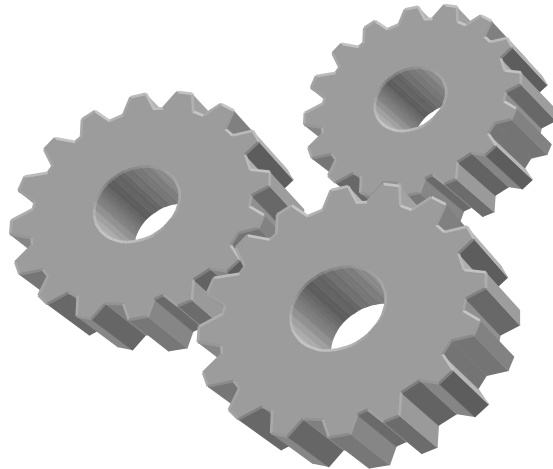


A Compendium of Best and Promising Practices for Heart Health and the Prevention of Cardiovascular Disease, Stroke and Diabetes

Worksite Channel



ACKNOWLEDGEMENTS

The Compendium of Best and Promising Practices for Diabetes, Cardiovascular Disease, Stroke Prevention and Heart Health was developed based on the work of the Health Behaviour Research Group at the University of Waterloo. The Compendium is an edited and condensed version of several large reports produced by an extensive team of researchers and writers on the original project. The material is not new and all credit for the content is due to the writing teams that produced the reports listed below.

OVERALL DIABETES REPORT

[Best Practices in Type 2 Diabetes Prevention Report](#)

Hanning, R.M., Manske, S., Skinner, K., McGrath, H., Heipel, R. (May 2004). International Best Practices in Type 2 Diabetes Prevention, (Project Final Report and Appendices), Waterloo, Ontario, Canada: Health Behaviour Research Group, University of Waterloo for the Heart Health Resource Centre, Ontario Public Health Association (funded by Health Canada).

[Best Practices in Type 2 Diabetes Prevention-Appendices](#)

Hanning, R.M., Manske, S., Skinner, K., McGrath, H., Heipel, R. (May 2004). International Best Practices in Type 2 Diabetes Prevention, (Project Final Report and Appendices), Waterloo, Ontario, Canada: Health Behaviour Research Group, University of Waterloo for the Heart Health Resource Centre, Ontario Public Health Association (funded by Health Canada).

[Best Practices in Type 2 Diabetes Prevention -Dissemination Report](#)

Skinner, K., Manske, S. (May 2004). International Best Practices in Type 2 Diabetes Prevention, (Dissemination Report), Waterloo, Ontario, Canada: Health Behaviour Research Group, University of Waterloo for the Heart Health Resource Centre, Ontario Public Health Association (funded by Health Canada).

NOMINATED PRACTICES SCAN

[Nominated Scan Project Summaries](#)

Hanning, R.M., Manske, S., Skinner, K., McGrath, H., Heipel, R. (January 2004). International Best Practices in Type 2 Diabetes Prevention, (Nominated Scan Project Summaries), Waterloo, Ontario, Canada: Health Behaviour Research Group, University of Waterloo for the Heart Health Resource Centre, Ontario Public Health Association (funded by Health Canada).

WORKSITES CHANNEL

[Worksite channel summary](#)

Hanning, R.M., Manske, S., Royall, D., Skinner, K., McGrath, H., Heipel, R. (October 2004). International Best Practices in Type 2 Diabetes Prevention, (Worksite Channel Report), Waterloo, Ontario, Canada: Health Behaviour Research Group, University of Waterloo for the Heart Health Resource Centre, Ontario Public Health Association (funded by Health Canada).

[Worksite project summaries](#)

Hanning, R.M., Manske, S., Royall, D., Skinner, K., McGrath, H., Heipel, R. (October 2004). International Best Practices in Type 2 Diabetes Prevention, (Worksite Channel Project Summaries), Waterloo, Ontario, Canada: Health Behaviour Research Group, University of Waterloo for the Heart Health Resource Centre, Ontario Public Health Association (funded by Health Canada).

Best and Promising Practices – Worksites

Best Practices

Health Works for Women (HWW)	1
HeartCheck and the Worksite Health Promotion Seminar Series	6

Promising Practices

Health Promotion Programme for Oil Refinery Employees, A.....	9
Healthier Work at Brabantia	13
Healthy Worker Project, The	16
Life-Style Intervention at the Worksite	19
NASA Cardiovascular Risk Reduction Program	22
Ottawa Heart Beat	25
Shipboard Weight Control Program, A	28
StayWell NextSteps	31
WellWorks Study, The	34
Working Healthy Project, The	37

Matrix of Worksite Programs Overlapping with Other Channels

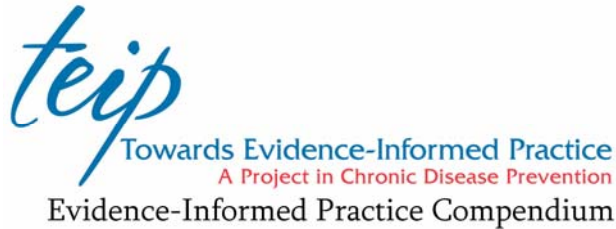
Best Practices

Program	Aboriginal	African American	Community	School	Stroke	Women
<i>Health Works for Women (HWW)</i>						✓
<i>HeartCheck and the Worksite Health Promotion Seminar Series</i>						

Promising Practices

Program	Aboriginal	African American	Community	School	Stroke	Women
<i>Health Promotion Programme for Oil Refinery Employees, A</i>					✓	
<i>Healthier Work at Brabantia</i>						
<i>Healthy Worker Project, The</i>						
<i>Life-style intervention at the worksite</i>						
<i>NASA Cardiovascular Risk Reduction Program</i>						
<i>Ottawa Heart Beat</i>			✓		✓	✓
<i>Shipboard Weight Control Program, A</i>						
<i>StayWell NextSteps</i>					✓	
<i>WellWorks Study, The</i>						
<i>Working Healthy Project, The</i>						

Health Works for Women (HWW)



Date of Intervention: N/A

Originally Reviewed: April 2005

Last Updated: July 2007

Best Practice

Source

West Virginia University; Universidad de la Frontera (Temuco, Chile)

Overview

The Health Works for Women (HWW) program is a randomized trial designed to assess the impact of a worksite intervention on improving multiple health behaviours among rural female blue-collar employees in North Carolina. Nine small to mid-sized workplaces were randomly assigned to either intervention or delayed intervention conditions. The intervention consisted of: the distribution of two computer-tailored magazines designed to present personalized feedback, strategies for change, and community resource information based on personalized health behaviour priorities; and a natural helpers program that trained women in the workplace to distribute information and provide support for healthy behavioural change.

The delayed intervention worksites received one tailored magazine. The intervention took place over 18 months.

The target audience included minority blue-collar female employees of small to medium-sized textile or light manufacturing worksites. The participants had to be 18 years of age or older and fluent in either English or Spanish. In the study sample, 53% of women were aged 40 or younger, 58% were African-American, the majority were married and had a high school education or greater. Participants were generally overweight with a BMI of approximately 29 kg/m².

Results showed that the intervention group increased fruit and vegetable consumption and improved in strengthening and flexibility exercise compared to the delayed intervention group. At 18-month follow-up there were no differences between groups for dietary fat consumption, aerobic exercise, breast and cervical cancer screening, and smoking cessation.

Results/Outcomes

The goal of the project was to determine whether a two-pronged worksite intervention consisting of health magazines and a natural helper program would improve multiple health behaviours among female blue-collar workers. The behavioural intervention goals included:

- Increase fruit and vegetable consumption
- Decrease dietary fat consumption
- Increase physical activity (aerobic, strengthening, and flexibility exercise)
- Smoking cessation

- Regular breast and cervical cancer screening
- Weight loss

The objectives of the program were:

- To read computer-tailored magazines which were provided to participants at baseline and at 6-month follow-up
- To choose behaviour change priorities to receive tailored health messages
- To approach the natural helpers for information/support regarding health behaviour changes

The study included formative evaluation, a pilot study to pretest the health magazines, process evaluation and outcome evaluation.

