

A DESCRIPTIVE ANALYSIS OF CORPORATE
HEALTH PROMOTION ACTIVITY EVALUATIONS

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Evaluation has been recognized as a basic component of health promotion program design; however, its implementation into ongoing worksite health promotion activities has been questioned. This study was conducted to determine what types of evaluation, if any, were conducted by health promotion professionals employed in worksite health promotion programs. A survey tool was developed specifically for this study and mailed to 587 members of the Association for Fitness in Business, who were listed in the 1990-1991 edition of the directory of members, and who were identified as corporate in-house professional members. A total of 221 (38%) usable responses to the questionnaire was received. Formal evaluations of the health promotion activities were conducted by 146 (67%) survey participants. Evaluation activities were used by the survey participants to review and/or revise the health promotion activities, to determine strengths and weaknesses of the activities, and to improve the effects of

the health promotion activities. Reasons evaluations were not conducted included a lack of personnel, a lack of financial resources, a lack of time to conduct the evaluation, and a lack of interest by supervisors/executives.

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CHAPTER I
INTRODUCTION TO THE STUDY

The stages in the development of health promotion programs in Opatz's (1985) model were identified as: planning, assessment, implementation, and evaluation. Components to be taken into consideration in the implementation of a comprehensive wellness program included physical, emotional, and social needs; behavioral change needs; and educational and motivational needs. Opatz promoted the use of formative and summative evaluation methods, and he believed that program evaluators needed to consider clarity, validity, reliability, objectivity, credibility, and effectiveness when designing evaluation studies. Opatz stressed "...the design of the evaluation process must occur in the planning phase...for the evaluation to meet its intended goal" (1985, p. 69). He also stated, "Periodic, formal considerations of the impact and effectiveness of health promotion scheduled into the regular work calendar..." would prevent the program director from forgetting program evaluation (Opatz, 1985, p. 73).

As a student of evaluation techniques and a professional with evaluation responsibilities, it has been

the integrated experience of this researcher that evaluation may include any or all of the following characteristics which distinguish evaluation from investigative research. Evaluation describes the results of programs. It delineates the progress towards goals, clarifies the impact of planned actions on health behavior, and tests hypotheses through rigorous inquiry. Evaluation assesses the levels of satisfaction with a program or product.

Evaluation also measures participation and monitors the activities of a program. It identifies methods and techniques utilized and their impact on program activities, and recounts behavior and performance generated from activities. Evaluation ascertains the frequency and volume of activities, and assesses the strengths and weaknesses of program activities.

Evaluation delineates the outcomes of program activities. It depicts the effects and consequences of activities, and communicates the accomplishments of a program. Evaluation provides a foundation for future planning and development of programs.

The evaluation of programs and activities provides positive information with which to systematically monitor, examine, and make judgments to improve health promotion programs. As such, evaluation is acknowledged as a basic component of program design and implementation (Opatz, 1985,

p. 32). What contributes to the execution of formal evaluation activities? If evaluation is not undertaken, whether in a random or routine fashion, what prevents the evaluation from occurring? Are evaluation results utilized in worksite health promotion programs?

Statement of the Problem

The problem of the study was to determine what types of evaluation, if any, were conducted by health promotion professionals who were employed in corporations, and who were listed at addresses in the United States in the most recent edition of the directory of members of the Association for Fitness in Business ([AFB], 1990). The study was conducted from December 1991 through February 1992. The educational preparation of the health promotion professionals who participated in the study, the sizes (number of employees) and types of business conducted at their worksites, and the types of health promotion activities that they evaluated were studied.

Purpose of the Study

The purpose of the study was to conduct an exploratory, baseline descriptive analysis of health promotion activity evaluations conducted in corporate worksites. A second purpose was to develop a survey instrument to collect data

regarding the types of health promotion activities provided, and to assess the evaluation activities conducted at the worksite.

Research Questions

The following questions were answered by the study:

1. What health promotion activities were provided in corporate worksites?
2. To what extent were process and/or outcome evaluations performed for worksite health promotion activities?
3. Were evaluations related to the goals and/or objectives of the health promotion activities?
4. For what reasons were evaluations of health promotion activities conducted or not conducted?
5. What evaluation methods were used by worksite health promotion professionals?
6. Were the quality, appropriateness, and/or effectiveness of the health promotion activities evaluated?
7. What were the similarities and differences among evaluations conducted in the various worksite settings?
8. What were the similarities and differences in the educational preparation of health promotion professionals in various worksite settings?

Definition of Terms

For the purposes of this study, the following terms were defined:

1. Corporation. "A body representing employers and employees of an industry and responsible for its direction" (Wyld & Partridge, 1960, p. 290).

2. Evaluation. "The comparison of a standard of expectations with the products produced" (Dignan, 1986, p. 120). "The comparison of an object of interest against a standard of acceptability" (Green, 1986, p.77).

3. Health Promotion Activities. Any actions or activities carried out to advance interest in a state of bodily or mental well-being (Wyld & Partridge, 1960).

Assumptions

The following were assumed for the study:

1. Health promotion professionals are knowledgeable about evaluation methodology and rationale.

2. The job responsibilities of health promotion professionals include an evaluation component.

3. It is possible to evaluate worksite health promotion activities.

4. The evaluation of worksite health promotion activities could provide measurable information which could

be used to assess the quality, appropriateness, and effectiveness of the activities.

Limitations

The study was subject to the following limitations:

1. The presence or involvement of the health promotion professional's immediate supervising manager may have had a moderating effect on evaluations conducted and/or methods utilized.

2. The results of the evaluation may have been impacted by the unique health profession in which the respondent had received formal training.

Delimitations

The study was subject to the following delimitations:

1. Only health promotion professionals who were listed in the Corporate In-House Occupation Index of the 1990-1991 AFB Membership Directory (AFB, 1990) at addresses in the United States were included in the study.

2. The health promotion professionals who were included in the study sample were those who returned completed questionnaires by March 1, 1992, thereby indicating their willingness to participate.

3. Only one health promotion professional from each corporate worksite was included in the sample.

4. The only personal variable studied was the highest educational degree earned by the health promotion manager.

Background and Significance

Evaluation activities conducted by health promotion professionals are inconsistent. As noted in the National Survey of Worksite Health Promotion Programs (U.S. Department of Health and Human Services [USDHHS], 1987), the methods of evaluation which are implemented do not appraise the structure, the process, or the outcomes of the health promotion activities in any routine or systematic manner. The quality and the appropriateness of the activities implemented are not evaluated, and there is little linkage between evaluation activities and program goals.

The evaluation of health promotion activities can delineate their status, progress, and effects. The evaluation of health promotion activities is important for the determination of their financial impact and goal achievement, and to establish the justification for continued program financing.

This baseline, exploratory, descriptive study will provide relevant information to managers of worksite health promotion programs, to institutions of higher education which provide training in worksite health promotion, and to

practitioners who advocate the professionalization of
worksite health promotion.

CHAPTER II

REVIEW OF LITERATURE

The scope and nature of literature reviewed for this baseline, descriptive study included works regarding evaluation theory and practices, the nature of worksite health promotion programs, and the evaluation of worksite health promotion programs. Literature which pertained to more than one of these categories is discussed in the section herein that is most representative of its basic content.

Overview

The purposes of the review of literature for this study were numerous. Literature was reviewed to establish the need for the study, to lay the foundation for the context of the research questions and the variables to be studied, to establish the need for the study, and to prevent duplication of previous studies. To accomplish these goals, a wide range of literature relating to evaluation, worksite health promotion, and the evaluation of worksite health promotion was examined and analyzed.

In the field of evaluation, the following themes were

examined: the function, purpose, and role of evaluation; the types and methods of evaluation design; the components of an evaluation plan; standards for evaluation; the difference between evaluation and research; and guidelines for presenting the evaluation report. Subject matter for the review of literature related to worksite health promotion activities included: the rationale and purpose of worksite health promotion activities; the design and development of worksite health promotion activities; the needs and objectives of these activities; the impact and limitations of worksite health promotion activities; and the management of worksite health promotion programs.

Literature reviewed regarding the evaluation of worksite health promotion activities focused on: the reasons and purposes of worksite health promotion evaluation; the theoretical framework for worksite health promotion evaluation; the purposes of databases from which to evaluate the worksite health promotion activities; the limitations of the evaluation of worksite health promotion activities; and the methodology utilized to evaluate worksite health promotion activities. The financial impact and the effectiveness of worksite health promotion activities related to absenteeism, productivity, physical fitness, hypertension, and health care costs were examined.

Evaluation Theory and Practices

In this section, literature was reviewed which represents the various aspects of evaluation including evaluation design, evaluation methodology, and evaluation theory. Only literature published during the past 25 years was reviewed for this section.

