ROI INSTITUTE®

MEASURING ROI IN STRESS

by Jack J. Phillips, Ph.D.

Measuring ROI in Stress Management

Midwest Electric Inc.

This case study describes how the need for a stress management program was determined and how an organization development solution was evaluated through ROI. The comprehensive approach includes the use of the StressMap® to measure learning, as well as the use of control groups to isolate the effects of the program. A description of how the ROI was measured is included. The specific forms, issues, and processes make this a practical case study for organizations interested in a comprehensive, balanced approach to evaluation.

BACKGROUND

Midwest Electric Inc. (MEI) is a growing electric utility serving several midwestern states. Since deregulation of the industry, MEI has been on a course of diversification and growth. Through a series of acquisitions, MEI has moved outside its traditional operating areas and into several related businesses.

MEI had been experiencing significant workplace changes as it transformed from a bureaucratic, sluggish organization into a lean, competitive force in the marketplace. These changes placed tremendous pressure on team members to develop multiple skills and perform additional work. Employees, working in teams, had to constantly strive to reduce costs, maintain excellent quality, boost productivity, and generate new and efficient ways to supply customers and improve service.

As with many industries in a deregulated environment, MEI detected symptoms of employee stress. The safety and health function in the company suggested that employee stress lowered productivity and reduced employee effectiveness. Stress was also considered a significant employee health risk. Research had shown that high levels of stress were commonplace in many work groups and that organizations were taking steps to help employees and work groups reduce stress in a variety of ways. The vice president of human resources at MEI asked the safety and health department, with the help of the training department, to develop a program for work groups to help them alleviate stressful situations and deal more productively and effectively with job-induced stress.

This case was prepared to serve as a basis for discussion rather than to illustrate either effective or ineffective administrative and management practices. The authors, dates, places, names, and organizations may have been disguised at the request of the author or organization.

Needs Assessment

Because of its size and sophisticated human resource systems, MEI had an extensive database on employee-related measures. MEI prided itself as being one of the leaders in the industry in human resources issues. Needs assessments had been routinely conducted at MEI, and the HR vice president was willing to allow sufficient time for an adequate needs assessment before proceeding with the stress management program.

The overall purpose of the needs assessment was to identify the causes of a perceived problem. The needs assessment would:

- Confirm that a problem did exist and provide an assessment of the actual impact of this problem.
- Uncover potential causes of the problem within the work unit, company, and environment.
- Provide insight into potential remedies to correct the problem.

The sources of data for the needs assessment included company records, external research, team members, team leaders, and managers. The assessment began with a review of external research that identified the factors usually related to high stress and the consequences of high stress in work groups. The consequences uncovered specific measures that could be identified at MEI.

This external research led to a review of several key data items in company records, including attitude surveys, medical claims, employee assistance plan (EAP) use, safety and health records, and exit interviews. The attitude survey data represented the results from the previous year and were reviewed for low scores on the specific questions that could yield stress-related symptoms. Medical claims were analyzed by codes to identify the extent of those related to stress-induced illnesses. EAP data were reviewed to determine the extent to which employees were using provisions and services of the plan perceived to be stress-related. Safety records were reviewed to determine if specific accidents were stress-related or if causes of accidents could be traced to high levels of stress. In each of the above areas, the data were compared with data from the previous year to determine whether stress-related measures were changing. Also, where available, data were compared with expected norms from the external research. Finally, exit interviews for the previous six months were analyzed to determine the extent to which the stress-related situations were factors in an employee's decision to voluntarily leave MEI.

During MEI's needs assessment process, a small sample of employees was interviewed (10 team members) to discuss their work-life situations and to uncover symptoms of stress at work. Also, a small group of managers (five) was interviewed with the same purpose. To provide more detail about this input, a 10 percent sample of employees received a questionnaire to explore the same issues. MEI had 22,550 employees with 18,220 non-supervisory team members.

Summary of Findings

The needs assessment process uncovered several significant findings:

- There was evidence of high levels of stress in work groups, caused by MEI's deregulation, restructuring, and job changes – in essence, the change in the nature of work-induced, high levels of stress in most work groups.

- Stress had led to a deterioration in several performance measures, including medical costs, short-term disability, withdrawals (absenteeism, turnover), and job satisfaction.
- Employees were often not fully aware of stress factors and the effect stress had on them and their work.
- Employees had inadequate skills for coping with stress and adjusting to, managing, and eliminating highly stressful situations.
- Managers had more insight into the causes of stress but did not have the skills or mechanisms to deal with most stressful situations.