The formative evaluation included focus group interview results in combination with literature and expertise of the project team to develop appropriate message content, language and literacy level for the tailored messages. The formative research also determined that women's magazines were a primary source of health information for the target population and that women in the blue collar workplaces had a group identity and preferred messages and activities that were multi-ethnic. This information helped in the design of the magazines. A final part of the formative evaluation was the use of focus groups with the women who were being trained as natural helpers. The groups helped in the development of culturally appropriate training manuals and educational materials.

The process evaluation measured women's recall, readership and personal relevance of the magazines. Results from the 18-month follow-up showed that 86% of women in the Intervention group recalled having received the tailored information and reported higher recall, readership and personal relevance of the magazines than the Delayed group.

Additional process measures included:

- Recording how many women had heard about the program at the workplace
- The frequency with which they received written materials, discussed health issues and met with natural helpers for group activities.

Only 29% of women heard about the program at the workplace. Exercise and healthy eating were the most frequently cited health behaviours around which women reported that they interacted with the natural helpers.

Results of the Outcome evaluation showed:

- The Intervention group had increased fruit and vegetable consumption by 0.7 daily servings at the 18-month follow-up (no change in the Delayed group)
- No significant difference in fat intake at 18 months (only at 6 months)
- The Intervention group demonstrated improvements in strength and flexibility compared to the Delayed group
- Rates of smoking cessation and cancer screening did not differ between groups

A possible drawback to tailoring messages to behavioural priority is that women may not choose a behaviour, such as smoking, that could have the highest objective impact on decreasing health risks. It is recommended that future research investigate the role of choice as a variable for tailoring interventions aimed at changing multiple behaviours.

An important limitation of this study is the fact that the Delayed group received a partial intervention (one tailored message) after the 6-month measurement point. The observed differences between the two groups at 18 months may have been attenuated if the Delayed intervention had some effects on behaviour.

Recommendations for future research include:

- Replicate with a larger sample of workplaces and women, and address adaptation of the program to include male workers and other ethnic groups and industries
- Focus on other levels of change, such as the organization, environment, and/or policy level, which may be needed in order to impact behaviours such as smoking among blue-collar women

Prevention of Chronic Disease and Conditions

- Cardiovascular Disease
- Type 2 Disease

Audiences

- Adults Female (19-64 years)

Risk Factors and Other Issues

- Physical Inactivity
- Tobacco Use
- Unhealthy Eating/ Nutrition

Audiences Characteristics

- Peer Support/Educator

Setting

- Media
- Worksites

Approach

- Awareness
- Education
- Environmental Support

Program Description

Ten worksites were recruited into the study. One served as a pilot site and 9 served as study sites. Of the study sites, 4 were randomized to the Intervention group and 5 to the Delayed Intervention group.

Employees of all worksites were asked to complete a self-administered baseline survey during work time, which took 30-40 minutes. The percentage of women who completed the survey at each worksite was an average of 73%. Survey measures included demographic information, health behaviours such as diet, physical activity, smoking, cancer screening, and the personal behaviour subjects wished to target in the study. Participants also completed 6- and 18-month follow-up surveys.

Details of the Intervention Group Activities

Two individually-tailored computerized magazines were provided to all participants, the first after filling out the baseline survey and the second after completing the 6-month follow-up. These messages were tailored primarily based on women's personal health concerns and current health behaviours.

Women at each worksite were identified for the natural helpers program using several different methods. Natural helpers received training on health topics including nutrition, fitness and exercise, stress management, cancer, and weight management. They were expected to provide health information to co-workers and to organize worksite health activities such as walking groups.

Details of the Delayed Intervention Activities

During the first 6 months of the study, the Delayed Intervention worksites were offered health education sessions for their employees on topics not directly related to study objectives, however none of the worksites chose to take advantage of these. After completing the 6-month survey, the Delayed Intervention group received one individually tailored magazine. They did not have the natural helpers program at their workplaces.

Resources

Three main resources were developed for this program:

- Women's magazines containing health messages that were computer-tailored based on individual's health concerns and behaviours
- An extensive message library of text, graphics, and photographs that corresponded with each survey question selected for tailoring, and its possible response options
- Training manuals and educational materials used to train natural helpers

Other Information

Staff and volunteer time was not reported. Costs were unknown. Collaboration among study researchers, worksites, and employees who acted as natural helpers was necessary for program implementation. The natural helpers were women from the worksite who were trained as lay health advisors.

The commitment of the worksite is important for program success. Unfortunately, almost half of the eligible workplaces would not commit to participate during the recruitment process. Furthermore, despite signing a contract to indicate they would allow all interested employees to complete all surveys during work time, one site did not do so during the 6-month follow-up survey and four sites did not do so during the 18-month survey.

HWW was designed to fit with other interventions. It is based on a system's approach to worksite health programs that involves the incorporation of multiple levels of influence and health promotion programming.

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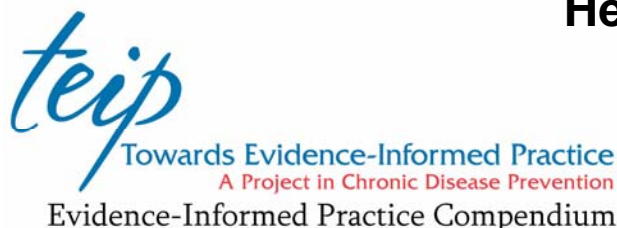
Campbell, M.K., Tessaro, I., DeVellis, B., Benedict, S., Kelsey, K., Belton, L. & Sanjueza, A.

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HeartCheck and the Worksite Health Promotion Seminar Series



Date of Intervention: N/A

Originally Reviewed: April 2005

Last Updated: July 2007

Best Practice

Source

Department of Health Science, (SUNY College at Brockport); The Center for Worksite Health, (SUNY College at Buffalo); the School of Health Sciences, West Chester University; and the New York State Department of Health; the Niagara County Healthy Heart Program in partnership with the Prevention Resource Center (State University of New York College at Buffalo)

Overview

The target audience for this program was a variety of worksites, including heavy and light industries, school districts, insurance companies, county health agencies, and health care centers.

This intervention used a management-training module to guide company representatives in the development of an institutional plan to support employee health. The Worksite Health Promotion Seminar Series was developed by the Center for Worksite Health (the Center) to increase the level of organizational support for employee heart health.

The program was evaluated through a quasi-experimental design trial.

Twenty western New York companies served as subjects (matched on size, industry types, and interest in worksite health promotion). Seven training seminars were held at a local college for 1 year and directed primarily at human resource managers. Groups were assessed using HeartCheck. The Experimental vs. Comparison groups achieved a fourfold difference in change in this measure.

HeartCheck is an organizational assessment tool used to measure employer support for heart health. The level of HeartCheck reached in the Experimental group is comparable to levels reached in highly acclaimed commercially sponsored programs.

Results/Outcomes

The goal of the Health Promotion Seminar Series was to develop permanent organizational changes in western New York companies that supported employee health.

HeartCheck has been evaluated extensively during its development and early history. It has

undergone pilot tests and has been used in cross-sectional analyses and quasi-experiments.

For the Process evaluation component of this project, focus groups were conducted with both managers and interns involved in the Experimental group. Information gained from these sessions and observations from the project staff led to the following conclusions about what program features worked best:

- *HeartCheck* and its feedback mechanisms in the form of the matrix, and the “hit list” (a list of the cheapest, easiest, and quickest ways to improve the *HeartCheck* score)
- The availability of interns
- Collaboration with a managed care company
- Group cohesion and program accountability
- The vendors’ fair
- Competent and motivated program managers.

