AN ANALYSIS OF HEALTH PROMOTION MEDIA USE IN ORGANIZATIONS WITHIN THE UNITED STATES

By

Gary L. Flegal

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Physical Education and Exercise Science

1996

ABSTRACT

AN ANALYSIS OF
HEALTH PROMOTION MEDIA USE
IN ORGANIZATIONS WITHIN THE UNITED STATES

By

Gary L. Flegal

Downie, Fyfe, and Tannahill's (1990) model of health promotion was utilized in this study to assess the use of media in companies providing worksite health promotion programs. Subjects were 212 (response rate = 35.33%) health promotion professionals and members of the Association for Worksite Health Promotion. Nine research questions were used to explore (a) the types of programs offered by organizations, (b) the value placed upon various criteria for rating program effectiveness, (c) the types of media used to promote various programs, (d) the media and non-media reasons health promotion practitioners identify for program effectiveness and non-effectiveness, (e) the importance of specific media characteristics in promoting health promotion programs, and (f) demographic information about the respondents and their organizations. Major findings of the study indicated that professionals' promotional efforts were primarily in the Positive Health Education (49.7%), Preventive Health Education (21.5%), and Preventive Services (13.6%) domains. Professionals reported that Behavioral Change, Attendance, Long Term Health-Cost Improvement, and Management Favors It are the primary criteria by which their organizations judge their programs and that Urgency, Detail, Cost, Novelty, and Interactive are the most important qualities in their choice of media. Media choice (e.g., face-to-face, word-of-mouth, newsletter) in effective programs

differed from ineffective programs primarily in the frequency of use. Personal Contact and Management Support were identified as the major media and non-media reasons for program effectiveness, respectively. Lack Of Promotion for an event and Readiness were identified as the major media and non-media reasons for program ineffectiveness, respectively.

This dissertation is dedicated to Leona Washburn
and the inspiration that she provided in my life.
May your dance never end . . .

ACKNOWLEDGMENTS

There are many people to whom a word of thanks is due for the suffering that they have personally endured to help me through my doctoral school process.

- First I would like to thank Vernon Miller, without whose patient guidance this dissertation would never have happened.
- A B I G thank you to Ed and Lillian Kivela who provided my "home away from home." Thank you for making me part of your family.
- For all his many patient hours helping me locate resources, thank you, Bill Nelton, my favorite librarian in all the world.
- A word of appreciation to Willa Manchester, who has given me the opportunity to work in my chosen field, and will be particularly pleased to see me finished with this degree.
- A thank you to my parents, Joe and Donna Flegal, who gave me life and an attitude to win.
- To my children, Samuel Judson Flegal and Diana Rose Flegal, I love you guys and want to thank you for gypsying all over the country with your wayward dad. Thanks for being the special people you are.

- The most important and biggest **thank you** goes to my wife, Daphna. You stayed with me the whole way - that says a lot. I love you, more than you'll ever know.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

AN ANALYSIS OF HEALTH PROMOTION MEDIA USE IN ORGANIZATIONS WITHIN THE UNITED STATES

Introduction

In this study the health promotion practices of organizations within the United States are examined. In an effort to more adequately describe downward dissemination of health promotion efforts in corporations, this study identifies: (a) the characteristics of the corporate health program domains, (b) the downward-directed message dissemination strategies typifying these health program domains, and (c) the role of communication in program effectiveness.

Research Questions

Nine research questions are asked in order to determine the characteristics of corporate health promotion programs and the role of communication in program effectiveness. The nine research questions are listed below.

RQ1: What types of health promotion programs are used by organizations?

RQ2: How do health promotion programs differ across various types of industry?

RQ3: What criteria (dimensions) do health promotion professionals perceive that their organizations value as being most useful in determining program effectiveness?

RQ4: How do criteria used to evaluate the effectiveness of health promotion programs vary across the types of industry?

RQ5: What do health promotion professionals consider to be the most important media characteristics (i.e., "media dimensions") in promoting programs?

RQ6: How do these rated media characteristics vary by industry?

RQ7: What uses of media characterize effective and ineffective health promotion programs?

RQ8: What do health promotion professionals regard as the key media and non-media factors in the success or failure of promotions?

RQ9: What is the relationship between health promotion program success or failure and media use in their respective health promotion domains?

Background information for each question is developed in the literature review.

Literature Review

Throughout North America and Europe, organizations are endorsing health promotion programs in an effort to improve employees' fitness, health, and wellness (Chen, 1988; Fielding, 1984; Terborg, 1986). Nearly two-thirds of all companies in the United States have at least some type of health promotion program (Mayer, 1991) serving their employees and the employees' dependents (Vass, Gatlin, & Walsh-Allis, 1988). Worksite health promotion has potential to reduce corporate expenses through improved employee performance (Anderson, 1986; Bhagat, 1983; Donoghue, 1977; Howard & Mikalachki, 1979; Shephard, Cox, & Corey, 1981), attitudes (Holzbach, Piserchia, McFadden, Hartwell, Herrmann, & Fielding, 1990; Waller, Crow, Sands, & Becker, 1988; Yoder, Jones, & Jones, 1985), job attendance (Bell & Blanke, 1986; Bertera, 1990; Boyce, Jones, & Hiatt, 1991; Hendricks & Czujko, 1986; Jones, Bly, & Richardson, 1990; Tucker, Aldana, & Friedman, 1990), lifestyles linked with lower disease risks (Reed, 1991; Shephard, Corey, Renzland, & Cox, 1983), and cost containment of employee benefit/health plans (Bly & Jones, 1986; Chenoweth, 1990;

Elias, 1986; Erfurt, Foote, & Heirich, 1991a; Pelletier, 1991; Philips, 1988; Schwartz & Rollins, 1985; Super, 1987). With the establishment of worksite health promotion programs, employers want assurance that health promotion expenditures will, in fact, curtail costs in the aforementioned areas and involve significant numbers of employees (DeFriese & Barry, 1982; Emont & Cummings, 1990; Fielding, 1982; Harris, 1991; Lovato & Green, 1990; Terry, 1990; Wilson, 1990).

Recent research suggests that measurable improvements in employee health result from corporate programs dealing with hypertension control, physical fitness, nutrition education, weight management, cholesterol control, stress management, substance management, and smoking control (Chen, 1988; Erfurt & Foote, 1990; Erfurt et al., 1991a, 1991b; Fielding, 1982; Walker & Evans, 1987). Among health promotion practitioners, there is general agreement that the dissemination of information about programs and activities is a key factor in health promotion effectiveness (Heirich, Cameron, Erfurt, Foote, & Gregg, 1989; Rawson, 1987; Solomon & Maccoby, 1984; Yeater, Fink, & West-Barker, 1985). Their conclusions are based on the premise that employees' awareness of and participation in corporate health programs can be traced to receiving timely and relevant messages about these programs. In light of the importance of communication processes relative to program success, health promotion professionals should be knowledgeable of the various nuances inherent in marketing, advocating, and orchestrating their programs (Heirich et al., 1989; Rawson, 1987; Solomon & Maccoby, 1984).

While organizations advertise health promotion programs through in-house publications, union publications, word of mouth, memos attached to paychecks, in-house

closed-circuit television, posters, the organizational hierarchy, and union stewards (Barnes & Given, 1991), there is no guarantee that these messages are effective in informing or motivating employees. On the contrary, corporate efforts at downward dissemination of information are often ineffective in producing desired results (Redding, 1972; Stohl & Redding, 1987). Superiors may not relay messages to subordinates because (a) messages are interpreted as irrelevant, (b) messages are not understood, (c) messages fail to motivate the superior, or (d) superiors simply do not send messages. Given the reliance of health promotion professionals on message dissemination for the success of their programs, it is alarming that to date no systematic effort has been made to examine the effectiveness of *how* health promotion programs are promoted. Authors describing the dissemination of health promotion information have restricted their work to "how-to" lists lacking in theoretical or empirical basis (e.g., Anderson, 1986; Heirich et al., 1989; Rawson, 1987). Without theoretically based empirical assessments, it is impossible to determine the extent of employee response to corporate wellness efforts and the effective use of budgeted dollars.

In an effort to more adequately describe downward dissemination of health promotion efforts in corporations, the following factors are identified: (a) the characteristics of the corporate health programs, (b) the downward-directed message dissemination strategies typifying these health programs, and (c) the role of communication in program effectiveness. In the first section of this review the terms "health promotion program" and its elements as reflected in current industry practice will be defined. In the second section effective and ineffective health promotion programs will be distinguished. In the third section, entitled "Promoting Health Promotion

Programs," the role that corporate communication takes with regard to disseminating information about health promotion programs will be examined.

Health Promotion Programs

Current models of health promotion are the result of reactions to previous health-related models. These include (a) The Public Health Model, (b) The Medical Authority Model, (c) The Employee Assistance Model, and (d) The Health Era Model. A brief overview of these four models follows in order to give the reader an historical perspective on the roots of modern health promotion.

The Public Health Model

The great strides in health protection during the early years of the twentieth century were largely due to legislation and subsequent regulation in such areas as improved ventilation in public buildings, public sewer and water systems, improved waste storage guidelines, and mandated immunizations (McClary, Zahrt, Montgomery, Walker, & Petry, 1985; Means, 1962). Public health programs receive credit for controlling and eradicating many of the contagious diseases that prevailed during the 19th century and into the early 1900's (McClary et al., 1985). The primary focus of public health programs is changing physical, social, and/or legal environments by controlling options within these environments (Klarreich, 1987). For example, a city has choices about how it purifies its water, but these choices are affected by regulations of other government agencies (e.g., state inspectors examine city water purification systems). In this way, public health targets communities, not individuals. Individuals are only of interest "...for statistical purposes - as a smoker, drinker, drug abuser, or an entry in

the Centers for Disease Control *Weekly Mortality and Morbidity Report*" (Ainsworth, 1984, p.5).

The Medical Authority Model

This model, sometimes called the Acute Care Model, assumes that health depends upon control of diseases (Academy for Educational Development, 1985). McClary et al. (1985) also refer to this model as emanating from "The Medical Era," a period between 1920 and 1960 which was characterized by extreme specialization within the medical community and patients' acceptance of physicians' expert power. Perhaps the greatest indicator of this kind of power is the patient who, when asked how he or she is doing, turns to their physician and asks, "Well, how am I doing, Doctor?" The development of "miracle" cures for the major illnesses of our day (e.g., open heart surgery; chemotherapy for cancer) exemplify the thrust of medical specialization, but this model does little to prevent these diseases or induce the personal responsibility necessary to reduce the risk of disease. Historically, physicians have told patients to stop smoking, lose weight, or exercise in order to prevent disease, but have not taught patients *how* to do these things. According to Ainsworth (1984),

> Physicians are not involved in health care. They confine their professional activities to illness, that is, care of the sick. They are taught to diagnose and treat disease. The healthy person has not been their concern. In fact, physicians define health as the absence of disease, something beyond their interest, training, and competence (p.5).

The Employee Assistance Model

Employee assistance programs (EAPs) surfaced during the early to mid 1940s in order to assist employees in overcoming alcohol-related problems (Brody, 1988). In general, sober workers reduced direct costs to employers through fewer accidents, better

attendance and higher productivity. The inauguration of workmen's compensation laws also motivated employers to eliminate on-the-job alcohol-related problems. These laws held employers financially responsible for most work-related injuries regardless of who was at fault.

The framing of alcoholism as a disease in 1956 by the American Medical Association fundamentally changed the approach to employee alcohol problems. Based on the Yale Center of Alcohol Studies, program titles in the 1960s and 1970s contained descriptors such as "personal counseling" to remove the stigma attached to alcoholism (Brody, 1988). Metaphors like "counseling" led to new EAP services for a broad range of problems, including mental health, marital and family difficulties, money management, as well as substance abuse (Carr & Hellan, 1980). These new EAPs contained educational, preventive, and safety-oriented components.

The Health Era Model

This model emphasizes understanding health from a "wellness" perspective, a view that sees an individual's health as a complex function of the environment interrelated with behaviors and choices made by the individual. Also referred to as the "Post-Medical Era" (McClary et al., 1985), the Health Era Model views health as a participatory process where individuals take responsibility for their own level of health in conjunction with physicians and other health care professionals. This is in contrast to the mechanistic view of health provided by the Medical Authority Model which treats individuals' bodies as machines to be worked upon by highly skilled mechanics. The Health Era Model stresses that both public health and the medical professions are necessary for maintaining and supporting wellness (McNight, 1982). Indeed, they are

responsible for bringing us to the place in history where we are able to pursue wellness. At its most elemental level, wellness is a state resulting from individuals' conscious choices to improve or sustain physical, social, spiritual, and psychological health to pursue a higher level of health and well-being, not simply the absence of disease. For example, the main causes of premature death in our society are "lifestyle diseases (Edlin & Golanty, 1985, p.206-210)," meaning that we participate in the causes of these maladies.

> Our participating in the development of an illness means that we make certain choices to expose ourselves to stressful situations, and furthermore, to react to these stresses in certain ways. These choices are made unconsciously more often than consciously, and will depend on our personality, on various external constraints and on social and cultural conditioning (Capra, 1982, pp 162-163).

It is important to understand that individuals, in part, create their illness through behaviors and choices (e.g., smoking, avoiding exercise). Taking partial responsibility for any illness allows for one of two responses: individuals can either feel guilty, or they can work at improving their health.

Definitions

Prior to defining health promotion, three historical uses of the term "health" are first compared. These concepts include (a) traditional medical understandings of health, (b) the relationship of health education to health, and (c) the "wellness" or health promotion understanding of health. Medical and health sciences have traditionally focused upon how to avoid (primary prevention), cure (secondary prevention), or control further complications from illness and disease (tertiary prevention) (Tannahill, 1985a). These three levels of prevention constitute the range of physicians' and public health

workers' necessary functions. As such, "health" is the outcome of the medical process and can be defined as the absence or control of signs and symptoms of disease (Stachtchenko & Jenicek, 1990). While this medical orientation currently dominates the health field, these efforts focus on the negative concept of ill-health. "In speaking about ill-health, one might be referring to disease, injury, illness, disability or handicap, singly or in various combinations and experienced over a long or a short period of time" (Downie, Fyfe, & Tannahill, 1990, p.10). Strictly speaking, this approach "has attempted to repair damage after it has been done without eliminating its causes" (Anspaugh, Hamrick, & Rosato, 1991, p.3). In turn, a primary focus on remediating ill-health does little to remediate the leading causes of premature death (i.e., heart disease, cancer, etc.) which are related to behaviors and lifestyle choices (e.g., smoking, exercise, eating habits) (Anspaugh et al., 1991).

In contrast, health education is better equipped to address needed behavior changes. Health education professionals provide background information and help clients "develop skills and a healthy level of self-esteem, so that they come to feel significant control resides within themselves, rather than feeling buffeted about by external forces outside their sphere of influence" (Downie, et al., 1990, pp.59-60). Yet, health educators lack the ability to handle the medical problems associated with behaviors and lifestyles (e.g., surgery for cancer, prescription of drugs to control blood pressure).

Health promotion provides a basis for unifying the efforts of the traditional medical community and health education professionals. "Health promotion" considers health to be a resource which individuals bring to life situations, much the same as other basic resources like income, shelter, and food (Nutbeam, 1986). Health promoters (a)

emphasize approaches and activities that sustain and enhance existing levels of health and (b) view health as a positive and multidimensional concept (Stachtchenko & Jenicek, 1990). Central to health promotion is helping individuals discover (a) how to exercise power that they may already possess, but are afraid to use, and (b) new skills enabling them to manage parts of their lives that have been out of control. Learning how to say "No" to a boss or acquaintance without feeling guilty exemplifies the former; learning how to monitor blood pressure and keep it in a healthful range illustrates the latter.

Health promotion enables coordinated health care by (a) emphasizing the gains of joint efforts on a potential or current medical problem, (b) identifying areas of common interest, and (c) specifying the roles of medical and health education professionals. Consider the following two examples. First, a smoking cessation class based on behavior modification techniques also uses the medical prescription of epidermal nicotine patches. Such a two-pronged attack only becomes possible when health education and medical professionals work in concert. Instructors teach participants how to deal with the stresses which reinforce the need to smoke and the patch temporarily eliminates or reduces the urge to smoke. Second, surgery that corrects an existing problem (secondary prevention) can be re-conceptualized as sustaining health. In this case, individuals are brought back to the point where they can begin to deal with the positive aspects of health. After bypass surgery, patients can begin supervised exercise which may reduce the risk of future heart ailments and improve their overall health.

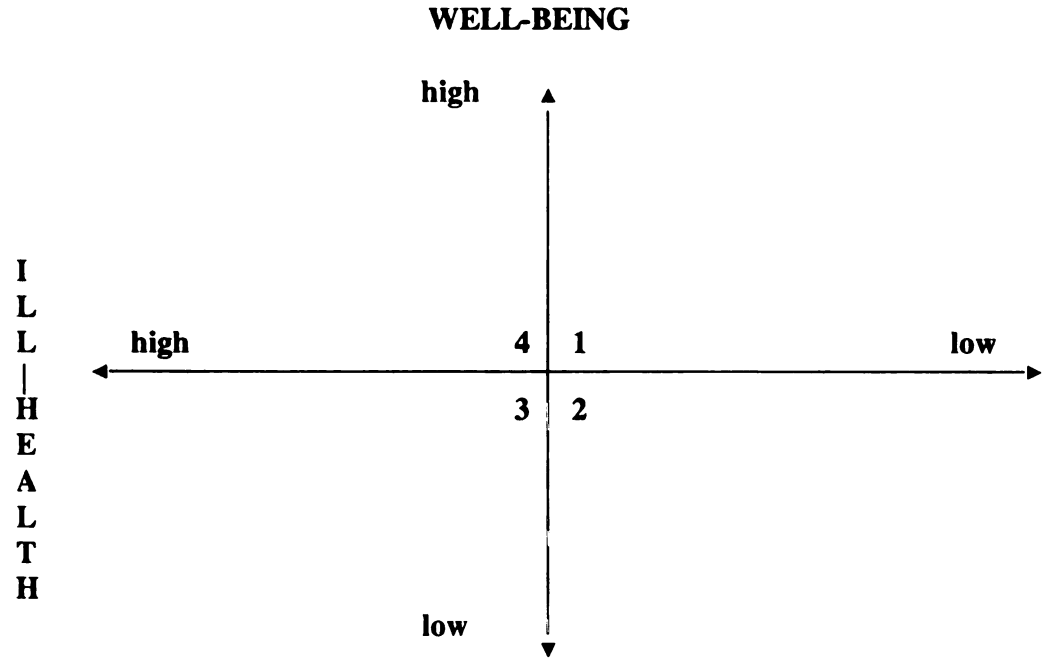
In summary, health promotion offers the widest possible array of strategies to deal with the health issues of employers and employees, including cost containment. Just replacing employees who have experienced heart attacks was estimated to cost employers

$700 million in 1989, with the total annual cost of cardiovascular disease estimated at $88.2 billion (American Heart Association, 1989). Health promotion recognizes the need for medical interventions as well as behavior modification education to control or prevent some of the causes (e.g., smoking, lack of exercise) of potential health problems. Thus, instead of maintaining the division between prevention and health education (Nutbeam, 1986), health promotion enables medical professionals and health educators to address the complete range of health and wellness as a team (Anspaugh et al., 1991; Catford, 1983). Health protection (i.e., safety) programs are now recognized as compatible with health education and behavioral/lifestyle change programs (Cohen & Murphy, 1989). This suggests that safety engineers who work to reduce occupational exposures to toxic and other harmful agents also can contribute to health promotion.

Beyond One Dimensional Models

Downie et al. (1990) suggest that the popular one dimensional health model (Anspaugh et al., 1991; Catford, 1983) placing ill-health at one end and well-being at the other end of the continuum is inadequate. Flaws in the one dimensional model are obvious. Individuals can feel very positive about life in the presence of a life-threatening disease, or they can be free from illness and not have feelings of well-being. Downie and colleagues advocate a two dimensional model featuring both health and well-being continuums. As depicted in Figure 1, individuals in quadrant 1 experience a high level of well-being and are free from ill-health. Individuals in the second quadrant have no evidence of ill-health, but exhibit a low level of well-being due to depression or simply being unable to enjoy physical health. Individuals in quadrant 3 have a low level of

Figure 1
Relationship between Well-being and Ill-health adapted from Downie et al. (1990)

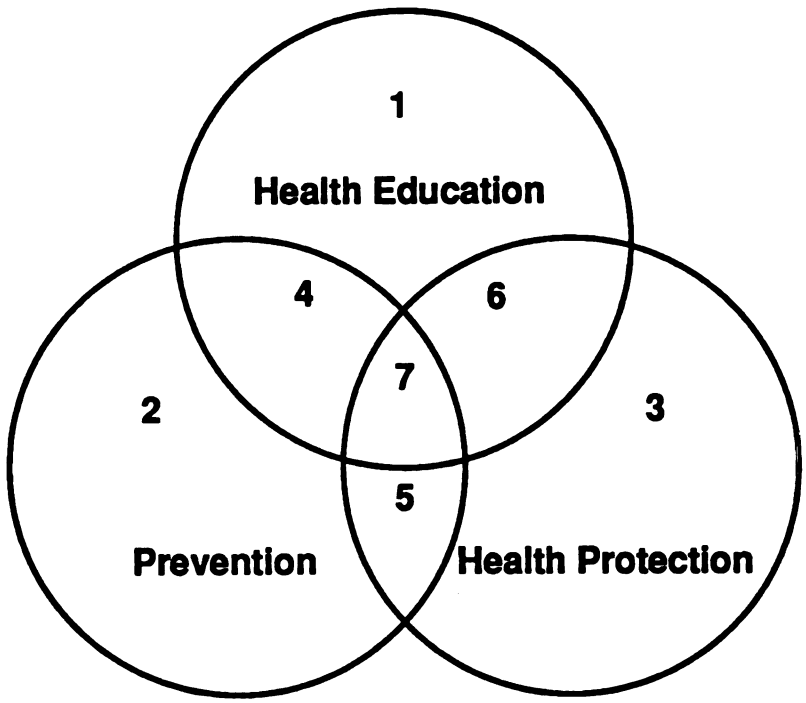


well-being and a high level of ill-health. These persons may be depressed and have a terminal illness or be experiencing chronic pain. Persons in quadrant 4 experience a high level of well-being despite a high level of ill-health. These individuals may have a serious illness, but accept what is happening and are at peace with themselves. In short, it is important to recognize that (a) well-being and health both constitute our daily definitions of a person's state, and (b) that the relationship between well-being and health is dynamic and always in flux.

Domains of Health Promotion

Downie et al. (1990), based upon work by Tannahill (1985b), propose that health promotion consists of seven "domains": Positive Health Education; Preventive Services; Positive Health Protection; Preventive Health Education; Preventive Health Protection; Health Education aimed at Positive Health Protection; and Health Education for Preventive Health Protection. As illustrated in Figure 2, these seven domains of health promotion are the result of the dynamic interaction of three main domains, health education, prevention, and health protection. This model: (a) depicts activities frequently considered to be health promotion, (b) shows how health education, prevention, and health protection overlap, (c) includes both the positive and negative aspects of health, and (d) identifies the political dimension of health care where legislation aimed at protecting public health is introduced and lobbied. The following discussion describes the health activity of each domain as proposed by Downie et al. (1990). This manuscript then extends the description of each domain's health activities and specifies the means (i.e. media, channels) by which the activities are communicated.

Figure 2
A Model of Health Promotion
adapted from Downie et al. (1990)



Legend:

1. **Positive Health Education**
   General instructional health activities.
2. **Preventive Services**
   Screenings, immunizations, and surgical interventions for clients or populations.
3. **Positive Health Protection**
   Creation of health legislation or regulatory policy.
4. **Preventive Health Education**
   Interventions for specific, identified health problems, (i.e., Weight loss, smoking cessation, counseling, & EAPs).
5. **Preventive Health Protection**
   Enforcement of legislation/regulations to prevent health problems caused by workplace hazards, toxins, or radiation.
6. **Health Education aimed at Positive Health Protection**
   Safety education to teach proper safety techniques, raising awareness and support for legislation among employers and employees to combat potential health risks.
7. **Health Education for Preventive Health Protection**
   Educating legislators and policy makers of the need for laws/policies to prevent health and safety problems.

According to Downie et al. (1990), the model demonstrates the wide range of possibilities for health promotion. The domains "... are not seen as occupying rigidly separate compartments (p. 59)." However, upon careful inspection of the model, it is clear that each of the domains is intended to perform certain functions or is intended for a specific audience. Since one of the purposes of this study is to understand more about the kinds of health promotion activities used in business and industry, an effort is made to categorize health promotion activities into specific domains. Intentionality of a program or service ("What is the intention or purpose of a program?" or "For whom is it intended?") is a major ingredient in classifying activities into specific domains. Without intentionality some programs could fit in several categories.

Positive Health Education. Positive Health Education is intended to provide general health information, instruction, or a general activity to a non-specific/general population (e.g., everybody who works here). As noted earlier, positive health focuses on helping individuals acquire lifeskills, a sense of autonomy, and personal power or self-esteem. Positive Health Education is an instructional process which seeks (a) to help individuals clarify their values in relation to themselves, health, and health-influencing behaviors as well as (b) to teach up-to-date knowledge about health. Common offerings may include classes related to fitness, nutrition, recreational skills, stress management, self-esteem, and death education. Information is often conveyed through lectures in small group seminars or traditional class settings. At other times, information is provided to employees through newsletters or pamphlets.

In general, the promotion of Positive Health Education emphasizes teaching and encouraging people to take greater responsibility for their health through the recognition

that their behaviors and choices impact upon their health (Tannahill, 1985b). Media appropriate for promoting Positive Health Education offerings include posters, television advertisements, radio, video, newspaper advertisements and articles, flyers, pamphlets, college course catalogues, face-to-face meetings, and memos. In the workplace, it is observed that flyers and internal memos tend to be the most dominant media choices used to make employees aware of Positive Health Education events. This is probably due to their ease of use and the ability to target specific individuals if desired.

Preventive Services. Preventive Services are intended to prevent disease or illness from developing or continuing to spread. In this domain, a health professional generally performs a physical procedure upon a client. These procedures consist of screenings and immunizations for risk factors which may lead to disease or the early stages of an existing disease, as well as more advanced procedures such as surgery to deal with secondary and tertiary prevention. Typical activities include screening for cervical cancer, hypertension, cholesterol, vision, and handicapping congenital disorders like scoliosis (Downie et al., 1990; Fielding, 1984, 1991). Examples of diseases for which immunizations are available include mumps, measles, diphtheria, polio, rubella, and tetanus (Green & Anderson, 1986). Two of the most common Preventive Services offered to employees are cholesterol and hypertension screenings (Parkinson and associates, 1982).

Common means for promoting Preventive Services are posters, paycheck inserts, in-house publications, newspaper advertisements and articles, flyers, billboards, the yellow pages, postcards, face-to-face contacts, pamphlets, radio and TV commercials, and memos. It is observed that the most used media in promoting Preventive Services

in the workplace tend to be flyers and memos, due to the ease of their use and the ability to target specific individuals.

Preventive service messages contain two of three elements. All preventive service messages emphasize the risk to the employee. As a fear-arousing appeal, the nature of the risk varies from morbidity (i.e., illness, heart disease) to mortality (i.e., death). Preventive service messages also include either a "screening" or an "inoculation" message. While both messages focus on means to alleviate the risk, screening messages advocate that the danger can be reduced only if the person becomes aware of the risk. For instance, most individuals experience no signs or symptoms of hypertension. Only by participating in a screening can they learn that they have high blood pressure. Inoculation messages argue that the risk can be reduced only if precautions (i.e., vaccinations) are administered. Health care workers who handle blood and other body fluids are encouraged to participate in a hepatitis-B vaccination program to protect against this life-threatening disease.

Positive Health Protection. Positive Health Protection includes legal or legislative activities that create laws or policies whose purpose is to protect the health of those under the jurisdiction of the laws or policies. Top management also seeks to improve employee health by implementing policies that will have immediate as well as long-term physical benefits. These policies may stem from legislation mandating change or the organization's attempt to mirror conventional wisdom espoused by the medical community. Examples include workplace smoking policies which encourage cleaner office air and fetal protection programs for expectant workers. These policies may also encourage the use of management or union funds to construct leisure facilities which

promote the improvement of workers' health (Downie et al., 1990). Thus, enactment of legislation or regulatory policy designed to influence employee health is the distinguishing characteristic of health activity in this domain.

Positive Health Protection messages mirror the power of legislation or regulatory policy. The power of a policy resides in part with the government's ability to enforce it. While a number of states have mandatory seatbelt laws, few states have the manpower to enforce those laws. The power of a policy also resides in the government's desire to enforce it. For instance, many public buildings have "no smoking" signs posted, but enforcement ranges from casual disregard in restaurants to strict compliance in some manufacturing environments and health care facilities. Consequently, compliance-gaining messages vary with the issue, and range from recommendations to demands. Group meetings provide the general forum for the creation of legislation or policy, with the meeting of the safety committee being the most dominant arena for this activity in the workplace.

Preventive Health Education. Preventive Health Education is intended to prevent identified, specific health problems from getting worse in specific populations or clients. Activities are classified as Preventive Health Education if they provide information or skills to assist employees in preventing ill-health. Preventive Health Education activities are interventional in nature, including both counseling and education that range from one-on-one to group interactions. Organizations promote counseling for hypertension and hyperlipidemia, often following a screening, because individuals can modify lifestyle behaviors and thereby lower the risk of heart disease. Counseling usually involves a professional health care provider meeting with an employee (as client)

in order to educate the employee about the condition and its treatment. Organizations also sponsor classes designed to address specific prevention topics (e.g., Stress Management, How to Help a Friend Quit Smoking, and "Heart Healthy" cooking and nutrition). Examples of intervention activities include weight loss programs, smoking cessation, and employee assistance programs (EAPs) which feature alcohol and drug withdrawal programs, as well as family and personal counseling (Brody, 1988; Downie et al., 1990; Mayhew, 1991; Smith, 1990).

Preventive Health Education illustrates the inter-relatedness of health promotion programs. For instance, an employee's need for preventive education may be identified by (a) a screening event, (b) the study of epidemiological data (Mayhew, 1991), (c) the employee, (d) the employer (i.e., "You will get counseling for your drug/alcohol problem!"), or (e) legislative mandate (Occupational Safety and Health Administration [OSHA]). Moreover, counseling which continues after the start of a Preventive Health Education activity for hypertension control, weight loss, and smoking cessation improves the results of the initial intervention (Erfurt et al., 1991b).