PROGRAM PLANNING AND DESIGN

Several inherent factors about work groups and data at MEI influenced the program and its subsequent evaluation. MEI was organized around teams, and groups were not usually identical. However, many teams had similar performance measures. The HR database was rich with a variety of measures and with data about employees and work unit factors. Because of the team environment and the important role of the team leader/manager, the program to reduce stress needed to involve the management group in a proactive way. Any efforts to reduce stress needed to shift much of the responsibility to participants and therefore reduce the amount of time off the job. Job pressures in the deregulated environment provided fewer off- the-job opportunities for meeting and development activities.

Program Design

Although several approaches could have feasibly satisfied this need, four issues surfaced that influenced program design:

- A skills and knowledge deficiency existed, and some type of learning event was necessary.
- Several stress management programs were commercially available, which could prevent developing a new program from scratch.
- Managers needed to be involved in the process to the greatest extent possible.
- Because of the concerns about time away from the job, the actual classroom/formal meeting activities needed to be limited to one or two days.

With this in mind, the program outlined in Figure 1 was designed to meet this important need.

Why ROI?

HR programs usually targeted for a Level 5 ROI evaluation are those perceived to be adding significant value to the company, and closely linked to the organizational goals and strategic objectives. The evaluation is then pursued to confirm the added value. Based on the results of the analysis, these programs may be enhanced, redesigned, or eliminated if the results are insufficient. Stress management can be different. If the results are inadequate, the program may not be discontinued but may be altered for future sessions, particularly if behavior changes are not identified in the Level 3 evaluation.

Figure 1. Stress Management for Intact Work Teams

Departments or work groups of 10 or more people who are committed to improving the satisfaction and effectiveness of their teams will benefit by this more comprehensive approach to stress. The process uses the StressMap® tool as the starting point.

Managers and representative employees will participate in focus groups to identify work satisfiers and distressors, and then will collaborate on alleviating systemic sources of stress.

What Group Members Will Learn

- How to identify sources of stress and their personal response to them.
- That individuals have the ability to make a difference in their lives.
- How to take the first steps to enhance personal health and overall performance.
- How to access resources, internally and externally, to help teach personal goals.

What the Group/Manager Will Learn

- Group profile of sources of stress and response patterns.
- Additional information about sources of both work distress and work satisfaction obtained through focus groups and themes identified when possible.
- New stress reduction skills specific to the needs of the group.
- Development of recommendations for next steps to improve work satisfaction and productivity.

Highlights

- Through completion of a comprehensive self-assessment tool called StressMap®, individuals will be able to immediately score themselves on 21 stress scales dealing with work and home life, as well as learn about their preferred coping styles and the thinking and feeling patterns that impact their ability to manage stress. Anonymous copies of each member's StressMap® will be compiled to create a group score.
- A 3–4 hour StressMap® debriefing session designed to help individuals better interpret their scores will be followed by a four-hour module suited to the needs of the group (such as situation mastery, changing habits, creating climate for agreement). Total of one day.

Pre-course Requirements

- Management commitment to the process is essential. Employees will complete the StressMap® tool and submit a confidential copy.

Length and Format

- Lead time of three to four weeks minimum for preparation and communication.
- Consultant on-site 1-1/2 days.
- Initial follow-up one to two weeks later on-site or by phone to senior management (Subsequent follow-up on impact of the initiative to occur as negotiated with three to four hours of telephone follow-up included).

Cost

- Approximately $XXXX (plus taxes) US per group of 8 to 25; $XX US per set of materials. Travel and living expenses for consultant are additional.

At MEI, the stress management program was chosen for an ROI evaluation for two reasons. First, the HR department was interested in the accountability of all programs, including stress management. Second, positive results would clearly show management that these types of programs, which are preventive in nature, could significantly contribute to the bottom line when implemented and supported by management.

Because the program could have been expensive if applied to the entire company, it was decided to try it on a limited basis to determine its success and then to either adjust the program, discontinue the program, or expand the program to other areas in MEI. The evaluation methodology provided the best information to make that decision.

Data Collection Plan

Figure 2 shows the data collection plan for the stress management program. Broad objectives were established for Levels 1, 2, 3, and 4 data collection. The data collection plan was comprehensive but necessary to meet all of requirements at each of the four levels of data collection. The timing and responsibilities were detailed. For measuring learning, three tools were used. The StressMap® was one measure of learning in the awareness category. Completion of the StressMap® provided insight into stress factors and stress signals. In addition, built into the one-day program was an end-of-course self-assessment to measure learning. Finally, the facilitator had a brief checklist to indicate the extent of learning for the group.

At Level 3 data collection, the completion of the 21-day plan provided some evidence that the participants had changed behavior to reduce stress. A conference call was planned with the facilitator, team manager, and the team 21 days after the course. This provided a review of issues and addressed any concerns or barriers to further implementation. A follow-up session was planned with the team, co-facilitated by the manager and facilitator, approximately one to two weeks after the one-day program, to discuss changes in behavior and to address barriers. To determine the extent to which the participants were using internal or external resources to address stress related problems, records of those requests were scheduled to be reviewed for approximately six months.