Outcome evaluation

This study utilized a quasi-experimental design. The unit of measurement was the worksite, with 20 companies providing pre- and post-intervention assessment data. Companies were matched on industrial sector and employee size and assigned to either active intervention (experimental group) or delayed treatment (comparison group). Outcome data were obtained using *HeartCheck*.

Key managers at each organization were identified and provided with interview questions in order to prepare responses in advance. Managers were interviewed by telephone at baseline and one year later. Average interview time was 30 minutes. Following baseline interviews, managers received a brief overview of their companies’ results in a follow-up letter.

All 10 of the experimental companies improved their total *HeartCheck* scores, with increases ranging from 45% to 146%, or an average of 75% per company. Comparison companies averaged a 16% increase, ranging from +64% to -07%. Comparison of the mean differences on total *HeartCheck* scores indicates a four-fold increase in the experimental group vs. the comparison group, which was statistically significant.

This study indicates that changes in the organizational structure of companies to support employee heart health are possible through training that is sponsored by an academic institution. These changes appear both meaningful and cost-effective.

This study represents one of the first to focus intervention at the organizational level and may lead to more activity by the health promotion community in this relatively neglected area

HeartCheck enables practitioners to measure employer support for heart health, which includes factors such as its policies, facilities, and services. Its numeric scoring system allows many new programmatic functions, including the development of normative standards, the identification of tangible organizational goals, rewards and recognition for companies of excellent and pre- to post-evaluations of interventions.

Prevention of Chronic Disease and Conditions

- Cardiovascular Disease

Setting

- Worksite

Audiences

- Adults (19-64 years)

Audiences Characteristics

- Politicians/Decision Makers

Approach

- Awareness
- Environmental Support
- Policy

Program Description

Twenty companies agreed to participate in the program: 10 were assigned to an active Intervention group and the rest made up the delayed treatment Comparison group. The project relied heavily on student interns. Project managers and faculty researchers gave extensive training to them, which included five half-day workshops. The workshops were designed to broaden the student's background in worksite health promotion and enhance business related skills. Once the training was over, interns were assigned to a worksite. They attended a series of seven half-day workshops over a period of 10-months along with worksite managers. Using the content of the workshops and HeartCheck, company representatives developed and implemented an institutional plan to support employee health.

Resources

The HeartCheck tool was developed as well as materials for the Health Promotion Seminar Series. HeartCheck examines and quantifies a workplace's policies, services and facilities that presumably support heart health, for example, the presence of smoke-free mandates, a wellness committee, or fitness centre. It is relatively inexpensive, easy-to-use, and psychometrically tested. HeartCheck shows promise when used as part of a system to enhance heart health through public health based interventions in the workplace.

Other Information

The HeartCheck tool could be used with a number of other interventions. It could be used to determine the effectiveness of another organizational intervention and/or used in conjunction with a program targeting individuals. The seminar series could also be used as a means of affecting the environment while another intervention targeted the individual.

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Promising Practice

Source

Neste Oyi, Finland; Social Insurance Institution, Research and Development Centre, Finland.

Overview

The purpose of the study was to assess the long-term effects of a workplace health promotion intervention program carried out by occupational health care. The target audience was employees of two oil refineries located in southern Finland.

The program targets 7 risk factors for chronic disease (exercise, eating habits, obesity, blood pressure, serum lipids and smoking) and three health concerns (quality of sleep, mental well-being and musculoskeletal problems). Employees' needs in each of these areas were assessed at baseline and at follow-up three years later.

The most extensive changes were seen in the areas of musculoskeletal symptoms, dietary habits, blood pressure and well-being.

Results/Outcomes

The goal of the study was to report on the long-term effects of a workplace health promotion intervention program conducted by occupational health care. The objective was to study which factors are associated with changes in needs for health promotion.

Outcome evaluation was based on questionnaires and health examinations. Results included:

- Effects of special health promotion counseling were observed in physical activity only
- Elimination of certain health promotion needs was seen in both groups in all of the target areas
- The most extensive changes were seen in the target areas of musculoskeletal symptoms, dietary habits, blood pressure and mental well-being.

Several changes in chemical and physiological parameters were reported:

- A significant decrease in cholesterol levels for men in the control group
- A significant decrease in HDL cholesterol levels was found in men for both the study and the control group and in women in the control group

- A significant increase in BMI was found in both the men and women in the control group
- The mean estimated oxygen uptake significantly increased in the men participating in the study group and decreased in the control group
- Astrand Index significantly increased among men in the study group and decreased in the control group

The changes in health promotion needs in different target areas included:

- 24% in the study group and 18% in the control group who at the first examination were in need of increased physical activity had increased their physical activity to an appropriate level at re-examination
- 55% in the study group and 56% in the control group no longer demonstrated musculoskeletal symptoms at the final examination
- 44% in the study group and 40% in the control group who previously had improper diets at the first examination were shown to improve their eating habits at re-examination
- 14% in the study group and 9% in the control group who were obese at the initial examination no longer fit the criteria for obesity at re-examination
- 31% in the study group and 34% in the control group who had high blood pressure at baseline were no longer hypertensive at the follow-up examination
- 12% in the study group and 14% in the control group who showed high serum lipids at the first examination no longer fit the criteria at re-examination
- 20% in the study group and 24% in the control group who were smokers at baseline were non-smokers at follow-up
- 24% in the study group and 33% in the control group who had sleeping problems and 50% in the study group and 54% in the control group who had mental well-being related problems at baseline no longer showed these problems at follow-up
-

Prevention of Chronic Disease and Conditions

- Cardiovascular Disease
- Stroke
- Hypertension
- Overweight/Obesity

Setting

- Worksites

Audiences

- Adults (19-64 years)

Risk Factors and Other Issues

- Alcohol and Other Drug Abuse
- Physical Inactivity
- Tobacco Use
- Unhealthy Eating/ Nutrition
- Stress

Approach

- Awareness
- Education

Program Description

This cohort study began with an invitation to employees requesting their participation in a questionnaire. The questionnaire asked about education, perceived health, previous and present illnesses, sleep, problems lately and presently, work, smoking habits, physical condition and exercise habits, diet and alcohol consumption.

At the first appointment the completed questionnaire was checked by an occupational health nurse and additional questionnaire were filled in. Subject's blood pressure, height and weight were measured and clinical laboratory tests were made. Results of measurements for cholesterol, triglycerides and HDL-cholesterol in serum were presented.

A second visit occurred within 4-6 weeks during which a medical examination was performed. Blood pressure measurement was repeated and physical fitness was assessed. If the initial screen revealed any problems related to mental health, subjects in the treatment group also met with a psychologist.

- For the treatment group, an occupational health physician and an occupational health nurse evaluated the relative importance of the results for each participant and prioritized their health promotion needs.
 - Participants met with the occupational health physician to discuss and agree on health promotion action(s) the participant would be willing to undertake (maximum of two).
 - For the treatment group, the health service unit organized special counseling.
 - For the control group, the occupational health physician gave feedback about results and instructions for health promotion in writing and no guided interventions were arranged.
-
- *Physical activity* – this intervention began with a personal interview with a physical education instructor. The type of physical exercise appropriate for improvements was selected according to the participants' preferences.
 - *Musculoskeletal problems* – main aim was to improve muscular fitness and functional capacity. Intervention was carried out as individual back or neck muscle training for 30 min. three times a week, under the instruction of a physiotherapist.
 - *Dietary habits, obesity, blood pressure and/or serum lipids* – participants with these needs were invited to attend a two-hour lecture given by an occupational health nurse covering information about energy intake and consumption, BMI, metabolism and different methods of healthy cooking. Those with health promotion needs related to obesity or blood pressure also had a personal discussion with the occupational health nurse.
 - *Smoking* – intervention occurred through individual discussions and a lecture including different aspects of how smoking affects health.
 - *Sleep quality and/or mental well being* – individual discussions and follow-up were arranged.

