

## **Outcomes of Educational Interventions for Employee Stress:**

### **A Longitudinal Controlled Study**

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As part of the growing recognition of the role of work stressors and employee health (Bergmark et al., 1996), a major health plan in Minnesota recently offered additional health promotion services at the work-site for certain public inner city high schools. The general goal was to reduce stress and improve work performance of employees. All schools were clients of the managed care health plan and received Optum<sup>®</sup> employee assistance services as part of their plan benefits. One school received monthly psychosocial interventions and two other schools in the same city did not receive any interventions and served as comparison sites. After a pilot study of one school, survey data was collected from staff at each school at three time points during the academic year.

#### Methods and Results

##### Pilot Study

A preliminary study of the intervention school was conducted in April, 1997. Based on 49 returned surveys, the results indicated high interest among the employees in attending training sessions to address stress-related issues and identified which topics were of most interest. A wide range of stress level, health status, and current use/non-use of stress management techniques was found, thus indicating a need among many employees for stress-related health promotion interventions.

Based on these findings, a program was developed for monthly delivery of interventions during the next academic year. Both personal (a self-care book and stress self-assessment tools) and group-level interventions (educational workshops and skill-building trainings) were in this program. These interventions were designed to emphasize both individual and social psychological or contextual factors in causing stress (Heaney & Ryn, 1990) and were planned according to the limits of conducting applied naturalistic research (Parker, Bergmark & Attridge, 1997).

##### Time 1: Baseline

The baseline survey in the fall of 1997 included 105 employees from the intervention school and 103 employees from two control schools. Comparison of the intervention and control schools found almost no differences, as expected, since few interventions had been provided at the start of the academic year prior to the survey. The data was combined to yield a baseline profile representative of all three schools. About one-third of employees reported either "high" or "very high" overall stress. It is interesting to note that these high school employees, compared to national norms for U.S. adults, were less healthy on standardized measures of symptoms of depression, emotional problems affecting work performance and energy/fatigue level. Other analyses indicated that greater overall stress was negatively correlated with these health status areas and also with feeling control over work factors.

Time 2: Initial Follow-up

The first follow-up survey in the winter of 1998 included 60 employees from the intervention school and 56 employees from the two control schools. A self-care book, six brief educational presentations (four of 45 minutes and two of 10 minutes), and four other interventions (stress monitoring tools, health information bulletin board, and on-site exercise facility) had been delivered to employees at the intervention school.

When responses to the follow-up survey were compared to the baseline survey, several key results emerged. Most important, the school with the workshops showed a decline in overall stress, whereas the control school did not change in stress level and the intervention school had fewer visits to health care providers than the control. Ratings of the interventions revealed that a majority of employees: Attended the different workshops, rated them as helping to reduce stress and attained specific learning and behavioral objectives from the interventions.

Time 3: Final Follow-up

The final follow-up survey in the spring of 1998 included 40 employees from the intervention school and 42 employees from the control sites. Two additional trainings had been delivered, for a total of 13 presentations to employees at the intervention school. When responses to the two follow-up surveys were compared to responses on the baseline survey, several key differences emerged that were similar to the winter survey.

The intervention group showed a further decline in overall stress, but the control group did not have a change in