Finally, a detailed follow-up questionnaire was planned for six months after the program to collect both Levels 3 and 4 data. This questionnaire was intended to capture sustained behavior changes, indicate barriers to improvement, and identify impact measures for both groups and individuals. Group records were expected to reveal changes in medical costs, absenteeism, turnover, and productivity six months after the program. In addition, increased job satisfaction was to be determined from the follow-up questionnaire, which would be administered six months after the program (the same questionnaire described earlier).

ROI Analysis Plan

Figure 3 shows the ROI analysis plan. For most data items, the method to isolate the effects of the program would be obtained in a control group arrangement in which the performance of the group involved in the program would be compared with the performance of a carefully matched companion control group. In addition, for most of the data items, trendline analysis was scheduled for use. Historical data were projected in a trend and compared with the actual data to determine the impact of the program.

The methods of converting data involved a variety of approaches, including tabulating direct costs, using standard values, using external data, and securing estimates from a variety of target audiences. The cost categories represented fully loaded costs for the program. Expected intangible benefits from the program were based on the experience of other organizations and other stress reduction programs. The communication target audience consisted of six key groups ranging from corporate and business unit managers to participants and their immediate supervisors.

Figure 2. Data Collection Plan

Program: Stress Management for Intact Groups **Responsibility:**_____ **Date:** _____

Level	Broad Program Objective(s)	Data Collection Method	Timing of Data Collection	Responsibilities for Data Collection
I Reaction, Satisfaction, andPlanned Actions	• Positive Reaction • Suggestions for Improvements • Planned Action	• Standard Questionnaire • 21-Day Action Plan	• End of 1-Day Course • End of Course	• Facilitator • Facilitator
II Learning	• Personal Stress Awareness • Coping Strategies • Stress Reduction Skills	• StressMap® • Self-Assessment • Facilitator Assessment	• Prior to Course • End of Course • End of Course	• Facilitator • Facilitator • Facilitator
III Application	• Change Behavior to Reduce Stress • Develop Group Action Plan and Communicate to Group • Access Internal/External Resources • Application of Skills/ Knowledge	• Completion of 21-Day Plan • Conference Call • Follow-Up Session • Review Records • Follow-Up Questionnaire	• 21 Days After Course • 21 Days After Course • 1-2 Weeks After 1-Day Course • 6 Months After Course • 6 Months After Course	• No Report • Facilitator • Facilitator/Manager • Program Coordinator • External Consultant
IV Business Impact	• Reduce Medical Care Costs • Reduce Absenteeism • Reduce Turnover • Increase Productivity • Increase Job Satisfaction	• Group Records • Group Records • Group Records • Group Records • Follow-Up Questionnaire	• 6 Months After Course • 6 Months After Course • 6 Months After Course • 6 Months After Course • 6 Months After Course	• Program Coordinator • Program Coordinator • Program Coordinator • Program Coordinator • External Consultant

Figure 3. Evaluation Strategy: ROI Analysis

Program: Stress Management for Intact Groups **Responsibility:**_____ **Date:** _____

Data Items (Usually Level 4)	Methods of Isolating the Effects of the Program	Methods of Converting Data	Cost Categories	Intangible Benefits	Other Influences/ Issues	Communication Targets
Medical Health Care Costs—Preventable Claims	• Control Group Arrangement	• Direct Costs	• Needs Assessment • Program Development • Program Materials • Participant Salaries/ Benefits • Participant Travel (if applicable) • Facilitator • Meeting Facilities (Room, Food, Beverages) • Program Coordinator • Training and Education Overhead • Evaluation Costs	• Improved Communication Time Savings • Fewer Conflicts • Teamwork • Improvement in Problem Solving	• Match Groups Appropriately • Limit Communications with Control Group • Check for Team- Building Initiatives During Program • Monitor Restructuring Activities During Program • 6 Groups Will Be Monitored	• Program Participants • Intact Team/ Manager • Senior Manager/ Management in Business Units • Training and Education Staff • Safety and Health Staff • Senior Corporate Management • Prospective Team Leaders
Absenteeism	• Control Group Arrangement • Trend line Analysis	• Standard Value • Supervisor Estimation				
Employee Turnover	• Control Group • Trend line Analysis	• External Study—Cost of Turnover in High Tech Industry • Management Review				
Employee Job Satisfaction	• Control Group Arrangement • Management Estimation	• Management Estimation				
Employee/Group Productivity	• Control Group Arrangement • Trend line Analysis	• Standard Values • Management Estimation				

Management Involvement

Management involvement was a key issue from the beginning and was integrated throughout the design of the program. The manager served as the team leader for the program, although a facilitator provided assistance and conducted a one-day workshop.