Resources

None mentioned.

Other Information

The Intervention requires implementation by an occupational health physician and an

occupational health nurse. A physical education instructor provided the physical activity intervention. A physiotherapist oversaw musculoskeletal problems.

The study was very well received in the company as evidenced by high participation and low dropout rates. While attitudes toward health promotion and health education were very positive, the results in term of changed behaviour were modest.

This study suggests that health promotion should be established as a continuous process rather than a single project.

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Promising Practice

Source

The Section of Clinical and Health Psychology – Leiden University (Leiden, the Netherlands)

Overview

The Healthier Work at Brabantia project was named after a Dutch manufacturer of household goods. It combined a focus on lifestyle changes with environmental and organizational changes to enhance wellness and health. The target group for the intervention was the employees of Brabantia. Workers at one Brabantia site made up the Experimental group while workers from two other sites formed the control group.

Both groups were assessed at baseline and after 1,2, and 3 years. Measures taken included: biomedical variables, lifestyles, general stress reactions and quality of work. Absenteeism was also tracked.

The intervention was successful in affecting favourable short-term changes in health risks, working conditions and absenteeism. These findings indicate that a combination of these two approaches can produce positive effects on health-related variables, wellness and absenteeism.

Results/Outcomes

The goal of the program was to improve the health and wellness of employees of a manufacturer of household goods, through lifestyle changes and changes in working conditions. The objective was to improve health behaviour, reduce health risks, reduce general stress reactions, improve quality of work, and reduce absenteeism.

This study employed a quasi-experimental pre-/post-test design. Three worksites were evaluated, with one serving as a Control group. Of the 552 employees in the three worksites, 264 participated in the evaluation – 130 in the Control group and 134 in the Experimental group.

A variety of measurement instruments were used, including structured interviews, self-report questionnaires, and biomedical measures. Employee absenteeism was monitored throughout the project.

The evaluation identified five specific outcome variables: lifestyles, cardiovascular health risk, general stress reactions, working conditions, and absenteeism.

Results of the evaluation revealed the following:

Lifestyles and General stress reactions: There were no significant difference between the Intervention group and the Control group

Cardiovascular health risk: Men in the Intervention worksite showed a significant change in serum cholesterol levels compared to the Control group in the first post-test evaluation

Working conditions: Employees in the Intervention group reported an increase in a sense of control between the first and second post-test evaluations compared to the Control group; no significant differences were found between the Intervention group and the Control group with respect to social support from supervisors and other employees

Absenteeism: Absenteeism decreased by 8.1% in the Intervention group and by 4.8% in the Control group. The absenteeism rate in the Intervention group was below the mean national percentage, while the rate in the Control group was 2-3% higher than the national trend.

Prevention of Chronic Disease and Conditions

- Cardiovascular Diseases

Risk Factors and Other Issues

- Physical Inactivity
- Tobacco Use
- Unhealthy Eating/ Nutrition
- Stress

Setting

- Media
- Worksites

Audiences

- Adults (19-64 years)

Audiences Characteristics

- Politicians/Decision Makers

Approach

- Awareness
- Screening
- Education
- Environmental Support
- Policy

Program Description

The project implemented lifestyle activities and organizational activities over the three-year period. Lifestyle intervention in the first year began with half-hour sessions held during lunchtime, 3 times/week. Employees were paid for half of the time in the session and the other half was considered lunchtime. The sessions were mostly physical exercise with minor attention to health education including nutrition, alcohol and drug consumption (which was discontinued after one year due to low participation).

During the second year, an elected group of workers formed a lifestyle committee that directed the interventions. This led to fewer, but more comprehensive activities (health fair and health exhibit) and higher levels of participation. A 40-hour training program in social skills and leadership was offered to upper and middle management.

The organizational activities occurred during years 2 and 3. Some of the interventions included: creating on-site exercise facilities, implementing a smoking policy in the cafeteria, promoting the program through a variety of messages, and offering healthy food in the cafeteria. Screenings for wellness risks at work were implemented and the results were used to construct wellness risk profiles. The profiles were used by a committee to propose and guide implementation and evaluation of changes to the worksite.

Resources

Several resources were produced for this project and included: posters, videos, internal radio messages, a newsletter and information about nutrition for employees. In addition, employee incentives were distributed, including t-shirts, sweatshirts and sports bags.

Other Information

The strength of this program was the focus on organizational change. Employees had autonomy to control their work environment and were empowered to make changes in organizational structure. This was seen as favourable.

References

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Source

Division of Epidemiology, University of Minnesota School of Public Health.

Overview

The purpose of this project was to examine the effects of worksite health promotion interventions for weight loss and smoking cessation over a period of 2 years. The target audience for the intervention was male and female employees in the public and private sectors, including professional/managerial workers, clerical/sales, and blue-collar workers. A strong component of this trial was the research methodology. Methods of intervention were chosen based on careful review of existing programs and were pilot tested for attractiveness to employees and short-term efficacy.

Over the 2-year period, 43% of smokers quit, and the average per-person weight loss was 4.8 lbs. The weight differences between treatment and control groups were not statistically significant.

Results/Outcomes

The goal of the program was to evaluate the effectiveness of a worksite health promotion program. The objective was to reduce obesity and the prevalence of cigarette smoking.

Evaluation was carried out by questionnaires that assessed demographics, smoking and weight loss histories, diet and exercise habits, job characteristics, health history and job satisfaction. Direct measures of height and weight were taken to assess BMI. Expired air carbon monoxide was used to validate self-reported smoking status. Participants were surveyed by phone if they did not attend on-site survey sessions.

Over the 2-year period, 43% of smokers quit and the average per-person weight loss was 4.8 lbs. Weight differences between treatment and control groups were not statistically significant.

Despite low participation, the prevalence of smoking in treatment worksites decreased significantly compared to control sites.

The overall receptiveness of employers to worksite health promotion may be more modest than some advocates have suggested. A majority of sites that were eligible to participate in the study (72%) declined.

Participation rates for the weight loss program were better than for the smoking program. This confirms previous finding that people are less likely to seek professional help for smoking

cessation that they are for weight loss.

Prevention of Chronic Disease and Conditions

- Cardiovascular Disease
- Overweight/Obesity

Risk Factors and Other Issues

- Physical Inactivity
- Tobacco Use
- Unhealthy Eating/ Nutrition

Setting

- Worksites

Audiences

- Adults (19-64 years)

Audiences Characteristics

- Health Care Professionals

Approach

- Education
- Environmental Support

Program Description

The program began with a recruitment phase that was carried out through the mail, word-of-mouth, posters and cafeteria booths. This was followed by 11 bi-weekly sessions of classes on smoking cessation and weight loss led by trained professional health educators (trained and paid by the project). Four rounds of classes were offered over the 2-year period. Classes were held on-site and on employee time with multiple class times to accommodate different shifts.

Participants set goals for themselves. Weight loss goals had to be a minimum of 0lb, and a maximum of 1% body weight. Cessation was the only goal for smokers (not reduction).

As in other successful worksite studies, incentives were offered and included:

- A biweekly deduction from each paycheque that was refunded for weight loss at each session in relation to progress toward goals
- Similar deductions were taken for those in the smoking cessation program and when carbon monoxide levels were lower than 8 parts per million, participants received all money in their account at any session
- At the end of the study remaining monies were used in various ways, determined on a site-by-site basis.

Resources

No description of classroom materials was provided. The only product mentioned was recruitment materials.

Other Information

The intervention could easily be combined with a media or policy approach that focused on the organization/environment, and/or an intervention focused on additional risk factors.

References

Jeffery, R.W., Forster, J.L., French, S.A., Kelder, S.H., Lando, H.A., McGovern, P.G., Jacobs, D.R. Jr. and Baxter, J.E. (1993). The Healthy Worker Project: a work-site intervention for weight control and smoking cessation. *Am J Public Health*, 83, 395-401.