Aquilina (1990) stressed the importance of a corporate information strategy to promote optimal data analysis, and identified the following steps to a data analysis strategy: determining priority questions that must be asked, determining how to access the data, and determining the need for an outside vendor to assist with the data analysis. In his article, Aquilina utilized this process to develop a data analysis strategy to manage worksite health care costs. The ability to evaluate and manage health care costs was related to the planned data analysis strategy.

Fitz-Gibbon and Morris (1978) discussed the following basic types of program evaluation design in their book of the same title: use of control or experimental groups, use of pre-tests and post-tests, complex analysis, and time series designs. The authors stated that the evaluator's task was to "...find the design that provides the most credible information in the situation at hand, and then try to follow directions as faithfully as possible for its implementation" (Fitz-Gibbon & Morris, 1978, p. 10). They

also emphasized that, "...information from a well designed study is hard to refute" (Fitz-Gibbon & Morris, 1978, p. 11).

Stakeholder-based evaluation was the topic of the book edited by Bryk (1983). The book emphasized evaluation design from the stakeholder's perspective, or, in other words, from the perspective of "...the people who make decisions about the program" (Bryk, 1983, p. 7). "The justification for stakeholder involvement relies heavily on the idea that it can increase the use of evaluation results in decision making" (Bryk, 1983, p. 9). The shortcomings of this type of evaluation were discussed and included a narrow focus of evaluation, irrelevant use of data, and a biased perspective for the evaluation.

"One of the program evaluation's major responsibilities is keeping track of how the program looks in actual practice" (Morris & Fitz-Gibbon, 1978b, p. 7). Morris and Fitz-Gibbon stated that, "...you cannot interpret a program's results without knowing about its implementation" (1978b, p. 10). The methods of data collection, the validity and reliability of implementation measures, the use of back-up data, and the outline for implementation reports were discussed in their book on how to measure program implementation.

Assessing program environments, checking congruence

between program and organizational environment, and the central role played by program personnel in generating program environments were discussed by Conrad and Roberts-Gray (1988). They defined a program environment as "...a system of interrelated factors such as economic constraints, physical resources, available services, staff characteristics, ownership, size, and staffing" (Conrad & Roberts-Gray, 1988, p. 13). The authors stressed the dynamic state of program environments as a significant theme in their book. One of the most important factors in attempts to account for variance in the environment relative to program outcome and to "...distinguish successful programs from unsuccessful programs..." was identified as personnel variables (Conrad & Roberts-Gray, 1988, p. 84).

The components required for an appropriate evaluation, from design through post-evaluation actions, were presented and explained in the article, "Methodological Challenges to Program Evaluation" (Murphy, Gasparotto, & Opatz, 1987). The evaluator's role, the use of the evaluation by the organization, and potential conflicts of interest with the use of the evaluation by the recipients were discussed. Cost-benefit and cost-effectiveness evaluations, and the financial data generated from each method, were examined thoroughly as they pertained to health promotion efforts.

Grant (1978) identified three purposes for monitoring

ongoing programs as follows: "...to ensure that agencies comply with (sponsor's) requirements, to obtain information about the program functioning on which to base future program decisions, and to stimulate improvement" (Grant, 1978, p. 46). In his description of the similarities and differences between monitoring and program evaluation, Grant noted that "...monitoring adds a dimension to the process of evaluating programs" (1978, p. viii).

In his book on the client perspective in evaluation, Nowakowski (1987) discussed the collaboration between the client and evaluator, the client's expectations for useful evaluations, and client concerns in evaluation studies. "Ultimately, clients determine whether and how to use evaluation reports" (Nowakowski, 1987, p. 1). Techniques used to prevent problems with the evaluation which occur between the client and the evaluator were presented. One technique to prevent problems between the involved parties was the partnership evaluation. Nowakowski discussed several examples of what clients expected from evaluations, including: objectivity, expertise, recommendations and a plan of action, credible sources of data, and sensitivity to client's needs.

The use of evaluation to justify work-welfare programs, examination of racial discrimination with fair housing audits, and mental health program evaluation and needs

assessment were presented by Bloom, Corday, and Light (1988). In their discussion of the two roles of evaluation studies, the authors noted that evaluation studies "...answer some questions and serve as a springboard for new inquiry" (Bloom et al., 1988, p. 5). Bloom and his associates presented several significant concepts relative to evaluation. For example, they stated that, "treatments [by programs] vary considerably; looking inside the treatment will help to understand why programs work or not" (Bloom et al., 1988, p. 3). Also, the "effects of treatments are likely to vary substantially across different target groups and locales" (p. 4). The continued need for the development and implementation of well executed evaluations was discussed, as was the impact of such evaluations "...to our cumulative understanding of program theory" (Bloom et al., 1988, p. 5).

Assuring data quality, estimating effect size, and decision analysis were topics presented by Wortman (1981) in reference to corporate evaluation studies. Data quality, data collection and processing, structured procedures, competent personnel, and quality control were identified as the major components of a management plan to ensure accuracy and completeness of data. "Inadequate planning to assure data quality may lead to severe data management problems" (Wortman, 1981, p. 23) and thus impact the results of the

study. At the other end of the study, "researchers must temper any estimation of the magnitude of effects demonstrated with an accurate assessment of the strength, integrity, and conceptual relevance of the treatment" (Wortman, 1981, p. 84).

Perloff and Perloff (1980) presented topics such as values and ethics in evaluation, evaluation as a change agent, and six social program evaluation models in their book. The six evaluation models presented were: social process audit, experimental/quasi-experimental designs, goal-free evaluation, system evaluation, cost-benefit analysis, and accountability program evaluation. Basic ethical principles related to human interaction were discussed: beneficence, respect, and justice. Role conflicts which may face evaluators could arise when "...the evaluator may be the program administrator, [or when]....evaluators are called upon to act as advocates in adversary hearings" (Perloff & Perloff, 1980, p. 57). The evaluator often is called upon to be an objective scientist in the review of social programs. One of the most important points discussed in the book was that "the hallmark of being ethical in program evaluation research is planning so that the context of evaluation does not produce ethical dilemmas" (Perloff & Perloff, 1980, p. 58). The evaluator is

responsible for recognizing potential areas of value/ethical conflict, and then for planning to prevent the conflict.

Past and present program evaluation methods, the role of evaluation research, politics and ethics related to evaluation, and evaluation through social ecology were discussed in the Handbook of Evaluation Research (Struening & Brewer, 1983). "Program effectiveness evaluation involves assessment of effects of the program in its generic sense, in comparison to alternative programs or program strategies" (Struening & Brewer, 1983, p. 19). One of the required conditions for effectiveness evaluation is "...that the goals and objectives of the program be sufficiently specified to allow for definable outcomes" (Streuning & Brewer, 1983, p. 18). In a discussion of the differences in the roles of evaluation research and conventional research, the authors concluded that the main difference is the evaluation researcher's "...explicit attempt to make value judgments, [and its]...determining what is most effective, valuable, desirable, or useful" (Streuning & Brewer, 1983, p. 210).

In his book on naturalistic evaluation, Williams (1986) included discussions of naturalistic methods and ethics, methods for combining quantitative and qualitative approaches, authenticity in naturalistic evaluation, and concerns regarding the use of this method. Naturalistic

evaluation was defined as "...a process by which evaluators seek to know and understand an evaluand, and then to present their knowledge and understanding to others" (Williams, 1986, p. 3). Williams explained that "naturalistic evaluation in practice aims at understanding, at extending experience, and at increasing a conviction in that which is known" (1986, p. 3). Williams indicated that naturalistic evaluation generally is recognized as equitable to qualitative assessments, and he specified the following criteria to test the rigor and trustworthiness of naturalistic evaluations: credibility, transferability, dependability, and confirmability.

Ideological dimensions of evaluations, organization of evaluation efforts, management of evaluation functions, and resource allocation evaluations were presented by Woolridge (1981) in the Evaluation of Complex Systems. Woolridge identified general systems theory as a conceptual model which would assist in the evaluation of human service delivery systems, and stated that, as such, "evaluation must be linked to both the planning process, which provides objectives, schedules, and policies, and to the ideological basis of the organization, which provides the values and principles that....form the organization's review plan" (Woolridge, 1981, p. 27). The classical approach to evaluation focuses on input, process, and outcome

evaluations. "Process evaluation can yield information that helps to establish the degree of program influence on observed outcomes, and can also identify unintended side effects of the program" (Woolridge, 1981, p. 52). Outcome evaluations help to "...determine whether the program achieved its stated goals" (p. 52).