Figure 4 illustrates the tool used for identifying initial problems as the work group began using the stress management program. With this brief questionnaire, the manager identified specific problem areas and provided appropriate comments and details. This exercise allowed program planning to focus on the problems and provided guidance to the facilitator and the team.

Figure 5 illustrates manager responsibility and involvement for the process. This handout, provided directly to the managers, details 12 specific areas of responsibility and involvement for the managers. Collectively, initial planning, program design, and detailing of responsibilities pushed the manager into a higher-profile position in the program.

Control Group Arrangement

The appropriateness of control groups was reviewed in this setting. If a stress reduction program was needed, it would be appropriate and ethical to withhold the program for certain groups while the experiment was being conducted. It was concluded that this approach was appropriate because the impact of the planned program was in question. Although it was clear that stress-induced problems existed at MEI, there was no guarantee that this program would correct them. Six control groups were planned. The control group arrangement was diligently pursued because it represented the best approach to isolating the effects of the program, if the groups could be matched.

Figure 4. Manager Input: Potential Area for Improvement Stress Reduction for Intact Work Teams

Before you begin the stress reduction program for your team, it is important to capture specific concernsthat you have about your work group. Some of these concerns may be stress related and therefore may be used to help structure specific goals and objectives for your team.

For each of the following potential areas of improvement, please check all that apply to your group. Add others if appropriate. Next to the item, provide specific comments to detail your concerns and indicate if you think this concern may be related to excessive stress.

- Employee Turnover. Comments:
- Employee Absenteeism. Comments:
- Employee Complaints. Comments:
- Morale/Job Satisfaction. Comments:
- Conflicts with the Team. Comments:
- Productivity. Comments:
- Quality. Comments:
- Customer Satisfaction. Comments:
- Customer Service. Comments:
- Work Backlog. Comments:
- Delays. Comments:
- Other Areas. List and Provide Comments:

Figure 5. Manager Responsibility and Involvement Stress Management for Intact Work Teams

With the team approach, the team manager should:

1. Have a discussion with the facilitator to share reasons for interest in stress reduction and the desired outcome of the program. Gain a greater understanding of the StressMap® and the OD approach. Discuss recent changes in the work group and identify any known stressors. This meeting could be held with the senior manager or the senior management team.
2. Identify any additional work group members for the consultant to callto gather preliminary information.
3. Appoint a project coordinator, preferably an individual with good organizing and influencing skills, who is respected by the work group.
4. Send out a letter with a personal endorsement and signature, invitingthe group to participate in the program.
5. Allocate eight hours of work time per employee for completion of StressMap® and attendance at a StressMap® debriefing and customized course.
6. Schedule a focus group after discussing desired group composition withthe facilitator. Ideal size is 10 to 22 participants. The manager should not attend.
7. Attend the workshop and ensure that direct reports attend.
8. Participate in the follow-up meeting held after the last workshop, either in per- son or by conference call. Other participants to includeare the HR representative for your area, the Safety and Health representative for your area, and your management team. The facilitator will provide feedback about the group issues and make recommendations of actions to take to reduce work stress or increase work satisfaction.
9. Commit to an action plan to reduce workplace distress and/or increase work- place satisfaction after thoughtfully considering feedback.
10. Communicate the action plan to your work group.
11. Schedule and participate in a 21-day follow-up call with the consultant and yourwork group.
12. Work with your team (managers, HR, safety and health, facilitator) to evaluatethe success of the action plan and determine the next steps.

Several criteria were available for group selection. Figure 6 shows the data collection instrument used to identify groups for a control group arrangement. At the first cut, only those groups that had the same measures were considered (that is, at least 75 percent of the measures were common in the group). This action provided an opportunity to compare performance in the six months preceding the program.

Next, only groups in the same function code were used. At MEI, all groups were assigned a code depending on the type of work, such as finance and accounting or engineering. Therefore, each experimental group had to be in the same code as the matched control group. It was also required that all six groups span at least three different codes.

Two other variables were used in the matching process: group size and tenure. The number of employees in the groups had to be within a 20 percent spread, and the average tenure had to be within a two-year range. At MEI, as with many other utilities, there was a high-average tenure rate.

Although other variables could have been used to make the match, these five were considered the most influential in the outcome. In summary, the following criteria were used to select the two sets of groups:

- Same measures of performance
- Similar performance in the previous six months
- Same function code
- Similar size
- Similar tenure

The six pairs of groups represented a total level of employment of 138 team members and six managers for the experimental groups, and 132 team members and six managers for the control groups.