Schmitz, K., French, S.A. and Jeffery, R.W. (1997). Correlates of changes in leisure time physical activity over 2 years: The Healthy Worker Project. *Prev Med*, 26, 570-579.

Promising Practice

Source

Department of Community Medicine, University of Lund (Lund, Sweden); Occupational Health Care, Helsingborg City, Sweden.

Overview

The target audience for this project was employees in the public sector. The purpose of the Life-Style Intervention was to design a study that tested both a method for screening for cardiovascular risk at the worksite and the effects of a lifestyle intervention program that included educational and behavioural counseling tailored for cardiovascular disease (CVD) participants.

The project assessed the effects of an eighteen-month comprehensive lifestyle worksite intervention initiative and a two-step screening technique on reducing several cardiovascular risk factors. The initial health screening consisted of a questionnaire on lifestyle, medical history, psychosocial factors, social network characteristics and work-related stressors. Cardiovascular risk scores were calculated based on participant responses. Those with scores >9 were randomized into a Control ($n=46$) or Intervention ($n=43$) condition. The second screening measured objective cardiovascular risk through a physical examination and blood analysis. It was complete at baseline, twelve and eighteen months. The Life-Style intervention consisted of 16 yearly group sessions that were educational and practical, as well as individual counseling. The Control participants received standard written and oral advice about cardiovascular risk factors at baseline.

The Life-Style intervention study was successful in reducing obesity, diastolic blood pressure, LDL, heart rate, and smoking, and increasing HDL cholesterol after eighteen months.

Results/Outcomes

The goal of the study was to test a feasible method for screening for CVD risk at the worksite and to investigate the effects of a long-term comprehensive program of Life-Style intervention to prevent CVD.

Specific behaviour change objectives included:

- Reducing weight in the obese
- Increase smoking cessation rates
- Improving dietary intake
- Increasing physical activity
- Stress management

This is considered a pilot since it is a feasibility study.

One week after baseline health check and randomization, blood sampling was performed in the morning after overnight fasting. Laboratory blood investigation included blood glucose, hemoglobin, serum lipids, gamma glutamyl transferases, alkaline phosphatase, cortisol, plasma insulin and plasma DHEA.

The mean number of sick days was recorded during the months of September through December during the first and second year of the study.

Results showed significant reductions in obesity, diastolic blood pressure, LDL, heart rate, smoking and increased HDL cholesterol after eighteen months.

According to researchers, this study has shown that:

- A two-step screening procedure for cardiovascular risk evaluation is feasible in a worksite setting and
- A comprehensive program of life-style intervention at the worksite is superior to usual care in reducing some cardiovascular risk factors (obesity and diastolic blood pressure) as well as increasing HDL cholesterol after 18 months.

The evaluation of cost-effectiveness should be addressed in future studies. There may be health economic benefits as the mean number of sick days decreased in the Intervention group but not in the Control group.

Prevention of Chronic Disease and Conditions

- Cardiovascular Disease
- Hypertension
- Overweight/Obesity

Risk Factors and Other Issues

- Physical Inactivity
- Tobacco Use
- Unhealthy Eating/ Nutrition
- Stress

Setting

- Media
- Recreational Facilities/Community Organizations
- Worksites

Audiences

- Adults (19-64 years)

Approach

- Education
- Environmental Support

Program Description

The program involved baseline screening that produced a cardiovascular risk score for each respondent. Those with risk scores greater than nine were randomly allocated into either the life-style Intervention or the Control condition.

The Intervention group attended 16 sessions a year that included lectures, discussions, video sessions, outdoor activities and individual counseling by a nurse. All the activities took place outside the workplace at a health centre but were scheduled during work hours to maximize participation. Participants in the Control condition received standardized written and oral advice about CVD risk factors but did not participate in any other activities.

Resources

Videos, Lecture and discussion notes and outdoor activity plans.

Other Information

The Life-Style intervention team included one full-time and one part-time nurse, nutritionists, physiotherapists and a physician.

The sessions conducted at the health centre could supplement other interventions in a worksite setting.

References

Nilsson, P.M., Klasson, E-B. and Nyberg, P. (2001). Life-style intervention at the worksite – reduction of cardiovascular risk factors in a randomized study. *Scand J Work Environ Health*, 27(1), 57-62.

Promising Practice

Source

National Aeronautics and Space Administration, Office of Health Affairs; Uniformed Services University of the Health Sciences; division of Aerospace Medicine and Occupational Health at the National Aeronautics and Space Administration.

Overview

This program is an individualized, combined program that was implemented in an office environment. The target group was NASA employees with initial elevated total serum cholesterol levels. Initially the NASA CVD Risk Reduction Program ran for five years. It was reviewed and found to be successful in maintaining HDL-C levels while significantly lowering total serum cholesterol levels. Because of the positive findings the program was extended for five more years to determine further improvement or lapses.

The intervention lasted for eight-weeks and focused on reducing saturated fat intake, introducing a moderate continuous exercise program and behavioural counseling.

Results for high-risk participants in the Intervention condition indicated a statistically significant improvement in their cardiovascular risk profile.

Results/Outcomes

The goal of the study was to determine the effect of a combined dietary and exercise intervention on cardiovascular risk reduction of the NASA Headquarters employees. The objectives of the intervention program were:

- To decrease LDL-Cholesterol
- To increase HDL-Cholesterol
- To decrease total serum cholesterol levels
- To improve ratios of total serum cholesterol to HDL-Cholesterol

The overall study design is a repeated intervention, longitudinal study with pre- and post-intervention measures. Retrospective data were selected for evaluation from two major NASA health assessment programs. The Annual Preventive Medical Examinations Program provided serum cholesterol data and the intervention data were derived from the CVD Risk Reduction Program

Results of the study included:

- The nine-year mean beginning total serum cholesterol levels was reduced from 254.7 mg/dL (6.6 mmol/L) to an ending mean of 218.2 mg/dL (5.7 mmol/L), a significant reduction of 16.7% after intervention
- Employee participants who began the program with higher initial total serum levels had a statistically significant mean decrease of 21.6% (323.3 to 265.8 mg/dL or 8.4 to 6.9 mmol/L)
- Exercise levels from, at, or above 10.5 mean hours per month of aerobic exercise were associated with increased HDL cholesterol levels

This study seems to indicate that serum cholesterol reduction and HDL cholesterol preservation and maintenance may be achieved by implementing a combined dietary and exercise intervention for a small, high risk group of employees with a serum cholesterol over 200 mg/dL.

A potential threshold between 10 and 11 hours of aerobic exercise per month may be needed for affecting an increase in HDL cholesterol levels to further reduce the risk of CVD.

If these indications prove true, focus on CVD risk factor awareness should be stressed to enhance identification and participation of the high-risk group in the workplace.

It is believed that the interaction that intervention participants had with the clinicians greatly added to the program's positive results, although this was not quantified in the study.

Prevention of Chronic Disease and Conditions

- Cardiovascular Disease

Risk Factors and Other Issues

- Physical Inactivity
- Unhealthy Eating/ Nutrition

Setting

- Worksites

Audiences

- Adults (19-64 years)

Approach

- Screening
- Education
-

Program Description

Participants were assigned to the Intervention condition when they met the following criteria:

- Elevated total serum cholesterol levels of >200 mg/dL (5.2 mmol/L)
- Depressed HDL cholesterol levels
- Not using cholesterol lowering medications, at the time of the physician follow-up consult or between the eight-week interventions

The high-risk employee participants completed the eight-week intervention and were provided follow-up by a physician in the annual physical examination. The program was administered each year for nine years, and was repeated for those participants whose total serum cholesterol remained in the high-risk category of 200 mg/dL (5.2 mmol/L) or higher and who still conformed to the criterion of not using any cholesterol-reducing medication.

Each participant had individual counseling with a registered dietitian a minimum of three times during the eight-week intervention, for thirty minutes. The dietitian monitored and evaluated the participant's diet and exercise efforts, determined necessary intervention modification, and provided positive reinforcement.