Preventive Health Education messages also emphasize the health risks faced by employees. These messages differ from Positive Health Education messages in that they (a) target identified risk populations, (b) disseminate background information about a health risk (e.g., one out of nine women will get breast cancer), and (c) concomitantly emphasize the means to reduce the risk (e.g., use a preventive service, get a mammogram). Some message functions inherent in these activities are supporting ("You are strong enough to do this"), encouraging ("Doing this really is for your benefit, as well as your family's"), advising ("It is recommended that you have this procedure done

annually"), instructing ("Those who have this procedure done increase their chances of early detection significantly"), and confronting ("If you won't do it for yourself, do it for your family").

The immediacy of a health risk may determine how Preventive Health Education messages are disseminated. Thus, organizations rely on word-of-mouth transmission, company newsletters, and bulletin board posters to promote fitness and stress management classes. In contrast, when health risks are identified through screenings or self-reports from the client, organizations use a more personal, focused mode of communication. Appointments are scheduled and reminders are made face-to-face (sometimes at the point-of-contact following a screening), over the phone, and through personal letters. Posters, pamphlets, and bulletin board displays are appropriate channels to advertise counselling services and intervention classes to all employees. It is observed that word-of-mouth (person-to-person), posters, and flyers seem to predominate as media choices for helping employees learn about Preventive Health Education programs and services.

Preventive Health Protection. Preventive Health Protection activities are intended to enforce health-related laws and regulations for the purpose of preventing the development of health problems from exposure to workplace or environmental hazards. Preventive Health Protection messages follow the recommendations or mandates of regulations and/or legislation. The intent of these messages is to enforce the legislation and/or policies created in the Positive Health Protection domain. These messages vary in content and range from recommendations to directives. For instance, while communities are not required to fluoridate public water supplies, manufacturers and

importers of chemicals are required by law to (a) evaluate hazards inherent in their chemicals and (b) notify employees, shippers, and customers of the hazards by container labeling and Material Safety Data Sheets (MSDS) (OSHA's Hazard Communication Standard - OSHA regulation 29 CFR 1910.1200). These companies are also required to institute a hazard communication program for employees which includes information about labels, MSDS, and training for employees who may be exposed to chemicals and/or chemical containers in the workplace. Other obvious examples of Preventive Health Protection in the workplace include enforcing the use of various protective devices (e.g., safety glasses, hard hats, hearing protection, steel-toe shoes, etc.) and compliance with required actions (e.g., for restaurant workers, washing hands following the handling of money or use of the bathroom before any further food preparation). In addition, many regulations require personal inspections or monitoring by those empowered to enforce laws or regulations. These could include face-to-face engagements as well as personal and non-personal letters or memos, posters, and telephone communications. Memos, posters, and inspections seem to be the dominant methods used to mediate Preventive Health Protection messages because 1) memos can target specific detailed information to those required to enforce legislation; 2) posters are a point-of-use reminder for employees to follow legislation; and 3) inspections are specifically targeted to employees and employers to force compliance with safety and health regulations (e.g., cleanliness standards for food preparation, or storage standards for hazardous materials).

Health Education Aimed at Positive Health Protection. Health Education aimed at Positive Health Protection is intended to target those who would or could be impacted by some area of health legislation or regulation. This domain emphasizes

safety education and parallels the efforts of professionals in the Health Education for Preventive Health Protection domain. The key for inclusion in this domain is that activities raise awareness and secure support for Positive Health Protection measures among those affected by a potential health risk. Health Education aimed at Positive Health Protection encourages both employers and employees to support (a) the monitoring of exposure to risks in the workplace (toxins, noise and other unavoidable risks) and (b) education programs that inform employers and employees regarding their rights and responsibilities in protecting their health. Examples include educational safety programs (a) encouraging workers to wear ear protection and instructing them regarding correct use while working near loud equipment, or (b) educating employees in the use of correct lifting techniques. This information can be delivered during meetings, by reminders from co-workers, or by posters and labels located in the workplace.

Health Education aimed at Positive Health Protection messages also can be disseminated by individual instruction, classes, workgroup meetings, and posters directed at employers and employee groups (i.e., unions, etc.). These messages potentially promote an awareness of activities and procedures that can prevent exposure to danger (e.g., working without a hard hat or safety glasses, improper handling of chemicals or blood products) and thereby may protect employees from accidents or disease. Such messages are also directed at the public through posters, bumper stickers, and television advertisements. A classic example of a message in this category is the crash-dummy advertisement campaign that suggests, "Only a dummy would drive without a seatbelt." The dominant media for presenting these messages in the workplace seems to be mandatory health and safety meetings and memos. Mandatory health and safety meetings

can assure employers of worker exposure to specified information, as well as allowing employees the opportunity to ask for clarification regarding new policies and/or procedures. Memos serve as an excellent reinforcement tool following such meetings, and also can be used to introduce new information with less difficulty than the scheduling of another meeting.

Health Education for Preventive Health Protection. Health Education for Preventive Health Protection is intended to target those who make health-related laws and policies for the purpose of educating or influencing them, as well as making them aware of the need to protect the public by creating new legislation. Health professionals in this domain encourage change in work and social environments through education. Educational efforts directed at legislators have resulted in Preventive Health Protection laws, such as seat-belt legislation (Bernstein, Radius, & McDonald, 1990; Downie et al., 1990) and non-smoking areas in public buildings (Fielding, 1986; Naidoff, 1992; Parkinson & Eriksen, 1987, p.359-360). The purpose of such efforts is to eliminate health risk before exposure takes place, thus preventing disease and protecting health. Health professionals in this domain are typically removed from direct contact with employees, but still affect employees. They educate and influence legislators and other public policy makers who consider legislation, policies and regulations which impact employees' health risks. These efforts enable legislators to become familiar with issues and advise them regarding preferred courses of action. The key for inclusion in this domain is the intention to influence/educate legislators and/or policy makers regarding the creation of health and safety legislation or regulations.

The channels for familiarizing and educating legislators vary from face-to-face meetings to television advertisements (i.e., encouraging individuals to influence legislators/policy makers by informing them, by letter or telephone call, of concern regarding an issue). The education of legislators who draft laws concerning improper or excessive exposure to workplace toxins can assist in the effort to protect workers' health. In this case, lobbying requires face-to-face interaction, writing personalized letters, and arranging meetings with large groups of affected workers and targeted legislators. Within local organizations, where professional health lobbyists do not exist, Health Education for Preventive Health Protection messages are delivered on a more personal level. Preventive Health Protection messages are directed at influencing those who make local health policy decisions, usually the health and safety committee. The media most often used at the local organizational level for this domain takes the form of related journal or newspaper articles sent to committee members, or face-to-face conversation.

In summary, health education is a central focus of this model of health promotion. This recognition does not elevate health education above any other component in the model, but reflects an emphasis within a new, behavioral approach to health care. It also takes advantage of the historical opportunities for the prevention of the lifestyle diseases, avoidance of worksite accidents, and facilitation of medical rehabilitation.

The model of health promotion proposed by Downie et al. (1990) implies that health promotion is not an assortment of programs, but rather is a unifying concept that serves to coordinate existing services and programs for the benefit of potential clients. Therefore it is important to make a distinction between the term "health promotion" and

"health promotion programs." The former is a unifying concept that includes health educators, medical professionals, legislators, and others who have the potential to impact the health of workers and consumers in this nation; the latter is a procedure that has been designed to help deliver a certain set of health programs and/or services to those who need them. Health promotion is literally about promoting, upgrading, or elevating the health of employees and their families through medical, educational, motivational, and legislative means. This definition also recognizes that there is semantic confusion with terminology in the field of health promotion, including the word "promotion" itself.

For the purposes of this investigation, health promotion programs are defined as activities, services, classes, materials, and screenings offered by organizations for the purpose of helping individuals enhance their level of health and/or wellness. However, given confusion over the term, "health promotion," and the variety of programs for employees, the first set of questions in this investigation asks:

RQ1: What types of health promotion programs are used by organizations?

RQ2: How do health promotion programs differ across various types of industry?

Research question 1 is answered by analyzing the respondents' identification of the health promotion programs that are used in their organizations. A list of health promotion programs offered in North American corporations and government agencies (compiled and adapted from Parkinson, et al., 1982) is included from which to make selections. Space is also provided for open-ended responses (survey Section I) (see Appendix A).

Research question 2 is answered by analyzing respondents' identification of their industry type. Respondents are offered a list of industry types as identified by The

Standard Industrial Classification Manual (1987) and modified by Miller (1988). Subjects are asked to identify their organizations' industry types (survey Section VI, Part e.). The responses from research question 1 are analyzed by industry type data gathered in research question 2.

Effectiveness Of Health Promotion Programs

The potential benefits from participating in health promotion programs, how these benefits relate to health promotion domains, the attractiveness of these programs to corporate decision makers, and the issues with which decision makers must contend when measuring the effectiveness of health promotion programs are examined in this section.

Potential Benefits

Health promotion programs positively impact employees' health in many ways. A summary of 26 benefits of health promotion programs identified by Anderson (1986) and Terborg (1986) arranged under Downie et al.'s (1990) categories is presented in Table 1. In general, these benefits represent three outcomes: health benefits; employer/cost benefits; and employee/attitude benefits. Health benefits directly impact employees' physical health through decreases in fatigue, overall improved quality of life, and reduced on-the-job accidents. Employer cost benefits manifest themselves directly through extended employee work years, as well as reduced health insurance costs, health service and medical costs, utilization of medical facilities, and workers' compensation costs. Indirect cost benefits for employers are realized through reduced absenteeism and tardiness, reduced voluntary turnover, increased employee productivity, and improved labor relations, recruiting, and workgroup cohesiveness. Employee attitudinal benefits include increased employee morale, improved self-image, and greater employee

Table 1
Potential Benefits from Worksite Health Promotion Programs*

Domains / Potential Benefits	Positive Health Education 1	Preventive Services 2	Positive Health Protection 3	Preventive Health Education 4	Preventive Health Protection 5	Health Education aimed at Positive Health Protection 6	Health Education for Preventive Health Protection 7
Health Benefits							
less employee fatigue	x	x		x			
improved employee health	x	x	x	x	x	x	x
overall improved quality of life	x	x	x	x	x	x	x
reduced on- and off-the-job accidents**			x	x	x	x	x
reduced disability**	x	x	x	x	x	x	x
reduced time lost from work due to illness and injury**		x	x	x	x	x	x
reduced early mortality**	x	x	x	x	x	x	x

Table 1 (cont'd).

Domains Potential Benefits	Positive Health Education 1	Preventive Services 2	Positive Health Protection 3	Preventive Health Education 4	Preventive Health Protection 5	Health Education aimed at Positive Health Protection 6	Health Education for Preventive Health Protection 7
Employer/Cost Benefits							
reduced health insurance costs	x	x	x	x	x	x	x
reduced health service and medical costs	x		x	x	x	x	x
extended employee work years	x	x	x	x	x	x	x
reduced utilization of medical facilities	x		x	x	x	x	x
reduced workers' compensation costs			x	x	x	x	x
reduced absenteeism	x			x			
reduced tardiness	x			x			
increased employee productivity	x	x		x			
improved labor relations	x	x	x	x	x	x	
improved recruiting	x	x		x			
reduced voluntary turnover	x			x			
improved workgroup cohesiveness***	x			x		x	

Domains / Potential Benefits	Positive Health Education 1	Preventive Services 2	Positive Health Protection 3	Preventive Health Education 4	Preventive Health Protection 5	Health Education aimed at Positive Health Protection 6	Health Education for Preventive Health Protection 7
Attitudinal Benefits							
increased employee morale	x	x		x		x	
increased employee loyalty	x	x		x		x	
positive attitude toward employment	x	x		x		x	
greater employee creativity	x			x			
increased health awareness	x	x		x		x	x
improved employee self-image	x	x		x			
improved corporate image	x	x	x	x	x	x	

* Compiled from Anderson (1986) and Terborg (1986) & arranged under Health Promotion Domains from Downie et al. (1990)

** Could also be categorized as Employer/Cost Benefit

*** Could also be categorized as Attitudinal Benefit

creativity. However, some attitudinal benefits such as increased employee creativity might benefit the company only if that creativity is applied to work-related tasks.

Relationship Of Benefits To Health Promotion Domains

By arranging benefits under Downie et al.'s (1990) categories, a number of patterns become apparent. First, several benefits (e.g., reduced disability) could easily fit under more than one health promotion category. Second, all seven domains of health promotion (with minor exceptions) contribute to the overall health of employees. Third, all seven health promotion domains reduce employers' direct costs by reducing medical expenses. In contrast, Positive Health Education and Preventive Health Protection programs contribute primarily to reducing indirect costs of employers. Fourth, attitudinal benefits generally result from Positive Health Education, Preventive Services, and Preventive Health Education efforts.

Cost-Benefit Analyses

The attractiveness of health promotion programs for corporate decision makers emanates from the promise of decreased costs and increased productivity (Terborg, 1986). Corporations measure the impact of most programs in projected dollars saved or by cost-benefit analysis. Yet, as Banta and Luce (1983) contend, "health often does not lend itself to quantification" (p. 147), and some outcomes (e.g., corporate image) do not directly impact profitability. Since employers are looking for ways to reduce health care expenses, programs that show a positive cost-benefit analysis (i.e., direct cost benefits) provide their own arguments that they are "worth it" (Barry & DeFriese, 1990, p. 448).

Consider the following examples of health promotion programs directly impacting profitability. TRW, Inc. in Cleveland estimates that a blood pressure control program

costs the company $150 per participating hypertensive employee as compared to $10,000 when an employee has a heart attack (Brennan, 1983). Participants in Johnson & Johnson's Live for Life health promotion program save the company approximately $33 per employee per year in hospital costs (Jones et al., 1990). Employees participating in a corporate fitness program at the Mesa Petroleum Company in Amarillo, Texas, incur $173 per employee in medical costs as compared to $390 for sedentary employees (Gettman, 1986).

The most complete documentation of cost benefits currently comes from studies of fitness and exercise programs (Cumming, 1986; Eddy, Eynon, Nagy, & Paradossi, 1990; Falkenberg, 1987; Lynch, Golaszewski, Clearie, Snow, & Vickery, 1990; Shephard et al., 1981; Shephard et al., 1983). Reasons for extensive documentation include: (a) the popularity of fitness programs and, consequently, more opportunities to measure their impact, (b) the longevity and continuity of these programs which facilitate longitudinal comparisons, (c) the ability to measure physiological changes in contrast to psychological changes, and (d) the need to justify expenditures for facilities (e.g., gymnasiums) and equipment (e.g., weight machines, basketballs). The combination of visibility and direct cost benefits derived from fitness and exercise programs provides a powerful argument for inclusion in health promotion.

Challenges When Measuring Effectiveness

While measurements of the cost benefits from health promotion programs focus on actual costs or benefits when possible, many benefits are indirect. In other words, they are difficult to substantiate in dollar-related terms (e.g., employee self-image, labor-relations) and employers must rely on projected or estimated costs or benefits. The

measurement of benefits from programs producing "indirect" benefits is complicated by three factors. First, any one realized benefit may be the result of several health promotion programs, making it difficult to establish causality and singular effects. Second, there is a lack of measurement of "direct" and "indirect" benefits. In the relatively recent period of time since the inception of the health promotion field, quantitative evaluation of programs has not been the norm. According to Downie et al. (1990), corporations must improve their ability to measure the impact of health promotion programs in order to: (a) confirm that activities are having the desired effect; (b) minimize waste of resources; (c) improve program materials and methods for delivering services; (d) overcome the skepticism about the effectiveness of health promotion; and (e) assess whether activities are ethically justifiable. Third, the complex and unique needs of every organization make the establishment of criteria for evaluation difficult. For one organization, the perception that employees are fairly happy with the program may be sufficient to justify the existence of the program. In another organization, a proportionately high participation rate in the program may be necessary to insure the future of the program. Other companies may demand to see monetary savings or participation by different groups of employees. In cases where the company CEO has experienced a heart attack, the CEO may embark on a personal mission to convert employees to a low cholesterol diet and jogging. Thus, what is deemed effective may vary from a strict management of health care costs to universal participation in a program without regard to quantifiable results.

Despite the problems associated with measuring the success of health promotion programs (especially those producing indirect benefits), health promotion programming

will continue to grow given the alternatives of the traditional medical authority model and the desire to control rising health care costs. The largest medical expenditures in a health care budget result from lifestyle related diseases such as heart disease (Terborg, 1986). If a company only targeted smoking cessation, major reductions in heart disease incidents (direct benefit) would transpire (Stachnik & Stoffelmayr, 1983). At the same time, quitting smoking may lead to a better self-image and increased loyalty to the company (indirect benefits).

In sum, the best composite of health promotion programs within a given organization will be contingent upon the needs of that particular organization. Central to the effectiveness of any health promotion program are the methods by which programs are promoted. Organizations should pay attention to how health promotion programs are communicated because (a) employees could be recruited, or urged, to comply with programs that have a proven record for improving participants' health, (b) measuring the monetary investment of an organization in a communication strategy for a program may be the only indicator of the interest of the organization in health promotion, and (c) the degree of participation in a program may be the only available outcome measurement (however poor) of the success of a program.

Given the need for measuring the success of health promotion programs, a second set of research questions asks:

RQ3: What criteria (dimensions) do health promotion professionals perceive that their organizations value as being most useful in determining program effectiveness?

RQ4: How do criteria used to evaluate the effectiveness of health promotion programs vary across the types of industry?

Answers to research question 3 are based on survey responses to the criteria within the six hypothetical health promotion program effectiveness dimensions identified in appendix B (survey Section II).

Research question 4 is answered by analyzing responses to a list of industry types as defined by The Standard Industrial Classification Manual (1987) and modified by Miller (1988) (see survey Section VI, Part e.). The responses from research question 3 are analyzed by industry type data.

Promoting Health Promotion Programs

Considerable confusion surrounds the term "promotion" when referring to "health promotion." On one hand, promotion means advancing or moving forward, whether referring to improving a person's level of health by a company-sponsored intervention or to a series of advertising messages eliciting attendance at an event. On the other hand, health promotion programs will not achieve the ends for which they were designed without specific messages persuading an audience to participate or adhere. It is this latter use of the term which is emphasized in the remainder of this manuscript.

Health Promotion and Communication Goals

In general, the advocation of health promotion programs employs three theoretical frameworks: communication-behavior change (Bandura, 1977), community organization (Rothman, 1979), and social marketing theories (Kotler, 1975). The communication-behavior change model postulates that individuals must receive messages that initially alter knowledge, then attitudes, and finally, behaviors (Bandura, Adams, & Beyer,

1977). Community organization theorists use legislation and policy changes to solve organizational problems from within existing power structures (Rothman, 1979), as illustrated by recent laws regarding smoking in public buildings and on airlines. Social marketing uses a consumer-based approach and applies marketing principles to social campaigns (Solomon & Maccoby, 1984). The basic concepts of social marketing, revolving around "*product, price, place,* and *promotion*" (p.212), are difficult to use in health promotion because the content of health promotion programs (e.g., quitting behaviors that you like, such as eating high cholesterol foods; beginning behaviors which appear tedious, like exercising and eating "health" food) is often not attractive to employees. Nonetheless, it is assumed that the basic elements that make messages palatable are (a) exposure, (b) credibility, (c) attention getting, (d) memorable, and (e) motivational (Flay, DiTecco, & Schlegel, 1980; Rawson, 1987; Solomon & Maccoby, 1984, p. 218).

As noted earlier, health promotion professionals at times focus on programs, services, and campaigns as the "products" of health promotion in lieu of changes in participants' health. In this sense, health promotion products vary along a continuum from one-shot programs to on-going campaigns. One-shot programs target very focused audiences (e.g., Breast Health Month with free mammograms for women age 35 and older who have not had a previous exam). One-shot programs employ unique, attention-getting messages and mediums to highlight the uniqueness of the event. In contrast, on-going health campaigns share the following five characteristics: (a) integrated series of communication activities, (b) use of multiple operations and channels, (c) aimed at saturating a large target audience or population, (d) long duration, and (e) clear purpose

(Flay & Burton, 1990). One-shot programs and campaigns also differ in the goals of the promotion messages. The promotion messages of one-shot programs solicit employee attendance through enticing titles and two sentence descriptions (or "blurbs"). The goals of messages for on-going campaigns in health promotion are multifaceted and include: soliciting attendance, eliciting a long term commitment to health outcomes, educating employees, and reinforcing program content.

While one-shot programs and on-going campaigns differ in many respects, the nature of the promotion messages is similar in four ways. First, messages contain a certain level of informativeness, or amount of information. The volume and type of information to be transmitted influences media selection (Sitkin, Sutcliffe, & Barrios-Choplin, 1992; Stohl & Redding, 1987). Some media are superior to others at carrying large amounts of text, pictures, or sound data. At times, as in one-shot publicity, the message may not provide details regarding scientific findings or steps to elicit a change in behavior or attitude. Other messages will contain greater amounts of information in an attempt to stimulate the audience's awareness and evaluation. People process information cues in terms of existing generalities or stereotypes in order to reduce the amount of individual pieces of information that they must handle (Meyer, 1990). However, a risk of using health promotion messages that fit within existing social constructs is that they may be perceived as boring or trite.

Second, the credibility associated with the message and its sender greatly influences to what degree a message is attended. Credibility refers to the accuracy, trustworthiness, and intent of the message (Cooper, 1932; Cronkhite, 1969). The confidence that someone attaches to a message greatly affects its impact (Redding, 1972).

Rogers (1983) suggests that clients require messages to be associated with "competence, trustworthiness, and empathy" (p.316) before accepting the innovation. Likewise, an institution whose image is respected by employees may have greater compliance with its campaign messages than those institutions lacking credibility.

Third, the attention-getting ability of a message is dependent upon the receiver's perceived need, or the relevance that the message has to the receiver. Meyer (1990) suggests six characteristics of messages that make them engaging, or of interest to message receivers: (a) health messages get more attention if they have an element of timeliness, as employees place a level of importance to issues that are new; (b) message relevance is greatly enhanced if the consequence of the health-related finding is included so that it shows how this information will change or impact employees' lives; (c) a message that contains an element of human interest helps draw attention to the message by eliciting an emotional response to the message; (d) conflict is inherently attention-getting and portrayed as individuals struggle to "win" against illness; (e) prominence can make a message more attention-getting, such as referring to a celebrity's health condition or disease; and (f) anything that adds to the unusualness of a message will catch people's attention. In an investigation of message characteristics and their effectiveness in producing belief change, Morley and Walker (1987) found that novelty, importance, and plausibility must go together, and that omitting even one of these significantly reduced the power of a message. In other words, the message must present new information which is important to the audience and which indicates plausible or reasonable actions by which the audience will improve their health condition. Without hope of being able

to apply the information to their situation, a message that initially gets employees' attention will soon be tuned out.

Fourth, health messages from both one-shot programs and on-going campaigns must be socially acceptable before they will be received. Individuals in a workplace culture that allows smoking at meetings may show resistance to a campaign for a smoke-free workplace (Flay & Burton, 1990). The culture that develops within an organization produces a system of shared symbols and meanings. These basic "themes" within the culture of an organization meaningfully influence the values and relationships that exist for the membership of the organization (Smircich, 1983). Cultural themes within individual organizations may need to be assessed and understood before successful health campaigns can be designed. In sum, the success of health promotion messages relies on their informativeness, credibility, attention-getting qualities, and social acceptability. However, constructing an appropriate message represents only half of the challenge to health promoters. The message must be communicated to have any impact.

Channels for Health Communication in Organizations

The success of health promotion programs ultimately depends upon the ability of messages to flow throughout the organization. Frequently considered message channels are vertical, horizontal, formal, and informal. McPhee (1988) notes,

> Vertical channels allow the transmission of goals, orders, and performance evaluations downward, and of problems, feedback about programs, and other relevant information upward. Such flows are essential for the coordination of action by individuals and groups in the organization and for control over efficiency and deviance. Thus, although vertical communication chains may not contain all or even most communication or contain only orders, etc., they are especially important conduits (pp.475-476).

Horizontal channels allow communication to flow between departments and individuals. Informal communication structures supplement formal hierarchical communication structures (Likert, 1967; McPhee, 1988; Simon, 1976). Informal channels provide horizontal and vertical links which are vital in filling the gaps that are often not covered by the formal vertical channels. According to Burns (1954), only an oversimplified view of organizations would deny the existence of complementary horizontal communication channels within groups and organizations. Yet, corporations commonly rely only on formal vertical channels to disseminate messages to their employees (Baker, Ballentine, & True, 1949; Heirich, Cameron, Erfurt, Foote, & Gregg, 1989; Jablin, 1984; Peterson & Jenkins, 1948; Stohl, & Redding, 1987). In contrast, writers on the downward dissemination of information advocate identifying and using existing, informal networks (Rogers, 1983) and using both oral and written mediums (Daft, & Lengel, 1984; Dahle, 1953; Tompkins, 1984) to reinforce the promotion message and to reduce the waste of resources. Thus, it seems prudent for health promotion professionals not to automatically assume that employees will read bulletin boards, pay inserts, or even flyers in the cafeteria.

A number of untested guidelines for designing effective health promotion programs exist. For instance, Rawson (1987) suggests "the first step in any health promotion program is to establish the specific role or roles that communications will play" (p. 71). Other advice includes check lists (see Figures 3 and 4) to guide the effective design of health promotion programs. However, these guidelines lack a theoretical background, appear to be a collection of various experiences, and lack empirical validation.

Figure 3
12 Key Questions To Guide In The Assessment Of Communication Environment And Development Of Communication Guidelines.[a]

1. What is the objective of the planned wellness program? To increase awareness? To influence attitudes? To modify behavior? What response is desired from the audience?
2. What information will be communicated to employees during the program? Are scripts or speeches involved? Will material be obtained from existing literature? Obtain all details.
3. How will the information be communicated? When and where? Is it a seminar, a workshop, a lecture? Will it be held during office hours? On site or off site?
4. Who is the targeted audience? All employees or management? At which locations?
5. What do we know about this group? Is the target audience homogeneous? What are its demographic and psychographic traits?
6. What attitudes or concerns may this group have about the subject matter? Will it be receptive to the message? What are its preconceived ideas? Beliefs?
7. What are the values, norms, and sensitivities of the workplace in which the program will be promoted? Would you describe the organization's culture as one that recognizes people? Profits? Innovation? Technology? How would you describe the company if it were a person?
8. What lessons have been learned from previous wellness communication programs? Have employee surveys been taken? Did certain communication vehicles work better than others?
9. What other employee communication programs currently exist within the company? What is the competitive environment in which communications will be received?
10. What vehicles are currently being used to communicate internally? Is there a company newsletter? Are there bulletin boards?
11. Are there executional considerations to be aware of? Brochures to be distributed? A health department logo to be used? Areas of the company where communications are prohibited?
12. How much money can we afford to promote the program? Is there an established budget or an acceptable promotional expenditure per employee?

[a] From Rawson, 1987, p. 73-74

Figure 4
Eight Steps to Effective Worksite Communication of Health Information.[b]

1. **Use existing formal communication channels**
   - Place short articles and announcements in newspapers and magazines
   - Make presentations to groups
   - Present announcements and requests for assistance in company "chain of command" meetings

2. **Create a new, official health communication channel**
   - Create a Wellness Committee with strategic membership, including persons in health-relevant work roles, some key decision makers in both union and management, and some rank-and-file employees
   - Set up regular meetings and an agenda which includes their support for wellness activities and their help in solving logistical problems

3. **Create direct-link, one-to-one outreach with plant employees**
   - Offer plant-wide voluntary health screening and immediate counseling sessions with individual employees
   - Send post card invitations to employees to come in for follow-up wellness counseling (send these to different sets of employees weekly)
   - Make follow-up phone calls to employees who need reminding
   - Visit "no show" employees at their work locations

4. **Create informal health communication flow by targeting strategically-placed employees for early one-to-one outreach**
   - Include Wellness Committee members
   - Include "Bees" whose jobs have them moving throughout the worksite and able to talk with others
   - Include people at the hub of communication interaction (e.g., secretaries in key offices)

5. **Enlarge and reinforce short-link communication chains**
   - Invite people who want to make health changes to create their own buddy systems and support groups

6. **Create new health communication networks**
   - Invite people with a common health status to have lunch together and plan ways to help others (e.g., ex-smokers, successful weight losers, successful cardiac rehabilitation patients)

7. Organize special health events involving
- Friendly competition
- Humor
- Gimmicks that encourage participation
- Opportunities for social support while making changes
- Small rewards for successful health changes (e.g., smokeouts, smoke reduction campaigns, walking contests, weight loss contests)

8. Create attention for focused health messages
- Use poster posting techniques
- Use moving targets
- Use sight and sound surprises

[b] From Heirich, Cameron, Erfurt, Foote, & Gregg, 1989, p.116

Health Program Promotion Mediums

As noted by Solomon and Maccoby (1984), the relationship between the objectives of a media program and the medium used is often overlooked. "...decisions have often been made on the basis of personal preferences for film, videotape, or print, without further consideration" (p.216). Media are also selected at times on the basis of costs, prior experience, available resources, expertise, or organizational history. Noticeably missing when making decisions relative to advertising health promotion programs (e.g., Heirich et al., 1989; McGuire, 1981; Rawson, 1987) is a theoretical base from which to proceed.

Message Mediums. Although much has been written about the means by which information is disseminated within organizations, Redding (1972) states that "the communication manager or corporate editor will be disappointed if he expects to find established principles which reliably predict, in each individual circumstance, the most appropriate medium, modality, or channel" (p.462). Nonetheless, Redding (1972) and others (Daft & Lengel, 1984; Sitkin et. al, 1992) argue that practitioners can apply communication theory to specific situations when seeking the most appropriate medium to disseminate information, recruit participants, and educate employees.

Mediums are specific modes of transmitting information. Common modes are face-to-face, small group, large group, videoconferencing, telephone, electronic messaging, written-personal, written-formal, numeric-personal, or numeric-formal (Sitkin et al., 1992). Channels refer to general categories for transmitting data, such as audio or visual. Taken together, the descriptors, medium and channel, enable fairly precise classification of intra-organizational communication means as illustrated by Table 2.