PROGRAM RESULTS

Questionnaire Response

A follow-up questionnaire, Figure 7, served as the primary data collection instrument for participants. A similar, slightly modified instrument was used with the managers. In all, 73 percent of the participants returned the questionnaire. This excellent response rate was caused, in part, by a variety of actions taken to ensure an appropriate response rate. Some of the most important actions were:

- The team manager distributed the questionnaire and encouraged participants to return it to the external consulting firm. The manager also provided a follow-up reminder.
- A full explanation of how the evaluation data would be used was provided to participants.
- The questionnaire was reviewed during the follow-up session.
- Two types of incentives were used.
- Participants were promised a copy of the questionnaire results.

Application Data

The application of the program was considered an outstanding success with 92 percent of the participants completing their 21-day action plan. A conference call at the end of the 21 days showed positive feedback and much enthusiasm for the progress made. The follow-up session also demonstrated success because most of the participants had indicated changes in behavior. The most comprehensive application data came from the six-month questionnaire administered to participants and managers. The following skills and behaviors were reported as achieving significant success:

- Taking full responsibility for one’s actions.
- Identifying or removing barriers to change behavior.
- Applying coping strategies to manage stressful situations.
- Responding effectively to conflict.
- Creating a positive climate.
- Acknowledging a complaint properly.

Coworkers were the most frequently cited group in which relationships had improved through use of the skills, with 95 percent indicating application improvement with this group.

Figure 6. Manager Input: Group Measures and Characteristics Stress Management for Intact Work Teams.

To measure the progress of your team, a brief profile of performance measures for employees and your work group is needed. This information will be helpful to determine the feasibility of using your group in a pilot study to measure the impact of the stress management program. Changes in performance measures will be monitored for six months after the program.

Listed below are several categories of measures for your work group. Check the appropriate category and please indicate the specific measure under the description. In addition, indicate if it is a group measure or an individual measure. If other measures are available in other categories, please include them under "Other."

Key Performance Measures_____**Dept** _____

Performance Category	Measure	Description of Measure	Group Measure	Individual Measure
Productivity	1. 2.		☐ ☐	☐ ☐
Efficiency	3. 4.		☐ ☐	☐ ☐
Quality	5. 6.		☐ ☐	☐ ☐
Response Time	7. 8.		☐ ☐	☐ ☐
Cost Control/ Budgets	9. 10.		☐ ☐	☐ ☐
Customer Satisfaction	11. 12.		☐ ☐	☐ ☐
Absenteeism	13.		☐	☐
Turnover	14.		☐	☐
Morale/ Job Satisfaction	15. 16.		☐ ☐	☐ ☐
Other (please specify)	17. 18. 19. 20.		☐ ☐ ☐ ☐	☐ ☐ ☐ ☐

Group Characteristics

Average tenure for group:_____years
Average job grade for group: _____
Number in group: _____

Group function code: _____ Average age: _____ Average educational level: _____

Figure 7. Stress Management for Intact Work Teams Impact Questionnaire

Check one: ☐ Team Member ☐ Team Leader/Manager

1. Listed below are the objectives of the stress management program. After reflecting on this program, please indicate the degree of success in meeting the objectives.

OBJECTIVES	Failed	Limited Success	Generally Successful	Completely Successful
PERSONAL • Identify sources of stress in work, personal, and family worlds • Apply coping strategies to manage stressful situations • Understand to what degree stress is hampering your health and performance • Take steps to enhance personal health and overall performance • Access internal and external resources to help reach personal goals				
GROUP • Identify sources of stress for group • Identify sources of distress and satisfaction • Apply skills to manage and reduce stress in work group • Develop action plan to improve work group effectiveness • Improve effectiveness and efficiency measures for work group				

2. Did you develop and implement a 21-day action plan?

   □ Yes □ No

   If yes, please describe the success of the plan. If not, explain why. _____

   _____

3. Please rate, on a scale of 1–5, the relevance of each of the program elements to your job, with (1) indicating no relevance, and (5) indicating very relevant

   _____ StressMap® Instrument _____ Action Planning

   _____ Group Discussion _____ Program Content

4. Please indicate the degree of success in applying the following skills and behaviors as a result of your participation in the stress management program.

	1	2	3	4	5	
	No	Little	Some	Significant	Very Much	No Opportunity To Use Skills
a) Selecting containable behavior for change						
b) Identifying measures of behavior						
c) Taking full responsibility for your actions						
d) Selecting a buddy to help you change behavior						
e) Identifying and removing barriers to changing behavior						
f) Identifying and using enablers to help change behavior						
g) Staying on track with the 21-day action plan						

Figure 7. *(continued)*

h) Applying coping strategies to manage stressful situations						
i) Using control effectively						
j) Knowing when to let go						
k) Responding effectively to conflict						
l) Creating a positive climate						
m) Acknowledging a complaint properly						
n) Reframing problems						
o) Using stress talk strategies						

5. List (3) behaviors or skills you have used most as a result of the stress management program.

_____

_____

_____

6. When did you first use one of the skills from the program?
   _____ During the program
   _____ Day(s) after the program (indicate number)
   _____ Week(s) after the program (indicate number)

7. Indicate the types of relationships in which you have used the skills.
   □ Coworkers
   □ Manager or supervisor
   □ MEI employee in another function
   □ Spouse
   □ Child
   □ Friend
   □ Other (list):

PERSONAL CHANGES

8. What has changed about your on-the-job behavior as a result of this program? (positive attitude, fewer conflicts, better organized, fewer outbursts of anger, etc.)