A personalized diet was designed for each participant based on individual food preferences and government guidelines. The intervention consisted of the following:

- Restriction of dietary cholesterol to less than 200 mg/d (5.2 mmol/L).
- Restriction of saturated fats to less than 7% of total daily calories or 15g for men and 7g for women

This portion of the intervention consisted of the following:

- Low to moderate-level aerobic activity (regular, rhythmic, sustained exercise using the large muscles of the body).
- Thirty minutes or more for at least fifteen hours per month.
- Target heart rate (established by dietitian) at 65% – 70% of age-adjusted maximum heart rate.

All intervention participants were required to keep a daily journal of the type and amount of exercise activity completed.

Resources

None mentioned.

Other Information

This intervention could be used in combination with interventions that have an organizational or environmental focus.

References

Angotti, C. M. and Levine, M. S. (1994). Review of 5 years of a combined dietary and physical fitness intervention for control of serum cholesterol. *Journal of the American Dietetics Association*, 94(6), 634 – 638.

Angotti, C.M., Chan W.T., Sample C.J. and Levine, M.S. (2000). Combined Dietary and Exercise Intervention for Control of Serum Cholesterol in the Workplace. *American Journal of Health Promotion*, 15(1), 9-16.

Promising Practice

Source

People Services, Ottawa, Ontario

Overview

Ottawa Heart Beat is a coalition of community groups and organizations working together. Their goal is to improve the health of the people in the City of Ottawa and surrounding areas through adoption of a healthier lifestyle in a supportive, clean and safe environment. The underlying structure of the program is a Regional Heart Beat Committee (RHBC) that includes sub-committees, partner coalitions, individuals and partners from the community. A Logic Model guides the process and describes activities, target groups and short-and long-term outcomes for each of the components (Awareness/Education, Skill Building, Community Partnerships & Mobilization, and Policy Development and Advocacy).

This program is targeted to a variety of audiences with a focus on populations that are under serviced. Priority groups include children, youth, cultural groups and women.

Results/Outcomes

The objectives of Heart Beat are:

- To increase the percentage of children and adults consuming nutritionally adequate diets as reflected in Canada's Food Guide to Healthy Eating/Nutrition Recommendations for Canadians.
- To increase the percentage of adults and senior adults being physically active
- To increase the percentage of adults using healthy coping options to deal with change, stress and life transitions
- To decrease the percentage of adults with uncontrolled hypertension
- To increase the percentage of adults and senior adults who do not smoke to 85%.

For each objective, specific targets are described. For example for the first objective above, one of the targets is to increase by 10% the percentage of children and adults who consume 4 or more servings of fruits and vegetables per day.

No study has been conducted on this program. Individuals of the Coalition have been interviewed to determine "what works well" and to address issues for a number of process

indicators and outcome indicators. Under process indicators, a strong sense of collaborative partnership and good interpersonal relationships among partners were mentioned. Other positive aspects of the Coalition included the establishment of four -year activity plans, the flexibility of the Coalition to respond to the community's needs, effective communication and the champions within the Health Department and from the community.

Outcome indicators included a win/win situation for the organizations involved and the Health Department, a number of spin-off activities due to the building of social networks in the community and an overall increase in the number of partners in the coalition. Evaluability of the overall program is difficult because so many facets overlap in dissemination.

Prevention of Chronic Disease and Conditions

- Cardiovascular Disease
- Stroke
- Hypertension

Risk Factors and Other Issues

- Physical Inactivity
- Tobacco Use
- Unhealthy Eating/ Nutrition
- Stress

Setting

- Community at Large
- Grocery Stores
- Restaurants
- Worksites

Program Description

The key activities of Heart Beat involved building the capacity of the community to deliver heart health messages and programs through partnering with stakeholders.

There are 17 active projects listed on the website:

(www.ottawaheartbeat.com/projects.htm).

They include:

- GOTTAWALK
- Kanata Heart Beat
- Multicultural Health Coalition
- Nepean Heart Beat
- Partenaires franco santé

Audiences

- Children (<13 years)
- Youth (13 – 18 years)
- Adults Female (19-64 years)
- General Community (inc. children, youth, adults, seniors)

Audiences Characteristics

- Community Volunteer
- Individuals Living in Low Income Situation
- Peer Support/Educator

Approach

- Awareness
- Education
- Environmental Support
- Policy

- Pathway Patrol
- Pathways to Health
- Regional Heart Beat Executive
- Regional Heart Saver Committee
- Rural Heart Health Coalition
- “Taking Charge”: Women and Heart Health
- Tobacco Initiatives such as ACCESS
- Vegetable and Fruit Campaign
- Woman Alive: Women and Heart Health
- Women and Heart Health Advisory Committee
- Workplace Health Program
- Youth Committee

Resources

Materials from various projects are available on a cost recovery basis. Some are available on the website: www.ottawaheartbeat.com.

The Youth Committee provides the following materials:

1. Happy Heart Leaders’ Manual
2. Feel the Beat Leader’s Manual
3. Outdoor Adventure for Girls Leader’s Manual

The first two Manuals are available in French and English.

Other Information

This project requires on full time Heart Health Project officer. In addition, many volunteers contribute time and talent to planning and making the programs and activities happen. The in-kind contributions from the health department amounted to 8.3 Full Time Equivalents (FTE) and 7.4 FTEs for the community.

The Coalition is highly visible with an extensive reach as evidenced by the large number of ongoing projects.

The program is sustainable as long as funding is maintained and it is organized through the Health Department. Sustainability is also dependent on significant time and money from in-kind contributions.

The materials are useful and the program is well documented.

The program targets the following risk factors: high blood pressure, sedentary lifestyle, unhealthy eating, smoking, high cholesterol, stress, obesity, and diabetes.

References

No references available

A Shipboard Weight Control Program

Date of Intervention: N/A

Originally Reviewed: April 2005

Last Updated: July 2007

Promising Practice

Source

US Naval Reserve; the Maryland Health Care System; the University of Maryland; the Naval Surface Force.

Overview

This intervention attempted to educate participants in effective and acceptable ways to adopt lifetime, lifestyle behaviours conducive to long-term weight control and physical activity. The target audience for the program included enlisted men onboard a deployed combatant ship of the U.S. Navy who had failed their previous Physical Readiness Test due to excessive weight.

The program components included diet, behaviour modification, cognitive, emotional and social factors that influence weight management, and exercise.

The intervention was a two-group randomized design that tested a nutrition, cognitive-behavioural obesity treatment plus exercise program versus the Navy's usual treatment, which is exercise alone. Thirty-nine men were randomly assigned to the Treatment or Control condition (exercise only).

Outcomes for the treatment group were significantly better than the controls, including weight loss, reduction in body weight and body fat, a decline in triglycerides and an improvement in depression and eating behaviours.

Results/Outcomes

The goal of the study was to determine whether a multifaceted approach to weight loss and physical readiness could be implemented onboard a deployed combatant ship of the U.S. Navy.

The study objectives were:

- To affect the weight loss of enlisted men who did not meet body composition standards
- To evaluate factors at sea that could affect the program's implementation, and
- To determine its relative effectiveness in helping service members with obesity meet weight and physical fitness standards

All evaluation measures were obtained onboard ship, immediately before and after treatment. A variety of measures were taken (height, body circumferences, percent body fat, glucose and lipoprotein lipid levels, blood pressure, mood, estimates of total calories and percent of calories from carbohydrates, protein, and fat) from participants. Additional data collected included menu analysis (calories/day, and percent of calories from carbohydrates, protein and fat) and a record of shipboard and external events that may have affected weight management.

Results for the Body Habitus measures included:

- No significant differences in body composition between participants in the treatment groups as compared to the control group at baseline.
- The treatment group at post-test showed significant decreases in body weight as compared to the control group.