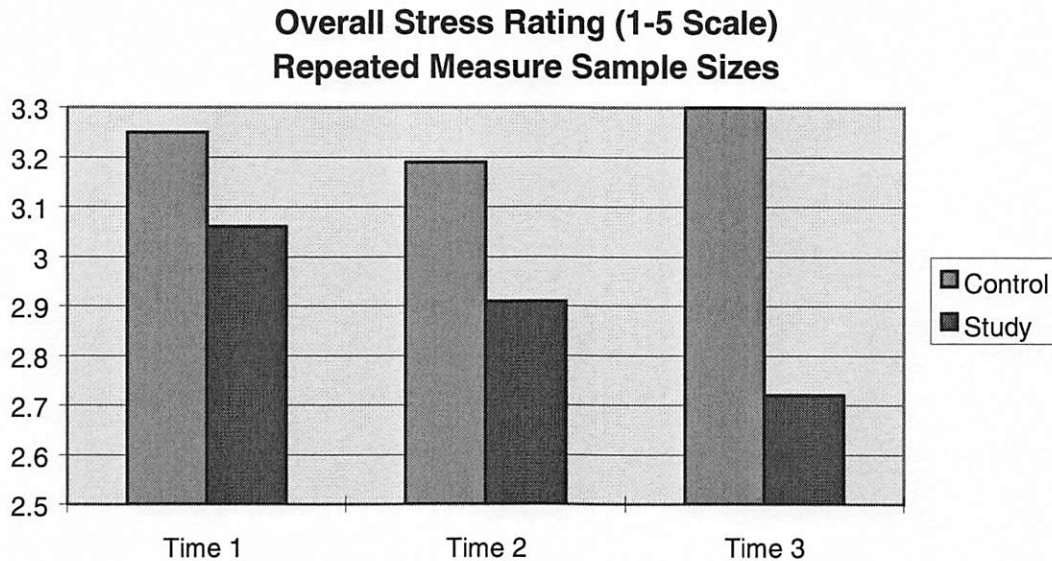
stress level. Results for the major outcome measure of *overall stress level* found that the study group experienced a significant ( $p < .05$ ) decline over time in the average per person ratings (the rating scale is as follows: 1-5 rating scale from "very low," "low," "moderate," "high," and "very high") from 3.27 at Time 1 to 3.09 at Time 2 and 2.82 at Time 3. In contrast, the control group did not change with average ratings of 3.30, 3.37, and 3.30, respectively for Times 1, 2, and 3 (see graph).

Staff at the intervention site utilized the employee assistance program more than staff at the control site (12% vs. 0%). There were no significant study group differences, however, on other measures, including the level of change from baseline to follow-up time periods on measures of perceived personal control over stress factors, use of stress reduction techniques and coping behaviors, and general health status.

Results relevant only to the intervention group indicated that a majority of employees: a) participated in the various intervention (on average, 8 of the 13 interventions were used by employees), b) rated the workshops as helping to reduce their stress and c) attained specific learning and behavioral objectives targeted in each intervention.

Most of these employees rated participation in the interventions as helping to improve their work performance and helping to reduce their missed time off from work (mean ratings were of 3.9 and 3.2, respectively, on a scale of 1 "no help" to 10 "extremely helpful"). As expected, the more interventions that an employee attended, the more the interventions were rated as helping job performance and avoid

missing work ( $r = .24$  and  $.21$ , both  $p < .05$ ).



### Conclusions

A two-group, three-wave longitudinal survey study was completed to assess the impact of psychosocial health promotion interventions. The delivery of multiple, brief, educational interventions had a small but positive impact on reducing the overall stress level, increasing the utilization of employee assistance program services, and improving job performance and reducing absenteeism. Considering the complex nature of stress and the highly scheduled and demanding work context of high school employees, it is encouraging that positive results were achieved in stress reduction from participation in the brief interventions that were delivered.

### References

- Bergmark, R. E., Dell, P., Attridge, M., & Parker, M. (1996). Creating an integrated health care system: The health and human risk model. Managed Care Quarterly, 4(1): 36-42.
- Heaney, C. & Ryn, M. (1990). Broadening the scope of Worksite Stress Programs: A Guiding Framework, American Journal of Health Promotion, 4 (6): 413-420.
- Parker, M., Bergmark, R. E., & Attridge, M. (1997). "The mind-body connection: Outcomes research in the real world." In J.D. Haber & G. E. Mitchell (Eds.), Primary care meets mental health: Tools for the 21<sup>st</sup> century. CentralLink Publications: Tiburon, CA.