_____

_____

_____

9. Recognizing the changes in your own behavior and perceptions, please identify any specific personal accomplishments/improvements that you can link to this program. (time savings, project completion, fewer mistakes, etc.)

10. What specific value in U.S. dollars can be attributed to the above accomplishments/improvements? Although this is a difficult question, try to think of specific ways in which the above improvements can be converted to monetary units. Use one year of data. Along with the monetary value, please indicate the basis of your calculation.
    $ _____
    Basis _____

_____

11. What level of confidence do you place in the above estimations? (0% = No Confidence, 100% = Certainty)_____%

12. Other factors often influence improvements in performance. Please indicate the percent of the above improvement that is related directly to this program._____%
    Please explain. _____

_____

_____

Figure 7. *(continued)*

GROUP CHANGES

13. What has changed about your work group as a result of your group's participation in this program? (interactions, cooperation, commitment, problem solving, creativity, etc.)

    _____
    _____
    _____

14. Please identify any specific group accomplishments/improvements that you can link to the program. (project completion, response times, innovative approaches)

    _____
    _____
    _____

15. What specific value in U.S. dollars can be attributed to the above accomplishments/improvements? Although this is a difficult question, try to think of specific ways in which the above improvements can be converted to monetary units. Use one year of values. Along with the monetary value, please indicate the basis of your calculation.
    $ _____
    Basis _____
    _____
    _____

16. What level of confidence do you place in the above estimations? (0% = No Confidence, 100% = Certainty)_____%

17. Other factors often influence improvements in performance. Please indicate the percent of the above improvement that is related directly to this program._____%

    _____
    _____
    _____

18. Do you think this program represented a good investment for MEI?
    □ Yes □ No
    Please explain. _____
    _____
    _____
    _____

19. What barriers, if any, have you encountered that have prevented you from using skills or knowledge gained in this program? Check all that apply. Please explain, if possible.
    - □ Not enough time
    - □ Work environment does not support it
    - □ Management does not support it
    - □ Information is not useful (comments)
    - □ Other _____

20. Which of the following best describes the actions of your manager during the stress management program?
    - □ Very little discussion or reference to the program
    - □ Casual mention of program with few specifics
    - □ Discussed details of program in terms of content, issues, concerns, etc.
    - □ Discussed how the program could be applied to work group
    - □ Set goals for changes/improvements
    - □ Provided ongoing feedback about the action plan
    - □ Provided encouragement and support to help change behavior
    - □ Other (comments): _____

Figure 7. *(continued)*

21. For each of the areas below, indicate the extent to which you think this program has influenced these measures in your work group.

	No Influence	**Some Influence**	**Moderate Influence**	**Significant Influence**	**Very Much Influence**
a) Productivity					
b) Efficiency					
c) Quality					
d) Response Time					
e) Cost Control					
f) Customer Service					
g) Customer Satisfaction					

Please cite specific examples or provide more details.

_____
_____
_____
_____

22. What specific suggestions do you have for improving the stress management program? Please specify.
    - □ Content
    - □ Duration
    - □ Presentation
    - □ Other

23. Other comments:

_____
_____
_____

Barriers

Information collected throughout the process, including the two follow-up questionnaires, indicated few barriers to implementing the process. The two most frequently listed barriers were:

- There is not enough time.
- The work environment does not support the process.

Management Support

Manager support seemed quite effective. The most frequently listed behaviors of managers were:

- Managers set goals for change and improvement.
- Managers discussed how the program could apply to the work group.

Impact Data

The program had significant impact with regard to both perceptions and actual values. On Figure 7, the follow-up questionnaire, 90 percent of the participants perceived this program as a good investment for MEI. In addition, participants perceived that this program had a significantly influenced:

- Employee satisfaction
- Absenteeism
- Turnover
- Healthcare cost
- Safety and health cost

This assessment appears to support the actual improvement data, outlined below. For each measure below, only the team data were collected and presented. Because managers were not the target of the program, manager performance data were not included. An average of months five and six, instead of the sixth month, was used consistently for the post-program data analysis to eliminate the spike effect.