Results for the CVD Risk Factors:

- At baseline the participants in both groups had low HDL cholesterol levels, which placed the participants at an increased risk for CVD
- The triglycerides declined significantly among those in the treatment group as compared to those in the control group
- Depression and eating habits significantly improved in the treatment group versus the control group

It was noted that differential improvements in depression and eating behaviours for the treatment group underscore the importance of evaluating a variety of outcomes in health promotion programs.

These results support the ability to conduct multifaceted weight control programs on deployed naval vessels. This is important to the Navy because of the potential to positively impact Navy policy on obesity treatment.

Prevention of Chronic Disease and Conditions

- Cardiovascular Disease
- Overweight/Obesity

Risk Factors and Other Issues

- Physical Inactivity
- Unhealthy Eating/ Nutrition
- Stress

Setting

- Worksites

Audiences

- Adults Male (19-64 years)

Audiences Characteristics

- Teachers/Educational Instructors

Approach

- Education
- Environmental Support

Program Description

Small groups (7-12) met for hour-long weekly sessions for sixteen weeks of the 6-month deployment. The program format was lecture and discussion.

Participants weighed in weekly and self-monitored with food records.

The diet followed NCEP Step I (Heart Healthy) guidelines for dietary composition. These guidelines recommend 50% to 55% of calories from carbohydrate, <20% from protein, and <30% from fat. Portions are controlled to decrease energy intake by 500 calories/day to promote weight loss of 0.5 kg/week to 1.0 kg/week. Participants learned food exchange lists rather than to count calories.

Specific meal plans were not given as the intent was to educate the men to make their own choices while on board, in port, and eventually at home.

Behaviour modification consisted of teaching participants techniques conducive to weight management. Cognitive/emotional factors involved enhancing self-efficacy, managing stress, solidifying social support, and dealing with lapses and relapses.

The exercise program for the experimental group was the program mandated by the Navy, which consisted of 1 hour of exercise 4 days per week. Established exercises included curl-ups, push-ups, walking, jogging, and other aerobic exercises.

The control group received the Navy's usual care and individuals were provided nutrition fact sheets and brochures if requested.

Resources

Resources used in the program included:

- Standardized instructor manual
- Participant notebooks with course material
- Food records

Other Information

This intervention could be combined with interventions that focus on organizational/environmental change, and/or the diet could be paired with an exercise component from another intervention.

References

Dennis, K.E., Pane, K.W., Adams, B.K. and Qi, B.B. (1999). The impact of a shipboard weight control program. *Obes Res*, 7, 60-67.

Promising Practice

Source

StayWell Company (Minnesota).

Overview

The target group for the intervention was employees of public and private organizations who were clients of StayWell. The purpose of the study was to evaluate the effectiveness of an individually targeted, multi-component health promotion intervention delivered by telephone. Employees in six organizations were invited to participate. Interventions were designed for seven lifestyle risk factors (back care, cholesterol control, eating habits, exercise and activities, stress management, tobacco use and weight control) and intended to help participants acquire general behaviour-change skills. Participants were also encouraged to apply these skills to other problem behaviours they wanted to change.

Long-term improvements were made in health risk factors directly related to the intervention in which participants were involved.

Results/Outcomes

The goal of the study was to evaluate the long-term impact of an individually targeted, multi-component health promotion intervention delivered by telephone to high risk, ready-to-change individuals. The objectives were:

- To assist participants in making specific long-term improvements in lifestyle risks directly related to the intervention in which they participated
- To help participants acquire general behaviour-change skills
- To encourage participants to apply the skills to other problem behaviours they wanted to change

Three sets of analyses were conducted to determine the effectiveness of the program. The first set examined the overall effect on the number of health risks. The second set examined specific effects, defined as changes to the targeted risk area made by participants in each of the seven intervention areas. The third set of analyses examined general effects on health risks not specifically targeted by the intervention in which the individual participated.

Results are as follows:

- Participants in the Intervention group significantly decreased the number of health risks, while those in the Control group significantly increased the number of health risks
- Participants in six of the seven specific lifestyle risk factors (all but those in cholesterol control) were 1.8 to 3.5 more likely to reduce their risks than non-participants
- There were no significant differences in the cholesterol control area in the Intervention group
- Participants in the Intervention group were 1.7 to 3.5 times more likely to reduce their health risk factors in 9 of the 13 lifestyle areas not specifically targeted by the Intervention than those in the Control group.

The study seems to suggest that targeted interventions using stage-based protocols delivered via the telephone can have a significant, long-term impact on health risks. This supports the assertion that targeting individuals by risk and readiness is an effective health promotion strategy. This program might be appealing to those who wish to effect permanent health risk reductions among receptive employees.

Prevention of Chronic Disease and Conditions

- Cardiovascular Disease
- Stroke
- Type 2 Disease
- Hypertension
- Overweight/Obesity

Setting

- In home
- Worksites

Audiences

- Adults (19-64 years)

Risk Factors and Other Issues

- Alcohol and Other Drug Abuse
- Physical Inactivity
- Tobacco Use
- Unhealthy Eating/ Nutrition
- Stress

Approach

- Screening
- Education

Program Description

Employees of six clients of StayWell were invited to participate in NextSteps. Those who declined served as the Control group. Participants began by completing the StayWell HealthPath health risk assessment (HRA) for baseline data collection. The HRA collects information on chronic conditions, health status, demographics and lifestyles.

The scores on the HRA were used to categorize employees as low, moderate or high risk in each of 13 lifestyle areas: alcohol consumption, back care, blood pressure control, cholesterol control, driving safety, eating habits, exercise and activity, mental health, preventive screening

examinations, self-care, stress management, tobacco use and weight control.

Intervention programs were implemented in 7 of the 13 areas (back care, cholesterol control, eating habits, exercise and activity, stress management, tobacco use and weight control). The intervention began with the mailing of educational materials and followed by a series of counseling contacts by a trained health educator. The educator provided information, telephone counseling, and feedback to facilitate change in the risk behaviour selected by the participant.

Participants were contacted three times during the education phase – one week after the mailing, at 6- and 12- month points of the program.

During the initial contact, stage-of-change status was established along with short- and long-term goals. Barriers to moving to the next stage of change were also identified. Subsequent contacts were used to monitor progress, address barriers, discuss social support and acknowledge success. Participants had access to a toll-free telephone service on an as-needed basis to talk to the health educator.

A key element of the program was the facilitative role of the health educator who supports the participant's decisions about how and when changes are made. This approach is intended to increase commitment by moving decision-making responsibility to the participant and increase assimilation of general behaviour change skills to other areas.

Resources

The Health Risk Assessment (HRA) was used to collect self-reported health risk information. Additional materials included a welcome letter, educational booklet and videotape.

Other Information

The collaborative approach and encouragement for participants to determine their own goals, and how and when to make behaviour change was a positive element of the study.

The time commitment of health educators is a minimum of 10 minutes per employee, every six months.

References

Gold, D.B., Anderson, D.R. and Serxner, S.A. (2000). Impact of a telephone-based intervention on the reduction of health risks. *Am J Health Promot*, 15(2), 97-106.

Source

Dana-Farber Cancer Institute/Harvard School of Public Health; University of Massachusetts School of Public Health and Health Sciences; University of Massachusetts Medical School; University of California School of Public Health.

Overview

The WellWorks Study was designed to fit into the existing structure of manufacturing worksites by identifying barriers to participation and developing strategies to facilitate maximum worker involvement and worksite changes. The target audience was employees in manufacturing facilities.

WellWorks was an integrated health promotion-health protection intervention in twenty-four manufacturing worksites. The intervention targeted the reduction of risky health behaviours, including high fat, low fruit, vegetable and fibre consumption and cigarette smoking. Occupational hazards targeted included reduction of exposure to occupational carcinogens, ventilation, instruction on the use of MSDSs and the use of personal protective equipment. Clean air policies were established and healthy food options were made available in vending machines and cafeterias.