Table 2
The Relationship Between Media Characteristics and Media Richness

Richness	*Medium*	*Feedback*	*Channel*	*Source*	*Language*	*Target*
Highest	Face-to-face	Immediate	Audio + visual	Personal	Body + natural	Personal
	Small group	Immediate(?)	Audio + visual	Personal	Body + natural	Personal or impersonal
	Large group	Immediate(?)	Audio + somewhat limited visual	Personal	Body + natural	Impersonal
	Videoconferencing	Immediate	Audio	Personal	Natural	Personal or impersonal
	Telephone	Fast	Limited visual	Personal	Natural	Personal
	Electronic messaging	Fast	Limited visual	Personal	Natural	Personal or impersonal
	Written, personal	Slow	Limited visual	Personal	Natural	Personal or impersonal
	Written, formal	Slow	Limited visual	Impersonal	Natural	Impersonal
	Numeric, personal	Very slow	Limited visual	Personal	Numeric	Personal or impersonal
Lowest	Numeric, formal	Very slow	Limited visual	Impersonal	Numeric	Impersonal

NOTE: Implicit weighting of media characteristics in determining richness is as follows: feedback > channel > source > language > target.
SOURCE: Sitkin et al., 1992, p.568.

For example, telephone conversations currently offer only an audio channel. The visual channel creates additional layers of information (e.g., facial expressions, shrugs, hunched shoulders) absent in telephone conversations but present in face-to-face exchanges.

Face-to-face interactions offer both audio and visual channels for transmitting data and are comparatively "richer" in information than either solely audio or visual channels. Information richness (Daft & Lengel, 1984) refers to the potential information-carrying capacity of data. Rich media "convey multiple cues and enable rapid feedback. Less rich media ... oversimplify complex topics and may not enable the exchange of sufficient information" (Daft & Lengel, 1984, p. 200). For instance, facial expressions (e.g., a wink or a frown) bring a level of understanding, or richness, to an information exchange unavailable on the telephone or in a letter. Mediums containing multiple channels (audio and visual) contain higher levels of information richness. Face-to-face feedback provides the richest information because of the use of multiple channels and its immediacy which allows the understanding of messages to be verified and their interpretations to be revised.

Each media form has its own special set of strengths and weaknesses, suggesting that there may be no one form of message transmission that is best for all purposes. The most effective media for a particular message depends on the target audience's preferences, the interest value and comprehensibility of the message, and the characteristics (e.g., credibility) of the message source. Written information conveyed by memos or reports can be very clear and precise, but may (a) lack relational affect conveyed by intonation and delivery speed or (b) leave the other party in a confused state since the information sender is not present to clarify the message.

Complex messages are better understood when they are in print than when they are in audio or audio-visual form. In contrast, easily comprehended messages are more positively attended to when they are presented in video format (Petty & Cacioppo, 1981). In one national study, more than 80 percent of the respondents identified television as the most influential medium (Atkin, 1979). However, there are advantages and disadvantages with both broadcast and print media. For instance, the video/television medium combines music, professional announcers, and professional models to add layers of meaning to the formal message. The disadvantages of video messages include limited exposure to the video telecast and inaccessibility to the technology needed to view and hear a tape. In contrast, print media uses only the visual channel, which ranges from simple black on white printing to slick, full color layouts. A major advantage of print is that, once it is produced and distributed, it is always ready to view.

There are times when the medium can be a symbol that is as important as the message itself. A handwritten letter may symbolize greater personal attention than a computerized form letter, even if it contains the same information. Employees in different organizations appear to vary in their view of the same medium (e.g., electronic mail) given their experience with the chosen style of communicating (Sitkin et al., 1992). For instance, within the same high-tech company the use of e-mail can be considered as a measure of competence and power by management. In contrast, assembly line workers may be bothered or even intimidated by others' use of e-mail. In addition, media vary in their ease of conveying symbols. A handwritten note is often more appropriate than a typed note for a personal message. A medium can also become the standard or "normal" way for particular kinds of information to be conveyed within an organization.

For instance, mandatory inservice meetings showing video-taped messages on closed-circuit television may be the norm for disseminating top management's viewpoints. Thus, the choice of which medium to use in sending a message may determine the audience's level of attention to the message, or even *if* the message is received, underscoring the dual-capacity of the media to carry both (a) data, or information, and (b) symbolic meanings or values.

When choosing media, health promoters also should consider (a) the importance or urgency of the information, (b) the clarity of the message, (c) the need for feedback, (d) the novelty of the information or program, (e) the novelty of the message medium to the audience, and (f) the availability of funding for promotion (which is sometimes the most critical consideration). For example, messages perceived as important or urgent garner more resources (time, energy, money). Easily understood messages may be effectively delivered through media low in information richness, whereas richer media (e.g., face-to-face) may be more appropriate for delivering complex information which requires clarification. In addition, health messages which are innovative may require long periods of time before audiences will accept the messages. Individuals accept novel information at different rates of speed. "It matters little, so far as human behavior is concerned, whether or not an idea is 'objectively' new as measured by the lapse of time since its first use or discovery. The perceived newness of the idea for the individual determines his or her reaction to it" (Rogers, 1983, p.11).

In summary, for effective message dissemination, health promotion practitioners must choose media based on (a) the media's richness, (b) the goals of the individual message, (c) the resources available to help in delivering that message, and (d) the

organization's norms for message sending and receiving. This advice follows Sitkin et al's (1992) suggestion that models of media selection and usage must "take account of both task contingencies and normative contingencies as key determinants" (p. 573). To date, it is unclear how health promotion practitioners conceptualize the richness or the effectiveness of the media which they use on a daily basis. Further, it is unclear whether they make distinctions in their media use given the different types of health promotion activities (Downie et al., 1990) embodied in organizational health promotion programs. Consequently, the third set of research questions inquires:

RQ5: What do health promotion professionals consider to be the most important media characteristics (i.e., "media dimensions") in promoting programs?

RQ6: How do these rated media characteristics vary by industry?

Research question 5 is answered by examining respondents' ratings of the importance of the five media characteristics (dimensions) identified in appendix C (survey Section V).

Research question 6 is answered by analyzing responses to the list of industry types as identified by The Standard Industrial Classification Manual (1987) and modified by Miller (1988) (see survey Section VI, Part e.). The responses from research question 5 are analyzed by industry type data.

Media Applications for Domains of Health Promotion

There are two media application possibilities in the different health promotion domains (see Table 3): (a) media promotes the event and creates awareness (i.e., advertising), or (b) media imparts information or subject content. This section reviews

Table 3
Media Use

Domains of Health Promotion	A. Promotional Media, for Creating Awareness of Event, Advertising	A1. Dominant Promotional Media Choice for the Workplace	B. Imparting Information on a Subject
1. **Positive Health Education**	radio, video, television, film, newspaper ads & articles, posters/flyers, pamphlets, college course catalogues, face-to-face meeting, memos	flyers or internal memo	radio, video & filmed public service announcements (PSA), newspaper articles, classes, posters, handouts, pamphlets, books
2. **Preventive Services**	newspaper ads & articles, posters/flyers, paycheck inserts, billboards, the yellow pages, postcards, face-to-face contact, pamphlets, radio & TV commercials, memos	flyers or internal memo	newspaper articles, physician referral services, billboards, posters, direct mail, one-on-one contact, radio & TV programs
3. **Positive Health Protection**	face-to-face, both one-on-one and group format	safety committee meeting	face-to-face committee or legislative meeting, reports, laws
4. **Preventive Health Education**	person-to-person referral, posters/flyers, newspaper articles or ads, telephone, TV programs & commercials, pamphlets	word-of-mouth, posters/flyers	face-to-face counseling, newspaper & magazine articles, TV & radio programs, classes, posters, pamphlets, books
5. **Preventive Health Protection**	letters, memos, telephone discussion, face-to-face meetings, posters, signs	inspections (face-to-face), memos, posters, signs	face-to-face formal evaluation/investigation/inspection, meetings, letters, memos, telephone, conversations
6. **Health Education aimed at Positive Health Protection**	face-to-face meetings, print & TV ads, posters, memos	safety committee meeting, memos	face-to-face meetings & classes (one-on-one & group), print, TV, & radio campaigns, posters, pamphlets, billboards, direct mail
7. **Health Education for Preventive Health Protection**	face-to-face meetings, print & TV campaigns, posters, direct mail	send photocopy of articles and newspaper clippings to safety committee members and/or management	face-to-face meetings, print, TV, & radio campaigns, posters, direct mail

the focus for each of the previously described domains of health promotion and identifies appropriate media possibilities for each.

Positive Health Education consists of general instructional health activities which help individuals learn more about themselves, health, health-influencing behaviors, and up-to-date information about health. This domain covers a wide range of topics and encourages individuals to make informed, responsible choices regarding their health-related behaviors. For health promoters it is important to make people aware of the existence of the programs and activities that are available. The key for inclusion in the creating awareness category (Table 3, column A) is whether or not the media can effectively carry a message that can raise the awareness of individuals in the target market regarding an upcoming event. Appropriate media for advertising, or raising awareness of Positive Health Education activities include radio, video, television, film, newspaper advertisements and articles, posters/flyers, pamphlets, college course catalogues, face-to-face meeting, and memos. Individuals commonly receive messages through these media regarding a variety of public events, including Positive Health Education events.

In interviews conducted with professional health promoters regarding media choices for promoting events in the workplace, it is clear that there are dominant media choices in each of the health domains that seem to reflect both custom and usage, and pragmatic necessity. These dominant promotional media choices for the workplace are included in Table 3 (column A1). Media used for imparting topic information (Table 3, column B) include radio, video and filmed public service announcements (PSA), newspaper articles, classes, educational posters, handouts, pamphlets, and books. The

key for inclusion in this category is whether or not the media can be used for instruction. If the media can carry the desired message to the intended audience, it can be used for imparting topical information.

The traditional medical profession and the field of public health are reflected in activities within the Preventive Services domain. Promotion activities in this domain include various levels of prevention, ranging from screenings to surgery, and are generally performed by health care professionals. Messages from this domain accentuate a client's risk, determined by a procedure (e.g., blood pressure measurement) which provides data useful in advising the client. Advertising for Preventive Services uses newspaper advertisements and articles, posters and billboards, the yellow pages, postcards, one-on-one persuasive contact, pamphlets, and radio and television commercials. Individuals traditionally search these sources when they are seeking health information. Additional information regarding these services can be obtained through newspaper articles, physician referral services, billboards, posters, direct mail, one-on-one contact, and radio and television programs.

Enacting legislation or regulatory policies that influence health is characteristic of the Positive Health Protection domain. Primarily the realm of legislators, this domain consists mainly of legislative meetings to create health policies and laws. Committee and large group meetings constitute the primary activities in this domain and written reports and documents are the products of such meetings.

Preventive Health Education activities are interventional in nature, assisting employees in achieving high levels of wellness (Anspaugh et al., 1991, p. 8). Activities in this domain combine education, medical, and behavior modification interventions to

address specific identified health problems of individuals and to develop measures of control over health problems. Health promoters raise client awareness of programs and services by person-to-person referral, posters, newspaper articles or ads, television programs and commercials, and pamphlets because, as stated earlier, individuals are conditioned to obtain expert information from these sources. Once contacted, it is important to use media that have the ability to pass on facts and details in sufficient quantity to those needing more knowledge. Appropriate media for imparting this information include face-to-face counseling, newspaper and magazine articles, television commercials and programs, classes, posters, pamphlets, and books.

Preventive Health Protection is the law enforcement branch of health promotion, responsible for protecting employees' health by preventing health problems through the implementation of health and safety legislation and policies. Individuals working in this domain inspect and monitor workplaces to insure compliance with the law. Appropriate media to create awareness of an upcoming inspection event include letters, memoranda, telephone discussions, and face-to-face meetings. These media commonly inform individuals of upcoming public forums. Media used to impart subject information include face-to-face formal evaluation/investigation/inspection, meetings, letters, memoranda, and telephone conversations.

It is important to note that some media serve to raise awareness and teach subject matter, underscoring the versatility of certain media. For example, a memorandum could inform someone about an upcoming inspection or contain detailed information about how to prepare for an inspection. Thus, there are multiple uses for the same media.

The domain of Health Education aimed at Positive Health Protection specializes in education activities whose purpose is to protect the health and safety of employees in the workplace. In addition to programs designed to teach workers safe behaviors (e.g., use of hearing protection devices, use of proper lifting techniques to protect employees' backs), this domain encourages employees to become supportive of workplace safety legislation and the creation of a safer, more healthful work environment. Safety education plans for contingencies and trains employees (or the public) to make safe choices. "Educational programs that emphasize awareness are an essential facet of controlling workplace hazards" ("Health and Safety in Small Industry: A Practical Guide For Managers," 1989, p. 7) and other such programs are believed to be effective (Mayhew, 1991, p 885; Vojtecky, 1987, p. 13). Appropriate media for advertising events in this domain include face-to-face meetings, print and television ads, posters, and direct mail because these media have the ability to carry sufficient information to a group of targeted individuals. An often used medium within this domain is face-to-face meetings (one-on-one or group), typified in the workplace by mandatory health and safety meetings. Other educational media appropriate for this domain include print and television campaigns, posters, pamphlets, billboards, and direct mail.

Health Education for Preventive Health Protection is the central domain (Domain #7) of the health promotion model (see Figure 2, p. 14). These activities focus on the education of legislators and policy makers by health educators and others with interests in health and safety issues in order to influence the development of health and safety-related legislation. Educators working in this very political domain often represent special interest groups (e.g., National Rifle Association, Mothers Against Drunk Drivers)

and at times are called lobbyists. Special interest groups often sponsor campaigns to keep the attention of legislators focused on key issues. In this domain the distinctions between creating awareness and imparting information blur as special interest groups use media to draw attention to their causes, often twisting the interpretation of facts and events to support their crusades. Special interest groups use media to sensationalize events which simultaneously serve to draw attention and "teach." Appropriate media for this purpose are face-to-face meetings, telephone, print and television campaigns, posters, and direct mail because these are all ways to either directly (by lobbyists) or indirectly (by constituents) influence legislators regarding special interest groups. To date, no research exists determining the most frequently used media within each health promotion program. Such information might be helpful in training health promotion professionals and in understanding the reasons for their media selection. Consequently, this study also investigates the following research question:

RQ7: What uses of media characterize effective and ineffective health promotion programs?

Research question 7 is tested by using a list of media types (Appendix D) expanded from Sitkin et al. (1992). Subjects identify which media are used to promote the programs that subjects reported as their most effective health promotion programs (survey Section III) and their least effective health promotion programs (survey Section IV). A comparison is made between the reported effective and ineffective conditions to examine differences in media use for the two conditions.

Media Choice and Effectiveness. Much of the health promotion information within organizations is downward directed (Heirich et al., 1989). Redding's (1972)

summary of downward-directed information questions this method because downward-directed messages are (a) often ignored, (b) often not passed along to others, (c) often not understood, and (d) the impact of efforts at sending downward-directed messages is unclear. Nonetheless, health promotion professionals may use the richest downward-directed mediums (e.g., official announcements at required meetings) for events soliciting a large attendance. Health promotion professionals may use rich mediums if attendance justifies the existence of the program. In some cases, program effectiveness may be determined by asking, "Did you get a crowd?" This is in contrast to a behavior-change focus that asks the question, "Did you impact health behaviors?" The definition of program effectiveness may vary depending upon who is evaluating the program and its design (e.g., health educator, risk management specialist, public relations manager). However, reasonable criteria for judging program effectiveness include: (a) changed behaviors, (b) saved dollars, (c) the extent to which participants or management liked the program, and (d) reduced health risk.

When selecting a particular medium, the users' (a) budget and (b) familiarity with types of media may preempt issues of effectiveness or appropriateness. Unless a health promoter has ample funds budgeted for the promotion of a specific program, the money will always be an influencing factor in the selection of media. No matter what media is desired, unaffordable mediums will not be used. Even if creative funding (donations) is available, external funding often comes with strings attached that favor certain media. In turn, familiarity with various media may be due to limited experience, previous success, and the technology that the organization has available. If newspaper advertising was the only promotional media previously used for an event and the event was

successful, the success may unduly influence future media selection. Also, sending everyone a reminder about an event on e-mail will not be possible if the organization does not provide access to a computer terminal for each employee.

The criteria of message effectiveness ultimately determines message success in relation to the goal of the message. Part of the measure of message effectiveness will include (a) expenditure of energy on the part of the message sender(s) and (b) expenditure of money. Yet, it is difficult to pinpoint objectively why a promotion succeeds (e.g., many personnel attend, the event makes/saves money). Intuitively, individuals assign causes when promotions are deemed "effective" or "ineffective" (e.g., nobody/very few attend(s), the event loses money) because they wish to identify signs leading to wise choices in the future. A focus on media and related factors that are perceived to lead to positive or negative outcomes (i.e., what was not effective) in corporate health promotion programs would provide insight into professionals' beliefs about media use and aid in the predicting of future media use. Furthermore, comparisons between media used in professionals' successes and failures may provide more precise guidelines for future media use specific to their industry and health promotion domain. These comparisons may allow for media selection that effectively promotes the programs and services to the members of their organizations.

While the use of media certainly impacts the effectiveness or success of health promotion programs, it is important to note that there may be a number of non-media influences that also impact program success. These might include such things as, "It is just a great program!"; "Just plain dumb luck."; "It was the **right** time for this program."; "Employees are required to attend at least 3 programs, and this program was

the most convenient." While this list is not exhaustive, it suggests that there may be any number of non-media factors that may influence health promotion program success. Thus, the last research questions of this study ask:

RQ8: What do health promotion professionals regard as the key media and non-media factors in the success or failure of promotions?

RQ9: What is the relationship between health promotion program success or failure and media use in their respective health promotion domains?

Research question 8 is answered through examination of responses to two open-ended questions. Subjects are asked to identify what they consider to be three primary media and non-media reasons for program effectiveness and ineffectiveness (survey Sections III and IV).

Research question 9 is answered by asking subjects to identify the type of program and intended audience in order to help place the program in the proper health domain (Downie, et al., 1990). Coders (see Appendix E for code book) follow information about the type of program and intended audience to help in categorizing the identified programs into one of the seven health promotion domains. Intentionality ("What is the intention or purpose of a program?" or "For whom is it intended?") of a program or service is a major ingredient for classification into one area of health promotion as opposed to another. As Figure 2 illustrates, the categories overlap, making it imperative that intentionality is understood. Without intentionality, some programs could fit in several categories. For the purposes of this study, intentionality is used to classify health promotion activities into unique domains. For example, knowing that a program is about exercise allows a program to be in one of several domains. But

knowing that an exercise program is for the general public allows it to be categorized into domain 1 (Positive Health Education). An exercise program for people who need to lose weight is categorized into domain 4 (Preventive Health Education) because it is an intervention for an identified population. It is, therefore, necessary to have knowledge of both the kind of program and its intended audience in order to properly categorize a health promotion program. A comparison is then made between the health promotion domain and the media used (survey Sections III and IV).

CHAPTER 2

METHODOLOGY AND RESEARCH DESIGN

Research Questions

This study examined the health promotion practices of organizations belonging to the Association for Worksite Health Promotion (AWHP). Nine research questions were asked in order to determine the characteristics of corporate health promotion programs and the role of communication in program effectiveness:

RQ1: What types of health promotion programs are used by organizations?

RQ2: How do health promotion programs differ across various types of industry?

RQ3: What criteria (dimensions) do health promotion professionals perceive that their organizations value as being most useful in determining program effectiveness?

RQ4: How do criteria used to evaluate the effectiveness of health promotion programs vary across the types of industry?

RQ5: What do health promotion professionals consider to be the most important media characteristics (i.e., "media dimensions") in promoting programs?

RQ6: How do these rated media characteristics vary by industry?

RQ7: What uses of media characterize effective and ineffective health promotion programs?

RQ8: What do health promotion professionals regard as the key media and non-media factors in the success or failure of promotions?

RQ9: What is the relationship between health promotion program success or failure and media use in their respective health promotion domains?

Subjects

Since the basic purpose of this research was to learn more about the condition of the field of health promotion, subjects in the primary study were health promotion professionals who actively work in the field of health promotion. A sample of 600 subjects was randomly selected from the members of the Association for Worksite Health Promotion (AWHP). The AWHP, one of the oldest professional organizations in the field of worksite health promotion, was established in 1974 and represented: (a) professionals who are currently working in the field of health promotion, (b) a wide variety of industries, and (c) all states in the United States.

As this study sought subjects who actively worked in the field of worksite health promotion, survey recipients completed three screening questions before answering the survey questions. The three screening questions, to be answered by "yes" or "no" responses, were (a) "Your health promotion and/or safety program directs services to your organization's employees," (b) "You help make decisions about the types of media (print, broadcast, face-to-face, etc.) to be used in conducting or promoting health programs," and (c) "At least 50% of your work time is devoted to or spent on health promotion and/or safety programs." A "Yes" response to each of these questions indicated that subjects were in decision making, professional positions in the field of health promotion. If recipients answered "No" to any question, the person was thanked and asked to please pass the survey on to someone who would be able to answer affirmatively to all three questions.

Two hundred and twelve surveys out of 600 were returned representing a response rate of 35.33%. Research participants can be characterized as follows: the

mean age for subjects was 36.62 years of age (median = 36.00 years); nearly three fourths (71.7%, n = 152) were female, while about one forth (28.3%, n = 60) were male; and education levels ranged from high school graduate to doctoral level, with approximately 30% earning only a bachelor's degree and 60% earning a master's degree (see Table 4). Subjects represented a variety of departments within organizations: finance, production, research and development, marketing, personnel/human resources, support, and health services with nearly half being in Personnel/Human Resources and a third being in Health Services (see Table 5). Subjects' departments varied in size (see Table 6), and subjects worked in a variety of industries (process technology, manufacturing and construction, service, and trade, see Table 7).

In addition, nearly one third of the subjects were employed in organizations with between 1001 and 5000 employees, another third in organizations with over 10,000 employees, and nearly another third in organizations containing all other numbers of employees (see Table 8). At the time of completing the survey instrument, just over 80% of the subjects had been with their organizations for ten years or less (mean = 6.39 years, median = 5.00 years) (see Table 9). Nearly 80% of respondents had been in their current positions within the organization 5 years or less (mean = 2.91, median = 3.00) (see Table 10). Subjects reported their status within their organizations by ranking themselves from lowest to highest with over 80% rating themselves plus or minus 1 from the middle of a 1 to 7 scale (see Table 11). Additionally, subjects reported that their organizations had established health promotion programs an average of 9.52 years (range = 1 to 126 years, median = 7.00) (see Table 12), with approximately 46% having programs 6 years or less.

Table 4

Distribution of Subjects by Education Levels

Education Level	n	%
High School	4	1.9
Associate's	6	2.9
Bachelor's	63	30.3
Master's	126	60.6
Doctorate	9	4.3

Table 5

Distribution of Subjects by Departments

Department	n	%
Finance	3	1.4
Production	1	.5
Research and Development	2	1.0
Marketing	4	1.9
Personnel/Human Resources	99	47.8
Support	19	9.2
Health Services	69	33.3
Other	10	4.8

Table 6

Distribution of Subjects by Department Size

Number of Employees in Department	n	%
1 to 5	80	44.9
6 to 10	46	25.9
11 to 15	8	4.5
16 to 25	15	8.4
26 to 99	22	12.4
100 +	7	3.9

Table 7

Distribution of Subjects by Industry Type

Industry	n	%
Process Technology	13	6.6
Manufacturing	71	36.0
Service	101	51.3
Trade	12	6.1

Table 8

Distribution of Subjects by Size of Organization

Organization Size	n	%
1 to 99 members	5	2.5
100 to 500 members	16	7.8
501 to 1000 members	22	10.8
1001 to 5000	62	30.4
5001 to 10,000	31	15.2
over 10,001 members	68	33.3

Table 9

Distribution of Subjects by Length of Tenure with Organization

Years with Organization	n	%
1 year	20	9.5
2 to 5 years	97	46.0
6 to 10 years	59	27.9
11 to 15	24	11.4
16 +	11	5.2

Table 10

Distribution of Subjects by Time In Current Position

Time in Current Position	n	%
6 months or less	13	6.2
7 months to less than 2 years	52	24.9
2 to 5 years	97	46.4
6 to 10 years	38	18.2
11 to 15 years	5	2.4
16 + years	4	1.9

Table 11

Distribution of Subjects by Status/Rank within Organization

Status/Rank		n	%
Lowest	1	3	1.5
	2	14	6.9
	3	51	25.1
	4	62	30.5
	5	54	26.6
	6	9	4.4
Highest	7	10	4.9

Table 12

Distribution of Subjects by Number of Years Health Promotion Program Has Existed Within Organization

Health Promotion Program Years	n	%
1 to 3	45	21.8
4 to 6	49	23.8
7 to 9	40	19.4
10 to 12	36	17.5
13 to 15	20	9.7
16 to 20	6	2.9
More than 20	10	4.9

Procedures

A cover letter to survey recipients explained possible benefits to participants, including (a) a chance to contribute to current understandings of health promotion, (b) a better understanding of what makes programs effective, (c) an industry-specific look at program effectiveness, (d) an opportunity to determine whether or not the choice of communication media can influence the effectiveness or success of health promotion programs, (e) an opportunity to learn if the way media are used is characteristic of various health promotion programs, and (f) an opportunity to learn what health promotion professionals perceive to be the key media and non-media factors in the successful promotion of health promotion programs. Respondents were provided with an addressed, stamped envelope in which to return the survey. Two follow-up postcards were mailed at one week intervals as reminders to subjects, asking them to complete and return the survey.

A pilot survey instrument based upon the criteria from academic and popular publications was developed in order to answer the nine research questions, gathering information from working health promotion professionals (see "Instrument Used in the Survey"). Twenty-five working health promotion professionals from a large Southeastern city completed the survey and provided commentary in an attempt to improve the survey instrument. These twenty-five professionals, who were excluded from the final survey, fit the same criteria used in the survey, namely: (a) involvement with delivery of health promotion services to employees, (b) involvement in making decisions about the types of media used in conducting and promoting health programs, and (c) at least 50% of their work time is devoted to or spent on health promotion programs. Results of the pilot

study suggested (a) the rewriting of several examples offered in the survey in order to improve clarity and (b) the addition of a list of brief descriptions of the seven health promotion categories (Downie, et al., 1990) by which survey respondents could identify their primary type of health promotion activity.

Subjects received the revised survey which solicited information about (a) the type of industry in which they work, (b) the kinds of health promotion programs they offer employees, (c) the criteria used to assess program effectiveness within their workplace, (d) dimensions of media used within their organization, in general, and (e) media used in health promotion programs in their organization. This information provided the data for answering research questions 1 - 7.

The final survey also solicited information regarding media use in both "successful" and "unsuccessful" conditions (survey Sections III and IV). Respondents were asked to list (open-ended responses) the program name, or title, for their most successful health promotion program during the previous twelve months. Information was solicited regarding the target audience of the program and the intention or purpose of the program in order to categorize the program according to Downie et al.'s (1990) classifications. Respondents were asked to list reasons that they attribute as leading to the successful promotion of the program they reported. For the most unsuccessful program, the same open-ended format was also used to ask respondents to list the program name for the health promotion program that they consider to be their least successful during the previous twelve months. Information was again requested regarding the target audience, the program's purpose, and factors leading to program success or failure. These responses constitute the data for research questions 8 and 9.

Additional information gathered about each subject's background and program use provided the ability to define the subject population and interpret the data.

The returned surveys were compiled and assigned subject numbers for coding. Two adult volunteers were trained to categorize independently the open-ended responses (survey Sections III and IV) into the seven domains from Downie et al. (1990). The coders also categorized the media and non-media reasons for program effectiveness based upon categories and code books (see Appendices F, G, H, and I for the codebooks) that were developed by the researcher after scanning responses for key and unique ideas. The reliabilities (Scott's π) of the coders were as follows: for effective programs, .98 for domain types, .89 for media reasons, .85 for non-media reasons; for ineffective programs, .98 for domain types, .96 for media reasons, .89 for non-media reasons (Scott, 1955).

Instrument Used in the Survey

The final survey solicited information from health promotion practitioners about (a) the types of programs offered by their organizations, (b) the value placed upon various criteria for rating program effectiveness, (c) the types of media used to promote various programs, (d) the media and non-media reasons health promotion practitioners identify for program effectiveness and ineffectiveness, (e) the importance of specific media characteristics in promoting health promotion programs, and (f) various demographic information about the respondents and their organizations. Additionally, respondents were asked to identify which of the seven health promotion categories from Downie et al. (1990) was the primary type of health promotion activity in which their

organization engages. The following descriptions provide information regarding the origin and use of instruments used in developing the survey instrument for this study.

Following procedures specified by Hunter (1980; Hunter & Gerbing, 1982) confirmatory factor analysis tests of face validity, item loading, internal consistency, and external consistency were applied to each of the Likert-type scales (Program Effectiveness, Important Dimensions of Media). Primary factor loadings for all items and the reliability coefficients for each scale are reported in Tables 13 and 14. Except for the deviations discussed below, all items met the criteria for internal consistency: (a) face validity; (b) a primary factor loading of .4 or greater; (c) less than 5% of the discrepancies between predicted and observed correlations were outside the bounds of the confidence interval (at a $p < .05$); and (d) a nonsignificant sum of squared errors showing no departure from the hypothesized unidimensional model. For tests of parallelism, less than 5% of discrepancies between predicted and observed correlations fell outside the confidence interval.

Health Promotion Program Offerings. Parkinson et al. (1982) provided an extensive listing of health promotion program offerings by organizations (see Appendix J). This list reflected current practices among a number of large corporations and government agencies within the United States. Subjects were asked to identify the health promotion programs that their organization sponsors for employees. Subjects were also given space to reply in open-ended format. These responses were used to identify what health promotion programs currently exist in business and industry (survey Section I, RQ1).