Bickman (1987) discussed the functions of program theory, measuring program philosophy, and implementation theory in relation to their implications for evaluators in Using Program Theory in Evaluation. Bickman stated, "many programs are not developed with a strong and coherent theory, instead the theory underlying the program must often be developed by the program evaluator in an attempt to perform some of the measurement and design tasks" (1987, p. 16). Many studies, therefore, do not include an evaluation of the theory inherent in the program. According to Bickman, "program theory should be used by evaluators to guide the development of measuring instruments to assess what program was delivered" (1987, p. 60). In contrast, implementation theory concerns itself with "...variables governing the delivery mechanism itself; it helps illuminate why a program is or is not being delivered accurately" (Bickman, 1987, p. 60). The four problems that inhibit the uses of evaluation were identified as: the lack of definition of the problem, expected outcome, or impact; the

lack of testable assumptions linking program components and results; the lack of agreement "...on evaluation priorities and uses of evaluation; [and] the inability or unwillingness to act on the basis of evaluation information" (Bickman, 1987, p. 77).

In Federal Efforts to Develop New Evaluation Methods Smith (1981a) was concerned with Service Delivery Assessments (SDAs), model evaluation, and evaluation instituted in several governmental efforts. Guidelines for "...use in auditing efficiency, reviewing program results, and conducting impact evaluations" have been published by the General Accounting Office (Smith, 1981a, p. 41). The SDA approach utilized by the government was analyzed and its impact on improving information and management of governmental operations was stressed. According to Smith, SDAs meet "...six criteria for evaluation effectiveness: relevance, importance, scope, credibility, timeliness, and pervasiveness; [and they are]...useful because they are relevant to the needs of decision makers" (1981a, p. 21).

In Field Assessments of Innovative Evaluation Methods, Smith (1982) stated that:

The ultimate purpose of method assessments is to use information in making reasoned selections of methods so that there is maximum compatibility among the nature of the method, the purpose of the evaluation study, and

the context within which the evaluation is to take place. (p. 4)

Smith (1982) presented analytic and synthetic approaches to method development, criteria for the selection of methods to review, and criteria for the review of evaluation methods. Approaches to test evaluation methods were identified, and included: collective discussions, critiques, feasibility analysis, pilot study, and application study.

In the Logic of Evaluation, Scrivner (1980) presented the who, what, and why of evaluation. Evaluation was described as broad in scope, including an analysis of the "...program, product, personnel, proposal, or plans....[and their] components or aspects" (Scrivner, 1980, pp. 4-5).

Scrivner answered the question:

Why perform evaluations? Evaluations may be done to provide feedback to people who are trying to improve something, to provide information to decision makers who are wondering whether to fund something, or because someone wants to know the worth of something.

(1980, pp. 6-7)

Scrivner developed a key evaluation checklist, which included: overall description, client identification, delivery system, needs and values of the impacted population, the effects produced, and the content of the evaluation report.

According to Schulberg and Jerrell (1979), "program evaluation has come to be an integral component of management functions and responsibilities" (p. 7). Schulberg and Jerrell also presented the managerial use of evaluation findings, management perspective on program evaluation, and the evaluator-manager relationship. The utilization of evaluation was affected by "...the quality of information provided, the amount of relevant information provided, and the organizational stress created in implementation methodology" (Schulberg & Jerrell, 1979, p. 140).

Monitoring cost-benefit analysis, identifying and valuing benefits and costs, and valuation in context were discussed by Thompson (1980) in his book, Benefit Cost Analysis for Program Evaluation. He also clarified the many roles of cost-benefit analysis in the evaluation of programs. A methodology for cost-benefit analysis and estimations of opportunity costs were presented via an eight step process. Cost-effectiveness and cost-benefit methods were compared and contrasted in relation to program evaluation.

Weiss (1972) discussed the purposes of evaluation, summative and formative evaluation methods, data collection measurements, and design of the evaluation activity. The basic "...purpose of evaluation research is to measure the

with: objects and systems of physical nature; performance characteristics of people at work; psychological concepts; and social and cultural attributes" (Murdick, 1969, p. 41). The various types of research described by Murdick included: needs research, descriptive research, forecasting and planning, program development, operations research, and model building. The typical business research report "...generally followed this sequence of ideas: statement of problem, conclusions and recommendations, description of procedure, and results and analysis of procedure" (Murdick, 1969, p. 79).

Love (1983) discussed the integration of program evaluation and management, influences on internal evaluation, and program utilization in Developing Effective Internal Evaluation. "The internal evaluation process is essential for survival, because it provides the information crucial for program improvement, accountability, and planned change under adverse circumstances" (Love, 1983, p. 5). Variables that affect the success of internal evaluation in organizations are "...characterized as uncontrolled, partially controllable, and controlled" (Love, 1983, p. 9). Love identified "the four major factors associated with organizational support for internal evaluation [as] policy, funding, skilled staff, and time frame" (1983, p. 10). In his description of the shifting meaning of program

evaluation as a central theme, Love stated that "evaluation objectives and reports must become relevant to managers....and client groups and must be responsive to managers' information needs" (p. 7).

Mark and Shotland (1987) stated that "multiple methods [of evaluation] usefully address different but complimentary questions, and by doing so, increase the interpretability of the results...and reduce inappropriate certainty" (p. 1). Mark and Shotland also discussed the combination of process and outcome evaluations, the combination of qualitative and quantitative evaluations, and how to draw inferences from multiple evaluation methods. Models of multiple methods were presented, including: triangulation, bracketing, complimentary purposes, enhancing interpretability, and levels of analysis. The benefits of outcome and process evaluation were clarified. They stated that the benefits of process evaluation included an explanation of "...why a given treatment produces the effects it does," (p. 24), and how process evaluation aids the evaluation of program outcomes.

In Teaching of Evaluation Across the Disciplines, Davis (1986) discussed the teaching of evaluation in education, management, health settings, psychology, and interdisciplinary settings.

The extent to which evaluation is considered central to

the decision making process (by disciplines) is a function of three things: the evaluators access to key decision makers, the evaluators ability to translate the research results into language the potential user can understand, and the propensity of the decision maker to view evaluation results as an important source of information. (p. 30)

Management functions that incorporated a thread of evaluation included: organizational design, planning, budgeting, personnel administration, and appraising the work environment. Typical topics in an interdisciplinary evaluation course included concerns for the above, as well as "...goal setting methods, needs assessment, politics and context evaluation, impact evaluation, efficiency assessment, project budgeting, and evaluation research" (Davis, 1986, p. 62).

In the 1978 revision of his book, Utilization Focused Evaluation, Patton included such topics as: utilization of evaluation in practice, deciding what to evaluate, appropriate methods of evaluation, and the meanings of evaluation data. The author's central focus was the use of evaluations and their results. According to Patton, "evaluation is an ongoing process examining different questions at different times" (1978, p. 165). Halcom (cited in Patton, 1978) stressed that "five key variables are

absolutely central to evaluation use. They are, in order of importance: people, people, people, people, and people" (p. 40). The uniqueness of utilization-focused evaluation was explained as the evaluation approach in which "the evaluator does alone carry the burden for making choices about the nature, purpose, content, and methods of evaluation. These decisions are shared by an identifiable and organized group of intended users" (Patton, 1978, p. 53). Patton also indicated that the purpose of utilization-focused data collection and analysis is to use results to improve programs and decisions.

In 1982, Patton wrote Practical Evaluation, in which he discussed evaluating with and without goals, thoughtful evaluation methods decisions, practical data collections, types of evaluation, and practical evaluation methods. The book explored "...the practical implications of conducting evaluations that exhibit four fundamentals of excellence: utility, feasibility, propriety, and accuracy" (Patton, 1982, p. 9). Professional standards for the conduct of evaluation practices "...explicitly include the mandate to be practical" (p. 15). "The mandate to be practical applied to two different aspects of evaluation: the evaluation process and the content that results from that process" (p. 23). Patton consistently emphasized that "practical

evaluation processes are most likely to generate practical and useful evaluation findings" (1982, p. 25).

In Creative Evaluation, Patton (1987) discussed creative evaluation themes, evaluation metaphors, evaluation simulation, and 10 commandments of evaluation. The author stated that "over time, program evaluation has emerged as significantly different from basic research. Research is aimed at truth. Evaluation is aimed at action" (Patton, 1987, p. 16). Patton's basic philosophy regarding creative evaluation was that "there is no one best way to conduct an evaluation. Every evaluation situation is unique" (1987, p. 19). The evaluator must recognize the situation and react/adapt to it in order to create an appropriate evaluation plan. "Creative evaluation opens up the possibility of defining situations as new and looking for new solutions....so that we need not automatically become limited by and victims of our past experiences" (Patton, 1987, p. 29).

Patton (1980) discussed the nature of qualitative data, the strategy of qualitative methods, situations in which qualitative methods were appropriate, truth in evaluation research, and qualitative analysis of interpretation. Process evaluations are greatly aided by qualitative methods.

