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IMPLICATIONS AND IMPACTS OF AWARENESS SESSIONS  
IN A WORKSITE HEALTH PROMOTION PROGRAM

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Abstract: The purpose of this study was to evaluate one phase of an extensive worksite health promotion program, developed and implemented by multidisciplinary health care professionals. A single group pre-post design was conducted using the Cardiac Health Questionnaire. T-test and **chi-square** results indicated significant changes in attitude and knowledge related to **cardiovascular** disease prevention. Perceptions of organizational climate and employee concerns regarding issues of confidentiality in the work place, also have implications for the development of such programs. The need for worksite health programs and the skills health professionals **provide** to their successful implementation, provide educational direction to the development of health occupations programs.

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Worksite Health

Current trends in health care, including increased incidence of chronic disease and increased fiscal support for prevention, have stimulated interest in expanding the direction of health education programs. One such direction is the consideration of new settings for health education programs developed and implemented by multidisciplinary health occupations professionals. The worksite provides an excellent environment for health care programs, especially in terms of preventative **health** promotion. Alderman, Madhaven, and Davis (1983) postulate that the worksite environment is potentially a major factor in illness and, with appropriate intervention, could be used to promote **wellness**. The logistical convenience of worksite health programs, and the complex social networks that develop among coworkers provide an alternative environment within which knowledge, attitudes, and behavior can be changed (Chadwick, 1982; Colletti and Brownell, 1982; Fielding, 1984). Sallis, Hill, Fortmann and Flora (1986) found that cardiovascular status improved in persons supported by a health conscious network. Given the large percentage of the population which could be reached by health promotion programs at the worksite, successful intervention efforts could have a significant impact on the public **health** problem of cardiovascular diseases (Blair, et al., 1984). These programs also can influence the direction of health occupations programs by preparing professionals to assume expanded roles within the worksite. Such roles include not only clinical skills, but competencies related to teaching, program development and evaluation. The purpose of this paper is to evaluate one component of a worksite health promotion program entitled Working Hearts, which demonstrates the expansion of this role.

The Working Hearts Program is a worksite health promotion program implemented at a large corporation in the midwest. The program is designed to increase the knowledge of cardiovascular disease and encourage reduction of risk for such disease. The Working Hearts Program is comprised of 4 phases, totaling 24 months in length: (a) Baseline Physical Screening, consisting of physiologic measures indicative of health status (i.e., height, weight, cholesterol levels, stress level assessment); (b) Awareness Sessions, designed to present a didactic overview of current cardiovascular health information; (c) Health Promotion Workshops, consisting of 21 discrete presentations of material that allow for active learning experiences on the part of the participants (topics include nutritional eating, weight loss, stress reduction, smoking cessation, exercise); (d) Follow-up Screening, which occurs at the conclusion of the program and involves a repeat of the physiological measures initially conducted in Phase 1.

The Working Hearts Program is being delivered to 15 divisions within 6 company sites, located at various geographic locations across Missouri. A total of 1,004 subjects are participating in the program, which is currently in the third phase of implementation. The remainder of this paper will present the evaluation of the second component of the Working Hearts Program: the Awareness Sessions.

#### Working Hearts Awareness Session

The Working Hearts Awareness Sessions encompassed 4 instructional modules, developed by a team of multidisciplinary health professionals (i.e., nurses, dietitians, social workers). The goals of the Awareness Program were to: (a) improve the knowledge level of the worksite population

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regarding cardiovascular disease; (b) encourage attitudes supportive of positive health behaviors; and (c) provide resources for changing behaviors regarding cardiovascular health. The sessions were delivered by various members of this team using media in the form of slides and educational materials specifically developed for each module. Brochures summarized the content related to the objectives of the sessions, presented answers to the most frequently asked questions, and offered referrals to organizations available for supplemental information. A 10 to 15 minute question and answer session followed each 45 minute didactic presentation developed according to the specified curriculum. An overview of the curriculum for the four sessions follows:

1. Your Cardiovascular Health. The objective of this session was to improve participant knowledge of the physical workings and mechanical composition of the heart. An overview of risk factors associated with cardiovascular disease was presented including information on smoking cessation, hypertension, obesity, exercise, stress, and elevated blood cholesterol level. Strategies for modifying these risk behaviors were discussed.

2. Hearty Eating. The objective of this session was to promote the concept of ideal body weight with regard to maintaining optimal health. An overview of nutritional needs, appropriate dieting strategies, and specific steps for assuring long-term weight loss were presented.

3. Stress and Exercise. The objective of this session was to increase participant knowledge of the impact of stress on the body and to introduce methods of identifying and dealing with stress. Specific lifestyle changes and healthful ways of modifying an individuals' reaction to stress were

introduced. A second objective was to provide an overview of the physiologic and **psychologic** impacts of exercise on the body.

4. Warning Signals of Heart Attack. The objective of this session was to summarize the effects of long-term risk factors on cardiac functioning with implications for care in terms of **myocardial** infarction (MI). Information was presented on risk factors and warning signs of heart attack. The importance of decreasing delay time and problems associated with returning to work after a **myocardial** infarction were addressed. Supportive behaviors by coworkers that promote recovery, as cited by post MI patients, were discussed.