Table 13

Factor Loadings for Items and Reliabilities for Program Effectiveness Scale

PROGRAM EFFECTIVENESS	
"A health promotion program in my organization is viewed as being effective when . . ."	
Cost-financial	
it makes money	.59
it doesn't lose money	.88
it pays for itself	.65
it is a profit center for the organization	*
Long Term Health/Cost Improvement	
it reduces the company's overall health care expenditures	.82
it is linked to corporate savings	.86
it brings down cost in other areas (e.g., insurance)	.81
it saves the company money overall	.87
Program Attendance	
many people participate	.68
my expectation of the number of participants is met	.68
employees show support for the program by participating	.71
there are enough participants to justify the program's existence	
Public Relations	
it results in media coverage (radio, tv, newspaper)	.61
it generates good publicity	.79
it makes the company look good	.68
there is a good feeling about the program throughout the organization	
Management Favors It	
management personnel participate	.51
management wants it	.51
management views the program favorably	
management discusses it while recruiting new employees	
Behavior Change	
participants learn new health-related skills	.82
participants incorporate new healthy behaviors into their daily routine	.88
participants demonstrate behavioral changes	.84
behavioral changes are clearly visible and measurable	

* items without factor loading score were dropped

Table 14

Factor Loadings for Items and Reliabilities for Important Dimensions of Media Scale

IMPORTANT DIMENSIONS OF MEDIA	
"Please *rate the importance* of each of the following media characteristics as <u>you decide</u> how to publicize health promotion programs in your organization."	
Cost	
The expense of preparing materials (flyers, posters, advertisement)	.77
The cost of delivering the materials/information to potential clients	.77
How much money had been spent on promoting other health promotion programs	*
Interactive	
The ability of the medium to tailor the message to each individual	.55
The medium provides employees with the opportunity to ask questions . . .	.55
The ability to get quick feedback from potential participants	
Urgency	
The ability to get information to potential participants quickly	.72
The medium's ability to reach many people in the shortest amount of time	.81
The speed with which the medium can deliver a message to the target audience	.87
Detail	
Particular medium's ability to deliver detailed information	.59
The medium has sufficient capacity to give employees all the information they need	.59
The ability to convey detailed information	
Novelty	
The use of a promotional medium that had not been used recently	.69
The medium presents the message in a novel manner	.69
The ability of the medium to grab employees' attention	

* items without factor loading score were dropped

Health Promotion Typology. In keeping with Downie, et al. (1990), this survey sought information on the purpose and intended audience of health promotion program offerings to determine the type of health promotion program. Subjects identified the purpose (general instructional health activities, services intended to prevent disease or illness, legal or legislative activity, interventional activities, health-related laws and regulations, health education targeting those impacted by health legislation or regulation, and health education targeting legislators and policy makers) and intended audience (e.g., women over 40 years of age, workers exposed to radiation, the general public) of specific program offerings which were categorized according to Downie, et al.'s (1990) classifications. Subjects identified their use of existing programs by: (a) marking a box adjacent to each of the listed programs and (b) through open-ended responses (survey Sections III and IV, RQ3, RQ7, RQ8, and RQ9). The survey also asked respondents to mark the one description from Downie et. al's categories which best represented the primary type of health promotion activity within their organizations.

Type of Industry. The survey solicited information concerning the nature of the industry in which subjects work. The Standard Industrial Classification Manual (1987) identifies ten types of industry, including (a) agriculture, forestry, and fishing, (b) mining, (c) construction, (d) manufacturing, (e) transportation and public utilities, (f) wholesale trade, (g) retail trade, (h) finance, insurance, and real estate, (i) services, and (j) public administration. Since the data followed prior reporting patterns, these industry types were collapsed into four industry types (Miller, 1988) in order to facilitate a more manageable sample size: (a) manufacturing and construction; (b) service (hospital, public administration, public utilities, finance, insurance); (c) process technology (oil refinery,

nuclear power plant, mining, agriculture, forestry); and (d) trade (wholesale and retail) (survey Section VI, RQ2, RQ4, and RQ6).

Program Effectiveness. Twenty-four survey items from Appendix B were used to evaluate program effectiveness (RQ3) as perceived by health promotion professionals. These items represent criteria suggested by the literature review and were used to assess subjects' organization's emphasis on: (a) cost/financial outcomes (Anderson, 1986; Barry & DeFriese, 1990; Brennan, 1983; Gettman, 1986; Jones et al., 1990; Terborg, 1986), (b) long term health-cost improvement (Anderson, 1986; Barry & DeFriese, 1990; Brennan, 1983; Gettman, 1986; Jones et al., 1990; Terborg, 1986), (c) program attendance (Anderson, 1986; Terborg, 1986), (d) public relations (Anderson, 1986; Terborg, 1986), (e) management favors it (Anderson, 1986; Terborg, 1986), and (f) change in behaviors (Anderson, 1986; Bandura, Adams, & Beyer, 1977; Cumming, 1986; Eddy, Eynon, Nagy, & Paradossi, 1990; Falkenberg, 1987; Lynch, Golaszewski, Clearie, Snow, & Vickery, 1990; Shephard et al., 1981; Shephard et al., 1983; Terborg, 1986). Respondents were urged to rate criteria as they are valued in determining program effectiveness within their organization, recognizing that not all items are equally important to their organization. Finally, respondents were asked to rate each criterion on its own merit based upon their workplace experience, not necessarily according to their personal preference (survey Section II, RQ3). Subjects rated the degree of importance each criterion receives within their organization with 1 being the lowest value in determining program effectiveness to 11 being the highest value of effectiveness.

In keeping with the above theoretical dimensions, the results of the confirmatory factor analysis of the 24 item scale indicated the presence of six factors (see Table 13).

After removing items which exceeded their confidence intervals, subsequent tests of internal consistency revealed that less than 5% of discrepancies between the observed and predicted correlations exceeded the bounds of the confidence interval (at a $p < .05$). The sum of squared errors in the test of internal consistency was nonsignificant for each factor (cost/financial outcomes, $\chi^2 = .18$, 3 df, $p > .05$; long term health-cost improvements, $\chi^2 = .25$, 6 df, $p > .05$; program attendance, $\chi^2 = .02$, 3 df, $p > .05$; public relations, $\chi^2 = .02$, 3 df, $p > .05$; management favors it, $\chi^2 = .08$, 1 df, $p > .05$; and change in behaviors, $\chi^2 = .04$, 3 df, $p > .05$). The scales were judged to be heterogenous as less than 5% of items exceeded the bounds of the confidence interval and a test of the sum of squared errors showed no significant departure from the hypothesized model (sum of squared errors = .64, $\chi^2 = 125.11$, 134 df, $p > .05$).

Important dimensions of media. Organizations vary in what forms of media are acceptable for health promotion and are necessary to engage employees' attention. A 15 item scale assessing 5 categories was used to evaluate the importance of dimensions of media (RQ5) as perceived by health promotion professionals within various organizations (see Appendix C). The categories, suggested by the literature review, include: cost (Sitkin et al., 1992), interactive (Daft & Lengel, 1984; Sitkin et al., 1992), urgency (Steinfield & Fulk, 1986; Sitkin et al., 1992), detail (Daft & Lengel, 1984; Sitkin et al., 1992), and novelty (Heirich et al., 1989; Rogers, 1983). Respondents were asked to rate items on an 11 point scale from 1 = "no importance" to 11 = "highest level of importance" in planning a recent health promotion program (survey Section V, RQ5).

The results of the confirmatory factor analysis of the 15 item scale (see Table 14) revealed the presence of five factors: cost, interactive, urgency, detail, and novelty.

Items which exceeded their confidence intervals were dropped. Subsequent tests of internal consistency revealed that less than 5% of discrepancies between the observed and predicted correlations exceeded the bounds of the confidence interval (at a $p < .05$). The sum of squared errors in the test of internal consistency was nonsignificant for each factor (cost, $\chi^2 = .08$, 1 df, $p > .05$; interactive, $\chi^2 = .08$, 1 df, $p > .05$; urgency, $\chi^2 = .04$, 3 df, $p > .05$; detail, $\chi^2 = .08$, 1 df, $p > .05$; and novelty, $\chi^2 = .08$, 1 df, $p > .05$). The scales were judged to be heterogenous as less than 5% of items exceeded the bounds of the confidence interval and a test of the sum of squared errors showed no significant departure from the hypothesized model (sum of squared errors = .22, $\chi^2 = 42.67$, 48 df, $p > .05$).

Factors associated with program success or failure. As previously described, a 24 item section of the survey instrument was used to assess subjects' evaluations of program effectiveness. Because health promotion professionals may recognize other measures of effectiveness, subjects were asked to identify in open-ended format (a) the three most important or key *media* factors and (b) the three most important *non-media* factors that contributed to one of their most effective programs in the previous twelve months (RQ8 and RQ9). Additionally, they were asked for the name of the program and the intended audience. The same procedure was observed for the least ineffective program to discover the range over which success can occur (survey Section III and IV, RQ8 and RQ9).

Background Information. Additional demographic information was requested from respondents. This information was used to assist in the interpretation of data. These items include (a) gender, (b) highest education level completed, (c) age, (d) tenure

in organization, (e) job title, (f) status in organization (hierarchical position), (g) health promotion budget, (h) staff, and (i) number of years health promotion program has existed within the organization (survey Section VI).

Statistics. Multivariate comparisons complement Research Questions 1,3,5, and 7 which assess multiple dependent variables and which seek descriptive information, respectively, regarding the type of health promotion programs offered by organizations, how they measure program effectiveness, dimensions of media that are important to the respondent, and media actually used by organizations. Tests of Research Questions 4, 6, and 7 employed a 4 x 4 MANOVA design with 4 levels of program types and 4 levels of industry types. These analyses measured the impact of the program type and industry on health promotion program effectiveness criteria, dimensions of media, and actual media use, respectively. Two separate multivariate analyses were undertaken because the dependent variables are theoretically distinct and each dependent variable has multidimensional constructs.

In testing Research Question 2, a Chi Square Test of independence examined differences in the types of programs offered across 4 types of industry. A Chi Square Test of Independence also measured differences in media use by program for two levels of success (most effective or least effective health promotion program outcomes) in testing research question 9. Finally, in testing research question 8, a Chi Square test of Independence was used to assess differences in media and non-media factors leading to effectiveness or ineffectiveness of health promotion program outcomes.

CHAPTER 3

RESULTS

Research Question One asked, "*What types of health promotion programs are used by organizations?*" While Downie, et al. (1990) identify seven domains of health promotion, health professionals in this sample reported that their organizations focused on some domains to the exclusion of others and, at times, promoted sets of programs constituting two new unique domains.

As listed in Table 15, subjects reported using (in descending order of frequency): Positive Health Education (Domain 1 - programs offering general health information on one or more health topics); Preventive Health Education (Domain 4 - intervention programs offering specific information or counseling on specific, identified health risks); Preventive Services (Domain 2 - screenings, immunizations, and surgical interventions for clients or populations); Specific Education (composed of combinations of Domains 1, 2, and 4 - these programs are limited to education and screening activities to the exclusion of legislation/policy creating related domains); Doing It All (composed of Downie, et al.'s Domains 1 - 7); Health Education Aimed At Positive Health Protection (Domain 6, education and training specific to employees); and Preventive Health Protection (Domain 5 - enforcement of health-related laws and/or regulations for industry or the public).

Results of a Chi-Square Test of Goodness of Fit indicated that the variation in the distribution of domain use was significantly greater than by chance ($\chi^2 = 351.79$, 8 *df*, $n=199$, $p<.001$). An analysis of the distribution indicates that almost half of health professionals report using Positive Health Education. The use of Preventive Health

Table 15

Major Health Promotion Domain Use Reported In Study

Type of Health Promotion	Frequency	Percent
1. Positive Health Education	102	49.7
2. Preventive Services	28	13.6
3. *Positive Health Protection	-	-
4. Preventive Health Education	44	21.5
5. Preventive Health Protection	2	1.0
6. Health Education Aimed at Positive Health Protection	3	1.5
7. *Health Education for Preventive Health Protection	-	-
8. [a]Specific Education	14	6.8
9. [b]Doing It All	12	5.9
Total	205	100.0

* The use of categories 3 and 7 were reported in combinations with other health domains and did not appear uniquely from other domains.

[a] Specific Education was composed of combinations of Domains 1, 2, and 4 and are limited to education and screening activities to the exclusion of legislation/policy creating related domains.

[b] Doing It All resulted from subjects reporting the use of all of Downie, et al.'s Domains 1 - 7.

Education and Preventive Services accounted for approximately one third of health professionals' efforts. Specific Education and Doing It All were the focus of a small percentage of health professionals' efforts (6.8% and 5.9%, respectively). Health professionals focused on Preventive Health Protection and Health Education Aimed At Positive Health Protection relatively infrequently. In this particular sample, Positive Health Protection and Health Education For Preventive Health Protection were never identified as being used separate from other domains (see Table 15).

Constituting each health promotion domain were the specific programs which professionals offer to the organizations' employees. The distribution of 66 programs across the three most often represented domains is reported in Table 16. The overall pattern indicated considerable overlap in the programs offered by organizations across domains. Only two significant differences in the offering of specific programs were present (see Table 16). Thirteen programs were offered by more than 75% of organizations in the three most often represented domains, Positive Health Education, Preventive Services, and Preventive Health Education.

Research Question Two inquired, "*How do health promotion programs differ across various types of industry?*" The distribution of the usage of health promotion program domains across types of industry is reported in Table 17. A Chi-Square Test of Independence revealed that the distribution of health promotion domains did not differ significantly across the industry types ($\chi^2 = 20.10$, 18 *df*, $p = .33$). The lack of significant differences appears to be principally due to the relatively small sample size.

Table 16

Percentages of Program Usage By Domains

Program Titles	Overall	Positive Health Ed.	Preventive Services	Preventive Health Ed.
*Nutrition Counseling	81.8	76.5	89.3	81.8
*Weight Control Program	92.5	94.1	96.4	88.6
*Employee Assistance Program (EAP)	87.3	84.3	85.7	90.9
Family Counseling	51.9	46.1	57.1	61.4
Personal Counseling	63.2	54.9	71.4	75.0
Planned Safety Meetings	72.6	68.6	71.4	77.3
*Smoking Cessation Program	80.2	75.5	89.3	84.1
Hypertension Modification Program	57.1	47.1	71.4	61.4
Serum Lipid Modification Program	60.8	46.1	75.0	75.0
Counseling & Referral for Substance Abuse	70.8	62.7	85.7	77.3
*Health Risk Appraisal	80.2	82.4	82.1	79.5
*Stress Management (learning relaxation, etc.)	83.0	78.4	89.3	88.6
At work Fitness Center (company owned)	73.6	78.4	64.3	77.3
Off site Fitness Center (owned or contracted)	24.1	17.6	25.0	27.3
Aerobic Dance (for everyone)	75.5	81.4	67.9	70.5
Aerobic Dance (specifically for weight loss)	10.4	5.9	10.7	13.6
Other aerobic exercise programs (tm, bike, etc.)	74.1	82.4	60.7	72.7
Circuit training (weight machines)	67.0	74.5	50.0	65.9
Swimming Instruction	10.4	10.8	10.7	9.1
*Cardiac Rehab	19.3	10.8	10.7	36.4
Recreational Skills	42.9	46.1	53.6	31.8
Self-help Groups (AA, etc.)	17.9	17.6	21.4	18.2
Safety Training	69.8	69.6	75.0	63.6
*Back Safety	79.2	79.4	82.1	81.8
Proper Lifting Techniques	72.6	70.6	75.0	72.7
How To Start An Exercise Program	71.2	72.5	75.0	68.2
HIV/AIDS Information	52.8	52.0	50.0	47.7
Women's Health Issues	66.0	66.7	64.3	54.5
How To Prevent Heart Disease	68.4	63.7	67.9	72.7
Second Hand Smoke and Your Health	25.0	21.6	32.1	13.6
*Basic Nutrition	86.3	87.3	82.1	86.4
Nutritional Label Reading	76.9	77.5	82.1	72.7
Planning For Retirement	52.4	53.9	57.1	50.0

Program Titles	Overall	Positive Health Ed.	Preventive Services	Preventive Health Ed.
Heart Healthy Cooking Class	54.2	56.9	53.6	43.2
Cancer Education (general)	59.4	56.9	60.7	61.4
Breast Cancer Education	64.6	61.8	60.7	65.9
Breast Self-Examination	56.6	51.0	53.6	61.4
Testicular Self-Examination	36.3	33.3	32.1	40.9
Colo-rectal Cancer Education	33.0	26.5	46.4	36.4
Cardio-Pulmonary Resuscitation (CPR)	79.7	85.3	67.9	79.5
[a]Stress Management (information class)	83.5	76.5	85.7	90.9
Exercise Education (general info - not activity)	67.5	69.6	64.3	68.2
Self-Esteem	33.5	36.3	28.6	22.7
Death Education	6.6	3.9	3.6	9.1
*Life Saving (swimming)	4.7	3.9	10.7	100.0
First Aid	59.9	63.7	57.1	59.1
[a]Health-related Brochures	81.6	79.4	85.7	86.4
Health-related Newsletter	73.6	76.5	60.7	77.3
Wellness Library for Employees	67.0	69.6	64.3	59.1
Skin Cancer Screening	37.7	39.2	50.0	31.8
Mammography	57.1	50.0	78.6	56.8
Colo-rectal Screening	33.5	30.4	39.3	34.1
Lung Cancer Screening (chest X-ray)	10.4	5.9	17.9	13.6
Prostate Cancer Screening	33.5	27.5	46.4	34.1
Cervical Cancer Screening	13.7	11.8	10.7	22.7
Immunization	48.1	46.1	57.1	43.2
Aerobic Capacity Test (Max tm test with EKG)	18.4	15.7	21.4	15.9
Aerobic Capacity Test (Sub-Max bike, no EKG)	56.6	61.8	39.3	54.5
[a]Body Composition (body fat) Testing	88.7	91.2	85.7	90.9
Flexibility Testing	72.2	77.5	64.3	70.5
Muscular Strength & Endurance Testing	65.6	72.5	53.6	65.9
Vision Screening	45.3	41.2	57.1	52.3
Glaucoma Screening	32.2	26.5	46.4	40.9
Low Back Clinic/Screening	28.8	31.4	28.6	27.3
Scoliosis Screening	7.1	6.9	14.3	4.5
[a]Hypertension Screening	94.3	93.1	100.0	97.7
[a]Cholesterol Screening	90.1	88.2	100.0	93.2
	n = 212	n = 102	n = 28	n = 44

* denotes significance between Domains at $p < .05$

[a] program offered by more than 75% of organizations in the three most represented domains

Table 17

Distribution Of The Usage Of Health Promotion Program Domains Across Types Of Industry

Organizational Type	Health Promotion Type						
	Positive Health Education	Preventive Services	Preventive Health Education	Preventive Health Protection	Health Education Aimed at Positive Health Protection	Specific Education	Doing It All
Process Technology	6	2	3	1	-	-	1
Manufacturing	38	10	14	-	1	4	6
Service	51	11	26	1	2	9	5
Trade	5	5	1	-	-	1	-

The third research question asked, "*What criteria (dimensions) do health promotion professionals perceive that their organizations value as being most useful in determining program effectiveness?*" According to health promotion professionals (see Table 18), their organizations value the criterion, behavioral change, as the most important in determining program effectiveness, followed by attendance, long term health-cost improvement, management favors it, public relations, and cost/financial. While behavioral change was weakly correlated with other criteria, attendance, management favors it, public relations, and cost/financial were moderately correlated with each other. Results of t-tests between the mean scores of the criteria (see Table 19) indicated that all criteria significantly differed from each other in importance except for attendance and management favors it when either were compared to long term health-cost improvement.

The fourth research question sought to identify *variations in the criteria to evaluate the effectiveness of health promotion programs due to the industry of the health professional.* While a multivariate analysis of variance revealed no significant differences in criteria due to industry type (see Table 20), analyses indicated a significant univariate effect in the importance of attendance ($F=2.92$, $df=3,204$, $p<.04$, $eta^2=.05$). Subsequent post hoc Tukey HSD tests indicated that attendance was a more important criterion for health promotion success for organizations in trade ($\bar{x} = 8.88$) and manufacturing ($\bar{x} = 8.55$) than in process technology industries ($\bar{x} = 7.28$).

Additional exploratory analyses, however, revealed a significant multivariate effect (Mult. $F=1.58$, $df=6,181$, $p<.02$, $R^2=.27$) in the importance of the criteria for judging program effectiveness due to professional's primary health promotion program

Table 18

Means, Standard Deviations and Correlations of Criteria for Reported Values of Organizations In Determining Program Effectiveness

Criteria	$\bar{x}$	s.d.					
Behavioral Change	9.20	1.61	-				
Attendance	8.41	1.56	.19	-			
Long Term Health-Cost Improvement	8.17	2.43	.14	-.03	-		
Management Favors It	7.90	1.80	.22	.48	.43	-	
Public Relations	5.85	2.20	-.02	.46	.08	.55	-
Cost/Financial	4.94	2.62	-.18	.22	.46	.50	.40 -

N=195

Rating scale was 0 to 10, but was adjusted by adding one to each response to create a scale of 1 to 11 for statistical purposes.

Table 19

T-Tests Between Program Effectiveness Criteria

Variables	**t-values**	***df***	**p**
Cost/Financial vs. Long Term Health-Cost Improvement	-16.76	1,204	.000
Cost/Financial vs. Attendance	-18.00	1,205	.000
Cost/Financial vs. Public Relations	- 4.49	1,201	.000
Cost/Financial vs. Management Favors It	-15.38	1,203	.000
Cost/Financial vs. Behavioral Change	-18.69	1,205	.000
Long Term Health-Cost Improvement vs. Attendance	- 1.27	1,205	.205
Long Term Health-Cost Improvement vs. Public Relations	10.58	1,201	.000
Long Term Health-Cost Improvement vs. Management Favors It	1.56	1,203	.119
Long Term Health-Cost Improvement vs. Behavioral Change	- 5.43	1,205	.000
Attendance vs. Public Relations	16.60	1,204	.000
Attendance vs. Management Favors It	3.71	1,207	.000
Attendance vs. Behavior Change	- 5.61	1,209	.000
Public Relations vs. Management Favors It	-12.47	1,202	.000
Public Relations vs. Behavior Change	-17.32	1,204	.000
Management Favors It vs. Behavior Change	- 8.47	1,207	.000

Table 20

Means and Standard Deviations for Comparison between Media Characteristics in the Various Industry Types

Criteria	Process Technology		Manufacturing		Service		Trade	
	$\bar{x}$	s.d.	$\bar{x}$	s.d.	$\bar{x}$	s.d.	$\bar{x}$	s.d.
Behavioral Change	8.87	2.09	9.46	1.46	9.08	1.59	9.09	1.85
Attendance	7.28	1.75	8.56	1.53	8.44	1.50	8.88	1.43
Long Term Health-Cost Improvement	8.17	2.50	8.23	2.45	8.20	2.32	8.39	3.00
Management Favors It	7.69	1.56	7.73	1.92	8.00	1.75	8.77	1.42
Public Relations	4.59	2.24	6.01	2.11	5.82	2.21	5.64	2.19
Cost/Financial	3.97	2.66	4.86	2.51	5.05	2.74	5.42	2.21

domain (see Table 21). Results of an analysis of variance indicated that only the criterion of attendance varied significantly among health promotion programs ($F=5.93$, $df=6,181$, $p<.0001$, $eta^2=.21$). Subsequent post hoc Tukey HSD tests revealed that attendance is a more important criterion in Specific Education ($\bar{x} = 9.02$), Positive Health Education ($\bar{x}=8.92$) and Preventive Services ($\bar{x} = 8.73$) than in Preventive Health Education ($\bar{x} = 7.50$) and Preventive Health Protection ($\bar{x} = 7.33$) programs.

Research Question 5 was, "*What do health promotion professionals consider to be the most important media characteristics (i.e., "media dimensions") in promoting programs?*" As reported in Table 22, health promotion professionals in this study identified urgency as the most important *media* dimension, followed by detail, cost, novelty, and interactive. Professionals' rating of detail as an important characteristic was also moderately correlated with the ratings of urgency and interactive while ratings of novelty were moderately correlated with interactive. Results of t-tests (Table 23) indicated that all *media* characteristics significantly differed from each other in importance except for cost compared to interactive and novelty, as well as interactive compared to novelty.

Additional exploratory analyses examined the relationship between professionals' rating of criteria for health promotion success and the importance of *media* characteristics. As indicated in Table 24, moderate but significant correlations were present for behavior change compared to detail and interactive, as well as attendance compared to detail.

The sixth research question asked, "*How do these rated media characteristics vary by industry?*" Multivariate analyses indicated a significant multivariate main effect for

Table 21

Means and Standard Deviations for Comparison between Media Characteristics in the Three Most Represented Health Promotion Domains

Criteria	Positive Health Education		Preventive Services		Preventive Health Education	
	$\bar{x}$	s.d.	$\bar{x}$	s.d.	$\bar{x}$	s.d.
Behavioral Change	9.15	1.76	9.32	1.54	9.15	1.44
Attendance	8.72	1.44	8.87	1.15	7.41	1.58
Long Term Health-Cost Improvement	7.78	2.62	8.48	2.31	8.76	2.01
Management Favors It	7.72	1.92	8.86	1.53	7.70	1.76
Public Relations	5.93	2.12	5.91	2.26	5.28	2.09
Cost/Financial	4.71	2.39	5.28	2.53	4.57	3.02

Table 22

Means, Standard Deviations and Correlations of Important Media Characteristics

Criteria	$\bar{x}$	s.d.					
Urgency	8.85	1.58	-				
Detail	8.46	1.49	.53	-			
Cost	7.28	2.22	.04	.11	-		
Novelty	7.22	1.76	.30	.29	.08	-	
Interactive	7.15	1.91	.31	.52	.01	.60	-

N = 195

Rating scale was 0 to 10, but was adjusted by adding one to each response to create a scale of 1 to 11 for statistical purposes.

Table 23

T-Tests Between Important Media Characteristics Criteria

Variables	t-values	*df*	p
Cost vs. Interactive	0.37	1,204	.711
Cost vs. Urgency	- 8.62	1,205	.000
Cost vs. Detail	- 6.63	1,203	.000
Cost vs. Novelty	- 0.21	1,200	.833
Interactive vs. Urgency	-10.71	1,206	.000
Interactive vs. Detail	- 8.04	1,204	.000
Interactive vs. Novelty	- 0.50	1,201	.617
Urgency vs. Detail	3.21	1,204	.002
Urgency vs. Novelty	10.37	1,202	.000
Detail vs. Novelty	8.26	1,199	.000

Table 24

Correlations Between Program Effectiveness Criteria And Important Media Characteristics

	Urgency	Detail	Cost	Novelty	Interactive
Behavioral Change	.11	.28**	.13	.17	.28**
Attendance	.09	.25**	.03	.09	- .00
Long Term Health-Cost Improvement	- .06	.08	.15	.06	- .02
Management Favors It	.13	.16	.12	.18	.10
Public Relations	.03	.17	.08	.08	- .02
Cost/Financial	.04	.04	.18	.04	.06

N = 187 2-tailed Signif: ** - .001

industry type (Mult. F = 1.83, *df*=15,522, p=.03, R^2=.13). A significant main effect for professionals' rating of urgency (F=3.889, *df*=3,193, p=.01, eta^2=.06) was also present. Subsequent Tukey HSD post hoc analyses revealed that urgency was perceived to be more important in manufacturing ($\bar{x}$ = 8.96) and service industries ($\bar{x}$ = 8.93) than in the sales industry ($\bar{x}$ = 7.41).

Additional exploratory analyses examined the impact of participants' primary health promotion domain type on their ratings of *media* characteristics. While a multivariate main effect was not present, univariate analyses indicated a significant main effect for urgency (F=2.35, *df*=6,181, p=.03, eta^2=.07) and interactive (F=2.19, *df*=6,181, p=.05, eta^2=.07). However, post hoc tests were unable to identify significant differences in *media* characteristics due to subjects' health promotion program domain.

Research Question 7 asked, "*What uses of media characterize effective and ineffective health promotion programs?*" Health professionals were asked to identify, by open-ended response, their "most" and "least" effective health promotion programs. They were also asked to identify the various media (out of a list of 42) used in their programs. Health promotion professionals (n = 208) named 51 different education or screening programs as their "most effective" programs. Professionals most often identified Health Fairs (8.7%), Health Screening (8.2%), Weight Loss/Management (7.2%), Cholesterol Screening (5.3%), and Recreational Programming (golf, tennis, rafting trip, etc.) (3.8%) as their most effective programs. Health promotion professionals (n = 184) also named 59 education or screening programs as their "least effective" programs. Programs most often identified as least effective were Smoking

Cessation Class/Program (15.8%), Exercise/Fitness Education (6.0%), General Nutrition Education and Stress Management (5.4%), Self-Care Education (3.8%), and General Health Education and Lunch and Learn (Brown Bag) on any topic (3.3%).

As professionals report the use of more than one medium, those media used in 50% or more for "most effective" programs by all respondents are identified in Table 25. Ten types of media were identified by this process. With one exception, these 10 most frequently used media matched the 10 most frequently used media for "least effective" programs. Actually, the top 11 media forms match completely if memorandums are included. Since less than 50% of professionals identified using memorandums in their "most effective" programs, memorandums were excluded from comparisons. The following 10 types of media were used more than half of the time in their "most effective" programs in the last 12 months: one-on-one (face-to-face), word of mouth, newsletter, bulletin board, flyers, one-on-group (in person), posters, announcement at a meeting, in-house publication, and e-mail. In contrast, health professionals reported most frequently using the following media (in descending order) in their "least effective" programs: flyers, newsletters, bulletin board, word-of-mouth, in-house publication, one-on-one (face to face), e-mail, announcement at meeting, posters, and one-on-group (in person).

Subsequent pairwise Chi Square Tests of Independence revealed significant differences in the use of these media in the "most" and "least" effective programs, except for the use of newsletters and flyers. Overall, the results indicated that the 10 most frequently used media were used more often in effective programs than in least effective programs.

Table 25

Summary of Top 10 Media Used For Health Promotion Programs [a]

	Most Effective Programs	Least Effective Programs
	% used	% used
* One-on-one (face to face)	73	40
* Word-of-mouth	71	45
Newsletter	65	50
* Bulletin board	63	45
Flyers	62	57
* One-on-group (in person)	60	25
* Posters	57	32
* Announcement at meeting	56	35
* In-house publication	56	42
* E-mail	51	37
	n = 208	n = 183

[a] Health professionals could identify as many as 42 media used in their most effective and least effective programs. The top 11 media match completely if memos are included. However, since less than 50% of professionals identified using memos in their most effective programs, comparisons between memos in the most versus least effective programs were not computed.

* indicates a significant difference in media use between most and least effective conditions at $p < .05$.

In addition to identifying the types of media used in their most and least effective health promotion programs, professionals also provided in an open-ended format the media-based and non-media based reasons for program success or failure. Consequently, Research Question 8 asked, "*What do health promotion professionals regard as the key media and non-media factors in the success or failure of promotions?*" With regard to *media* reasons for program effectiveness, professionals' reasons (see Table 26) for the media's role in program success fell into eight categories: Personal Contact (one person spreading information to another person or group), Use Of Specific Media (identified by references that simply list a particular kind or type of media), Placement Of/Point Of Contact With Media (i.e., *where* media were placed), Content/Message Of Media (i.e., *what* was said or *how* it was said), Quality Of The Promotion (i.e., references to the quality of the message's presentation), Top Management Media Contact (i.e., messages coming directly from administrators, managers, and/or supervisors), Multiple Media (i.e., use of more than one medium), and Timing Of Media (i.e., focus on *when* the media messages were presented to employees).

A Chi-Square Goodness of Fit Test indicated that the frequency of reasons for success significantly differed from chance ($\chi^2 = 141.54$, 7 *df*, $p < .001$). Overall, professionals indicated that program success was primarily due to Personal Contact, the Use Of Specific Media, and the Placement of/Point of Contact with the Media.