Qualitative data consists of detailed descriptions of

situations or events, direct quotations from people about their experiences, and excerpts from documents....Qualitative measures describe the experiences of people in depth. (Patton 1980, p. 22)

In describing the inductive nature of qualitative research, Patton indicated that it starts with specific observations which build toward general patterns.

According to Rossi and Freeman (1982), "evaluations are undertaken for different reasons: to judge the worth of ongoing programs, to assess the utility of innovative programs, to increase the effectiveness of program management, and to meet various accountability requirements" (p. 15). Rossi and Freeman discussed the reasons for evaluation, evaluation politics, tailoring evaluations, program monitoring, and strategies for impact assessment; and compared the three major classes of evaluation research. The authors stressed that "...unless programs have a demonstrable impact, it is hard to defend their implementation and continuation" (Rossi & Freeman, 1982, p. 37). Evaluations must be tailored to each unique situation, and to the stage of development at which the intervention is focused. The authors also indicated that "the evaluator's undertaking and maximal involvement in fitting evaluations to programs is essential to the successful implementation of systematic evaluations" (Rossi

& Freeman, 1982, p. 87). Rossi and Freeman identified the following stakeholder groups as being interested in the results of evaluations: policy makers, program sponsors, program management, program competitors, and evaluation sponsors.

In Standards for Evaluation Practice, Rossi (1982) included a discussion of the development of professional program evaluation standards by the Evaluation Research Society (ERS). Six sections of evaluation standards were developed to guide professionals in the conduct of evaluation. "The central evaluation design....should be fully described and justified, and the details of the sampling methodology should be described" (ERS, cited in Rossi, 1982, p. 13). Other standards were developed for the following categories: formulation and negotiation of evaluation, data collection and preparation, data analysis and interpretation, utilization of evaluations, and communication and disclosure of evaluation findings.

Conner's (1981) book, Methodological Advances in Evaluation Research, focused on "...the scientific understanding of how and why particular interventions work or should work" (p. 13). Contextual evaluation, evaluations combining process and impact, and evaluation simulation methods were presented. Connor discussed the use of cost-analysis data by management, and stressed the concept

that "decision makers should have a sense of program costs[that] will facilitate program comparisons" (1981, p. 44). Contextual evaluations were contrasted to true experimental evaluations: "contextual evaluations seek to understand program complexity in particular settings, while experimental evaluations seek to validate cause and effects through controlled comparisons" (Connor, 1981, p. 48).

Criticism and meta-evaluation, exploratory data analysis, and cost analysis were examples of evaluation methods presented in New Techniques for Evaluation (Smith, 1981b). The use of exploratory data analysis to review data for patterns and outlier cases was discussed as was its use in the development of program theory. Exploratory data analysis was described as an inductive, descriptive method "...directed toward the identification of patterns in data, not the confirmation of the presence of some hypothesized pattern" (Smith, 1981b, p. 77).

Operations research, evaluation of health systems, the adaptive health system model, and the system approach to patient care operations were presented by Werley, Zuzich, Zajkowski, and Zagornik (1976). "Systems analysis is a top level strategic activity aimed at the solution of resource allocation problems. It looks at the future and provides guidance for decision makers" (Werley et al., 1976, p. 110). Operations research techniques were described in relation to

their use in the health field. For example, linear programming was discussed relative to allocation of resources, queuing theory in relation to scheduling of resources, and multiple regression analysis in relation to predictions of needs or services in the health field.

According to Perloff (1982), "the major purpose of an evaluation of an activity or program is to provide as rational and as comprehensive as possible a basis for making decisions vis-à-vis program formulation, adoption, changes, or dissolution" (1982, p. 9). The evaluator's responsibility, the resistance to evaluation, means to assure the durability of evaluation, and evaluator intervention were discussed. The cases for and against evaluator intervention were presented. The case against evaluator intervention emphasized the problems of experimenter bias, lack of evaluator competence, and threats to external validity as reasons the evaluator should not intervene in the program. Evaluators were identified as "...specialists in determining the effectiveness of treatment, but not in delivering the treatment" (Perloff, 1982, p. 116).

Technical adequacy and usefulness were the two components of evaluation quality discussed by St. Pierre (1983) in Management and Organization of Program Evaluation. The quality of evaluation is impacted greatly by its design,

which also is useful in "...controlling costs, minimizing the time required for performance, and in tracking the use made of reports" (St. Pierre, 1983, p. 121). Relevance to user information needs, timeliness of reports, report presentation, and execution of the evaluation are other factors that strengthen the quality of an evaluation and which should be anticipated when planning an evaluation.

Two unique evaluation methods were discussed by Forehand (1982) and Silkman (1986) in their books. Both data-envelopment and time-series analysis were described as having impact on program evaluation.

Data envelopment analysis is a procedure that has been designed specifically to measure relative efficiency in situations in which there are multiple inputs and outputs and there is no obvious objective way of aggregating either into a meaningful index of productive efficiency. (Silkman, 1986, p. 10)

In contrast, the advantages of time-series analysis were stated as "...measurement of dependent variables over time allowing for the analysis of the process of change and achievement of control through a baseline phase and repeated measurement over time" (Forehand, 1982, p. 53). Both measures were presented as meriting consideration in the evaluation of programs or program activities.

Guild (1990) examined the relationship of goals and

evaluation as management tools. The author defined evaluation terminology, presented approaches for measuring goal achievement, and listed fundamental components of a program objective. Measures of short-term and long-term objectives as well as program efficiency were delineated. In conclusion, Guild stated, "programs that can demonstrate both effectiveness in meeting their goals and operational efficiency in doing so are more likely to be successful in the competition for scarce resources" (1990, p. 296).

General strategies for evaluation and the purposes of evaluation were presented by Wagner and Guild (1989). The measures of program effectiveness were discussed in relation to evaluation strategies. The design of the evaluation and the change in the health behavior to be measured were distinctive elements in program evaluation. The objectives and constraints of program evaluation were compared and contrasted, and the authors emphasized that evaluation of health promotion programs require a minimum of technical expertise, and can be established with the basic development of a general evaluation strategy.

Morris and Fitz-Gibbon (1978c) provided guidelines for the presentation of evaluation reports and discussed differences between summative evaluation, formative evaluation, and implementation reports. An outline for an evaluation report included the following components:

background of the program, description of the study, discussion of results, costs and benefits, conclusions and recommendations. The authors also offered practical tips to consider when writing and distributing the evaluation report, such as how to work with difficult audiences and how to make verbal presentations. The use of graphs and tables in evaluation reports was emphasized: "tables and figures not only convey the major data summaries of your written evaluation report, they also provide visuals for an oral one" (Morris & Fitz-Gibbon, 1978c, p. 48).

Two books on the fundamentals of evaluation were written by Morris and Fitz-Gibbon (1978a) and Fink and Kosecoff (1978). Fink and Kosecoff (1978) emphasized methods for developing credible evaluation questions, planning and collecting information, conducting analyses and reporting results. These topics were discussed relative to two types of programs: "...one is to improve a program and the other is to determine the effectiveness of a program" (Fink & Kosecoff, 1978, p. 1). In contrast, Morris and Fitz-Gibbon (1978a) promoted the use of the CSE evaluation model to conduct evaluations. Their evaluation method centered around formative and summative methods. The authors emphasized maintaining evaluation credibility, reporting style and budget, and the role of the evaluator as essential components to a successful evaluation. Specific

step-by-step guides for conducting various evaluations were discussed in detail.

The framework of evaluation design and guidelines to report the results of evaluation efforts were the focus of articles by Green (1986a) and Broughton (1991). Green emphasized the need to identify "...objects of interest with sufficient specificity to allow their classification into distinct categories" (1986a, p. 77). Green proposed key questions to assist in the clarification of "...causal relationships between the objects of interest in health promotion" (1986a, p. 77); specifically, the impacts, the processes, and the outcomes of health promotion. While Green emphasized the rigor of evaluation design, Broughton (1991) stressed the importance of providing evaluation results in a manner meaningful to the intended audience. He recommended good writing skills, presenting data clearly and precisely, presenting data in a selective manner, using statistics and graphs with accuracy, and presenting the limitations of the study. Each author stressed the focus of their respective articles as important to the ultimate success of the evaluation. The design must be rigorous to provide valid results and the report must be clear to enable the intended audience to utilize the evaluation results.

Worksite Health Promotion

Literature published within the past 10 years which represented various worksite health promotion programs was reviewed in this section. Sources included information about the nature of worksite health promotion activities, guidelines for program development, and the management of programs.

