ATT	19.88 (.36)	19.75 (.71)	--	19.78 (.67)	20.00 (.00)	--	20.00 (.00)	19.67 (.50)	--	20.00 (.00)	19.89 (.33)	--	19.89 (.33)	20.00 (.00)

TABLE 3. Self-Efficacy Measure

ID# _____

For the following questions, please circle the number that indicates how you feel *right now*. This questionnaire is entirely confidential and your identity is protected. Your responses will *not* be used for performance evaluation purposes. It is very important that you be completely honest.

1. Indicate your ability to effectively change/manage a routine work-related problem:

1 2 3 4 5
poor average excellent

2. How would you rate your capability at finding solutions to problems in stressful work situations?

1 2 3 4 5
poor average excellent

3. Given the performance objectives of your specific job, how would you rate your accomplishments?

1 2 3 4 5
poor average excellent

assess whether the subjects in the experimental groups differed from the subjects in the control group at pre-intervention and post-intervention on the Self-Efficacy Measure, data from the subjects from the four experimental groups were pooled and compared to the data from the subjects in the control group. A repeated-measures MANOVA (2×2) revealed a significant interaction effect, $F(1,42) = 8.15, p < .01$. Responses to the questions (e.g., "If a troublesome situation arises at work, how do you feel about your ability to resolve the problem?") revealed that the subjects in the experimental group ($M_{\text{post, exp}} = 1.2$) improved significantly more than subjects in the control group ($M_{\text{post, con}} = -.44$) at post-intervention.

To assess whether the four experimental groups differed at pre-intervention, post-intervention, and follow-up on the Self-Efficacy Measure, a repeated-measures MANOVA (4×3) was computed. The multiple dependent variables entered into the MANOVA were the individual SEM questions. Significant group differences were not found. The MANOVA revealed a significant main effect of time on the Self-Efficacy Measure, $F(2,62) = 13.29, p < .001$. Responses indicated that all subjects expressed more confidence in resolving work-related problems over time. Post hoc comparisons revealed that significant differences existed from pre-intervention ($M_{\text{pre}} = 11.31$) to post-intervention ($M_{\text{post}} = 12.51$), $t = -4.33, p < .001$ and that this confidence in resolving work-related problems persisted at follow-up ($M_{\text{f-up}} = 12.40$).

Attendance. Mean days attended out of possible 20 days are presented in Table 2. Subjects in the four experimental groups had excellent attendance records during the pre-intervention period ($M_{\text{pre, exp}} = 19.91$) as did subjects in the control group ($M_{\text{pre, con}} = 19.89$). Attendance remained high during the post-intervention period for both groups ($M_{\text{post, exp}} = 19.82$; $M_{\text{post, con}} = 20.00$).

Reaction Measure. Mean scores for the Reaction Measure are presented in Table 2. The Reaction Measure is presented in Table 4. Cronbach's alpha for the five-item Reaction Measure was .89. To assess whether the subjects in the four experimental groups differed at post-intervention and at follow-up on the Reaction Measure, a repeated-measures MANOVA (4×2) was computed. Significant differences were not found between groups or over time. Responses to the questions (e.g., "The training I received helped me overcome obstacles preventing me from solving problems at work") indicated that the subjects in all the groups expressed high ratings ($M_{\text{post}} = 22.06$) for the training and that their positive reaction remained high at follow-up ($M_{\text{f-up}} = 22.34$).

DISCUSSION

The major prediction that self-management training would assist employees in resolving a variety of work problems was supported. More specifi-

Self-Management of Work-Related Problems

The self-management model holds that principles of behavior analysis can be utilized to improve an individual's personally identified problem situation (Brigham, 1989). This study provided a step towards further elucidating target behaviors and populations amenable to the self-management approach. In this experiment, the majority of trainees ($n = 26$) targeted specific on-the-job issues. The behaviors targeted for change were diverse, but generally fell into three broad categories: (1) Job-related social skills ($n = 17$), (2) scheduling/organizational skills related to the job ($n = 9$), and (3) general health/self-improvement skills ($n = 7$). Identifying appropriate intervention goals as well as suitable target populations are important objectives to both self-management and training researchers (e.g., Brigham, 1989; Goldstein, 1993; Tannenbaum & Yukl, 1992).

Anecdotal information regarding a few employees' projects is noteworthy. Although most employees targeted issues directly related to the job, a few employees confidentially revealed that they chose to target problems indirectly related to work or related to their personal life. While these may not appear immediately relevant to work, their consequences on work related performance can be significant. For example, one employee who worked in a private office space disclosed that considerable time was spent each day working on cross-word puzzles instead of working on job assignments. This employee chose to improve time management skills.

Characteristics of Participants

The near perfect attendance displayed by both groups raises an interesting issue. Clearly, these participants differed on attendance from those in the Frayne and Latham (1987) and the Latham and Frayne (1989) studies. Possibly, employees who took their jobs seriously and attended work regularly signed up for the training. Supporting this view is the very high percentage of participants who completed the full eight weeks of training and turned in self-management projects. When the five people who had to withdraw because of changes in work assignments are removed, 33 of the 35 completed self-management projects. Most likely, these participants were well motivated and high functioning employees. Thus, the present results are limited to this type of employee.

Considering the high attendance of both groups, the finding that after training subjects in the experimental groups reported increased self-efficacy over control subjects is possibly important. It suggests that self-management training made competent employees feel better about their jobs and more self-confident about their ability to solve work related problems. Such increased confi-

dence as indicated by self-efficacy measures has been linked elsewhere with positive organizational outcomes (e.g., Frayne & Latham, 1987).

Reaction to Training

Those who participated in the training program were enthusiastic about their participation. This was consistent with Frayne and Latham's (1987) and Latham and Frayne's (1989) finding on self-management training. This conclusion was supported by quantitative analysis of the ratings and is augmented by qualitative reactions. For example, one such positive reaction is illustrated by a memo sent to the Human Resources Department by a trainee upon training completion. The employee wrote, "At a time when too many people either lack the skills or simply refuse to take responsibility for changing their lives, this kind of class seems especially relevant. The class participants are now equipped to create a more positive and productive work environment instead of relying on someone else to do it." In addition, personal communication with the director of training and the manager of the Human Resources Department further revealed favorable reactions and interest in continuing self-management training. Apparently several department managers had contacted the Human Resources Department with the intention of enrolling other employees in the self-management training.

SUMMARY AND CONCLUSIONS

The present research suggests that self-management training is a viable approach for improving work related problems. Employees were able to ameliorate self-selected problems by writing out a plan, systematic behavioral self-monitoring and environmental analysis, and implementing an intervention. The fact that employees took personal responsibility for bringing about the change differentiates the self-management approach from other organizational training approaches (Latham, 1989).

This experiment also provides an approximation in the development procedures for evaluation in training programs (Goldstein, 1993; Tannenbaum & Yukl, 1992). As stated earlier, rarely, if ever, do organizations collect information determining the utility of their instructional programs. This study used an experimental design and provided information regarding the effect of training on several dependent variables.

Additional studies using self-management procedures are required to determine if this general approach will be effective in helping employees in other organizations. Important next steps include the testing of the self-management approach with a general population in other organizations and fol-

lowing participants in their future projects to determine how well their new patterns of behavior are transferred, generalized and maintained.

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