With regard to *non-media* reasons for programs being effective, professionals' responses were placed into one of thirteen categories (see Table 27): Management Support (i.e., the support or endorsement from management), Incentives (i.e., enticements to participate such as prizes), Economic Issues (i.e., the cost of the

Table 26

Totals of Media Reasons for Most Effective Programs

Media Reasons For Most Effective Programs	Total
Personal Contact	112
Use Of Specific Media	95
Placement Of/Point Of Contact With Media	74
Content/Message Of Media	50
Quality Of The Promotion	43
Top Management Media Contact	36
Multiple Media	23
Timing of Media	22
Total number of reasons	455

Table 27

Totals of Non-Media Reasons for Most Effective Programs

Non-Media Reasons For Most Effective Programs	Total
Management Support	91
Incentives	62
Economic Issues	58
Ease/Convenience	47
Credibility	38
Individualized Programming	37
Fun/Social	34
Timing Of Program	30
Instructor Attributes	26
Novelty	16
Success Measured By Participation	13
Required Attendance	13
Ease Of Administration	2
Total number of reasons	467

program), Ease/Convenience (i.e., the ease of participation), Success Measured By Participation (i.e., attendance by "regular" and first time employees and/or their families), Novelty (i.e., uniqueness of the program or location), Timing Of Program (i.e., "timely" in meeting curiosity or needs), Instructor Attributes (i.e., characteristics of the program leader), Ease Of Administration (i.e., easy to organize the program), Fun/Social (i.e., participants' enjoyment of the program), Individualized Programming(i.e., tailored programs), Credibility (i.e., the integrity of the program), and Required Attendance (i.e., participation mandated by law or management).

A Chi-Square Goodness of Fit Test revealed that the frequency of *non-media* reasons significantly differed from chance ($\chi^2 = 196.17$, 12 *df*, $p < .001$). As indicated by Table 27, professionals named Management Support, Incentives, Economic Issues, and Ease/Convenience most frequently as contributing to program success.

Research Question 8 also inquired into *media* and *non-media* reasons contributing to professionals' least effective program. As reported in Table 28, professionals' eight *media* reasons for their least effective programs were: Lack Of Promotion (i.e., the lack of promotion of the event), Timing Of Media (i.e., focus on *when* media messages were presented to employees), Placement Of/Point Of Contact With Media (i.e., *where* media are placed), Content/Message Of Media (i.e., *what* was said or *how* it was said), Personal Contact (i.e., one person spreading the information to another person or group), Non-Media Factors (i.e., respondents indicated that the media were not an issue), Quality Of The Promotion (i.e., references to the quality of the message's presentation), and Top Management Media Contact (i.e., messages coming directly from administrators,

Table 28

Totals of Media Reasons for Least Effective Programs

Media Reasons For Least Effective Programs	Total
Lack Of Promotion	61
Timing of Media	34
Placement Of/Point Of Contact With Media	34
Content/Message Of Media	29
Personal Contact	24
Non-Media Factors	17
Quality Of Promotion	14
Top Management Media Contact	10
Total number of reasons	223

managers, and/or supervisors). A Chi-Square Goodness of Fit test revealed that the frequency *media* reasons for least effective programs significantly differed from chance (χ^2 = 64.22, 7 *df*, p<.001). Specifically, professionals cited the Lack Of Promotion most frequently as the *media* reason for program failure.

With regard to *non-media* reasons for program lack of effectiveness (see Table 29), professionals identified fifteen reasons (in descending order): Readiness (i.e., potential participants not understanding program benefits), Timing Of Program (i.e., not "timely" in meeting curiosity or needs), Program Administrative (i.e., disorganization of the program), Conflicts (i.e., too many things scheduled), Management Support (i.e., lack of support or endorsement from management), Economic Issues (i.e., the cost of the program), Novelty (i.e., the uniqueness of the program or location), Fear (i.e., anxiety about participation), Ease/Convenience (i.e., the ease of participation), Workload (i.e., too busy due to work), Success Measured By Participation (i.e., poor attendance), Incentives (i.e., lack of enticements to participate), Instructor Attributes (i.e., characteristics of the program leader), Weather (i.e., inclement weather), and Facilities (i.e., inadequate facility or location). A Chi-Square Goodness of Fit Test revealed that the frequency of *non-media* reasons for least effective programs significantly differed from chance (χ^2 = 272.41, 14 *df*, p<.001,). The lack of Readiness of Employees and the poor Timing of Programs were the most frequently named reasons for program failure.

The ninth research question asked, "*What is the relationship between health promotion success or failure and media use in their respective health domains?*" In answering this question, reports of media use of successful health promotion programs

Table 29

Totals of Non-Media Reasons for Least Effective Programs

Non-Media Reasons For Least Effective Programs	Total
Readiness	84
Timing Of Program	48
Program Administration	34
Conflicts	33
Management Support	24
Economic Issues	19
Novelty	17
Fear	16
Ease/Convenience	14
Workload	12
Success Measured By Participation	11
Incentives	9
Instructor Attributes	7
Weather	5
Facilities	5
Total number of reasons	338

were compared across professionals' respective domains. Due to the limited number of professionals in other categories (15%), only media use in the domains of Positive Health Education, Preventive Services, and Preventive Health Education are reported by health professionals below. As indicated in Table 30, media use within the three domains varied widely. While the overall patterns of media use in effective and ineffective programs continued, the use of only one-on-one (face to face) and one-on-group (in person) were significantly different in the reported most and least effective programs across the three domains.

In keeping with prior analyses, this investigation also examined differences in *media* and *non-media* reasons for professionals' most and least effective programs within Positive Health Education, Preventive Services, and Preventive Health Education domains. *Media* and *non-media* reasons for program success and failure across these domains are reported in Tables 31 - 34. In general, results indicated few significant differences among domains. The overall listings of *media* and *non-media* reasons contributing to the most and least effective programs are relatively consistent across these three health promotion domains.

Table 30

Percentages of Media Use for Most and Least Effective Health Promotion Programs by Promotion Domains

	Positive Health Education		Preventive Services		Preventive Health Education	
	Most	Least	Most	Least	Most	Least
One-on-one (face to face)	*67.3	36.5	*67.3	23.1	*79.0	47.6
Word-of-mouth	73.1	50.6	59.6	38.5	*74.0	41.5
Newsletter	*82.7	50.6	50.0	38.5	62.0	52.4
Bulletin board	65.4	48.2	61.5	38.5	64.0	45.1
Flyers	71.2	62.4	55.8	30.8	60.0	57.3
One-on-group (in person)	*57.7	24.7	*55.8	0.0	*63.0	28.0
Posters	*69.2	34.1	*59.6	7.7	48.0	34.1
Announcement at meeting	50.0	32.9	*61.5	15.4	58.0	40.2
In-house publication	57.7	38.8	*51.9	15.4	57.0	51.2
E-mail	61.5	41.2	50.0	23.1	45.0	36.6
Number of responses per category	52	86	52	13	100	82

* signifies significant difference in media use between most and least effective programs at $p < .05$

Table 31

Percentages of Media Reasons for Most Effective Programs by Domains

Media Reasons For Most Effective Programs	Positive Health Ed.	Preventive Services	Preventive Health Ed.
Personal Contact	24.4	19.3	28.2
Use Of Specific Media	23.5	13.1	23.2
Placement Of/Point Of Contact With Media	13.0	20.2	16.7
Content/Message Of Media	7.8	15.8	9.3
Quality Of The Promotion	11.3	7.9	9.7
Top Management Media Contact	6.1	9.6	7.4
Multiple Media	8.7	4.4	3.2
*Timing of Media	5.2	9.7	2.3
Number of responses per category	115	114	216

* indicates significant difference in given *media* reason across domains at $p < .05$

Table 32

Percentages of Non-Media Reasons for Most Effective Programs by Domains

Non-Media Reasons For Most Effective Programs	Positive Health Ed.	Preventive Services	Preventive Health Ed.
Management Support	19.7	22.9	17.6
Incentives	18.0	10.7	12.6
*Economic Issues	6.8	16.4	12.6
Ease/Convenience	7.7	13.1	9.0
Credibility	9.4	8.2	7.7
Individualized Programming	4.3	5.7	10.8
*Fun/Social	12.0	3.3	7.2
Timing Of Program	8.5	4.1	6.3
Instructor Attributes	3.4	3.3	7.7
Novelty	6.0	4.9	1.3
Success Measured By Participation	3.4	4.9	2.7
Required Attendance	.8	2.5	3.6
Ease Of Administration	0.0	0.0	.9
Number of responses per category	117	122	222

* indicates significant difference in given *non-media* reason across domains at $p < .05$

Table 33

Percentages of Media Reasons for Least Effective Programs by Domains

Media Reasons For Least Effective Programs	Positive Health Ed.	Preventive Services	Preventive Health Ed.
Lack Of Promotion	25.3	37.5	27.2
Timing of Media	14.1	18.8	14.6
*Placement Of/Point Of Contact With Media	12.1	31.3	16.5
Content/Message Of Media	17.2	6.2	9.7
*Personal Contact	15.2	0.0	8.7
*Non-Media Factors	9.1	0.0	7.8
Quality Of Promotion	3.0	6.2	9.7
Top Management Media Contact	4.0	0.0	5.8
Number of responses per category	99	16	103

* indicates significant difference in given *media* reason across domains at $p < .05$

Table 34

Percentages of Non-Media Reasons for Least Effective Programs by Domains

Non-Media Reasons For Least Effective Programs	Positive Health Ed.	Preventive Services	Preventive Health Ed.
Readiness	24.1	25.0	24.8
*Timing Of Program	17.2	5.6	12.7
*Program Administration	11.0	25.0	7.0
*Conflicts	5.5	2.8	15.3
Management Support	6.9	5.6	7.6
Economic Issues	6.9	2.8	5.1
*Novelty	4.8	0.0	6.4
*Fear	4.8	11.1	3.2
Ease/Convenience	4.8	8.3	2.6
Workload	2.8	2.8	4.4
Success Measured By Participation	3.5	0.0	3.8
Incentives	2.1	2.8	3.2
Instructor Attributes	2.1	0.0	2.6
Weather	2.1	0.0	1.3
*Facilities	1.4	8.3	0.0
Number of responses per category	145	36	157

* indicates significant difference in given *non-media* reason across domains at $p < .05$

CHAPTER 4

DISCUSSION

Health promotion professionals rely on communication media to advertise programs and services. However, few empirical investigations examine how professionals promote their programs or the reasons for program success or failure. In general, the health promotion communication literature consists of stories or lists based on anecdotal experiences (e.g., "If you do what I did, you will have a successful program"). Even more elaborate communication guidelines by Rawson (1987) and Heirich, et al. (1989) lack empirical support. Consequently, a major contribution of this study is the empirical investigation of health promotion professionals' activities and the role of communication in their promotion efforts. This investigation represents a first step to examine the services and programs offered by health promotion practitioners and to learn from their practices.

This study also increases understanding of how organizations evaluate the success of programs or services. Health professionals in this study identified criteria used to evaluate their programs and the importance of each criteria in their organizations. In the age of managed health care and capitated spending, professionals can no longer afford the luxury of continuing ineffective promotion practices and may tailor programs to insure success or be more selective in program offerings. Another contribution is the examination of differences in health promotion practitioners' criteria for success and media use by the emphasis of their programs. As such, this study reports a test of Downie, et al.'s (1990) program distinctions and the use of communication in health

promotion within these domains. In addition, this study reports differences in program criteria and media use by practitioners' industry affiliation.

This study also contributes to the health promotion and communication fields by examining both media and non-media factors in program success. In other words, this study acknowledges that both media factors (e.g., where the publicity is placed) and non-media factors (e.g., the novelty of the program; weather) contribute to program successes and debacles. By acknowledging the role of communication and non-communication factors, professionals may avoid short-circuiting their efforts by excelling in the promotion of their programs only to see the program fair poorly in their superiors' eyes due to non-communication factors or vice versa.

In discussing the results of this investigation, three major themes are addressed to help organize those results into a more meaningful format: (a) the programs offered by health promotion professionals and the criteria for judging program success; (b) important characteristics of media and their use by health promotion professionals; and (c) the role of media and non-media factors in effective and ineffective programs.

Theme 1: What Health Promotion Professionals Do And The Criteria For Determining Their Success

A variety of health promotion programs occur across workplace settings. Respondents classify themselves as primarily focusing on Positive Health Education (49.7%), Preventive Services (13.6%), and Preventive Health Education (21.5%) health promotion domains. While educational and screening programs are the primary focus of three-fourths of the professionals in this study, these proportions are representative of the sample and do not suggest that Downie and colleagues (1990) err regarding the

existence of other domains. There is a great likelihood that only a small proportion of health professionals situated in organizations work on health-related legislation or lobby legislators. Rather, Downie et al.'s model demonstrates the inter-relatedness of observed health promotion activities, a supposition borne out in the discussion below.

The majority of promotion professionals in this study offer programs and services to address risk factors for the lifestyle diseases (i.e., heart disease, cancer, stroke, some of whose risk factors include hypertension, obesity, high cholesterol, stress, smoking, and physical inactivity). They also offer screening programs to educate employees about the origin of disease processes within their bodies (mammography, hypertension, cholesterol) and various safety programs to teach employees healthy on-the-job practices (back safety, proper lifting techniques). Focussing only on whether any of 62 programs are offered, results reveal numerous non-significant differences in program use across the three most represented domains. The lack of differences suggest that professionals across these domains offer similar health promotion programs and that professionals in this study cover an array of needs despite their primary specialties.

In judging program effectiveness, organizations employ four primary criteria: (a) Health Behavior Change; (b) Attendance; (c) Long Term Health-Cost Improvement; and (d) Management Favors It. It is not surprising that health promotion professionals believe Health Behavior Change is primary to evaluating program effectiveness. The top three causes of premature death in our society are classified as lifestyle diseases (Edlin & Golanty, 1985), implying that employees must change their health-related behaviors related to smoking, control of cholesterol and blood pressure, and physical inactivity to improve their health. Without attendance at programs, health promotion programming

has little opportunity to create behavior change. While "getting a crowd" seems superficial, it is necessary to influence health behaviors and ultimately improve cost/benefit ratios. Lifestyle behavior change is difficult to achieve. Consequently, attendance provides (a) managers with a substitute measure for evaluating the effective expenditure of money and (b) health promotion professionals with a measure of political (albeit popular) support among the rank-and-file of their organizations.

Attendance is a more important criterion for health promotion program success for trade and manufacturing organizations than in process technology industries. Reasons for these differences include a greater number of programs required by law and a more visible link between full attendance and productivity in trade and manufacturing than in process technology industries. Additionally, attendance is a more important criterion in Positive Health Education and Preventive Services than in Preventive Health Education domains. Preventive Health Education are interventional programs (e.g., weight loss, smoking cessation, cardiac rehab) and target specific individuals for specific, identified health problems. These targeted programs use appointments and are not as dependant on large numbers of employees for their success as Positive Health Education (e.g., aerobic dance for everyone, a general informational program on nutrition) and Preventive Services (e.g., a blood pressure or cholesterol screening for everyone) programs.

Long Term Health-Cost Improvement is "the" renowned cost/benefit ratio, depicting benefits to the company in reduced expenditures in insurance and lost hours of work. No matter how wonderful the purported benefits of any program, eventually there will be a reckoning with the bottom line. Correspondingly, Management Favors It provides the administrative "buy-in" for health promotion programs which insures

program and budget survival. Managers understand cost/benefit results. However, it is not uncommon for management to support programming that does not produce change or improved bottom lines because an executive or his/her family member has experienced a particular health problem (e.g., heart attack) and simply wants the program.

These criteria for judging the work of health promotion professionals suggest a number of practical guidelines for program development. First, since Health Behavior Change is the most important criterion for judging program effectiveness, health promotion professionals may want to routinely document initially observed behaviors of clients in order to show changes in employee health behavior. Professionals may also document the plan of action (i.e., what will be done and how it will be done) facilitating clients' behavioral changes to substantiate the success or failure of the process. Second, professionals may maintain attendance records for programs and regularly report attendance to administrators and supervisors in order to demonstrate the number of employees being impacted by the programs. Thus, it is not surprising for health promotion articles to promote friendly competition in attendance between sections or teams (Heirich, et al., 1989). Third, it is important for professionals to stay up-to-date with methods of measuring Long Term Health-Cost Improvement. Changes in cost/benefit computations may have a considerable impact on the health-cost outcomes predicted by professionals. Fourth, top management should be updated on the progress of health promotion programs and involved in planning and idea sessions. As the Management Favors It criterion suggests, health promotion programs *can* operate in a supportive atmosphere. By regularly informing key individuals of the progress of their

favored programs, health professionals may be able to broaden the basis of their political support within the organization.

Theme 2: Important Media And Their Characteristics

A major finding of this study indicates that the 10 most frequently used media in professionals' "most" and "least" effective programs differ in the quantity or frequency of use. For instance, professionals report using one-on-one (face to face), word-of-mouth, one-on-group (in person), and announcement at meeting to a greater extent in their successful than in their unsuccessful programs. The use of these media, which involve personal contact, suggest that program success is largely dependent (a) on personal relationships and the capacity of interpersonal information exchanges to communicate promotion messages effectively or (b) on the use of media capable of handling the highest levels of information richness (Sitkin et al., 1992).

Other media used over half the time in promoting programs named by professionals are newsletters, bulletin boards, flyers, posters, in-house publications, and e-mail. For purposes of this discussion, these could be labeled Print Media and face-to-face interactions could be labeled Personal Contact Media. The use of these media require respondents to read printed messages which convey less information richness. In general, Print Media are less effective in gaining receivers' attention compared to Personal Contact Media (Daft & Lengel, 1984).

According to health professionals, urgency is the most important media characteristic followed by detail, cost, novelty, and interactive. According to Steinfield and Fulk (1986), media must be able to convey messages to many people in a short amount of time. This urgency can enable organizations to deliver messages quickly and

respond to employees' needs, thus motivating employees to attend. In addition, it is important to professionals that a particular medium deliver sufficient detail (who, what, where, when, why, how) about the event in a comprehensible manner. Media must also be affordable (i.e., cost), or it will be used sparingly. Of comparatively less importance to health professionals is the novelty of the media. While promoting messages through non-routine means increases message recall (Morley & Walker, 1987), the novelty of the promotion media may be less of a priority due to the cost of the media, the inconvenience that a different media may represent, or the belief in the efficacy of the previously used media. Finally, the interactive nature of the media is reported to be the least important media characteristic. Paradoxically, Personal Contact Media offer interaction between message senders and receivers. Some interactive media, such as face-to-face interaction, require considerable time and effort of professionals. Other interactive attempts, such as a message on a poster saying, "For more information call ..." are easily presented but probably ineffective.

In addition, urgency is a more important media characteristic in manufacturing and service than in trade (sales) industries. The importance of urgency in manufacturing industries may be due to a desire by management to get messages to employees quickly and appear responsive to employee needs. In turn, professionals in service industries may seek to alert a large number of employees quickly and maximize their attention to the message lest they be distracted by other concerns and forget the message. In contrast, professionals in trade industries may have less need to alert a maximum number of employees at one time as their employees may not be geographically concentrated.

There are a number of ways that health professionals can apply the findings of this study regarding frequently used media in successful programs and preferred media characteristics in general. First, it seems imperative for professionals to maximize Personal Contact Media. With their greater ability to carry "multiple cues and enable rapid feedback" (Daft & Lengel, 1984, p. 200), they are powerful conduits for communicating with employees. The use of Personal Contact Media seems particularly well suited for conveying messages in a quick (i.e., urgency) and detail oriented fashion. Thus, Personal Contact may be especially relevant if professionals work in manufacturing or service industries. Second, it is important to recognize that while Personal Contact Media were used more than 50% of the time for "most" effective programs, so were Print Media. The key difference in media use between "most" and "least" effective programs is the greater frequency of use of all media in the most effective programs.

Theme 3: The Contribution Of Media And Non-Media Factors To Successful And Unsuccessful Programs

Health promotion professionals' reports of media and non-media factors contributions to the success or failure of their programs provide unique insights into the promotion process. In response to questions about media reasons for program effectiveness in the prior 12 months, professionals report that Personal Contact and Use Of Specific Media are the primary media reasons for program success. As previously discussed, a greater frequency in the use of The Personal Contact Media (one-on-one, word-of-mouth, one-on-group, and announcement at meeting) are significantly related to effective programs. It is important to note that respondents' identification of specific media included voice mail messages, "Dog and Pony Shows," telephone confirmation

system, fliers, and announcement on PA system. Professionals did not detail why a particular medium contributed to success. However, it is reasonable to theorize that these examples matched the media environment of their organization.

Management Support is identified as the most important non-media reason for program effectiveness and reinforces the importance of Management Favors It as a criterion for judging a program's success. Others (Heirich, et al., 1989) suggest that administrative support is a key element in health promotion program success. Practically speaking, if management does not see the value of a program, the program is unlikely to be prevalent within that company unless it is mandated by law.

In turn, professionals list Lack Of Promotion as the single most important media reason for program ineffectiveness (as reported from open-ended responses). In hindsight, professionals are always likely to see what they could have done to promote a program. Yet, it would be of interest for future research to explore their reasons for not creating a greater quantity of promotion for a particular program.

Regarding non-media reasons for program failure, the lack of participant Readiness dominates professionals' answers. Similar to the concept of "readiness" in self-directed learning and adult education (Guglielmino, Guglielmino, & Long, 1987), individuals best learn when they are prepared to receive what is being taught. DiClemente and Prochaska (1982) identify several reasons for individual's lack of readiness to change, including (a) never considered change and need information, (b) considered change but not yet committed, (c) desire change but need motivation, and (d) attempting change but need structure, support, and skills. Assessing the readiness levels in individuals may be essential for creating effective programs. For instance, smoking

cessation is the most often mentioned "least effective" program (15.8%). Interventional programs (e.g., smoking cessation, heart risk management) will never be as effective as desired if participants aren't interested.

In sum, health professionals provide clear distinctions in the use of media (both frequency and specific types) and non-media factors for effective and ineffective programs. While the results of this study generally support anecdotal claims of Rawson (1987) and Heirich, et al. (1989), there are notable differences. First, while Rawson recognizes the importance of employee readiness (see Table 35), Rawson emphasizes the use of print media (as opposed to The Personal Contact Media) to promote programs. Heirich, et al.'s steps for effective worksite communication of health information note the role of both interpersonal influence (e.g., one-on-one, group presentation) and print media. They also acknowledge the importance of management support and the use of novel media. However, Heirich, et al. (1989) omit more important criteria for judging program success and other helpful media characteristics such as urgency and detail. Consequently, the results of this study clarify potentially erroneous recommendations and provide guidelines for the use of media in promoting health promotion programs.

Limitations

There are a number of limitations to this study. The sample size for this study ($n = 212$) was sufficient to measure large statistical effects ($p=.01$). However, the size of the sample limited the ability of statistical analyses to detect small effects. Although the literature suggests potential differences in program use across domains and industries,

Table 35

Comparison of Results with Rawson (1987) and Heirich, et al. (1989)

	Rawson	Heirich, et al.	Results of this Study
Criteria for judging program effectiveness	none	management support	health behavior change, attendance, long term health-cost improvement, management favors it
Relation of media use to program outcomes	use print media, newsletters, bulletin boards indiscriminately	emphasizes print media, developing one-on-one "outreach", and making presentations to groups	media emphasizing personal contact used frequently in successful programs, print media used most often in unsuccessful programs
Important media characteristics	cost	emphasizes novelty	urgency, detail, cost, novelty, and interactive of media
Important media & non-media reasons for program success/failure	readiness	emphasizes personal contact and management support	program success: personal contact, specific media, and management support, program failure: lack of promotion and lack of readiness

few were found. Thus, this study would be improved by a larger sample of the members of the AWHP, the professional organization providing the sample. Relatedly, there was considerable imbalance in the sample toward Positive Health Education, Preventive Services, and Preventive Health Education. It is unclear if this imbalance represents the distribution of professionals across the health promotion profession. Thus, the ability to adequately test for differences across domains could have been limited by the distribution within the AWHP.

The survey also restricted the number of potential criteria considered in determining program effectiveness and media characteristics. Although these criteria and media characteristics derived from popular writings and academic literature, it is possible that other criteria may exist. Further, the use of the various media were measured by a "yes" or "no" response format. While this format was helpful in determining the variety of health promotion offerings, this format was not sensitive to the frequency of specific media use or the sequence of media use in promoting programs. In addition, the survey did not directly ask participants why a particular program was effective or ineffective. Such information might have provided valuable insight beyond the media and non-media reasons for effectiveness and ineffectiveness.

Future Research Questions

This study suggests a number of directions for future research. First, researchers should endeavor to measure the frequency with which professionals' offer specific health programs and the frequency of specific media use. Such information would be helpful in (a) determining which factors are important to the effectiveness of programs and

media, (b) evaluating the efficiency of media use by professionals, and (c) advising those with less successful programs.

Second, this study identified the lack of promotion as the most important *media* reason for program ineffectiveness. Since this is not an uncommon occurrence in the field of health promotion, researchers should seek to answer several questions, including (a) "Why was there a lack of promotion?" and (b) "How much promotion is enough?" Knowing when, "enough is enough" would allow health promotion professionals to be more focussed in their application of media, as well as more financially responsible in reducing waste and redundancy in using media, both Personal Contact and Print. It is also possible that "threshold" levels exist. Once professionals have exerted a certain level of effort in their promotional efforts (e.g., number of flyers; number of one-to-group presentations), professionals may perceive little to be gained by additional promotions. Consequently, information on professionals' prior promotional efforts would be helpful in conserving the expenditures for health promotion projects. Researchers may need to consider professionals' fatigue on a project, the potential depletion of their budget, and the perception of potential return from additional promotional effort.

Third, the concept of readiness needs refinement to be more applicable to the field of health promotion. Naturally, each employee comes with his or her own unique readiness level for learning the various ideas and skills that health promotion professionals hope to teach. Future research should seek to clarify what professionals meant by "readiness" as well as to link communication promotion strategies to specific readiness problems. For example, are there certain types of media that are more effective when used with employees of a higher readiness level than for those at a lower

level? Is it possible to apply existing tools for measuring readiness such as the Self-Directed Learning Readiness Scale (SDLRS) (Guglielmino, 1977) in the field of health promotion? Additionally, some of the self-directed learning readiness factors reported by Brockett (1985), including creativity, self-concept, involvement in learning projects, health-promoting behavior, and motivational orientation, should be tested to learn if they have direct application to health promotion.

Fourth, it is interesting to note that not as many respondents were willing to disclose information on their least effective programs as were willing to share their most effective programs. Some respondents even emphasized in writing that they had no "least effective" programs. It is unclear whether subjects interpreted the request to name an unsuccessful program as a request to publicly admit a failure or if their programs were equally effective. Future research should explore professionals' understanding of "effective" and "ineffective" programs to understand health professionals' evaluations of programs.

Epilogue

In conclusion, Downie et al. (1990) present a model of health promotion that unifies distinct activities by identifying the inter-relatedness of health activities. It is of interest to note that the three most represented areas of the model in this investigation, Positive Health Education, Preventive Services, and Preventive Health Education, are highly interconnected. This interconnection suggests that many specialties have reason to work together in a coordinated fashion in offering a wide range of programs and services to meet the needs of patients. While many individuals seek health care only when they are ill, the health promotion model strives to educate patients to take greater

responsibility for their health and well-being. Health promotion facilitates coordinated health care by (a) emphasizing the gains of joint efforts on potential or current medical problems, (b) identifying areas of common interest, and (c) specifying the roles of medical and health education professionals. It is hoped that the delivery of the programs and services will be enhanced by the improved application of media and non-media resources in health promotion.

APPENDICES

APPENDIX A

SURVEY INSTRUMENT

Appendix A
Survey Instrument

Health Promotion: Program Effectiveness & Media Use

This is a survey that examines your involvement and activities in promoting health within the business or industrial setting. While much has been written on how to do health promotion, not much has been done to actually study what is being done by individuals such as yourself. This study seeks to fill an important gap in our scientific understanding of what health promotion professionals like you do. It will also look at the effectiveness of health promotion programs as perceived by health promotion professionals. Additionally, the study examines the role that various media play in helping to achieve program effectiveness.

This survey is part of a doctoral research study from the department of Physical Education and Exercise Science at Michigan State University, and cooperation in collection and dissemination of research information is supported by the Association for Worksite Health Promotion (AWHP).

Please Respond To The Following Checklist *BEFORE* Starting The Survey.

NO	YES	
❑	❑	**Your health promotion and/or safety program directs services to your organization's employees.**
❑	❑	**You help make decisions about the types of media (print, broadcast, face-to-face, etc.) to be used in conducting and promoting health programs.**
❑	❑	**At least 50% of your work time is devoted to or spent on health promotion and/or safety programs.**

- **If you answered "*NO*" to any of these descriptions, thank you for your time, but please pass this survey to someone else in your company who can answer all of the questions "*YES*".**

- **If you answered all of these descriptions "*YES*", please continue and complete the entire survey. THANK YOU.**

The survey should take approximately 20 minutes to complete. You indicate your voluntary agreement to participate by completing and returning this questionnaire. A self-addressed stamped envelope is enclosed for your convenience. Thank You.

If you would like a summary report of this study when it is complete, please mark the appropriate box at the end of the survey.

Gary L. Flegal
Michigan State University

HEALTH PROMOTION SURVEY

Thank you for participating in this investigation. As indicated in the cover letter, this survey examines factors related to health promotion and communication within organizations. Please answer the questions in the survey as frankly as possible. Your employer will not have access to how you answered any particular question.

Section I of this survey asks you to identify the various health promotion programs that are present within your organization.

The following are examples of *health promotion programs* as defined in this survey. (see also page 3)

Examples:

1 Safety programs ***ARE*** health promotion programs. Teaching and enforcing safety promotes health by helping to reduce accidents, therefor resulting in fewer injuries and a higher level of health. If the program in your place of business is called a "safety program," it is considered health promotion for the purposes of this survey.

2 Screening programs ***ARE*** health promotion programs. A service that either identifies or monitors an employee's health status (e.g., blood pressure, cholesterol, mammography, posture in a workstation) and allows for corrective action (the promotion of health) to take place if necessary.

3 Employee Assistance Programs (EAP) ***ARE*** health promotion programs. Counseling services or programs may be provided either "in-house" or from an outside agency.

4 Fitness programs ***ARE*** health promotion programs. The center can be on site, or contracted off site with an outside agency, as long as it is available to employees.