Christenson and Kiefhaber (1988) described the results from the National Survey of Worksite Health Promotion Activities conducted in 1985. Worksites with 50 or more employees were surveyed to assess "...the prevalence of worksite health promotion activities and to describe the nature of those activities" (Christenson & Kiefhaber, 1988, p. 31). Highlights of the findings included:

Nearly 66% of worksites had at least one health promotion activity, assistance in health promotion programming was often obtained from sources outside of the worksite, and most health promotion counseling and screening/exams were paid for entirely by the company.

(cited in Christenson & Kiefhaber, 1988, p. 32)

Two significant findings were that "...few worksites had formal evaluations, [and]...a majority of worksites had no written goals or objectives for their health promotion activities" (cited in Christenson & Kiefhaber, 1988, p. 33).

The design of successful health promotion programs in

the worksite was the focus of O'Donnell's book (1987). The author provided information ranging from how to structure the design process, through goals and employee involvement, to describing specific steps in the research and program implementation phases. O'Donnell's perspective was founded on the assumption that "the organization is starting at the beginning, not yet having decided whether it is ready to develop a health promotion program" (1987, p. 9). In the conclusion of the book, O'Donnell emphasized that the program design must include company specific elements of a successful program and that results must be measured to determine success.

In its book, entitled Guidelines for Employee Health Promotion Programs, the Association for Fitness in Business (1992) presented the fundamentals for program planning and implementation. In a discussion similar to that in O'Donnell's book, specific program design and implementation phases were presented. Specifically, guidelines for program calendars, marketing the program, and program record keeping were developed thoroughly. In contrast to O'Donnell's book, an entire section was devoted to the last phase of program design, the evaluation phase. Cost-effectiveness analysis, periodic operational and quality reviews, and longitudinal data analysis were examples of recommended evaluation techniques.

The use of insurance claims data by businesses who are considering health promotion programs was discussed by Wickizer and Samuelson (1987). The Lifestyle Cost Index was developed to analyze cost data and clinical data by researchers in Michigan. In a description of one company's use of this index, medical costs were attributed to lifestyle risk factors. The index was utilized to assess costs by age and sex, and by employees and dependents. Increasingly, cost analysis was identified as a needed element in the assessment of a program's worth, but only if it was based upon valid and credible claims data.

"Perceptions of the effects of the work environment and personal lifestyle behaviors on health" were analyzed in a study of industrial workers' perceptions and concerns related to their health (Walsh, Jennings, Mangione, & Merrigan, 1991, p. 148). Lifestyle risks and job health risks were assessed in relation to frequency of job injuries and work absences. Low rates of absenteeism and job injuries were related to a low number of risk factors among workers. However, "more than half of all the respondents, regardless of their risk rating, felt they had a considerable control over factors governing their health" (Walsh et al., 1991, p. 160).

Parkinson (1982) focused on the identification of program needs and objectives, methods to design health

promotion programs, and methods to develop and implement evaluations; and presented examples of workplace health promotion programs. Parkinson stated that there are "...five elements to an effective health promotion program: assessment, setting priorities and objectives, organizational location, implementation strategies, and the identification and allocation of resources" (1982, pp. 4-5). Specific program objectives were recommended for the following health promotion needs: health awareness, knowledge, attitudes and beliefs, behavior, risk reduction, and reduction in mortality. Parkinson emphasized evaluation as essential, but he did not include it as a fundamental element in program design. The author also stated, "although most program decision makers agree that evaluation is important, they often exclude evaluation activities because they feel either that evaluation is too complex or that the resources necessary to conduct acceptable evaluations are not available" (Parkinson, 1982, p. 44).

Work and the workplace, trends shaping the workplace and healthcare, promotion of health in the workplace, and trends in occupational health and safety were discussed in The Future of Work and Health (Bezold, Carlson, & Peck, 1986). "Worksite programs have succeeded in supporting healthy behavior, detecting risk factors for illness and

early signs of disease, and aiding with adherence to medical regimens" (Bezold et al., 1986, p. v). The authors identified and discussed key trends in shaping the workplace and healthcare, including: new technologies, elimination of middleman services, increasing cost of health care, increasing emphasis on self-care, and measurements of health outcomes. Values in work and health care have changed and have impacted health promotion activities in the workplace.

Many employers are evolving from passively involved to concerned, if not proactively involved, in reducing health care costs. The sponsorship of health promotion, wellness, and fitness programs....[are examples of] efforts to manage health care costs. (Bezold et al., 1986, p. 133)

Everly and Feldman (1985) discussed the rationale for occupational health promotion, guidelines for program development, the planning and evaluation of programs, and the importance of cost-effectiveness and cost-benefit analysis. The authors identified five steps in the planning of occupational health promotion programs: needs assessment, goal setting, identification of outcome measures, setting priorities, and budgeting. The evaluation of health promotion programs was conducted for three basic reasons: monitoring of program implementation and

accountability, "...obtaining feedback from program participants, and assessing the effectiveness or impact of a program" (Everly & Feldman, 1985, pp. 238-239).

The relationship between organizational factors, community resources, and employee health promotion programs were discussed in an article by Fellows, Gottlieb and McAlister (1988). The authors studied the frequency of health activities offered by employers in the state of Texas and found that large organizations provided more activities than small organizations, and self-insured organizations offered more activities than non-self-insured organizations. A significant majority of organizations utilized community resources to provide health promotion activities, and the most significant reason for health promotion programs was the control of health care costs.

In an article on the management of fitness programs, Pfeiffer (1986) identified the elements of an effective program development process. The elements included: needs assessment, establishing objectives, program positioning, facility design, and staffing. Each of these program-development elements was discussed in detail to provide direction for management development of a fitness program. Pfeiffer did not include evaluation as a necessary component for program development.

O'Donnell and Ainsworth (1984) presented information

regarding program design, developing program content, program administration, and the roles of external agents. The topics presented within these categories were diverse but included all the basic information necessary to implement a worksite health promotion program. The authors recognized evaluation as a necessary component of program development. However, they reflected that evaluation was difficult because "the quality of much of the data in support of programs continues to be of relatively poor quality" (O'Donnell & Ainsworth, 1984, p. 578). Various methods of evaluation, from formative to experimental to time series designs, were examined. Ultimately, the values and the philosophy of the evaluation must be delineated by each organization in order to perform valid assessments of the effectiveness of the health promotion activities.

Fielding's (1984) approach was to analyze the financial and medical requirements of a worksite health promotion program. Through the utilization of health insurance data, management of medical and dental benefits, and assessment of workers compensation claims, organizations had the basic information with which to design health promotion programs. Evaluation was considered an element of program administration, and generally was utilized to assess the company's return on investment. Fielding (1984) stated, "whether or not the program works can only be assessed in

relationship to program objectives" (p. 298). In addition, in program evaluation "the essential point is to decide at the onset what constitutes success and how it will be measured" (Fielding, 1984, p. 300). Fielding (1984) reiterated factors that Opatz (1985) identified as targets for evaluation: knowledge of health problems, attitudes, behaviors, health care costs, productivity, and mortality.

Iverson (1984) summarized the scientific evidence for health promotion in his article. He began with an overview indicating a changing focus in primary health-related concerns from infectious diseases to chronic diseases. Iverson cited information from the Centers for Disease Control which reflected that lifestyle factors overwhelmingly contributed to the top 10 causes of death. According to Iverson, the Framingham Study, the Alameda County Study, and the Multiple Risk Factor Intervention Trial produced reliable scientific data which demonstrated "...that lifestyle behavior change can effect changes in health status" (1984, p. 7). The author emphasized the need to "...be aware of and understand the results of epidemiological studies that often provide scientific justification for program efforts" (Iverson, 1984, p. 9).

Greenwald (1987) indicated that even the noteworthy studies of health promotion programs are limited by their weak attempts to establish causal links. "Where the link

between behavior and health outcomes has been established, worksite programs may not always produce the required behavioral change" (Greenwald, 1987, p. 40). Greenwald specifically analyzed the experience of Health Works Northwest health promotion project. At the end of the project, "no statistically significant differences were found between participants in the program and non-participants in reported illness, workdays missed, and satisfaction with immediate supervisors or prospects for advancement" (Greenwald, 1987, p. 42). In conclusion, the author believed that health promotion programs were not likely to result in reduced health care expenditures or increased productivity which would lead to measurable savings.

In 1987, Stein interviewed James Mason, then Director of the Centers for Disease Control (CDC), regarding worksite health promotion. Mason stated that the worksite may be the most effective place to change health behavior as it affords the opportunity to reach many people (cited in Stein, 1987). The interview included discussions regarding smoking cessation, AIDS education, and the use of health risk appraisals in the worksite. Mason stated that it was "the responsibility of the CDC to monitor what is going on in the nation and to shift our focus as needed to always work on those causes of unnecessary death, disability, and premature

death that are preeminent" (cited in Stein, 1987, p. 48). He believed that the workplace was one of the best places to initiate preventative measures for health.