Healthcare Costs. Healthcare costs for employees were categorized by diagnostic code. It was a simple process to track the cost of stress-induced illnesses. Although few differences were shown in the first three months after the program began, by months five and six, an average difference of $120 per employee per month was identified. This was apparently caused by the lack of stress-related incidents and the subsequent medical costs resulting from the stress. It was believed that this amount would be an appropriate improvement to use. The trend line projection of healthcare costs was inconclusive because of the variability of the medical care costs prior to the program. A consistent trend could not be identified.

Absenteeism. There was significant difference of absenteeism in the two groups. The average absenteeism for the control group for months five and six was 4.65 percent. The absenteeism rate for the groups involved in the program was 3.2 percent. Employees worked an average of 220 days. The trend line analysis appeared to support the absenteeism reduction. Because no other issues were identified that could have influenced absenteeism during this time period, the trend-line analysis provided an accurate estimate of the impact.

Turnover. Although turnover at MEI was traditionally low, in the past two years it had increased because of significant changes in the workplace. A turnover reduction was identified using the differences in the control group and experimental group. The control group had an average annual turnover rate of 19.2 percent for months five and six. The experimental group had an average of 14.1 percent for the same two months. As with absenteeism, the trend line analysis supported the turnover reduction.

Productivity. Control group differences showed no significant improvement in productivity. Of all the measures collected, the productivity measure was the most difficult to match between the two groups, which may account for the inconclusive results. Also, the trend line differences showed some slight improvement, but not enough to develop an actual value for productivity changes.

Job Satisfaction. Because of the timing difference in collecting attitude survey data, complete job satisfaction data were not available. Participants did provide input about the extent to which they felt the program actually influenced job satisfaction. The results were positive, with a significant influence rating for that variable. Because of the subjective nature of job satisfaction and the difficulties with measurement, a value was not assignedto job satisfaction.

Monetary Values

The determination of monetary benefits for the program was developed using the methods outlined in the ROI analysis plan. The medical costs were converted directly. A $120 per month savings yielded a $198,720 annual benefit. A standard value had routinely been used at MEI to reflect the cost of an absence. This value was 1.25 times the average daily wage rate. For the experimental group, the average wage rate was $123 per day. This yielded an annual improvement value of $67,684. For employee turnover, several turnover cost studies were available, which revealed a value of 85 percent of annual base pay. As expected, senior managers felt this cost of turnover was slightly overstated and preferred to use a value of 70 percent, yielding an annual benefit of $157,553. No values were used for productivity or job satisfaction. The total annual benefit of the stress management program was $423,957. Table 1 reflects the total economic benefits of the program.

The medical costs were converted directly. A $120 per month savings yielded a $198,720 annual benefit. Other values are as follows:

Unit Value for an Absence
$123 x 1.25 = $153.75

Unit Value for Turnover
$31,980 x 70% = $22,386

Improvement for Absenteeism
138 employees x 220 workdays x 1.45% x $153.75 = $67,684

Improvement for Turnover
138 employees x 5.1% x $22,386 = $157,553

Table 1. Annual Monetary Benefits for 138 Participants

	Monthly Difference	Unit Value	Annual Improvement Value
Medical Costs	$120	-	$198,720
Absenteeism	1.45%	$153.75	$ 67,684
Turnover	5.1% (annualized)	$22,386	$157,553
TOTAL			**$423,957**

No values were used for productivity or job satisfaction.

Intangible Benefits

Several intangible benefits were identified in the study and confirmed by actual input from participants and questionnaires. The following benefits were pinpointed:

- Employee satisfaction
- Teamwork
- Improved relationships with family and friends

- Time savings
- Improved image in the company
- Fewer conflicts

No attempt was made to place monetary values on any of the intangibles.

Program Costs

Calculating the costs of the stress management program also followed the categories outlined in the evaluation plan. For needs assessment, all the costs were fully allocated to the six groups. Although the needs assessment was necessary, the total cost of needs assessment, $16,500, was included. All program development costs were estimated at $95 per participant, or $4,800. The program could have possibly been spread through other parts of the organization, and then the cost would ultimately have been prorated across all the sessions. However, the costs were low because the materials were readily available for most of the effort, and the total development cost was used.

The salaries for the team members averaged $31,980, while the six team managers had average salaries of $49,140. The benefits factor for MEI was 37 percent for both groups. Although the program took a little more than one day of staff time, one day of program was considered sufficient for the cost. The total salary cost was $24,108. The participants' travel cost ($38 per participant) was low because the programs were conducted in the area. The facilitator cost, program coordination cost, and training and development overhead costs were estimated to be $10,800. The meeting room facilities, food, and refreshments averaged $22 per participant, for a total of $3,968. Evaluation costs were $22,320. It was decided that all the evaluation costs would be allocated to these six groups. This determination was extremely conservative because the evaluation costs could be prorated if the program was implemented over other areas.