5 Smoking cessation programs ***ARE*** health promotion programs. They must include a structured plan whereby participants meet with a counselor or health educator, in either a one-on-one or group setting, to receive instruction on changing behaviors or correct usage of the nicotine patch. *A poster or pamphlet on quitting smoking, offered by itself, with no other related programming in place is <u>not</u> a health promotion program for the purposes of this study.*

6 Health-related printed materials ***ARE*** part of a company health promotion program when they support or are in addition to existing services or programs for the purposes of this survey. *A poster or pamphlet on a health-related issue, offered by itself, with no other related programming in place is <u>not</u> a health promotion program for purposes of this study.*

Please refer to these examples when completing the rest of this survey.

Section I **Based on the examples from the previous page, please check ☑ the health promotion programs that your company sponsors for employees:**

• • • • • • • • • • • • • •

Activities

- ☐ nutrition counseling
- ☐ weight control program
- ☐ Employee Assistance Program (EAP)
- ☐ family counseling
- ☐ personal counseling
- ☐ planned safety meetings
- ☐ smoking cessation program
- ☐ hypertension modification program
- ☐ serum lipid (cholesterol) modification program
- ☐ counseling & referral for substance abuse
- ☐ health risk appraisal (questionnaire)
- ☐ stress management (learning relaxation & other practical techniques)
- ☐ at work fitness center (company owned)
- ☐ off site fitness center (owned or contracted)
- ☐ aerobic dance (for everyone)
- ☐ aerobic dance (specifically for weight loss)
- ☐ other aerobic exercise programs (treadmill, bike, stairclimber, NordicTrack™, walking, etc.)
- ☐ circuit training (weight machines)
- ☐ swimming instruction
- ☐ cardiac rehabilitation
- ☐ recreational skills
- ☐ self-help groups (Alcoholics Anonymous, etc.)
- ☐ Other activities_____

_____

_____

• • •

Classes (non-exercise activities)

- ☐ safety training
- ☐ back safety
- ☐ proper lifting techniques
- ☐ how to start an exercise program
- ☐ HIV/AIDS information
- ☐ women's health issues
- ☐ how to prevent heart disease
- ☐ second hand smoke and your health
- ☐ basic nutrition
- ☐ nutritional label reading
- ☐ planning for retirement
- ☐ heart healthy cooking class
- ☐ cancer education (general)
- ☐ breast cancer education
- ☐ breast self-examination
- ☐ testicular self-examination
- ☐ colo-rectal cancer education
- ☐ cardio-pulmonary resuscitation (CPR)
- ☐ stress management
- ☐ exercise education (general information or theory, not activity class/program)
- ☐ self-esteem
- ☐ death education
- ☐ life-saving (swimming)
- ☐ first aid
- ☐ Other classes_____

• • •

Printed Offerings

- ☐ health-related brochures
- ☐ health-related newsletter
- ☐ wellness library for employees (books, brochures, films/videos)

• • •

Screenings

- ☐ skin cancer screening
- ☐ mammography
- ☐ colo-rectal screening (hemoccult or ColoCARE)
- ☐ lung cancer screening (chest X-ray)
- ☐ prostate cancer screening
- ☐ cervical cancer screening
- ☐ immunization
- ☐ aerobic capacity testing (maximum stress treadmill test with electro-cardiogram)
- ☐ aerobic capacity testing (sub-maximum stationary bicycle ergometer test without electrocardiogram)
- ☐ body composition (% body fat) testing
- ☐ flexibility testing
- ☐ muscular strength & endurance testing
- ☐ vision screening
- ☐ glaucoma screening
- ☐ low back clinic/screening
- ☐ scoliosis screening
- ☐ hypertension (high blood pressure) screening
- ☐ cholesterol screening

• • •

Others

- ☐ **Please list all other health promotion programs that you sponsor for your employees:**

_____

_____

_____

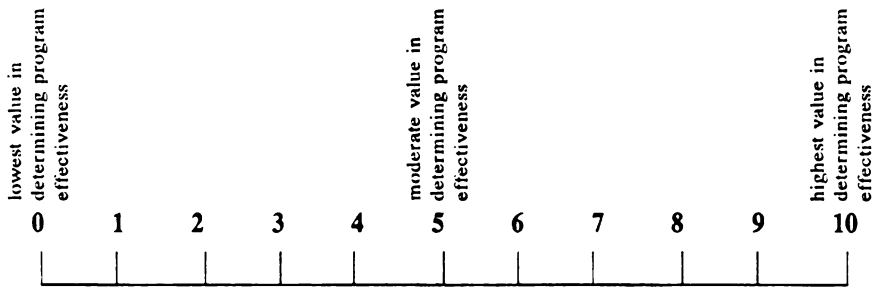
_____

_____

_____

page 4

Section II **This section asks you to rate the following criteria as they are valued in determining program effectiveness in your organization.** Please use the following scale to rate the degree of importance each criterion has for your organization:



Please rate the value of each criterion on a scale of 0 to 10 as it relates to your workplace experience, not necessarily according to your personal preference.

"A health promotion program in my organization is viewed as being effective when . . ."	**Fill-in the Blank 0 - 10**
1. it reduces the company's overall health care expenditures	_____
2. many people participate	_____
3. it results in media coverage (radio, tv, newspaper)	_____
4. management views the program favorably	_____
5. participants learn new health-related skills	_____
6. my expectation of the number of participants is met	_____
7. it generates good publicity	_____
8. management personnel participate	_____
9. participants incorporate new healthy behaviors into their daily routine	_____
10. it makes money	_____
11. there is a good feeling about the program throughout the organization	_____
12. management discusses it while recruiting new employees	_____
13. participants demonstrate behavioral changes	_____
14. it doesn't lose money	_____
15. it is linked to corporate savings	_____
16. management wants it	_____
17. behavioral changes are clearly visible and measurable	_____
18. it is a profit center for the organization	_____
19. it brings down cost in other areas (e.g., insurance)	_____
20. there are enough participants to justify the program's existence	_____
21. it pays for itself	_____
22. it saves the company money overall	_____
23. employees show support for the program by participating	_____
24. it makes the company look good	_____

Section III **Questions about your "Most Effective Health Promotion Program."** Think back over the last twelve months of health promotion programming. Select what you consider to have been your *most effective* health promotion program during those 12 months. *Effective* refers to getting the desired result. Write the title of the health promotion program you selected as your *most* effective program for the previous 12 months in blank below. **Our *most effective* program during the last 12 months was:**_____

Most

Next, as precisely as possible, identify the target audience for this program. Be as specific as possible. **Example**: "***PSA tests for male employees 50 years of age and older***" is much more specific than "***PSA tests for male employees.***"

The intended target audience for the most effective program was:_____

Means of Promotion

The following is a list of media. Check ☑ those that you and/or your staff used to promote the program which you identified above.

- ☐ One-on-one (face-to-face)
- ☐ One-on-group (in person)
- ☐ Announcement at a class
- ☐ Announcement at a meeting
- ☐ Videoconferencing
- ☐ Telephone
- ☐ Yellow pages
- ☐ Voice mail
- ☐ Electronic bulletin board
- ☐ E-mail
- ☐ Television/Video
- ☐ Film
- ☐ Radio
- ☐ Personal letters
- ☐ Direct mail
- ☐ Memos
- ☐ Pay-check inserts
- ☐ Post cards
- ☐ Posters
- ☐ Bumper stickers
- ☐ Flyers
- ☐ Slides
- ☐ Audio tape recording
- ☐ T-shirt
- ☐ Billboard
- ☐ Bulletin board
- ☐ Books
- ☐ Booklets
- ☐ Newsletter
- ☐ In-house publication
- ☐ Union publication
- ☐ College course catalog
- ☐ Pamphlet
- ☐ Magazine
- ☐ Newspaper ads
- ☐ Newspaper articles
- ☐ Union steward
- ☐ Supervisor
- ☐ "Grapevine"
- ☐ Word-of-mouth
- ☐ Organizational hierarchy
- ☐ Chart (graphic or numeric)

Reasons For Program Effectiveness

On the lines below, please list what you consider to be the three main *media* reasons that the program (which you identified above) was effective or successful in meeting predetermined goals. Feel free to supply any additional information that will help explain your reasoning.

Media Examples: The program was effective because it had lots of media coverage. The colorful flyers were eye-catching.

1. _____
2. _____
3. _____

On the lines below, please list what you consider to be the three main *non-media* reasons that made the program (which you identified above) effective or successful in meeting predetermined goals. Feel free to supply any additional information that will help explain your reasoning.

Non-Media Examples: The program was effective because it was offered on company time. Attendance was required.

1. _____
2. _____
3. _____

page 6

Section IV **Questions about your "Least Effective Health Promotion Program."** Once again, think back over the last twelve months of health promotion programming. This time, select what you consider to have been your *least effective* health promotion program during those 12 months. Remember that *effective* refers to getting the desired result. Write the title of the health promotion program you selected as your *least* effective program for the previous 12 months in the blank below. **Our *least effective* program during the last 12 months was:**_____

Least

_____

Next, as precisely as possible, identify the target audience for this program. Be as specific as possible. **Example**: "***Screening mammography for women 40 or more years of age who are employees at ABC Company***" is more specific than "***Mammograms for women employees.***"

The intended target audience for the least effective program was:_____

_____

Means of Promotion

The following is a list of media. Check ☑ those that you and/or your staff used to promote the program which you identified above.

- ☐ One-on-one (face-to-face)
- ☐ One-on-group (in person)
- ☐ Announcement at a class
- ☐ Announcement at a meeting
- ☐ Videoconferencing
- ☐ Telephone
- ☐ Yellow pages
- ☐ Voice mail
- ☐ Electronic bulletin board
- ☐ E-mail
- ☐ Television/Video
- ☐ Film
- ☐ Radio
- ☐ Personal letters
- ☐ Direct mail
- ☐ Memos
- ☐ Pay-check inserts
- ☐ Post cards
- ☐ Posters
- ☐ Bumper stickers
- ☐ Flyers
- ☐ Slides
- ☐ Audio tape recording
- ☐ T-shirt
- ☐ Billboard
- ☐ Bulletin board
- ☐ Books
- ☐ Booklets
- ☐ Newsletter
- ☐ In-house publication
- ☐ Union publication
- ☐ College course catalog
- ☐ Pamphlet
- ☐ Magazine
- ☐ Newspaper ads
- ☐ Newspaper articles
- ☐ Union steward
- ☐ Supervisor
- ☐ "Grapevine"
- ☐ Word-of-mouth
- ☐ Organizational hierarchy
- ☐ Chart (graphic or numeric)

Reasons For Program Non-Effectiveness

On the lines below, please list what you consider to be the three main *media* reasons that the program (which you identified above) *was not* effective or successful in meeting predetermined goals. Feel free to supply any additional information that will help explain your reasoning.

Media Examples: The program was not effective because it received little media coverage. The flyers were ugly.

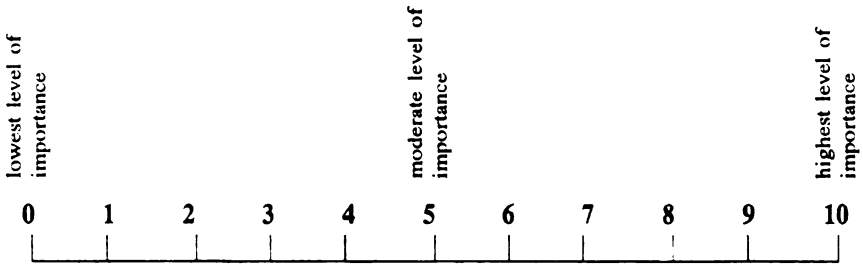
1. _____
2. _____
3. _____

On the lines below, please list what you consider to be the three main *non-media* reasons that made the program (which you identified above) *not* effective or *not* successful in meeting predetermined goals. Feel free to supply any additional information that will help explain your reasoning.

Non-Media Examples: The program was not effective because it conflicted with school programs. Attendance at the program was required.

1. _____
2. _____
3. _____

Section V **This section asks you to evaluate the importance of specific media characteristics in promoting Health Promotion Programs over the last 12 months.** Please use the following scale to rate the degree of importance in your organization:



Please *rate the importance* of each of the following media characteristics as <u>you decide</u> how to publicize health promotion programs in your organization.

	Fill-in the Blank 0 - 10
1. The expense of preparing materials (flyers, posters, advertisement)	_____
2. The ability to get quick feedback from potential participants	_____
3. The ability to convey detailed information	_____
4. The use of a promotional medium that had not been used recently	_____
5. The ability to get information to potential participants quickly	_____
6. The ability of the medium to tailor the message to each individual	_____
7. The ability of the medium to grab employees' attention	_____
8. The cost of delivering the materials/information to potential clients	_____
9. Particular medium's ability to deliver detailed information	_____
10. The medium's ability to reach many people in the shortest amount of time	_____
11. The speed with which the medium can deliver a message to the target audience	_____
12. The medium presents the message in a novel manner	_____
13. How much money had been spent on promoting other health promotion programs	_____
14. The medium has sufficient capacity to give employees all the information they need	_____
15. The medium provides employees with the opportunity to ask questions	_____

page 8

Please fill in the blanks, check a box ☑ or circle numbers to indicate your answer to each question. Please answer all questions. Even if you are unsure of the exact answer, please give your best answer.

Section VI

Background information.

a. Age: ____ (years)

b. Sex: ☐ Female ☐ Male

c. Job Title: _____

d. Highest Education Level Completed: ☐ High-School ☐ Associate's ☐ Bachelor's ☐ Master's ☐ Doctorate

e. Primary type of organization (check one):

☐ agriculture	☐ construction	☐ wholesale trade	☐ real estate
☐ forestry	☐ manufacturing	☐ retail trade	☐ service
☐ fishing	☐ transportation	☐ finance	☐ public administration
☐ mining	☐ public utilities	☐ insurance	☐ other _____

f. Approximate number of employees within your entire organization (check one):

- ☐ 100 or less
- ☐ 101 to 500
- ☐ 501 to 1000
- ☐ 1001 to 5000
- ☐ 5001 to 10,000
- ☐ over 10,000

g. Approximate Annual Health Promotion Budget:

- ☐ less than $1000.00
- ☐ $1000.00 to $5000.00
- ☐ $5001.00 to $10,000.00
- ☐ $10,001 to $25,000.00
- ☐ $25,001 to $50,000.00
- ☐ $50,001 to $100,000.00
- ☐ over $100,000.00

h. Number of years you have been employed by this organization: ____ (please round to nearest whole year)

i. Type of department (check one):

☐ finance	☐ sales	☐ marketing	☐ support
☐ production	☐ research & development	☐ personnel	☐ other _____

j. Approximate number of employees within your department (including you): ____

k. Rank your status in your organization by circling the number corresponding to your rank:

7 highest
6
5
4
3
2
1 lowest

l. How long have you been in your *current* position?

- ☐ 6 months or less
- ☐ 7 months to less than 2 years
- ☐ 2 - 5 years
- ☐ 6 to 10 years
- ☐ 11 to 15 years
- ☐ 16 + years

m. Number of years company has had Health Promotion Program _____.
Please Print

☐ Yes, I would like a summary of the results of this study. Mail it to: Name_____

Address_____

City_____ State_____ Zip_____

Types of Health Promotion Activity

Instructions: First, please carefully read all of each of the descriptions below. Then, check the boxes next to the ones that accurately describe how you spend most of your professional health promotion-related time.

☐ **Positive Health Education** is intended to provide ***general health information***, instruction, or a general activity to a ***non-specific/general population*** (e.g., everybody who works here). This could include basic health information classes, general aerobic dance, and other activity based classes for general populations.

☐ **Preventive Services** intended to prevent disease or illness from developing or continuing to spread (e.g., ***screenings, immunizations, surgery***). A cholesterol or blood pressure screening can help prevent heart disease by identifying or recognizing early symptoms, or a surgery can help prevent a condition from getting worse than it already is.

☐ **Positive Health Protection** is a ***legal or legislative activity that creates laws or policies*** whose purpose is to protect the health of those under the jurisdiction of the law or policy.

☐ **Preventive Health Education** is ***interventional activities intended to prevent identified, specific health problems from getting worse*** in specific populations or clients. A general health education program may lead people to realize the need for a more specific program. Or a client may be directed to participate in a specific program for a specific problem as a result of a preventive service (e.g., cardiac rehab following heart surgery). The key is directing an educational service at a specific problem (e.g., weight loss, smoking cessation, alcohol abuse, cardiac rehab, control of blood pressure or cholesterol) to help people related to the problem (both the affected individual and family/friends), and ***not simply those who want general information***. Most of these programs tend to be interventional activities. An aerobic dance class could fit here, ***if it is part of a specific intervention*** for an individual.

☐ **Preventive Health Protection** ***activities intended to enforce health-related laws and/or regulations*** for industry or the public for the purpose of preventing the development of health problems from exposure to workplace or environmental hazards. This could include inspections, review of records, interviews, measuring levels of compliance against standards for exposure to environmental or workplace toxins or radiation, leading to certification of compliance or a citation for not maintaining approved standards. To require the wearing of protective clothing or monitoring of levels of exposure to toxins or radiation, or to enforce the availability of a worker's right to know information all fit in this category.

☐ **Health Education Aimed At Positive Health Protection** is ***education intended to target those who would or could be impacted by some area of health legislation or regulation***, either pending or existing. The purpose of this education is to raise awareness of how the intended legal changes will impact people's lives and to gain support for the legal changes. A call to action in a general sense might be to contact your representative, to tell a friend or coworker, to sign a petition, or to vote for or against a change that will impact those in the targeted group. A call to action in a specific setting might be to inform and/or remind employees about certain actions that they must perform to protect themselves in the work environment (e.g., correct lifting technique, always following safety procedures specific to their workplace).

☐ **Health Education For Preventive Health Protection** is ***intended to target those who make health-related laws and policies***. The purpose of this domain is ***to educate or influence legislators***, making them aware of the need to protect the public by either creating new laws, or revising old laws. A specific area under the creation of new laws is legislation that promotes a more satisfactory social structure for encouraging people to make healthful choices, sometimes even in spite of themselves (e.g., passive seatbelt restraints, no smoking policies in public buildings). Part of the intention is to influence legislators and policy makers to assume responsibility for the health of those they represent. Lobbying in all its forms is a prime activity in this domain.

Please read all seven of the descriptions before completing this page. Thank you.

Dear Health Promotion Professional (Letter was personalized with name),

My name is Gary Flegal. I am a doctoral student at Michigan State University working to complete my degree while being employed by a hospital in Tennessee. Please take a few minutes to look through these materials.

Enclosed is a survey that examines your involvement in the field of health promotion. Many books have been written on how to do health promotion, but not much has been done to scientifically study what health promotion professionals such as yourself actually do. This study seeks to fill an important gap in our scientific understanding of what health promotion professionals like you do. It will also look at the effectiveness of health promotion programs as perceived by health promotion professionals, as well as the role of media in health promotion program effectiveness.

This survey is part of a doctoral research study from the department of Physical Education and Exercise Science at Michigan State University, and cooperation in collection and dissemination of research information is supported by the Association for Worksite Health Promotion (AWHP). Filling out the survey should take approximately 20 minutes. Participation is completely voluntary. Your individual responses will be strictly confidential. No one will be able to identify your responses. You indicate your voluntary agreement to participate by completing and returning this questionnaire.

If you have any questions about the survey or the study, please call any of those listed below.

Thank you.

Gary L. Flegal
Michigan State University

Vernon D. Miller, Ph.D.
Michigan State University
College of Communication Arts and Sciences
Department of Communication
East Lansing, MI 48824-1212
PH: (517) 355-3280

Kevin Hacke
Executive Director
Association for Worksite Health Promotion
60 Revere Drive, Suite 500
Northbrook, IL 60062
PH: (708) 480-9574

Gary Flegal
Baptist Center For Health & Wellness
2000 Church Street
Nashville, TN 37236
PH: (615) 329-5433

APPENDIX B

SELECTED DIMENSIONS FOR DETERMINING THE EFFECTIVENESS OF HEALTH PROMOTION PROGRAMS

Appendix B
Selected Dimensions For Determining Effectiveness Of Health Promotion Programs

In this organization, a health promotion program is effective:

Cost/Financial
When it makes money.
When it is a profit center for the organization.
When it doesn't lose money.
When it pays for itself.

Long Term Health-Cost Improvement
When it reduces the company's overall health care expenditures.
When programs are linked to corporate savings.
When it brings down cost in other areas (e.g., insurance).
When it saves the company money overall.

Program Attendance
When the expectation of the number of participants is met.
When there are enough participants to justify the program's existence.
When many people participate.
When employees show support for the program by participating.

Public Relations
When it results in media coverage (radio, tv, newspaper).
When there is a good feeling about the program throughout the organization.
When it is well thought of.
When it makes the company look good.

Management Favors It
When management discusses it while recruiting new employees.
When management personnel participate.
When management wants it.
When management views program favorably.

Behavior Change
When participants learn new health-related skills.
When participants demonstrate behavioral changes.
When participants incorporate new healthy behaviors into their daily routine.
When behavioral changes are clearly visible and measurable.

APPENDIX C

MEDIA CHARACTERISTICS (DIMENSIONS)

Appendix C
Media Characteristics (Dimensions) *

Cost
The expense of preparing materials (flyers, posters, advertisement).
The cost of delivering the materials/information to potential clients (e.g., mail, newspaper ad, air time).
How much money had been spent on promoting the previous health promotion program.

Interactive
Getting quick feedback from potential participants.
Tailoring each message to individuals.
Providing employees with the opportunity to ask questions.

Urgency
To impress upon potential participants how important the program is for their health.
To inform potential attenders that they must reserve their space right away.
To inform potential participants that their health may be at risk for disease, and that they will not know it unless they attend.

Detail
Can convey a lot of detailed information.
Sufficient capacity to give employees all the information they need.
Emphasizes providing information over catching their attention.

Novelty
Use a promotional medium (e.g., flyers, telephone calls) that had not been used recently.
Present the message in a novel manner.
Promote so as to attract employees' attention.

* Adapted from Daft and Lengel (1984); Heirich et al., (1989); Rogers (1983); and Sitkin et al. (1992).

APPENDIX D

TYPES OF MEDIA

Appendix D
Types of Media *

Types of Media

a. Face-to-face
    1. one-on-one
    2. one-on-group
b. Videoconferencing
c. Telephone
d. Voice mail
e. E-mail
f. Television/Video
g. Film
h. Radio
i. Personal letters
j. Memos
k. Posters
l. Flyers
m. Slides
n. Audio tape recording
o. T-shirt
p. Billboard
q. Bulletin board
r. Books
s. Booklets
t. Newsletter
u. Pamphlet
v. Magazine
w. Newspaper
x. "Grapevine"
y. Chart (graphic or numeric)

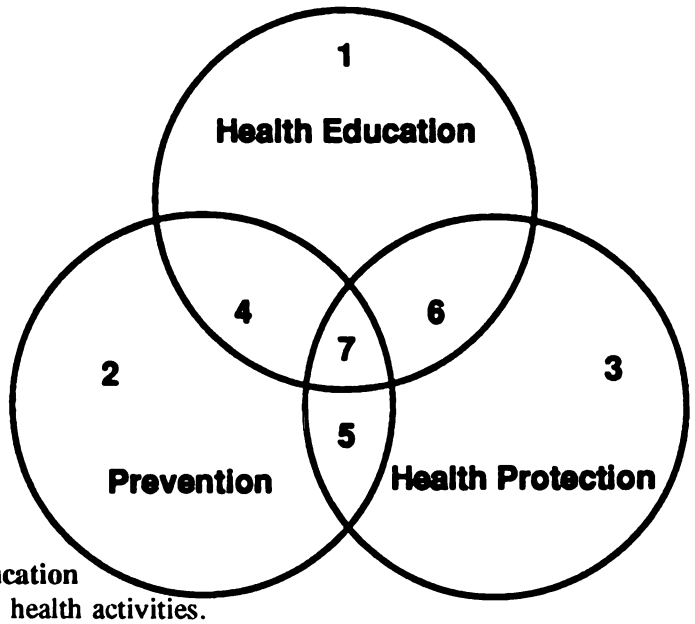
* expanded from Sitkin et al. (1992)

APPENDIX E

HEALTH PROMOTION PROGRAM DOMAINS
A CODE BOOK

Appendix E
Health Promotion Program Domains *
A Code Book

The purpose of the following coding definitions and rules is (1) to help the coder understand the distinction between each of the seven Health Promotion Domains *, (2) to explain to the coder the operational definitions between the Domains, (3) to provide the coder with examples to illustrate correct coding, and (4) to test the coders to make certain that he/she understands how to categorize into the proper Domains. Following is a diagram of the seven Health Promotion Domains.



Legend:

1. **Positive Health Education**
   General instructional health activities.
2. **Preventive Services**
   Screenings, immunizations, and surgical interventions for clients or populations.
3. **Positive Health Protection**
   Creation of health legislation or regulatory policy.
4. **Preventive Health Education**
   Interventions for specific, identified health problems, (i.e., Weight loss, smoking cessation, counseling, & EAPs).
5. **Preventive Health Protection**
   Enforcement of legislation/regulations to prevent health problems caused by workplace hazards, toxins, or radiation.
6. **Health Education aimed at Positive Health Protection**
   Safety education to teach proper safety techniques, raising awareness and support for legislation among employers and employees to combat potential health risks.
7. **Health Education for Preventive Health Protection**
   Educating legislators and policy makers of the need for laws/policies to prevent health and safety problems.

* adapted from Downie et al. (1990)

Intentionality ("What is the intention or purpose of a program?" or "For whom is it intended?") of a program or service is a major ingredient in classifying activities in one area of health promotion as opposed to another. As the diagram illustrates (previous page), the categories overlap, making it imperative that intentionality is understood. Without intentionality, some programs could fit in several categories. For the purposes of this study, intentionality and type of program will be used to classify health promotion activities into only one domain.

Domain 1. Positive Health Education. General instructional health activities.

Key Thought

Positive Health Education is intended to provide general health information, instruction, or a general activity to a non-specific/general population (e.g., everybody who works here). This could include basic health classes, general aerobic dance, and other activity based classes for general populations.

Intentionality

- This program is for the general public . . .
- This program is for everybody . . .
- To give everyone a basic understanding of . . .
- It is for whoever shows up . . .
- Information that every woman should know . . .

Example	Coding
An aerobic dance class offered to all employees.	The key is "offered to all employees." This is Domain 1 because no attempt is made to be more specific as to audience.
An exercise program to help you drop those pounds.	The key is "to help you drop those pounds." This is Domain 4 because it is specified as a weight loss intervention.
A program on the health risks related to smoking.	No specific audience is identified. This is Domain 1.
A smoking cessation program.	Smoking cessation (stopping the behavior) is for those who smoke, thus, smokers are the specific audience and this belongs in Domain 4.
A program on sinus problems that is open to the public.	The key is "open to the public." The audience is not specific and this is, therefore, Domain 1.
A finger-stick cholesterol screening for the general public.	The key is the word "screening." Screenings are part of Preventive Services for the purpose of identifying those at risk for specific health problems. This is Domain 2.

Domain 2. **Preventive Services**. Screenings, immunizations, and surgical interventions for clients or populations.

Key Thought

Preventive Services are intended to prevent disease or illness from developing or continuing to spread. A cholesterol or blood pressure screening can help prevent heart disease by identifying or recognizing early symptoms, or a surgery can help prevent a condition from getting worse than it already is.

Intentionality

- This is a screening event for everyone (whoever shows up) . . .
- To identify people who are at risk for . . .
- To perform a test for . . .
- Free immunizations for . . .
- A health risk appraisal to identify risk for . . .

Example	Coding
A maximum stress treadmill test for a man 40 years of age.	The key word is "test." Treadmill testing is used to identify risk for heart disease. This is Domain 2.
A blood pressure screening offered to all employees.	The key word is "screening." Screenings are part of Preventive Services for the purpose of identifying those at risk for specific health problems. This is Domain 2.
One-on-one counseling with an employee who has high blood pressure.	The key word is "counseling." Counseling is an educational intervention for someone with an identified problem or condition. This is Domain 4.
Every employee is required to have an annual TB test.	The key word is "test." A TB test is used to screen for tuberculosis. This is Domain 2.
All management personnel are required to have an annual physical exam.	The key here is "physical exam." It is a series of tests or screening procedures performed by medical professionals. This is Domain 2.

Domain 3. Positive Health Protection. Creation of health legislation or regulatory policy.

Key Thought

Positive Health Protection is a legal or legislative activity that creates laws or policies whose purpose is to protect the health of those under the jurisdiction of the law or policy.

Intentionality

- Any activity that produces laws, policies, or regulations whose purpose is to protect the health and well-being of those under the jurisdiction of the legislative body . . .
- To improve/promote health in the general public by reducing risk of injury or death by legally requiring seatbelt use . . .
- To reduce risk of injury by legally requiring the use of safety equipment (e.g., hard hat, safety glasses, hearing protection) . . .
- To require that municipalities test drinking water for certain levels of toxins, and that they must cooperate with public health officials who are required to analyze water resources (Requiring the test is not the same as conducting the test. Conducting the test falls in Domain 5) . . .

Example	Coding
Legislators create a law requiring employers to disclose information to employees about toxins in the workplace.	The key words are "create a law." This law makes it mandatory for employers to make certain information available to employees that could impact the health of employees. This is Domain 3.
A company's administrative committee makes a policy that the company will be smoke-free as of January 1.	The key words are "makes a policy." This policy will mandate the health benefits of escaping environmental tobacco smoke (ETS), or second hand smoke, for all employees while they are in the workplace. It is Domain 3.
The Fire Marshall inspects a worksite for adherence to the fire code.	Two key words are "inspects" and "adherence." They tell you the code is being enforced, not created. Enforcement or monitoring are activities of laws that are already in existence and are in Domain 5.
The health and safety officer for ABC company conducts an inservice on how to use Material Safety Data Sheets.	This is an educational activity to fulfill the directive of a guideline that is already in existence. Educational activities that are the result of legislation or regulation are Domain 6.

Domain 4. Preventive Health Education. Weight loss, smoking cessation, counseling, & EAP's as educational interventions for clients.

Key Thought

Preventive Health Education is comprised of interventional activities intended to prevent identified, specific health problems from getting worse in specific populations or clients. A general health education program may lead people to realize the need for a more specific program. Or a client may be directed to participate in a specific program for a specific problem as a result of a preventive service (e.g., cardiac rehab following heart surgery). The key is directing an educational service at a specific problem (e.g., weight loss, smoking cessation, alcohol abuse, cardiac rehab) to help people related to the problem (both the affected individual and family/friends), and not simply those who want general information. Most of these programs tend to be interventional activities. An aerobic dance class could fit here, if it is part of a specific intervention for an individual.