Jacobson (1988) discussed the efforts to develop the U.S. Public Health Service's health objectives for the year 2000 and the role of businesses and organizations in this effort. "Businesses repeatedly stressed the need for developing worksite specific objectives and the need for data to help them pinpoint problems and track progress in attaining objectives" (Jacobson, 1988, p. 37). Barriers to businesses' full endorsement of health promotion efforts were the lack of belief in the "...philosophy of prevention, [and the lack of]...willingness to invest up-front medical dollars" (Jacobson, 1988, p. 37).

In his perspective of a corporate medical director in the management of a worksite health program, McDonagh (1984) stressed that the manager of the program "...must understand the company's business strategies and objectives as well as society's concerns and expectations" (p. 263). The manager's role relative to program development, cost-effectiveness, clinical health practices, environmental concerns, and regulatory/legal issues were discussed. In conclusion, McDonagh stated that "the occupational health promotion manager must carefully evaluate his/her company needs vis-à-vis society's desires

and requirements, and then to prioritize and plan accordingly" (McDonagh, 1984, p. 263).

Origins of wellness in the workplace, components of worksite wellness programs, pros and cons of wellness programs, and the use of cost-effectiveness or cost-benefit analysis were discussed by Hartman and Cozzetto (1984). "Four areas that an employer should consider for a wellness program are: company needs, employee needs and interests, company capabilities, and community capabilities" (Hartman & Cozzetto, 1984, pp. 112-113). The authors reviewed the wellness programs at New York Telephone, Mesa Petroleum Company, and Kimberly-Clark Corporation. Estimates for cost savings at each company relative to health promotion programs reflected a trend towards cost savings. The authors concluded that each company should develop its wellness program specifically for its unique needs and capabilities, and that "wellness programs are a clear alternative to spiraling health insurance costs" (Hartman & Cozzetto, 1984, p. 117).

Kelley (1986) presented criteria common to successful health promotion programs, including: sincere organizational commitment, clearly defined goals and objectives, strategic planning, baseline data, environment of trust, and experienced staff. Kelley stated that formal evaluation was "...necessary, [and]...the most informative

evaluations are conceived during the program planning phase" (1986, p. 44). Techniques to assess and select vendors to provide health promotion programs also were discussed.

Guidelines for the use of self-help approaches in the development and implementation of worksite health promotion programs were discussed by Werch (1987). Key elements upon which a self-help based program should be developed includes: needs assessment, review of present self help materials, development of procedures for implementation and evaluation, monitoring of program process, and analysis of program status. The self-help approach was recognized by the author as a cost-effective approach and, therefore, worthy of further study.

The effects of worksite health promotion on employee health care costs were the subjects of a comparative study by Gibbs, Mulvaney, Henes, and Reid (1985). The utilization of health care in a worksite health promotion program and the subsequent impact on health care costs of participants and non-participants were described. "In almost all of the comparisons, participants average more claims and higher payments than non-participants" (Gibbs et al., 1985, p. 828). The authors believed this was a short-term effect and, over the long term, the costs for participants would have been less than for nonparticipants.

In 1986, Northern Telecom's health promotion program

was described by Harris, the program's medical director. Harris' description included the company, the development of the health promotion system, the design of the program, and the communication strategies and methods. The Northern Telecom program was based upon an assessment of mortality, disability, use of health insurance, prevalence of risk factors, and frequency of preventable/premature deaths. A needs assessment identified the need for a prevention focus for the program. Pre-employment screenings, development of fitness facilities, and specific health promotion activities were implemented at various worksites. Results of the program revealed reduced rate of increase of insurance costs, changes in illness patterns and expenditures, and cost savings.

The employees of Blue Cross and Blue Shield of Indiana participated in a 5-year study which assessed the impact of a health promotion program on health risk factors, absenteeism, and health care utilization. Employees were invited to participate in the program study which also included "...a matched employee control group, and a matched external account group" (cited in Reed, Mulvaney, Billingham, & Skinner, 1986, p. 10). The study involved a health risk screening phase, utilizing health risk questionnaires; an intervention phase, utilizing such strategies as nutrition and smoking cessation groups; and a

maintenance phase, during which followup data was collected. The results of the study revealed "a significant inverse association between participation in the program and hours absent from work," and a health care cost savings for participants (Reed et al., 1986, p. 5).

Opatz (1987) provided detailed information regarding evaluation of programs at the individual worksites, citing programs such as the Stay Well Program at Control Data, the Tri Healthalon Program at General Mills, and the Total Life Concept Process at AT&T. Program outcome, cost-benefit and cost-effectiveness analysis, and the consideration of organizational issues relative to evaluation were discussed. A central theme throughout the book was that "progress has been made in the effort to quantify and justify health promotion as an important organizational activity," and that evaluation of health promotion programs must continue (Opatz, 1987, p. 12).

According to Ruzicki (1985), "the reasons most often cited for not conducting evaluations are lack of personnel, time, expertise, and resources, as well as a lack of interest on the part of key persons for whom the evaluation might be performed" (p. 6). Ruzicki also discussed the differences between evaluation and research, the language of evaluation, and how to design an evaluation plan. Elements which must be considered in the design of an evaluation

include consideration of the intended audience, the focus of the evaluation questions and criteria, personnel, and financial resources for conducting the evaluation.

Evaluation of Worksite Health Promotion Programs

In this section, literature was reviewed which represents the various aspects of evaluation of worksite health promotion programs including cost-effectiveness and cost-benefit analysis, the impact of health promotion programs on various employee attributes, and the effectiveness of worksite programs. Only literature published during the past 10 years was reviewed.

A controlled study of the effects of an employee lifestyle and fitness program on health care costs was conducted in the main offices of two major insurance companies (Shepard, Corey, Renzland, & Cox, 1982). Data regarding specific categories of medical claims was gathered for the year prior to and the year during the implementation of the program. The results of the study revealed that participants tended to experience fewer hospital days and lower medical care costs than nonparticipants. Another interesting by-product of the study was the employees' overall increased health awareness as a result of the lifestyle and fitness program.

In another study of the effects of a physical fitness

program, the researchers specifically focused on selected physiological and psychological parameters during a 14-week study (Pauley, Palmer, Wright, & Pfeiffer, 1982).

Participants in the program were provided an exercise prescription which included warm-up periods, aerobic activity, and cool-down exercises. "Subjects were grouped by frequency of exercise for statistical analysis" (Pauley et al., 1982, p. 460). Improvements in psychological parameters, such as self-concept and trait anxiety, were significant; however, improvements in these areas were not related to the frequency of participation in the exercise program. Significant improvements also were found in the following physiological parameters: resting heart rate, systolic blood pressure, total cholesterol level, total triglyceride level, and maximum oxygen uptake.

A quasi-experimental design was utilized to study the effects of the Live for Life Program over a 2-year period (Blair, Piserchia, Wilbur, & Crowder, 1986). Four companies which offered this program and an annual health screen were compared to three companies which only offered a yearly health screen. Employees in the Live for Life Program self-reported a higher frequency of exercise than employees who only received an annual health screen. The results of the study reflected that "...health promotion program employees maintained, and in some cases improved, their

exercise participation and physical fitness status during the second year [of the study]" (Blair et al., 1986, p. 923).

In an article regarding employee health improvement programs, Fielding (1982) asked whether these programs were effective. Hypertension control, smoking cessation, physical fitness, and weight management programs were studied to determine the costs and effectiveness of the programs. Effectiveness in each of these programs was assessed by varied measurements of outcome and satisfaction. Speculative conclusions were determined regarding the relationship of costs and effectiveness of programs. By evaluating the impact of the programs on explicit clinical measures, Fielding was able to conclude that program effectiveness may reduce health risk in some cases but that "...benefits can be accurately assigned for only a few risk reduction efforts" (1982, p. 914).

In their article, "How well is your wellness program?" Terry and Fowles (1989) emphasized the need to monitor and audit the results of health promotion programs. Through the evaluation process, companies will learn "...precisely how much good they were doing....[as well as how to use the] results for future planning" (Terry & Fowles, 1989, p. 11). Establishing an audit focus unique to the company, creating a baseline of data, and comparing results to local or

national norms were basic elements of a program audit. Terry and Fowles concluded that evaluation "...will pay off in the end by assuring that instead of being scattershot, [the] wellness programs are right on target" (1989, p. 14). In her discussion of the need for valid, credible integrated health databases to manage and evaluate the effectiveness of health promotion programs, Yenney (1990) stated, "The ability to evaluate the total effect of changes in the health programs of a company requires an integrated health data management system (IHDMS)" (p. 41). Examples of databases that could be integrated were: "...health insurance claims, personal health risk files, demographics, workers compensation claims, and mortality statistics" (Yenney, 1990, p. 42). Although IHDMS may have many uses, "perhaps the most important use of IHDMS to date has been the ability to determine if the successful planned changes in one program have resulted in negative, inadvertent changes in another" (Yenney, 1990, p. 42). Problems identified in the development of an IHDMS were: loss of confidentiality of data, lack of common vocabulary, data inaccuracy, and the inability of managers to use the end results of the evaluation.