WellWorks was successful in reducing fat consumption and increasing fruit, vegetable and fibre consumption particularly among blue-collar workers.

Results/Outcomes

The goal of the program was to promote nutrition, smoking cessation and healthy working environments among manufacture workers. The objectives included:

- To decrease consumption of fat
- To increase consumption of fruits, vegetables and fibre
- To increase smoking cessation
- To increase awareness of occupational hazards
- To reduce exposure to occupational carcinogens
- To change worksite smoking policies
- To increase healthy foods in vending machines and cafeterias

A transitional goal was increasing worker's awareness of individual risk behaviours, and

exposure in their work environment.

Several significant differences were found between the Intervention group and the Control group. Workers in the Intervention group:

- Significantly reduced the percentage of calories consumed as fat
- Significantly increased consumption of fruits and vegetables
- Significantly increased fibre consumption

There was no significant difference in the rate of smoking between the two groups.

Prevention of Chronic Disease and Conditions

- Cancer
- Cardiovascular Disease
- Type 2 Disease

Audiences

- Adults (19-64 years)

Risk Factors and Other Issues

- Alcohol and Other Drug Abuse
- Tobacco Use
- Unhealthy Eating/ Nutrition
- Air Quality

Approach

- Awareness
- Education
- Environmental Support
- Policy

Setting

- Restaurants
- Worksites

Program Description

The study began with the collection of baseline measures for diet, fruit and vegetable intake, smoking and exposure to workplace hazards. After baseline assessment, worksites were matched and randomly assigned into twelve pairs based on presence of a cafeteria, worksite size, type of smoking policy, company type, distribution by gender, distribution of blue-collar and white-collar jobs, and response rate to the baseline survey.

In the first year, Intervention worksites established a worker-management advisory board and designated a worksite liaison. This Board met approximately once a month. Their task was to promote worksite-level changes in all three risk factors. They worked with WellWorks staff to reduce occupational risks, implement tobacco control policies and provide healthy food options in cafeterias and vending machines. They used various company communication channels, word of mouth and special events to promote healthy food options.

Four intervention activities formed the core of the program at each worksite:

1. A kickoff event announcing the beginning of program activities
2. Materials including brochures, videocassette presentations, and poster
3. Direct education groups of classes

4. Risk factor campaigns

Resources

Several resources/products were developed, including: brochures, videocassette presentations, posters, direct education groups/classes, taste tests and cooking demonstrations.

Other Information

The WellWorks team included an industrial hygienist and a nutritionist. Staff time was heavily invested in the study design and implementation to increase participation.

The results can be generalized to similar worksites that have a high readiness to provide multilevel programming promoting worker health.

The levels of behavioural risk factor change among blue-collar workers ranged from 2% for fat consumption to 7% for fibre consumption. If such changes were applied to a population wide basis, they would likely have a meaningful effect in terms of coronary heart disease, Type 2 Diabetes and other diseases.

References

Sorensen, G., Himmelstein, J.S., Hunt, MK., Youngstrom, R., Herbert, J.R., Hammond, K.S., Palombo, R., Stoddard, A. and Ockene, J.K. (1995). A Model for Worksite Cancer Prevention: Integration of Health Protection and Health Promotion in the WellWorks Project. *American Journal of Health Promotion*, 10, 55-62.

Sorensen, G., Stoddard, A., Hunt, MK., Hebert, J.R., Ockene, J.K., Avrunin, J.S., Himmelstein, J. and Hammond, S.K. (1998). The Effects of a Health Promotion-Health Protection Intervention on Behavior Change: The WellWorks Study. *American Journal of Public Health*, 88, 1685-1690.

Source

Miriam Hospital/Brown University Medical School.

Overview

The target audience for the project was employees in manufacturing worksites. The purpose of the project was to assess the impact of a two and a half year health promotion intervention that targeted health behaviour change in physical activity, nutrition and smoking. Twenty-two worksites participated (n=2055) and were matched and randomized to either Intervention or Control worksites.

The program used a combination of individual interventions and organizational strategies designed to support healthy behaviours such as health related policies and environmental interventions.

Results indicated that participants in the Intervention worksites had significantly increased their exercise behaviour and moderately increased their fruit, vegetable and fibre.

Results/Outcomes

The goal of the project was to understand the mechanisms associated with behaviour change processes to help develop better interventions for all employees. The objective was to integrate physical activity into a health promotion initiative.

Impact and outcome evaluation were conducted. For the impact evaluation, early change was assessed using a sensitive intermediate outcome measure for motivational readiness, which focused on three potential outcomes:

1. Within stage progression
2. Stage static
3. Stage regression

The Outcome evaluation measured physical activity, nutrition, and smoking using a census sample of individual employees and self-administered surveys. A secondary outcome for each behaviour was motivation for behaviour change.

Intervention participants were assessed for motivational change in all three target behaviours using stage-of-change measures (Precontemplation, Contemplation, Preparation, Action, Maintenance).

Results showed that participant in the Intervention worksites had significantly increased their exercise behaviour and moderately increased their fruit, vegetable and fibre intake.

Prevention of Chronic Disease and Conditions

- Cardiovascular Disease

Risk Factors and Other Issues

- Physical Inactivity
- Tobacco Use
- Unhealthy Eating/ Nutrition

Setting

- In home
- Media
- Worksites

Audiences

- Adults (19-64 years)

Approach

- Awareness
- Education
- Environmental Support
- Policy

Program Description

Employee advisory boards (EAB) were established in each of the intervention worksites. The chairperson for the EAB was designated worksite coordinator and the main contact person for the project. The worksite coordinator helped adapt the intervention to the particular worksite and served as spokesperson and advocate. Once a month the EAB met to plan and tailor intervention activities. Interventions were aimed at both individual/employee and environmental/organizational levels of change and consisted of the following strategies, activities and objectives:

Individual Level

A kick-off event took place for each risk factor and included a minimum of one interactive activity such as:

- Exhibits
- Demonstrations
- Guest speakers
- Taste tests

Informational/educational/motivational materials were provided for each risk factor and included:

- Four posters
- Four brochures
- Newsletters
- Door prizes and balloons

Self-help/self-skills management programs intended to support individual behavioural change were offered for each of the risk factors, and consisted of two activities per risk factor, such as:

- At-home videos
- Print materials

Contests and monetary incentives took place for each risk factor including activities such as:

- Cook-offs
- Poster contests
- Fitness challenges
- Incentives to participate in awareness, action, or maintenance events

Two direct-education group sessions were offered per risk factor and consisted of information regarding:

- Skill-building
- Social support
- Knowledge, attitude and behaviour change

Organizational Level

A cafeteria and vending machine program was implemented in all worksites and consisted of:

- Labeling all food items that met with the study's criteria for fat and fibre
- Offering low fat, high fibre foods at all meetings and/or events

Smoking control policies were implemented to reduce or eliminate smoking at the workplace.

Upon assessment of current physical activity options for employees (space, showers, equipment, and discounts on memberships) the following was implemented:

- Allocation of space for exercise equipment
- Purchases of new equipment for existing exercise rooms
- Training sessions offered for new equipment

A measured distance line was painted around the worksites to promote walking.

Resources

Informational/educational/motivational materials were provided for each risk factor and included:

- Posters
- Brochures
- Newsletters
- Door prizes and balloons
- Videos
- Print materials
- Questionnaires
- Labels for high fibre, low fat foods

Other Information

The Working Healthy Project was a population-based effort targeting a large number of workers. This intervention could be combined with interventions that offer an individual approach. It was based on a participatory strategies model to involve workers in the design and implementation of intervention activities.

References

Emmons, K.M., Linnan, L.A., Shadel, W.G., Marcus, B. and Abrams, D.B. (1999). The Working Healthy Project: A Worksite Health-Promotion Trial Targeting Physical Activity, Diet, and Smoking. *JOEM*, 41(7), 545-555.