#### Methods and Procedures

##### Sample

A single group pre-post design was employed. The sample was derived from a population randomly selected from the corporation to receive the Awareness Program. Approximately 67% of the population were married while 24% were college educated. Almost 81% had been with the organization for at least 5 years. The sample, with a mean age of 37 years, was 59% female and 32% white collar workers.

##### Questionnaire

The Cardiovascular Health Questionnaire was used as a measure of knowledge and attitude change of employees following the delivery of the Working Hearts Awareness Program. The 80 item, Likert Scale questionnaire consisted of 4 sections: knowledge of factors predisposing to **Myocardial** Infarction (MI), the subjects' perception of how they would respond to an MI, subjects attitudes toward rehabilitation from a cardiac event, and perception of organizational factors that may influence participation in

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a health promotion program. The 3 **subscales** of the Cardiac Health Questionnaire (Risk Factors, Symptomatology, Rehabilitation) were administered with alpha reliability coefficients of .75, .71, and .75 respectively.

The sample completed the Cardiac Health Questionnaire 2 weeks prior to the initiation of the first awareness presentation and within 2 weeks of the conclusion of the Awareness Sessions (n=143 at pre-test, 97 at post-test).

#### Data Analyses and Results

Descriptive analyses of **subscale** results and organizational climate items were initially conducted. Pre-post score changes in the 3 **subscales** were assessed by t-test comparisons. Additionally, **chi-square** analyses were used to determine if scores were significantly related to organizational climate items and demographic variables.

Change in the Risk Factors **subscale**, measuring knowledge of cardiac risk, indicated a significant improvement in knowledge ( $t=2.49, p<.01$ ). Significant differences also were discovered when comparing employees' pre and post-test **Symptomatology Subscale** scores ( $t=11.07, p<.0001$ ) indicating a post-intervention improvement in cognitive knowledge of MI symptoms and actions associated with decreasing delay time. Finally, employees' scores on the Rehabilitation **Subscale**, which measured cognitive knowledge and attitudinal **change** associated with return to work post MI, were significantly higher at the post-measure level ( $t=5.66, p<.0001$ ).

With regard to the organizational climate questions, 76% of the sample reported they would disclose their disease state to their supervisor. Of this number, 48% believed their chances for promotion would be negatively

affected by this admission. Approximately one-third of all employees reported that they would be more likely to retire early following the diagnosis of chronic disease although only one fourth believed that such a diagnosis would negatively affect their job performance. Significant differences in perceptions about disease-status disclosure were discovered between males and females and between older (> 35 years) and younger (18-35 years) employees as indicated by **chi-square** comparisons. Female employees perceived that they would be more likely to report a diagnosis of a chronic illness to a supervisor than males (72% vs. 65%), ( $\chi^2=15.1, p<.004$ ), as would those subjects older than 35 years (74% versus 69%), ( $\chi^2=22.4, p<.03$ ). No significant differences in perceptions were found when blue and white collar employees were compared ( $\chi^2=4.6, p<.32$ ).

#### Discussion and Conclusion

These results suggest that following participation in the worksite health promotion intervention, employees increased their knowledge of: (a) risk factors of cardiovascular disease, (b) issues related to rehabilitation following MI, and (c) the role of coworkers in supporting the recovery process associated with acute cardiovascular disease. Furthermore, employees improved their intent to intervene appropriately upon recognizing such symptoms. These data also suggest that employees perceive that disclosure of a chronic disease will have a negative impact on job advancement, and influence their decision to retire early (before age 65) despite their physical capability to work. These attitudes appear to be most firmly established for females and for those above 35 years of age. Such perceptions may influence the success of worksite health programs and their impact on promoting employee health since a baseline health survey,



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as was conducted in Phase I of the Working Hearts Program, usually requires disclosure of both acute and chronic conditions. Fear of job repercussions associated with diagnosis of a chronic disease or its disclosure **could** negatively influence attendance at such programs. These results also suggest the worksite is an appropriate environment for employee health promotion programs. A worksite health promotion program is a first step to such a focus as it educates subjects on preventative and rehabilitative aspects of care.

Implications for further study include **evaluation of** long-term impact of such programs on chronic disease development. Physiologic indicators of potential disease (i.e., blood pressure, cholesterol levels, etc.), provide valuable parameters whereby programmatic impact on cognitive and behavioral change can be determined. Such an assessment is currently being conducted in the Working Hearts Program.

In conclusion, our results suggest health occupations professionals, working in collaboration with employers, have an important and expanding role to play in the development of such programs. Probably the greatest need is for development of individually tailored, inexpensive programs for worksites with relatively few employees. Health occupations professionals can contribute health assessment and education skills to program implementation in a manner more cost efficient in terms of disease prevention and rehabilitation. The benefits of worksite locations may have particular value in rural communities where access to acute care settings for clinical education is limited. These current trends therefore have implications for the revision of health occupations curricula which have traditionally focused on training professionals primarily to meet acute

care needs. Health professionals educated to function in such innovative program settings are of significant and growing value to employers and employees dependent upon worksite programs for the majority of preventative health education.

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