Patterson (1986) described the efforts of the United Methodist Publishing House to evaluate its wellness program. The organization "...compared 1984 total medical claims cost

with the 1985 total....[and looked at] the workers' compensation loss experience" (Patterson, 1986, p. 40). The comparison of participants and nonparticipants suggested that "wellness participants are healthier and maybe expected to cost the company less in health costs" (Patterson, 1986, p. 41). Measurements of "...individual performance benefits experienced by active participants" (Patterson, 1986, p. 41) revealed that individuals improved their fitness levels.

The implementation and evaluation of a health promotion program was described by Ratner (1990). The Health Responsibility Program at Mount Vernon Hospital awarded credits for "...favorable health practices demonstrated [by the employees]" (cited in Ratner, 1990, p. 56). The credits offered to non-union employees were varied in type and value, and included such items as: "...increasing vacation time, eldercare allowances, lowering health insurance deductible payments" (cited in Ratner, 1990, p. 54). Analysis of the costs of the program revealed that participants' medical claims costs were less than those for nonparticipants.

When Pelletier, Klehr, and McPhee (1988) found that "...few companies conducted any systematic assessment of how effective their health promotion programs were" (p. 34), members of the San Francisco community and local university joined together. The members of the business and

educational settings developed goals for a 7-year program to develop activities and conduct research. The goals and programs were examined by the authors, and 3 years of data were presented in the assessment of this program. The authors found that the rates of success for specific organizational programs are higher than for programs in community health promotion programs.

The impact of a Boeing Company program to reduce employee injuries was examined by Stamper (1987). The effects of trending and tracking back-care injuries and subsequent prevention methods reduced the cost of back injuries for the company. In conclusion, Stamper stressed Boeing's responsibility to provide health promotion for their employees, and the employees' responsibility for their own health care.

In a study of incentives to stimulate the participation in worksite health promotion programs, Madlin (1991) stated "effective incentives target the specific health risks of a population as well as common goals" (p. 74). Examples of incentives utilized in effective wellness programs included: "...points for healthy behaviors,...T-shirts, gym bags,...and gift certificates" (Madlin, 1991, p. 73).

Employee activities regarding the participation or nonparticipation in worksite health promotion programs were studied by Stange, Strecher, Schoenbach, Strogatz, and

Dalton (1991). No difference was noted between participants and nonparticipants in relation to health beliefs, social support, stress job satisfaction, and prior experience with health behavior changes. The authors "...suggested that the corporate culture might be a more powerful influence on program participation than original employee attitudes" (Stange et al., 1991, p. 484).

General health promotion, evaluation results, health risk appraisals, and health promotion in specific areas were topics included in the Corporate Wellness Sourcebook by Bellingham and Cohen (1987). Examples of evaluation methods used at various worksites included those used in the AT&T health promotion programs at various AT&T worksites. "Built into the AT&T program from the start was an extensive evaluating design to assess the project's impact on changing unhealthy behaviors and reducing corporate costs" (Bellingham & Cohen, 1987, p. 82). Evaluations were conducted utilizing control groups and experimental groups. Data collection techniques used in these groups included: health risk appraisals, biometric measures, pre- and posttests, and participation charts.

In another broadly focused book, Braverman (1989) discussed the evaluation of community health promotion, decisions about program outcomes, levels of analysis of programs, and guidelines for reporting outcome evaluations.

"The rapid proliferation of health promotion programs has far outpaced the deliberative attempts of social scientists to determine their effectiveness. The emphasis placed on program evaluation is uneven" (Braverman, 1989, p. 5). The strengths and weaknesses of outcome and process evaluations were described. According to Braverman (1989), "the process evaluation describes the program as implemented, which is important for interpreting the results of outcome evaluations. It is necessary to understand how a program can deviate from its ideal and still meet its basic objective" (p. 103).

Dignan (1986) examined the nature and accuracy of measurement; the measurement of knowledge, attitudes and behavior; program evaluation; and presentation of evaluation results. He described the goals of evaluation as "...rationally clarifying questions about programs and their effects, collecting and analyzing data appropriately, and putting the results of analysis together to answer the question asked in the first place" (Dignan, 1986, p. 4). Dignan discussed how evaluation could focus on various aspects of the program, which included: "...activity, meeting standards, efficiency, effectiveness, outcome validity, and overall system appropriateness" (1986, p. 77). Dignan also presented "...four basic macro steps in developing evaluation design: orientation to the situation,

defining the problem, basic system design, and planning for data collection" (1986, p. 93).

Barry and DeFriese (1990) examined the basic concepts of cost-benefit and cost-effectiveness analysis for health promotion programs and included comparisons and contrasts of the two methods. Cost-benefit analysis is used to determine whether the value of a program justifies its cost. On the other hand, "cost-effectiveness analysis is based on the principle that even if we do not know the value of achieving an objective, we do know that we wish to achieve the objective in a way that minimizes costs" (Barry & DeFriese, 1990, p. 449). A four-step method of elementary cost effectiveness analysis was delineated: "...[a] define program objectives, [b] compute the program's cost not monetary costs, [c] define program objectives, and [d] perform a sensitivity analysis" (Barry & DeFriese, 1990, pp. 450-451).

According to Higgins (1988), the growth in health promotion programs was related to "... growing evidence linking lifestyle habits and behaviors to health outcomes, cultural preoccupation with health, and the need to control rapidly rising health expenditures" (p. 39). The author reviewed literature regarding the cost savings of worksite health promotion programs, and found that most of the programs evaluations "...were methodologically flawed and

too narrowly focused" (Higgins, 1988, p. 40). Higgins also examined such topics as: the reasons people do not engage in more health promotion programs, the containment of health spending, and whether health promotion should be subsidized. Higgins concluded that "...health promotion may have been oversold as a cost containment strategy" (1988, p. 44).

The escalation of health care costs and cost containment efforts were examined in Kaman's (1987) article regarding the benefits and costs of health promotion in the workplace. Kaman distinguished between cost-benefit and cost-effectiveness methods and their use to demonstrate the effectiveness of health promotion programs. Results of a number of cost-effectiveness analyses and examples of companies who utilized cost-benefit analyses were presented. The importance of continuing to document the effects and financial benefits of worksite health promotion was emphasized.

Erfurt and Foote (1984) studied the hypertension programs at four companies and the cost-effectiveness of each program model. Each of the four programs was described as having identical screening activities but "...different follow-up protocols" (Erfurt & Foote, 1984, p. 892). Detailed data were maintained throughout the study to ensure accurate cost assessments. Cost-effectiveness of each program differed "...depending on the presence of medical

benefits for treatment of hypertension" (Erfurt & Foote, 1984, p. 898). The nonfinancial advantages and disadvantages of each program model, modified followup, full followup, and on-site treatment were examined.

Jacobs and Chovil (1983) reviewed literature regarding economic evaluation of worksite health programs, and discussed "...the problems inherent in conducting such evaluations" (p. 273). Among the topics included in the literature review were: corporate objectives of worksite health programs, common activities of worksite medical departments, and a framework for evaluating the role of the medical program. Jacobs and Chovil believed that the studies reviewed in their article were not strong from a scientific research perspective, but that they did serve an evaluative purpose. The studies examined were from a small number of companies which did not represent any particular industry.

A study comparing the effectiveness of a community-based and a work-based hypertension program was conducted by Ruchlin, Melcher, and Alderman (1984). Both programs resulted in a significant reduction of workers' blood pressure during the first year of the program implementation. Analysis of the financial data revealed that the work-based program was more cost effective than the

community-based program, as it produced the greatest benefit to the workers.

Warner (1984) challenged central beliefs that health promotion programs have positive benefits. He stated that the "...generalization that health promotion programs are effective has not been established" (Warner, 1984, p. 4), and he questioned the validity and accuracy of evaluations conducted to determine effectiveness. Warner stated that the "...evidence demonstrating the cost savings potential of health promotion programs is still limited" (1984, pp. 4-5) and that some programs may cost companies more in the area of retirement income costs over time. He supported the premise that the purpose of health promotion programs was to improve all the dimensions of participants' health, and that this fundamental point of health promotion programs was in danger of being lost.