Table 2 details the stress management program costs. These costs were considered fully loaded with no proration, except for needs assessment. Additional time could have been used for participants' off-the-job activities. However, it was concluded one day should be sufficient (for the one-day program).

Table 2. Program Costs

Cost Category	Total Cost
Needs Assessment	$16,500
Program Development	$4,800
Program Materials (144 x $95)	$13,680
Participant Salaries/Benefits Based on 1 day 138 x $123 x 1.37 and 6 x 189 x 1.37	$24,108
Travel and Lodging 144 x 38	$5,472
Facilitation, Coordination, T&D Overhead	$10,800
Meeting Room, Food, and Refreshments 144 x 22	$3,168
Evaluation Costs	$22,320
TOTAL	**$100,848**

Results: ROI

Based on the given monetary benefits and costs, the return on investment and the benefits/costs ratio are shown below.

$$BCR = \frac{\$423,957}{\$100,848} = 4.20$$

$$ROI = \frac{\$423,957 - \$100,848}{\$100,848} = 320\%$$

Although this number is considered quite large, it is still conservative because of the following assumptions and adjustments:

- Only first-year values were used. The program should actually have second and third-year benefits.
- Control group differences were used in analysis, which is often the most effective way to isolate the effects of the program. These differences were also confirmed with the trend line analysis.
- The participants provided additional monetary benefits, detailed on the questionnaires. Although these benefits could have been added to the total numbers, they were not included because only 23 participants of the 144 supplied values for those questions.
- The costs are fully loaded.

When considering these adjustments, the value should represent a realistic value calculation for the actual return on investment.

Communication Strategies

Because of the importance of sharing the analysis results, a communication strategy was developed. Table 3 outlines this strategy. Three separate documents were developed to communicate with the different target groups in a variety of ways.

Table 3. Communication Strategies

Communication Document	Communication Target	Distribution
Complete report with appendices (75 pages)	• Training and EducationStaff • Safety and Health Staff • Intact Team Manager	Distributed and discussed in a special meeting
Executive Summary (8 pages)	• Senior Management in the Business Units • Senior Corporate Management	Distributed and discussed in routine meeting
General interest overviewand summary without theactual ROI calculation (10 pages)	• Program Participants	Mailed with letter
Brochure highlighting program, objectives, and specific results	• Prospective Team Leaders	Included with other program descriptions

Policy and Practice Implications

Because of the significance of the study and the information, two issues became policy. Whenever programs are considered that involve large groups of employees or a significant investment of funds, a detailed needs assessment should be conducted to ensure the proper program is developed. Also, an ROI study should be conducted for a small group of programs to measure the impact before complete implementation. In essence, this influenced the policy and practice on needs assessment, pilot program evaluation, and the number of impact studies developed.

Questions for Discussion

1. What is the purpose of the needs assessment?
2. What specific sources of data should be used?
3. Critique the data collection plan.
4. What other methods could be used to isolate the effects of the program?
5. Critique the methods to convert data to monetary values.
6. Are the costs fully loaded? Explain.
7. Is the ROI value realistic? Explain.
8. Critique the communication strategy.

About the Author

Jack J. Phillips, Ph.D., Chairman
ROI Institute, Inc.

Jack is a world-renowned expert on accountability, measurement, and evaluation. He provides consulting services for Fortune 500 companies and major global organizations. The author or editor of more than 100 books, he conducts workshops and presents at conferences throughout the world. Jack's expertise in measurement and evaluation is based on more than 27 years of corporate experience in the aerospace, textile, metals, construction materials, and banking industries. Jack regularly consults with clients in manufacturing, service, and government organizations in 70 countries in

About ROI Institute, Inc.®

ROI Institute, Inc., founded in 1992 as a service-driven organization, assists professionals in improving programs and processes using the ROI Methodology® developed by Dr. Jack J. Phillips and Dr. Patti P. Phillips. This Methodology is the global leader in measurement and evaluation including the use of return on investment (ROI) in non-traditional applications. ROI Institute regularly offers workshops, provides consulting services, publishes books and case studies, and conducts research on the use of measurement and ROI. This makes ROI Institute the leading source of content, tools, and services in measurement, evaluation, and analytics. Working with more than one hundred ROI consultants, ROI Institute applies the ROI Methodology in 20 fields in over 70 countries. ROI Institute authors have written or edited over 100 books, translated into 38 languages. Organizations build internal capability with the help of ROI Institute and its ROI Certification process. By successfully completing this process, individuals are awarded the Certified ROI Professional® (CRP) designation, which is respected by executives in organizations worldwide.

CONTACT US
+1 205-678-8101
www.roiinstitute.net
info@roiinstitute.net