Intentionality

- A program for people with a known problem (smoking, over-weight, substance abuse, marriage difficulties, etc.), designed to assist participants with behavior management, counseling, medication, and other strategies that are appropriate for each individual and the problem(s) under treatment . . .
- If it is unknown that a person has a condition, a screening might be conducted to make that determination. The screening is in Domain 2. If a screening identifies a person's problem, any educational intervention for the specific problem is in Domain 4.
- The key for inclusion in Domain 4 is some kind of educational/counseling activity designed to help someone with an identified problem. Identification of a problem might come from a screening (Domain 2) or an individual might identify him/herself based upon a general health education event (Domain 1) . . .

Example	Coding
An aerobic dance class as part of a weight loss program.	The key is "part of a weight loss program." A weight loss program is for an identified population - people who need/want to lose weight - this becomes part of an intervention and is in Domain 4.
One-on-one counseling (for some identified problem).	"Counseling" is the key word. Counseling is always interventional, and is designed to help individuals with some identified problem (e.g., depression, marital, financial, substance abuse, etc.).
Teaching a group of employees strategies for lowering blood pressure.	The key words are "a group of employees." This is general and therefore domain 1. Unless it is known that this is a group of employees with high blood pressure, it cannot be Domain 4.

Domain 4 continued . . .

Example	Coding
Having a blood pressure station in the company eating area to offer free blood pressure readings.	This is general - for everybody who wants to stop by. It is also a screening. This is Domain 2.
Having a blood pressure screening for employees known to have high blood pressure.	This activity is intended for a specific group of employees "known to have high blood pressure." This is Domain 4.

Domain 5. Preventive Health Protection. Enforcement of legislation/regulations to prevent health problems caused by workplace hazards, toxins, or radiation.

Key Thought

Preventive Health Protection activities are intended to enforce health-related laws and regulations for industry or the public for the purpose of preventing the development of health problems from exposure to workplace or environmental hazards. This could include inspections, review of records, interviews, measuring levels of compliance against standards for exposure to environmental or workplace toxins or radiation, leading to certification of compliance or a citation for not maintaining approved standards. To require the wearing of protective clothing or monitoring of levels of exposure to toxins or radiation, or to enforce the availability of a worker's right to know information all fit in this category.

Intentionality

- To enforce legislation, regulations, or policies created in Domain 3. A city government might be required by law to analyze drinking water at regular intervals and to comply with state officials during inspections. Creation of a law requiring such an analysis and compliance with officials is in Domain 3. The inspection and analysis of the public water supply under such a law is in Domain 5.
- Enforcement of any health or safety related law or policy (e.g., driving under the influence, seatbelt use, the wearing of hard hats in construction zones, the use of eye or hearing protection in the workplace, exposure monitoring for workplace toxins or other environmental hazards). The key activity is enforcing health- related legislation. Measuring a toxin level is a screening event that is in Domain 2. Inspecting the workplace to make certain that required screenings take place is in Domain 5. Key words are enforce, inspect, investigate.

Example	Coding
A company complies with a federally mandated safety inspection.	The keys are "inspection" and "mandated." This is Domain 5.
Imposing a fine upon an employee for repeated negligence in the use of safety equipment.	Enforcing a safety requirement is Domain 5.
Performing required maintenance upon public elevators as required by law.	Following mandated guidelines as set forth by law and public safety codes is Domain 5.

Domain 5 continued . . .

Creating a new safety code, following the death of an employee, to prevent further accidents.	Creating laws, policies, or codes to establish safer or healthier conditions is Domain 3. Domain 5 is the *enforcement* of laws or regulations, not the creation of laws or regulations.

Domain 6. Health Education aimed at Positive Health Protection. Raising awareness and/or support for legislation among employers and employees to combat potential health risks.

Key Thought

Health Education aimed at Positive Health Protection is education intended to target those who would or could be impacted by some area of health legislation or regulation, either pending or existing. The purpose of this education is to raise awareness of how the intended legal changes will impact people's lives and to gain support for the legal changes. A call to action in a general sense might be to contact your representative, to tell a friend or coworker, to sign a petition, or to vote for or against a change that will impact those in the targeted group. A call to action in a specific setting might be to inform and/or remind employees about certain actions that they must perform to protect themselves in the work environment (e.g., correct lifting technique, always following safety procedures specific to their workplace).

Intentionality

- To educate employees about new legislation or policy that will affect some aspect of work-related health or safety.
- To educate employees about new legislation that requires disclosure of harmful material in the work environment and how to handle it safely (Material Safety Data Sheets (MSDS)).
- To teach employees proper safety techniques to comply with safety regulations.
- The key for inclusion in Domain 6 is to educate or teach employees regarding some aspect of compliance with a health or safety-related law or policy.

Example	Coding
An annual required class (inservice) to teach and/or remind employees about blood-borne pathogens and correct handling of materials.	The key is "required class" or "inservice." This is Domain 6.
A meeting with employees to discuss the changes that will take place when a new piece of safety legislation goes into effect.	Updating employees about new safety legislation is an educational process about mandated safety requirements. This is Domain 6.
Meeting with a law-maker to convince him or her of the need for certain safety legislation.	Meeting with a legislator for purposes of educating or influencing him or her is lobbying. This is Domain 7. Domain 6 targets those who will live under the law.

Domain 7. Health Education for Preventive Health Protection. Educating legislators and policy makers of the need for laws to prevent health problems.

Key Thought

Health Education for Preventive Health Protection is intended to target those who make health-related laws and policies. The purpose of this domain is to educate or influence legislators, making them aware of the need to protect the public by either creating new laws, or revising old laws. A specific area under the creation of new laws is legislation that promotes a more satisfactory social structure for encouraging people to make healthful choices, sometimes even in spite of themselves (e.g., passive seatbelt restraints, no smoking policies in public buildings). Part of the intention is to influence legislators and policy makers to assume responsibility for the health of those they represent. Lobbying in all its forms is a prime activity in this domain.

Intentionality

- To educate or influence law and policy makers toward a more favorable (to the public or health promoters) outcome in the creation of health and safety legislation. Lobbying fits here. Activities in Domain 7 are directed at law and policy makers, not at those who will be impacted by legislation. Educating the public or employees in the workplace about an upcoming legal change in a health policy or law is in Domain 6. If someone is informing or teaching a group of employees how a potential law or policy might affect the employees the activity is in Domain 6. However the Domain 6 activity might lead to a Domain 7 activity if employees are encouraged to write or call their legislators to offer their positive or negative support for the impending legislation.

Example	Coding
A legislative committee holds public debates to gather information regarding nuclear waste disposal.	Public debates often include moments of lobbying by those who speak. They are intended as information gathering, or educational sessions about programs that influence the public. This is Domain 7.
Citizens of a small town organize a telephone and letter writing campaign to their members of congress to voice their concerns about the new health care reform bill.	Communicating with legislators is a form of lobbying that is available to everyone. It is an opportunity to let those who create laws and policies learn what some of their constituents desire. This is Domain 7.

Example	Coding
Your manager holds a meeting to review the implications of a new worksite safety law.	This is education about an existing safety law. This is Domain 6 because it targets those who must live under the law.

APPENDIX F

MEDIA REASONS FOR MOST EFFECTIVE PROGRAM SURVEY SECTION III A CODE BOOK

Appendix F
MEDIA Reasons For MOST EFFECTIVE Program/Survey Section III
A Code Book

The purpose of the following coding definitions and rules is:

(1) to help the coder understand the distinction between various media reasons offered in the open-ended responses of survey section III;
(2) provide the coder with general rules to use when coding surveys; and
(3) to provide the coder with specific rules for specific situations that may present coding difficulties.

Basically, Media can be thought of as the methods, or technologies, used to transmit messages. Examples of Media reasons include:

- People talking to other people in person or through video, film, telephone, or radio technologies, either one-on-one, one-on-group, word-of-mouth, public address (p.a.) system announcements, "grapevine," etc.
- Printed materials, such as the Yellow pages, personal letters, memos, posters, fliers, pamphlets, books or booklets, magazine or newspaper articles, messages on t-shirts (not the t-shirt itself), newsletters, post cards, billboards or bulletin boards, pay-check inserts, bumper stickers, etc.
- Electronic messages such as voice mail, E-mail, electronic or computer bulletin boards, videoconferencing, audio or video tape recordings, etc.

Non-media reasons include items and issues other than those associated with how the message is presented. These will be dealt with in another codebook.

The following are categories for media reasons for most effective programs:

Media Reasons For Most Effective Programs

1. Personal Contact
2. Top Management Media Contact
3. Timing Of Media
4. Placement Of/Point Of Contact With Media
5. Content/Message Of Media
6. Quality Of The Promotion
7. Multiple Media
8. Use Of Specific Media
9. Unknown/Respondent didn't know
10. Other

1. **Personal Contact** reasons are identified by references to one person spreading the information to another person or group. Examples include:

   ▸people liked program and told coworkers
   ▸special invitation
   ▸encouraged volunteers to spread the word
   ▸presentation made at meeting

- This category represents the personal effort to get information from one person to one or more others in a direct and individual manner.

2. **Top Management Media Contact** reasons are identified by references to information coming directly from managers, supervisors, and/or administrators. Examples include:

   ▸letter from CEO
   ▸media support by top management
   • (the emphasis here is the *media* support from management, not simply support. Without the word "media" this would simply be a non-media example of management support)
   ▸notified of event by supervisor
   ▸verbal endorsement of senior managers
   • (again, not simply the feeling of support from management, but the obvious use of media - verbal - to supply that support)

3. **Timing Of Media** reasons are identified by references to *when* the media were presented to employees. Examples include:

   ▸fliers desk dropped to all employees immediately prior to event
   • (note emphasis on timing - *immediately prior*)
   ▸e-mail everyday
   • (note the reference to *everyday* - without the time reference this would be an example of use of a certain type of media)
   ▸reminder postcards sent
   • (a *reminder* is the use of some form of media and implies the prompting of an individual's knowledge regarding a known event, prior to that event taking place - it is a timing issue)
   ▸called back to confirm appointments
   • (*confirmation* is the use of media to remind or prompt an individual's knowledge regarding a known event, prior to that event taking place - it is a timing issue)

4. **Placement Of/Point Of Contact With Media** reasons are identified by references to *where* media are placed. Examples include:

   ▸bulletin boards are in prominent locations
   - (the emphasis is on *location* - without this emphasis, this would be an example of use of a certain type of media)

   ▸flier sent to home address
   - (emphasis on *where* employees came in contact with media - without this emphasis it would be an example of use of a certain type of media)

   ▸flier given with paycheck
   - (emphasis on *where* employees came in contact with flier - almost everybody looks at paycheck and flier is right there - without this emphasis it would be another example of use of a certain type of media)

   ▸advertised in restroom
   - (doesn't even tell how, emphasis is on *location* of media)

5. **Content/Message Of Media** reasons are identified by references to *what* was said or *how* it was said. Examples include:

   ▸fliers used humor
   - (not only was a certain type of media used, the message was fun to read - refers to content)

   ▸media followed central theme
   - (theme refers to focus, subject, or content)

   ▸motivating memos
   - (the format of "memo" is rarely motivating - the subject matter or content could be)

   ▸specific/practical material
   - (the reference of specific or practical is a content issue)

6. **Quality Of The Promotion** reasons are identified by references to some attribute that adds value or quality to the media. Examples are:

   ▸professional look of resource
   - (not only was there a resource, it looked professional)

   ▸glossy color flier
   - (not only was there a certain type of medium used - flier - but it was produced in color AND on glossy paper - ooh!)

   ▸posters were eye-catching
   - (not only were posters used, they were good enough to demand attention, to get people to look at them)

   ▸attractive brochure
   - (not just a brochure, one that looked great!)

- The emphasis here seems to be one of overall impression of the media upon potential participants.

7. **Multiple Media** reasons are identified by references to the use or utilization of more than one use of a medium. Examples include:

   ▸multiple avenues for communication
   ▸used multiple media channels
   ▸more than one flier
   ▸fully laid out promotional campaign, posters, orientation

- The obvious concern here is that more than one effort has been made to promote the event.

8. **Use Of Specific Media** reasons are identified by references that simply list a particular kind or type of media. Examples include:

   ▸fliers
   - (no qualifiers, simply a kind of media)

   ▸announcement on PA system
   ▸voice mail messages
   ▸"Dog and Pony Shows"
   ▸telephone confirmation system
   - (emphasis here seems to be not just a confirmation system, but that it be made by telephone)

9. **Unknown/Respondent Didn't Know** reasons are identified by comments made by the respondent to indicate that they don't know why the media were successful. Examples include:

   - don't know
   - ? - (respondent wrote a question mark in the blank)
   - not sure

10. **Other** reasons are items that simply don't fit in any other category.

Summary Of MEDIA Reasons For MOST EFFECTIVE Program

1. **Personal Contact** reasons are identified by references to one person spreading the information to another person or group.

2. **Top Management Media Contact** reasons are identified by references to information coming directly from managers, supervisors, and/or administrators.

3. **Timing Of Media** reasons are identified by references to *when* the media were presented to employees.

4. **Placement Of/Point Of Contact With Media** reasons are identified by references to *where* media are placed.

5. **Content/Message Of Media** reasons are identified by references to *what* was said or *how* it was said.

6. **Quality Of The Promotion** reasons are identified by references to some attribute that adds value or quality to the media.

7. **Multiple Media** reasons are identified by references to the use or utilization of more than one use of a medium.

8. **Use Of Specific Media** reasons are identified by references that simply list a particular kind or type of media.

9. **Unknown/Respondent Didn't Know** reasons are identified by comments made by the respondent to indicate that they don't know why the media were successful.

10. **Other** reasons are items that simply don't fit in any other category.

Coders will test themselves on the following examples:

_____ Advertisement appeared on Sports page of paper

_____ Used in-house TV

_____ Receptionist told everyone who came by

Answers for previous page examples:

_____ Advertisement appeared on Sports page of paper
- this is a **Placement Of/Point Of Contact With Media** example and should be coded 4.

_____ Used in-house TV
- this is a **Use Of Specific Media** example and should be coded 8.

_____ Receptionist told everyone who came by
- this is a **Personal Contact** example and should be coded 1.

APPENDIX G

NON-MEDIA REASONS FOR MOST EFFECTIVE PROGRAM SURVEY SECTION III A CODE BOOK

Appendix G
NON-MEDIA Reasons For MOST EFFECTIVE Program/Survey Section III
A Code Book

The purpose of the following coding definitions and rules is:

(1) to help the coder understand the distinction between various non-media reasons offered in the open-ended responses of survey section III;
(2) provide the coder with general rules to use when coding surveys; and
(3) to provide the coder with specific rules for specific situations that may present coding difficulties.

Basically, Media can be thought of as the methods, or technologies, used to transmit messages. This will be addressed in another codebook.

Non-media reasons include items and issues other than those associated with how the message is presented. Examples of Non-media reasons include:

- Cost associated with the program (economic issues), whether it is free or has a fee
- Participation/attendance
- Conflict with other events and programs - people can only attend one thing at a time
- Fear - someone may not want to attend a program on skin cancer; it might mean having to admit the possibility of ***getting*** skin cancer
- Locating an event right next to the cafeteria might make it convenient for people to participate

The following are categories for non-media reasons for most effective programs:

Non-Media Reasons For Most Effective Programs

1. Economic Issues
2. Ease/Convenience
3. Incentives
4. Success Measured By Participation
5. Perception Of New/Novel
6. Management Support
7. Timing Of Program
8. Instructor/Leader Attributes
9. Ease Of Administration
10. Fun/Social
11. Individualized/Personalized Programming
12. Credibility
13. Required Attendance
14. Unknown/Respondent didn't know
15. Other

1. **Economic Issues** are identified by references to money, cost, etc., such phrases as:

   - free
   - low cost
   - self-paid basis
   - co-pay waived
   - fee charged
   - cost containment
   - health benefits plan
   - discounted price
   - reduced price/cost
   - insurance premiums

2. **Ease/Convenience** reasons are identified by references to making the process or service easy or convenient for employees to use. Examples include:

   ▸ user friendly regarding participant time
   ▸ simplified process
   ▸ "elementary" format
   ▸ flexible scheduling
   ▸ convenience
   ▸ accommodated everyone
   ▸ easy

3. **Incentives** reasons are identified by references to enticements to get people to participate, such as prizes, give-aways, etc. Examples include:

   ▸ offer of time off
   ▸ cash award
   ▸ t-shirt
   ▸ food, refreshments
   ▸ program tied to flex credits
   ▸ prizes
   ▸ raffle

4. **Success Measured By Participation** reasons are identified by references to increased participation, as well as participation by those who usually don't participate. May also include inclusion of those outside the employee population, such as spouse, children, or retirees. Examples include:

   ▸ employees who usually don't participate used this service
   ▸ high participation
   ▸ spouse involved

5. **Perception Of New/Novel** reasons are identified by references to newness of the program or service, uniqueness, or variety of program or program location. Examples include:

   ▸ 1st time offered
   ▸ perception of "special" event
   ▸ unique to company
   ▸ off-site meeting
   - (when listed as a reason for program effectiveness, the novelty of being away from the worksite is the emphasis rather than inconvenience that might be suggested if listed as a reason for non-effectiveness)

6. **Management Support** reasons are identified by references to positive support, backing, or endorsement from management. Examples include:

   ▸top management support
   ▸simply the word "support"
   ▸high value by senior management
   ▸letter from CEO
   • (emphasis is on who letter is from, not on form of media)
   ▸on company time
   • (this is also convenient, but doesn't happen without management support)
   ▸good corporate culture
   • (results from management support)
   ▸management participated
   • (demonstrated support)

7. **Timing Of Program** reasons are identified by references to reaching people at a time that is appropriate, relevant, or "timely" for those people. Examples include:

   ▸good timing
   ▸hot topic
   ▸offered on-site - great hours
   • (this could also be convenience, but the emphasis is on the "great hours" - timing of the event)
   ▸season of the year
   • (implies that some programs or services may be more successful during certain seasons of year than at other seasons)

8. **Instructor/Leader Attributes** reasons are identified by references to some characteristic or quality of the program planner/leader or instructor that lead to the success of the program or event. Examples are:

   ▸instructor charisma
   ▸professional instructor
   ▸well planned
   ▸wellness representatives are committed/dedicated
   ▸excellent vendor

9. **Ease Of Administration** reasons are identified by references to circumstances or events that made the program easy for the program leaders to organize and present. Examples include:

   ▸easy to administer
   ▸very little promotion needed

10. **Fun/Social** reasons are identified by references to participants having a good time or socializing during the event or program. Examples include:

- ▸it's fun
- ▸a competitive challenge
- ▸score board
- ▸peer support
- ▸used humor in memos
- (memos would be a media reason, but emphasis here is on content of message, not how the message was delivered)
- ▸list of weekly progress
- (suggestion of information to be topic of socializations in workplace)
- ▸participants encouraged each other
- ▸not intimidating
- ▸group building

11. **Individualized/Personalized Programming** reasons are identified by references to programs or events that are not general in nature, but have taken into account the needs and desires of those who will use the program or service. Something has been done to individualize the activity or offering. Examples include:

- ▸personal touch
- ▸a translator was available
- ▸lots of choices
- ▸sessions were personalized
- ▸readiness of participants was measured
- ▸employees ready for it
- ▸multidisciplinary approach
- ▸pre-registration was required
- (implies ability to know who is coming and individualize program)
- ▸requested service
- ▸employees got to give their ideas
- ▸promotion theme targeted our population
- ▸people don't want to sweat - program not physical-activity oriented

12. **Credibility** reasons are identified by references to details or items that add value or integrity to the program or service. Examples include:

    - high interest of participants
    - prior success of program
    - 3rd year offered
    - demonstrated improved health results
    - identified one case of breast cancer
    - confidentiality
    - it's "the right thing to do"
    - perceived value of program
    - therapists are good sources of information
    - very measurable outcomes
    - popularity of service

13. **Required Attendance** reasons are identified by references to mandatory or required participation. While this might also reflect management support, it does not necessarily imply that such support is voluntary. Some programming, such as certain safety or blood-borne pathogen programs, is required by law and therefore the reason for getting participation relies on compliance with law, not support by management. Examples include:

    - mandatory attendance on company time
      - (main emphasis is on mandatory, most mandatory programs are offered on company time)
    - participation required

14. **Unknown/Respondent Didn't Know** reasons are identified by some overt comment by the respondent that they simply don't know, or were unable to identify any specific reason(s) for the effectiveness of the program or service. Examples include:

    - don't know
    - unsure

15. **Other** reasons are items that simply don't fit in any other category. Examples include:

    - weather cooperated
    - beautiful corporate grounds

Summary Of NON-MEDIA Reasons For MOST EFFECTIVE Program

1. **Economic Issues** are identified by references to money, cost, etc.

2. **Ease/Convenience** reasons are identified by references to making the process or service easy or convenient for employees to use.

3. **Incentives** reasons are identified by references to enticements to get people to participate, such as prizes, give-aways, etc.

4. **Success Measured By Participation** reasons are identified by references to increased participation, as well as participation by those who usually don't participate. May also include inclusion of those outside the employee population, such as spouse, children, or retirees.

5. **Perception Of New/Novel** reasons are identified by references to newness of the program or service, uniqueness, or variety of program or program location.

6. **Management Support** reasons are identified by references to positive support, backing, or endorsement from management.

7. **Timing Of Program** reasons are identified by references to reaching people at a time that is appropriate, relevant, or "timely" for those people.

8. **Instructor/Leader Attributes** reasons are identified by references to some characteristic or quality of the program planner/leader or instructor that lead to the success of the program or event.

9. **Ease Of Administration** reasons are identified by references to circumstances or events that made the program easy for the program leaders to organize and present.

10. **Fun/Social** reasons are identified by references to participants having a good time or socializing during the event or program.

11. **Individualized/Personalized Programming** reasons are identified by references to programs or events that are not general in nature, but have taken into account the needs and desires of those who will use the program or service. Something has been done to individualize the activity or offering.

12. **Credibility** reasons are identified by references to details or items that add value or integrity to the program or service.

13. **Required Attendance** reasons are identified by references to mandatory or required participation. While this might also reflect management support, it does not necessarily imply that such support is voluntary. Some programming, such as certain safety or blood-borne pathogen programs, is required by law and therefore the reason for getting participation relies on compliance with law, not support by management.

14. **Unknown/Respondent Didn't Know** reasons are identified by some overt comment by the respondent that they simply don't know, or were unable to identify any specific reason(s) for the effectiveness of the program or service.

15. **Other** reasons are items that simply don't fit in any other category.

Coders will test themselves on the following examples:

_____ Program offered on company time

_____ We had the most people we've ever had

_____ Excellent program

Answers for previous page examples:

_____ Program offered on company time

- this is a **Management Support** example because no matter how convenient it may be, programs do not happen on company time without the support of administrators - this should be coded as a 6

_____ We had the most people we've ever had

- this is a **Success Measured By Participation** example - this should be coded as a 4

_____ Excellent program

- this is a **Credibility** example as perceived excellence adds value to the program. This should be coded as a 12.

APPENDIX H

MEDIA REASONS FOR LEAST EFFECTIVE PROGRAM SURVEY SECTION IV A CODE BOOK

Appendix H
MEDIA Reasons For LEAST EFFECTIVE Program/Survey Section IV
A Code Book

The purpose of the following coding definitions and rules is:

(1) to help the coder understand the distinction between various media reasons offered in the open-ended responses of survey section IV;
(2) provide the coder with general rules to use when coding surveys; and
(3) to provide the coder with specific rules for specific situations that may present coding difficulties.

Basically, Media can be thought of as the methods, or technologies, used to transmit messages. Examples of Media reasons include:

- People talking to other people in person or through video, film, telephone, or radio technologies, either one-on-one, one-on-group, word-of-mouth, public address (p.a.) system announcements, "grapevine," etc.
- Printed materials, such as the Yellow pages, personal letters, memos, posters, fliers, pamphlets, books or booklets, magazine or newspaper articles, messages on t-shirts (not the t-shirt itself), newsletters, post cards, billboards or bulletin boards, pay-check inserts, bumper stickers, etc.
- Electronic messages such as voice mail, E-mail, electronic or computer bulletin boards, videoconferencing, audio or video tape recordings, etc.

Non-media reasons include items and issues other than those associated with how the message is presented. These will be dealt with in another codebook.

The following are categories for media reasons for least effective programs:

Media Reasons For Least Effective Programs

1. Personal Contact
2. Top Management Media Contact
3. Timing Of Media
4. Placement Of/Point Of Contact With Media
5. Content/Message Of Media
6. Quality Of Promotional Material
7. Non-Media Factors
8. Lack Of Promotion
9. Unknown/Respondent didn't know
10. Other

1. **Personal Contact** reasons are identified by references to one person spreading the information to another person or group. Examples include:

   ▸low "word-of-mouth"
   ▸personal letters sent only once
   • (implication is that there *was* personal contact, but not enough)

- This category represents the personal effort, or lack thereof, to get information from one person to one or more others in a direct and individual manner.

2. **Top Management Media Contact** reasons are identified by references to information coming directly from managers, supervisors, and/or administrators. An example might include:

   ▸no direct memo from management
   • (there may or may not have been management support, but lack of overt demonstration of support may be interpreted as low or no support)

3. **Timing Of Media** reasons are identified by references to *when* the media were presented to employees. Examples include:

   ▸fliers sent out late
   • (fliers were sent out, but they were ineffective because of the timing)
   ▸short notice
   • (whatever media were used were ineffective because of timing)
   ▸not advertised soon enough
   • (there was advertising, but it wasn't used soon enough to accommodate potential participants)

4. **Placement Of/Point Of Contact With Media** reasons are identified by references to *where* media are placed. Examples include:

   ▸fliers not posted - participants had to pick them up
   • (there were fliers, but the point of contact - the method which allowed potential participants to come in contact with the fliers - was less than desirable)
   ▸posters for elevator areas not hung
   • (for whatever reason, media designated for a high traffic area didn't get placed and potential participants could not come in contact with the media)

5. **Content/Message Of Media** reasons are identified by references to *what* was said or *how* it was said. Examples include:

   ▸ fliers too verbose
   - (verbose refers to content)
   ▸ negative flier
   - (emphasis on tone of content, not necessarily on type of media)
   ▸ not enough detail on flier
   - (emphasis on content, not on type of media)
   ▸ brochure too lengthy
   - (what makes a media piece lengthy? - content!)

6. **Quality Of Promotion** reasons are identified by references to some attribute that adds value or quality to the media. Examples are:

   ▸ article not flashy enough
   - (there was an article in some publication, but it apparently was not of high enough quality to get attention)
   ▸ posters not exciting
   - (there were posters, but they were lacking in some detail of quality)
   ▸ reports are not very aesthetic to look at
   - (the word *aesthetic* directly addresses the concept of quality)
   ▸ printed material could have been more colorful
   - (not so much concerned with content as with the look, a degree of quality)

- The emphasis here seems to be one of overall impression, or lack thereof, of the media upon the potential participants.

7. **Non-Media Factors** reasons are identified by comments made by the respondent to indicate that they believe the media they created/used was not the issue. Examples include:

   ▸ media was not the problem
   ▸ not a media issue - other factors involved
   ▸ media/promotion ok
   ▸ don't feel like media was "unsuccessful"

8. **Lack Of Promotion** reasons are identified by references to some lack or deficiency in the methods used to promote the event/service/program. Examples include:

   ▸inadequate - inept PR
   ▸too little promo - not wide enough publicity
   ▸did not use e-mail
   • (example of lack)
   ▸poor communication
   ▸promotion too limited
   ▸didn't make it a big enough deal
   ▸not promoted well

- Phrases here are "not enough," "did not use," "needed more," too little," "inadequate," and phrases with like intention.

9. **Unknown/Respondent Didn't Know** reasons are identified by comments made by the respondent to indicate that they don't know why the media were successful. Examples include:

   ▸don't know
   ▸? - (respondent wrote a question mark in the blank)
   ▸not sure

10. **Other** reasons are items that simply don't fit in any other category.

Summary Of MEDIA Reasons For LEAST EFFECTIVE Program

1. **Personal Contact** reasons are identified by references to one person spreading the information to another person or group.

2. **Top Management Media Contact** reasons are identified by references to information coming directly from managers, supervisors, and/or administrators.

3. **Timing Of Media** reasons are identified by references to *when* the media were presented to employees.

4. **Placement Of/Point Of Contact With Media** reasons are identified by references to *where* media are placed.

5. **Content/Message Of Media** reasons are identified by references to *what* was said or *how* it was said.

6. **Quality Of Promotion** reasons are identified by references to some attribute that adds value or quality to the media.

7. **Non-Media Factors** reasons are identified by comments made by the respondent to indicate that they believe the media they created/used was not the issue.

8. **Lack Of Promotion** reasons are identified by references to some lack or deficiency in the methods used to promote the event/service/program.

9. **Unknown/Respondent Didn't Know** reasons are identified by comments made by the respondent to indicate that they don't know why the media were successful.

10. **Other** reasons are items that simply don't fit in any other category.

Coders will test themselves on the following examples:

_____ Extremely poor posters

_____ Hard to understand fliers

_____ Article came out day of event

Answers for previous page examples:

_____ Extremely poor posters
- this is a **Quality Of Promotion** example and should be coded 6.

_____ Hard to understand fliers
- this is a **Content/Message Of Media** example and should be coded 5.

_____ Article came out day of event
- this is a **Timing Of Media** example and should be coded 3.

APPENDIX I

NON-MEDIA REASONS FOR LEAST EFFECTIVE PROGRAM SURVEY SECTION IV A CODE BOOK

Appendix I
NON-MEDIA Reasons For LEAST EFFECTIVE Program/Survey Section IV
A Code Book

The purpose of the following coding definitions and rules is:

(1) to help the coder understand the distinction between various non-media reasons offered in the open-ended responses of survey section IV;
(2) provide the coder with general rules to use when coding surveys; and
(3) to provide the coder with specific rules for specific situations that may present coding difficulties.

Basically, Media can be thought of as the methods, or technologies, used to transmit messages. This will be dealt with in another codebook.

Non-media reasons include items and issues other than those associated with how the message is presented. Examples of Non-media reasons include:

- Cost associated with the program (economic issues), whether it is free or has a fee
- Participation/attendance
- Conflict with other events and programs - people can only attend one thing at a time
- Fear - someone may not want to attend a program on skin cancer; it might mean having to admit the possibility of ***getting*** skin cancer
- Locating an event right next to the cafeteria might make it convenient for people to participate

The following are categories for non-media reasons for least effective programs:

Non-Media Reasons For Least Effective Programs

1. Economic Issues
2. Ease/Convenience
3. Incentives
4. Success Measured By Participation
5. Novelty
6. Management Support
7. Timing Of Program
8. Instructor Attributes
9. Program Administration
10. Fear
11. Conflicts
12. Readiness
13. Workload
14. Weather
15. Facilities
16. Unknown/Respondent didn't know
17. Other

1. **Economic Issues** are identified by references to money, cost, etc., such phrases as:

   - ▸ most programs free - this had a fee
   - ▸ cost of offering - may have been prohibitive
   - ▸ included a co-pay
   - ▸ company paid entire cost of program
   - ▸ instructor increased price
   - ● (might also be an instructor issue, but emphasis seems to be on money)

2. **Ease/Convenience** reasons are identified by references to making the process or service less than easy or convenient for employees to use. Examples include:

   - ▸ location not convenient
   - ▸ held off-site
   - ▸ activity too challenging
   - ▸ confusing
   - ▸ asked participants to do too much

3. **Incentives** reasons are identified by references to enticements, or the lack thereof, to get people to participate, such as prizes, give-aways, etc. Examples include:

   ▸no intrinsic or extrinsic rewards
   ▸no food
   ▸prizes not valued enough

4. **Success Measured By Participation** reasons are identified by references to reduced participation or poor attendance. Examples include:

   ▸low participation
   ▸no one signed up
   ▸least attended

5. **Novelty** reasons are identified by references to lack of newness of the program or service, uniqueness, or variety of program or program location. Examples include:

   ▸have heard it all before
   ▸same program for 4th year
   ▸employees are sick of health fairs

6. **Management Support** reasons are identified by references to the lack of positive support, backing, or endorsement from management. Examples include:

   ▸lack of support
   ▸not on company time
   - (if this is a reason for lack of program effectiveness, it implies that lack of management support is the issue, not timing of the event, or timing would be listed specifically)

   ▸lack of management understanding
   ▸management did not buy into idea

7. **Timing Of Program** reasons are identified by references to reaching people at a times that are inappropriate or not "timely" for those people. Examples include:

   ▸ conflicted with lunch time
   ▸ held on Saturday
   ▸ lunch time too short for effective programming
   ▸ multiple sessions - too much time commitment
   ▸ work schedules
   ▸ contest too long
   ▸ after work
   • (might also be convenience, but specifically addresses the timing of the program)
   ▸ no set schedule

8. **Instructor Attributes** reasons are identified by references to some characteristic or quality of the program leader or instructor that lead to the lack of effectiveness of the program or event. Examples are:

   ▸ speaker disrespectful of women/minorities
   ▸ lousy instructor
   ▸ speaker tried to sell his own product at event
   ▸ people couldn't relate to the instructor

9. **Program Administration** are identified by references to some deficit in planning or organization of the program or service. Examples include:

   ▸ late planning
   ▸ no way to measure outcomes
   ▸ program didn't fit group
   ▸ administrative nightmare
   ▸ program mis-managed
   ▸ not organized well
   ▸ unable to target correct individuals

10. **Fear** reasons are identified by references to topics or items that cause anxiety, worry, or fear in potential participants. Examples include:

    ▸ employees want to tan, not think about skin cancer
    ▸ too sensitive of a subject
    ▸ are afraid will be disappointed with results
    ▸ stigma
    ▸ recent HIV related death

11. **Conflicts** reasons are identified by references to items that might cause friction or difficulty with participation in a program or event. They include:

    - ▸ people out of town
    - ▸ program conflicted with company's problems
    - ▸ other priorities
    - ▸ other activities going on
    - ▸ layoffs, job terminations

12. **Readiness** reasons are identified by references to items that identify the understanding of the concepts and benefits of a program, as well as simply being personally ready to deal with those understandings. Examples include:

    - ▸ no perception of risk
    - ▸ lack of understanding
    - ▸ don't like to sweat
    - ▸ program not viewed as important
    - ▸ tough group to motivate
    - ▸ little interest
    - ▸ smokers not ready to quit
    - ▸ dull topic
    - ▸ male dominated company
    - ● (implies lack of interest in female health issues)
    - ▸ seemingly boring topic
    - ▸ too general of a topic

13. **Workload** reasons are identified by references to stress and workload. Examples include:

    - ▸ staff overworked
    - ▸ not enough time
    - ▸ no time is a good time
    - ● (could be a timing issue, but emphasis is on "no time is a good time" - this suggests stress)
    - ▸ target audience "too busy"
    - ▸ program seen as another task or responsibility, not a benefit
    - ▸ information saturation of employees

14. **Weather** reasons are identified by references to the weather. Examples include:

    - ▸ nice weather
    - ▸ lousy weather

15. **Facilities** reasons are identified by references to having or not having an adequate or appropriate location to hold the event. Examples include:

    - ▸ hard to get room
    - ▸ lack of proper facilities
    - ▸ limited number of showers
    - ● (for athletic programming)

16. **Unknown/Respondent Didn't Know** reasons are identified by some overt comment by the respondent that they simply don't know, or were unable to identify any specific reason(s) for the lack of effectiveness of the program or service. Examples include:

    - ▸ don't know
    - ▸ unsure

17. **Other** reasons are items that simply don't fit in any other category.

Summary Of NON-MEDIA Reasons For LEAST EFFECTIVE Program

1. **Economic Issues** are identified by references to money, cost, etc.

2. **Ease/Convenience** reasons are identified by references to making the process or service less than easy or convenient for employees to use.

3. **Incentives** reasons are identified by references to enticements, or the lack thereof, to get people to participate, such as prizes, give-aways, etc.

4. **Success Measured By Participation** reasons are identified by references to reduced participation or poor attendance.

5. **Novelty** reasons are identified by references to lack of newness of the program or service, uniqueness, or variety of program or program location.

6. **Management Support** reasons are identified by references to the lack of positive support, backing, or endorsement from management.

7. **Timing Of Program** reasons are identified by references to reaching people at times that are inappropriate or not "timely" for those people.

8. **Instructor Attributes** reasons are identified by references to some characteristic or quality of the program leader or instructor that lead to the lack of effectiveness of the program or event.

9. **Program Administration** are identified by references to some deficit in planning or organization of the program or service.

10. **Fear** reasons are identified by references to topics or items that cause anxiety, worry, or fear in potential participants.

11. **Conflicts** reasons are identified by references to items that might cause friction or difficulty with participation in a program or event.

12. **Readiness** reasons are identified by references to items that identify the understanding of the concepts and benefits of a program, as well as simply being personally ready to deal with those understandings.

13. **Workload** reasons are identified by references to stress and workload.

14. **Weather** reasons are identified by references to the weather.

15. **Facilities** reasons are identified by references to having or not having an adequate or appropriate location to hold the event.

16. **Unknown/Respondent Didn't Know** reasons are identified by some overt comment by the respondent that they simply don't know, or were unable to identify any specific reason(s) for the lack of effectiveness of the program or service.

17. **Other** reasons are items that simply don't fit in any other category.

Coders will test themselves on the following examples:

_____ Employees are tired of health programs

_____ The prizes were really poor

_____ Don't have a fitness center

Answers for previous page examples:

_____ Employees are tired of health programs
- this is a **Novelty** example - you can only get tired of something you have had before - this should be coded as a 5

_____ The prizes were really poor
- this is an **Incentives** example - this should be coded as a 3

_____ Don't have a fitness center
- this is a **Facilities** example - not having a center would limit the success of certain kinds of programs - this should be coded as a 15

APPENDIX J

TYPOLOGY OF HEALTH PROMOTION PROGRAMS IN NORTH AMERICAN CORPORATIONS AND GOVERNMENT AGENCIES

Appendix J
Typology of Health Promotion Programs in North American Corporations and Government Agencies *

General

- general health program or class, any health topic (heart disease, women's issues, fitness, how to select a physician, HIV/AIDS, how secondhand smoke can affect your health, nutrition, etc.)
- safety training/awareness, specific topic (back safety, proper lifting techniques, etc.)
- produce health-related brochures or newsletter
- nutrition counseling
- nutrition education
- weight control
- heart healthy cooking class
- cancer education (general)
- breast cancer education
- breast self-examination
- testicular self-examination
- colo-rectal cancer education
- healthy heart program
- Employee Assistance Program (EAP)
- safety meeting
- cardio-pulmonary resuscitation (CPR)
- smoking cessation
- counseling & referral for substance abuse
- health risk appraisal (questionnaire)
- stress management
- serum lipid modification
- fitness center
- exercise education (general informational class/program)
- swimming instruction
- life-saving (swimming)
- first aid
- emphasis on self-help groups (Alcoholics Anonymous, etc.)
- wellness film/video available to employees

Exercise (activity) programs

- aerobic dance
- aerobic exercise (treadmill, bike, stairclimber, Nordic track, walking, etc.)
- circuit training (weight machines)
- cardiac rehab

Health evaluations

- aerobic capacity (maximum stress treadmill with electrocardiogram)
- aerobic capacity (estimated maximum oxygen uptake)
- flexibility
- body composition
- muscular strength & endurance testing
- vision screening
- glaucoma screening
- low-back clinic/screening
- cancer screening
- breast cancer screening
- colo-rectal cancer screening (hemoccult)
- hypertension (high blood pressure) screening
- cholesterol screening

* **Modified from Parkinson, et al. (1982)**

REFERENCES

References

Academy for Educational Development (1985). Beyond the flipchart: Three decades of development communications. Washington, D.C.

Ainsworth, T. H. (1984). The health promotion concept. In M. P. O'Donnell & T. H. Ainsworth (Eds.), Health promotion in the workplace (pp. 3-9). New York: John Wiley & Sons.

American Heart Association (1989). Heart facts. Dallas.

Anderson, R. C. (1986). Promoting employee health: A guide for worksite wellness. Des Plaines, Illinois: American Society of Safety Engineers.

Anspaugh, D. J., Hamrick, M. H., & Rosato, F. D. (1991). Wellness: Concepts and applications. St. Louis: Mosby - Year Book, Inc.

Atkin, C. K. (1979). Research evidence on mass mediated health communication campaigns. In Dan Nimmo (Ed.), Communication yearbook 3 (pp. 655-668). New Brunswick, New Jersey: International Communication Association.

Baker, H., Ballantine, J. W., & True, J. M. (1949). Transmitting information through management and union channels: Two case studies. Princeton, N.J.: Princeton University, Industrial Relations Section.

Bandura, A. (1977). Social learning theory. Englewood Cliffs, N.J.: Prentice-Hall.

Bandura, A., Adams, N. E., & Beyer, J. (1977). Cognitive processes mediating behavioral change. Journal of Personality and Social Psychology, 35, 125-139.

Banta, H. D., & Luce, B. R. (1983). Assessing the cost-effectiveness of prevention. Journal of Community Health, 9(2), 145-165.

Barnes, C. L., & Given, C. W. (1991). An overview of worksite hypertension control programs for business decision makers. In J. P. Mayer & J. K. David (Eds.), Worksite health promotion: Needs, approaches, and effectiveness (pp. 88-111). Lansing, Michigan: Michigan Department of Public Health.

Barry, P. Z., & DeFriese, G. H. (1990). Primer on evaluation methods: Cost-benefit and cost-effectiveness analysis for health promotion programs. American Journal of Health Promotion, 4(6), 448-452.

Bellicha, T., & McGrath, J. (1990). Mass media approaches to reducing cardiovascular disease risk. Public Health Reports, 105(3), 245-252.

Bernstein, L., Radius, S. M, & McDonald, E. M. (1990). Promoting wellness through passenger protection legislation. Health Values: Achieving High Level Wellness, 14(1) 16-24.

Bertera, R. L. (1990). The effects of workplace health promotion on absenteeism and employment costs in a large industrial population. American Journal of Public Health, 80(9), 1101-1105.

Bhagat, R. S. (1983). Effects of stressful life events on individual performance effectiveness and work adjustment processes within organizational settings: A research model. Academy of Management Review, 8(4), 660-671.

Blozis, K. L., Chen, M. S., & Cooper, M. C. (1988). What blue collar employees want in health promotion programs. Health Values: Achieving High Level Wellness, 12(2), 24-28.

Bly, J. L., & Jones, R. C. (1986). Impact of worksite health promotion on health care costs and utilization: Evaluation of Johnson & Johnson's Live for Life Program. Journal of the American Medical Association, 256(23), 3235-3240.

Boyce, R. W., Jones, G. R., & Hiatt, A. R. (1991). Physical fitness capacity and absenteeism of police officers. Journal of Occupational Medicine, 33(11), 1137-1143.

Brennan, A. J. (1983, April). Worksite health promotion can be cost-effective. Personnel Administrator, pp. 39-42.

Brockett, R. G. (1985). The relationship between self-directed learning readiness and life satisfaction among older adults. Adult Education Quarterly, 35(4), Summer, 210-219.

Brody, B. E. (1988). Employee assistance programs: An historical and literature review. American Journal of Health Promotion, Winter, 13-19.

Burns, T. (1954). The directions of activity and communication in a departmental executive group. Human Relations, 7, 73-97.

Capra, F. (1982). The Turning Point. New York: Simon & Schuster.

Carr, J., & Hellan, R. (1980). Improving corporate performance through employee assistance programs. Business Horizons Journal, 23(2), 57-60.

Catford, J. C. (1983). Positive health indicators - towards a new information base for health promotion. Community Medicine, 5(2), 125-132.

Chen, M. S., Jr. (1988). Wellness in the workplace: Beyond the point of no return. Health Values: Achieving High Level Wellness, 12(1), 16-22.

Chenoweth, D. (1990). Health-promotion programs examined through cost-effectiveness analysis. Occupational Health & Safety, 59(13), 40-41.

Cohen, A., & Murphy, L. (1989). Indicators of health promotion behaviors in the workplace. In S. B. Kar (Ed.), Health Promotion Indicators and Actions (pp. 249-270). New York: Springer Publishing Company, Inc.

Cohen, J. (1969). Statistical Power Analysis for the Behavioral Sciences. New York, N.Y.: Academic Press, Inc.

Cooper, L. (1932). The rhetoric of Aristotle (Trans.). Englewood Cliffs, N.J.: Prentice-Hall, Inc.

Cronkhite, G. (1969). Persuasion: Speech and Behavioral Change. Indianapolis: Bobbs-Merrill Educational Publishing.

Cumming, C. (1986). A review of the impact of nutrition on health and profits and a discussion of successful program elements. American Journal of Health Promotion, Summer, 14-22.

Daft, R. L., & Lengel, R. H. (1984). Information richness: A new approach to managerial behavior and organization design. Research in Organizational Behavior, 6, 191-233.

Dahle, T. L. (1953). An experimental study of methods of communication in business. Unpublished doctoral dissertation, Purdue University, Lafayette, IN.

Dalton, B. A., & Harris, J. S. (1991). A comprehensive approach to corporate health management. Journal of Occupational Medicine, 33(3), 338-348.

DeFriese, G. H., & Barry, P. Z. (1982, July). Questions about costs, benefits, and the effectiveness of health promotion programs. Mobius, 2(3), pp. 142-146.

DiClemente, C. C., & Prochaska, J. O. (1982). Self-change and therapy change of smoking behavior: A comparison of processes of change in cessation and maintenance. Addictive Behaviors 7, pp. 133-142.

Donoghue, S. (1977). The correlation between physical fitness, absenteeism and work performance. Canadian Journal of Public Health, 68, 201-203.

Downie, R.S., Fyfe, C., & Tannahill, A. (1990). Health promotion: Models and values. New York: Oxford University Press.

Eddy, J. M., Eynon, D., Nagy, S., & Paradossi, P. J. (1990). Impact of a physical fitness program in a blue-collar workforce. Health Values: Achieving High Level Wellness, 14(6), 14-23.

Edlin, G., & Golanty, E. (1985). Health & Wellness: Second Edition. United States of America: Jones and Bartlett Publishers, Inc.

Elias, W. S., & Murphy, R. J. (1986). The case for health promotion programs containing health care costs: A review of the literature. The American Journal of Occupational Therapy, 40(11), 759-763.

Emont, S. L., & Cummings, K. M. (1990). Organizational factors affecting participation in a smoking cessation program and abstinence among 68 auto dealerships. American Journal of Health Promotion, 5(2), 107-114.

Erfurt, J. C., & Foote, A. (1990). Maintenance of blood pressure treatment and control after discontinuation of work site follow-up. Journal of Occupational Medicine, 32(6), 513-520.

Erfurt, J. C., Foote, A., & Heirich, M. A. (1991a). The cost-effectiveness of work-site wellness programs for hypertension control, weight loss, and smoking cessation. Journal of Occupational Medicine, 33(9), 962-970.

Erfurt, J. C., Foote, A., & Heirich, M. A. (1991b). Worksite wellness programs: Incremental comparison of screening and referral alone, health education, follow-up counseling, and plant organization. American Journal of Health Promotion, 5(6), 438-448.

Erfurt, J. C., Foote, A., Heirich, M. A., & Gregg, W. (1990). Improving participation in worksite wellness programs: Comparing health education classes, a menu approach, and follow-up counseling. American Journal of Health Promotion, 4(4), 270-278.

Falkenberg, L. E. (1987). Employee fitness programs: Their impact on the employee and the organization. Academy of Management Review, 12(3), 511-522.

Fielding, J. E. (1982). Effectiveness of employee health improvement programs. Journal of Occupational Medicine, 24(11), 907-916.

Fielding, J. E. (1984). Health promotion and disease prevention at the worksite. Annual Review of Public Health, 5, 237-265.

Fielding, J. E. (1986). Banning worksite smoking. American Journal of Public Health, 76(8), 957-959.

Fielding, J. E. (1991). Preventive services as a health management tool: Occupational health physicians and prevention. Journal of Occupational Medicine, 33(3), 314-326.

Flay, B. R., & Burton, D. (1990). Effective mass communication strategies for health campaigns. In C. Atkin & L. Wallack (Eds.), Mass communication and public health (pp. 129-146). Newbury Park, California: Sage Publications, Inc.

Flay, B. R., DiTecco, D., & Schlegel, R. P. (1980). Mass media in health promotion: An analysis using an extended information-processing model. Health Education Quarterly, 7(2), 127-147.

Frederiksen, L. W., Solomon, L. J., & Brehony, K. A. (Eds.). (1984). Marketing health behavior: Principles, techniques, and applications. New York: Plenum Press.

Friedman, M., & Rosenman, R. H. (1974). Type A behavior and your heart. New York: Alfred A. Knopf.

Gettman, L. R. (1986, August). Cost/benefit analysis of a corporate fitness program. Fitness In Business, pp. 11-16.

Green, L. W. (1986). Evaluation model: A framework for a design of rigorous evaluation of efforts in health promotion. American Journal of Health Promotion, Summer, 77-79.

Green, L. W., & Anderson, C. L. (1986). Community Health (fifth edition). St. Louis: Times Mirror/Mosby College Publishing.

Gregg, W., Foote, A., Erfurt, J. C., & Heirich, M. A. (1990). Worksite follow-up and engagement strategies for initiating health risk behavior changes. Health Education Quarterly, 17(4), 445-478.

Gugliemino, L. M. (1977). Development of the self-directed learning readiness scale (Doctoral dissertation, University of Georgia). Dissertation Abstracts International, 38, 6467A.

Guglielmino, P. J., Guglielmino, L. M., & Long, H. B. (1987). Self-directed learning readiness and performance in the workplace: Implications for business, industry, and higher education. Higher Education, 16, 303-217.

Harris, J. S. (1991). Cost effectiveness of health promotion programs. Journal of Occupational Medicine, 33(3), 327-330.

Health and Safety in Small Industry: A Practical Guide For Managers. (1989). Chelsea, Michigan: Lewis Publishers, Inc.

Heirich, M. A., Cameron, V., Erfurt, J. C., Foote, A., & Gregg, W. (1989). Establishing communication networks for health promotion in industrial settings. American Journal of Health Promotion, 4(2), 108-117.

Hendricks, S. E., & Czujko, T. A. (1986, September). Physical fitness and absenteeism: Implications for hospitals. Dimensions, pp. 31-34.

Holzbach, R. L., Piserchia, P. V., McFadden, D. W., Hartwell, T. D., Herrmann, A., & Fielding, J. E. (1990). Effect of a comprehensive health promotion program on employee attitudes. Journal of Occupational Medicine, 32(10), 973-978.

Howard, J., & Mikalachki, A. (1979). Fitness and employee productivity. Canadian Journal of Applied Sport Sciences, 4(3), 191-198.

Hunter, J. E. (1980). Factor analysis. In P. R. Monge & J. N. Cappella (Eds.), Multivariate techniques in human communication research (pp. 229-258). New York: Academic Press.

Hunter, J. E. & Gerbing, D. W. (1982). Unidimensional measurement, second order factor analysis, and causal models. Research in Organizational Behavior, 4, 267-320.

Jablin, F. M. (1984). Assimilating new members into organizations. In R. Bostrom (Ed.), Communication yearbook 8 (pp. 594-626). Beverly Hills: Sage.

Jones, R. C, Bly, J. L., & Richardson, J. E. (1990). A study of a work site health promotion program and absenteeism. Journal of Occupational Medicine, 32(2), 95-99.

Klarreich, P. R. (1987). Health promotion in the workplace: A historical perspective. In S. H. Klarreich, (Ed.), Health and fitness in the workplace: Health education in business organizations (pp. 5-12). New York: Praeger Publishers.

Kotler, P. (1975). "Social marketing" in marketing for nonprofit organizations. Englewood Cliffs, N.J.: Prentice-Hall.

Likert, R. (1961). New Patterns of Management. New York: McGraw-Hill.

Lovato, C. Y., & Green, L. W. (1990). Maintaining employee participation in workplace health promotion programs. Health Education Quarterly, 17(1), 73-88.

Lynch, W. D., Golaszewski, T. J., Clearie, A. F., Snow, D., & Vickery, D. M. (1990). Impact of a facility-based corporate fitness program on the number of absences from work due to illness. Journal of Occupational Medicine, 32(1), 9-12.

Mayer, J. P. (1991). Worksite health promotion: Needs, approaches, and effectiveness. In J. P. Mayer & J. K. David (Eds.), Worksite health promotion: Needs, approaches, and effectiveness (pp. 1-18). Lansing, Michigan: Michigan Department of Public Health.

Mayhew, M. S. (1991). Strategies for promoting safety and preventing injury. Nursing Clinics of North America, 26(4), 885.

McClary, C. L., Zahrt, L., Montgomery, J. H., Walker, H., Jr., & Petry, J. R. (1985). Wellness: The mode in the new paradigm. Health Values: Achieving High Level Wellness, 9(6), 8-12.

McGuire, W. J. (1981). Behavioral medicine, public health and communication theories. Health Education, May/June, 8-13.

McNight, J. (1982). Health in the post medical era. Perspectives, p. 13.

McPhee, R. D. (1988). Vertical communication chains. Management Communication Quarterly, 1(4), 455-493.

Means, R. K. (1962). A history of health education in the United States. Philadelphia: Lea & Febiger.

Meyer, P. (1990). News media responsiveness to public health. In C. Atkin & L. Wallack (Eds.), Mass communication and public health (pp. 52-59). Newbury Park, California: Sage Publications, Inc.

Miller, V. D. (1988). A quasi-experimental study of newcomer's information seeking behaviors during organizational encounter. University of Texas. An unpublished dissertation.

Morley, D. D., & Walker, K. B. (1987). The role of importance, novelty and plausibility in producing belief change. Communication Monographs, 54, 436-442.

Naidoff, C. (1992). Do you mind if I smoke? Employers answering "Yes". Occupational Health & Safety, 61(2), 22, 37.

Nutbeam, D. (1986). Health promotion glossary. Health Promotion, 1(1), 113-127.

Parkinson, R. S., & Associates (1982). Managing health promotion in the workplace: Guidelines for implementation and evaluation. Palo Alto, California: Mayfield Publishing Company.

Parkinson, R. S., & Eriksen, M. P. (1987). Workplace smoking control in the United States: Economic, health, legal, programmatic, and policy issues. In S. H. Klarreich (Ed.), Health and fitness in the workplace: Health education in business organizations (pp. 355-372). New York: Praeger Publishers.

Pelletier, K. R. (1991). A review and analysis of the health and cost-effective outcome studies of comprehensive health promotion and disease prevention programs. American Journal of Health Promotion, 5(4), 311-315.

Peterson, D., & Jenkins, J. (1948). Communication between management and workers. Journal of Applied Psychology, 32, 71-80.

Petty, R. E., Cacioppo, J. T. (1981). Attitudes and persuasion: Classic and contemporary approaches. Dubuque, Iowa: Wm. C. Brown Company Publishers.

Philips, B. U. (1988). Editorial: Cost containment and health promotion. Health Values: Achieving High Level Wellness, 12(5), 30-31.

Publication Manual of the American Psychological Association, Third Edition. (1983). Washington, D.C. American Psychological Association.

Rawson, A. (1987). Wellness: Make it happen through effective communications. In S. H. Klarreich (Ed.), Health and fitness in the workplace: Health education in business organizations (pp. 71-80). New York: Praeger Publishers.

Redding, W. C. (1972). Communication within the organization: An interpretive review of theory and research. New York: Industrial Communication Council.

Reed, G. B. (1991). On-site health-monitoring program keeps "lifestyle" diseases in check. Occupational Health & Safety, October, 56-62.

Rogers, E. M. (1983). Diffusion of innovations (third edition). New York: The Free Press, A Division of Macmillan Publishing, Co., Inc.

Rothman, J. (1979). Three models of community organization practice, their mixing and phasing. In F.M. Cox, J.L. Erlich, J. Rothman, & J.E. Tropman (Eds.), Strategies of community organization. Illinois: Peacock Publishers.

Schwartz, R. M., & Rollins, P. L. (1985). Measuring the cost benefit of wellness strategies. Business and Health, 2(10), 24-26.

Scott, W. A. (1955). Reliability of content analysis: The case of nominal scale coding. Public Opinion Quarterly, 19, Fall, 321-325.

Shephard, R. J., Corey, P., Renzland, P., & Cox, M., (1983). The impact of changes in fitness and lifestyle upon health care utilization. Canadian Journal of Public Health, 74, 51-54.

Shephard, R. J., Cox, M., & Corey, P. (1981). Fitness program participation: Its effect on worker performance. Journal of Occupational Medicine, 23(5), 359-363.

Simon, H. (1976). Administrative Behavior (3rd edition). New York: Free Press.

Sitkin, S. B., Sutcliffe, K. M., & Barrios-Choplin, J. R. (1992). A dual-capacity model of communication media choice in organizations. Human Communication Research, 18(4), 563-598.

Smircich, L., (1983). Concepts of culture and organizational analysis. Administrative Science Quarterly, 28, 339-358.

Smith, R. B. (1990). Work-place stretching programs reduce costly accidents, injuries. Occupational Health & Safety, 59(3), 24-25.

Solomon, D. S., & Maccoby, N. (1984). Communication as a model for health enhancement. In J. D. Matarazzo, Sharlene. M. Weiss, J. A. Herd, N. E. Miller, & Stephen. M. Weiss (Eds.), Behavioral Health: A Handbook of Health Enhancement and Disease Prevention (pp. 209-221). New York: John Wiley & Sons.

Stachnik, T., & Stoffelmayr, B. (1983). Worksite smoking cessation programs: A potential for national impact. American Journal of Public Health, 73(12), 1395-1396.

Stachtchenko, S., & Jenicek, M. (1990). Conceptual differences between prevention and health promotion: Research implications for community health programs. Canadian Journal of Public Health, 81(1), 53-59.

Standard Industrial Classification Manual. (1987). Executive Office of the President, Office of Management and Budget.

Steinfield, C. W., & Fulk, J. (1986, August). Task demands and managers' use of communication media: An information processing view. Paper presented at the annual meeting of the Academy of Management, Chicago.

Stohl, C., & Redding, W. C. (1987). Messages and message exchange processes. In F. M. Jablin, L. L. Putnam, K. H. Roberts, & L. W. Porter (Eds.), Handbook of organizational communication: An interdisciplinary perspective (pp. 451-502). Beverly Hills, California: Sage Publications, Inc.

Super, K. E. (1987, January 2). Wellness plans trying incentives to reduce company healthcare costs. Modern Healthcare, pp. 84-5.

Tannahill, A. (1985a). Reclassifying prevention. Public Health, London, 99, 364-366.

Tannahill, A. (1985b). What is health promotion?. Health Education Journal, 44(4), 167-168.

Terborg, J. R. (1986). Health promotion at the worksite: A research challenge for personnel and human resources management. In K.M. Rowland & G.R. Ferris (Eds.), Research in Personnel and Human Resources Management, 4, 225-267.

Terry, P. E. (1990). Employers scrutinizing health plans for value and impact on employees. Occupational Health & Safety, 59(3), 45-51.

Tompkins, P. K. (1984). The functions of human communication in organizations. In C. Arnold & J. Bowers (Eds.), Organizational communication: Traditional themes and new directions (pp. 179-210). Beverly Hills: Sage.

Tucker, L. A., Aldana, S. G., & Friedman, G. M. (1990). Cardiovascular fitness and absenteeism in 8,301 employed adults. American Journal of Health Promotion, 5(2), 140-145.

Vass, M., Gatlin, E., & Walsh-Allis, G. (1988, June). Corporate culture: Health promotion should address the special needs of employee dependents. Business and Health. p. 53.

Vojtecky, M. A. (1987). Worker education and training in health and safety in the United States. In S. H. Klarreich (Ed.), Health and fitness in the workplace: Health education in business organizations (pp. 13-28). New York: Praeger Publishers.

Walker, V., & Evans, W. (1987). Ready, set, go: Wellness movement focuses business' efforts on improved worker fitness, health. Occupational Health & Safety, 56(7), 12-20, 32.

Waller, P. R., Crow, C., Sands, D., & Becker, H. (1988). Health related attitudes and health promoting behaviors: Differences between health fair attenders and a community comparison group. American Journal of Health Promotion, 3(1), 17-24, 32.

Wilson, M. G. (1990). Factors associated with, issues related to, and suggestions for increasing participation in workplace health promotion programs. Health Values: Achieving High Level Wellness, 14(4), 29-36.

Witherspoon, D., & Wilson, B. R. A. (1990). Evaluating research in worksite health promotion. Health Values: Achieving High Level Wellness, 14(4), 22-28.

Yeater, D. C., Fink, W., & West-Barker, P. (1985, April). Communicating wellness to employees. Business and Health, pp. 37-40.

Yoder, L. E., Jones, S. L., & Jones, P. K. (1985). The association between health care behavior and attitudes. Health Values: Achieving High Level Wellness, 9(4), 24-31.