In 1990, Bailey took an opposite point of view in her statement that "...according to the Wellness Council of America (WELCOA), concrete proof now exists that wellness programs pay off in lower health care costs, reduced absenteeism, increased productivity, and higher morale" (1990, p. 28). Examples that supported the WELCOA's claims were presented, and the programs at Johnson & Johnson, General Electric at Cincinnati, Scoular Grain Company, and Blue Cross and Blue Shield of Indiana were cited as

effecting decreased absenteeism and health care cost savings. The success of such health promotion programs was "...largely dependent upon support from the companies' top management" (Bailey, 1990, p. 40).

The cost of unhealthy workers, the limitations of health promotion programs, and the lack of data for program evaluations were assessed by Doherty (1989). She attempted to examine the experiences of some businesses and to discuss the controversy about the benefits of health promotion programs. Doherty stated that the greatest problem relative to program evaluations is a lack of data and the "...cost of extensive evaluations" (1989, p. 35). She provided statements from companies which stressed other, nonfinancial reasons for health promotion programs: wellness as an employee benefit, increased morale and productivity, and that "...the company cares about [employees'] health and well-being" (Doherty, 1989, p. 36).

The impact of a physical fitness program on health care costs and disability costs was investigated by Bowne, Russel, Morgan, Optenberg, and Clarke (1984). A longitudinal study covering a 5 year span measured workers' health care costs before and after participation in a physical fitness program. A structured fitness program with exercise prescriptions was developed for each participant; participants were required to "... exercise at least three

times a week, for a minimum period of 20 minutes" (Bowne et al., 1984, p. 810) at a level that would increase their pulse to maximum threshold. Annual and bimonthly measures of health and physical fitness were conducted during the study. The results of the study included an improvement in cardiovascular fitness, reduced disability absences, reduced major medical costs, and a return on the investment in the study program.

Rozek (1990) interviewed a number of companies regarding their reasons for health screenings. The two most significant reasons provided were "...to help employees," [and]...to help control health care costs" (Rozek, 1990, p. 14). Examples of various company screening programs were described, and included cholesterol screenings, mammography, blood pressure checks, and health risk appraisals. Rozek also described resources to develop screening programs and guidelines to hire an outside agency to perform health screenings.

Participants and nonparticipants in Johnson & Johnson's Live for Life Program were studied by Jones, Bly, and Richardson (1990) to determine the impact of the program on absenteeism. The employees were studied over a 3-year period; employees at four different company sites at which the program was implemented were evaluated and compared to employees at five other sites at which it was not

implemented. The reliability of some of the data was questioned due to the short length of the study and the inclusion of self-reported sick days. However, the results reflected "...areas of short-term benefits with respect to absenteeism" (Jones et al., 1990, p. 99) and a significantly lower number of sick hours among Live for Life wage employees.

Another study of the impact of a fitness program on absenteeism was conducted by Lynch, Golaszewski, Clearie, Snow, and Vickery (1990). "The purpose of this investigation was to compare employee absenteeism before membership and during first and second years of membership in a worksite fitness center" (Lynch et al., 1990, p. 9). The frequency of reported absences of those employees who did and did not become members of the physical fitness center was assessed. After they joined the program, members had significantly less sick days, however, "non-members experienced no change" (Lynch et al., 1990, p. 12).

The impact of an employee health promotion program on work-related attitudes was investigated by Holzbach and associates (1990). Johnson & Johnson's Live for Life Program was evaluated over a 2-year period utilizing a "...non-equivalent control group quasi-experimental design" at seven company sites (Holzbach et al., 1990, p. 973). A health screen and Lifestyle questionnaire were completed at

the initiation of the program and at the end of the first and second years. Results of the study revealed that "employee attitudes on a number of attitude measures significantly improved at those companies that participated in a health promotion program compared with a control group" (Holzbach et al., 1990, p. 977).

The need for a theoretical framework for the evaluation of worksite health programs was presented by Long and Wilkinson (1984). The need for program evaluation, definitions of evaluation, and the differences between administrative research and social research were discussed. The authors stressed the need for an understanding of "...the theory of the nature, purpose, and skill needed for general program evaluation" (Long & Wilkinson, 1984, p. 247) by occupational health nurses. The authors concluded that both process and outcome evaluations benefit the understanding of and impact programs. They also stressed that "program goals and objectives must be established....and information pertinent to the achievement of these goals and objectives must be collected" (Long & Wilkinson, 1984, p. 259).

Smith and Everly (1988) discussed the use of case study analysis in the evaluation of worksite health programs. Specifically, they studied the impact of participation in a weight loss program on health care cost savings through the

use of a comparative pretest, posttest research design. The study results revealed that there was no difference in the "...amount of health care claims incurred by the study group members" (Smith & Everly, 1988, pp. 46-47) before or after participation in the program and there was no difference between health care claims of participants and nonparticipants in the program. The difficulty of research in worksite health programs also was discussed. The authors believed that "the inability to employ true experimental designs, data availability constraints, vulnerability to a natural maturation process, and a susceptibility to a Hawthorne effect" (Smith & Everly, 1988, p. 49) were barriers to stringent evaluation of worksite health promotion programs.

Similarly, the view that "most studies are limited in their ability to draw clear inferences about program effects because their studies employed flawed research designs and/or analyses" was presented by Conrad, Conrad, and Walcott-McQuigg (1991, p. 112). Thirteen various threats to internal validity, such as selection bias, attrition of study subjects, and improper instrumentation were discussed in relation to worksite health promotion evaluation. Conrad and associates also provided examples of measures to control these threats to internal validity. The authors emphasized that threats to internal validity must be controlled either

by study design or by ruling them out before describing the results.

In 1990, Business & Health conducted its first annual national survey of executives regarding health care issues. This survey of 419 executives found that "cost issues far outrank top executives' concerns with quality of health care and drug/alcohol abuse problems" (The 1990 National Executive Poll, 1990, p. 26). Survey questions dealt with cost shifting as a method of cost control, the blame for health care cost increases, the use of case management, and views regarding national health insurance. The study revealed that wellness programs were perceived as ineffective by the executives. However, stress was identified by the executives as the top employee health problem, and 35% of the responding executives were planning to offer stress reduction programs.

Cost-benefit and cost-effectiveness analysis, and the use of this type of evaluation methodology in relation to worksite health promotion, was the subject of two articles. Ossler (1984) discussed the steps in performing cost-benefit or cost-effectiveness analysis, the rationale for both, and how to collect cost and benefit information. Kaman and Huckaby (1988) described the use of cost-benefit analysis as a measure of justification for employee health promotion

programs, as well as 2 approaches to justifying programs: an analysis of past and projected health care costs of the company, and an analysis of the health risk of the company and its employees. Kaman and Huckaby recommended that an action plan "...be prepared for each of the top health care problems" (1988, p. 42) and for each of the top employee health risks. Examples of the results of corporate cost-benefit analyses reported in published literature were reported.

Dickerson and Mandelblit (1983) discussed the need for alternative models for health promotion programs in the worksite. The traditional model of health program included: needs assessment, implementation plan, and evaluation of the results. The development and implementation of IBM's A Plan for Life Program was presented. National health data and 10 years of screening data replaced the needs assessment phase. Implementation of the program emphasized identification of "...facilities and institutional resources in communities in which IBM has offices" (cited in Dickerson & Mandelblit, 1983, p. 473). IBM emphasized the use of local YMCAs, local hospitals, and health care organizations. IBM's low cost health promotion model did not emphasize evaluation as "...it assumed that the results will be comparable to those reported in published studies" (cited in Dickerson & Mandelblit, 1983, p. 474).

According to Dignan and Carr (1981), developing a health promotion plan requires the following basic steps: identifying program goals, defining objectives, planning the implementation and strategies, and the evaluation of the program processes and outcomes. The authors detailed each step of the program development and recommended the use of a working planning group versus individuals working alone to design the program. "Evaluation is one of the key phases in the model, but differs from the others in that it also provides feedback for the other phases in the [program] cycle" (Dignan & Carr, 1981, p. 127). The scope of the program evaluation included the purpose of the evaluation, the uses of the evaluation data, the levels of the evaluation, and the criteria to be used in the measurement and evaluation of the program.

The PRECEDE model was presented and examined in detail by Green, Kreuter, Dieck, and Partridge (1980). Elements of the model included: health and nonhealth factors, behavioral and nonbehavioral causes of health, predisposing and health enabling factors, and health education components. Recommended educational strategies based on the characteristics of the health problem were discussed. Three levels of evaluation were advocated by the authors relative to the health behavior: process, impact, and outcome

evaluations. Evaluation design, suggested criteria, and rating scales were described.

Summary

The literature which was reviewed in this chapter included a broad range of topics relevant to the themes of this study. Topics regarding evaluation, worksite health promotion, and the evaluation of worksite health promotion activities were examined. The literature reflected the need and purpose of evaluation and the need for the evaluation of worksite health promotion activities. However, the current literature reflected a paucity of evaluations of worksite health promotion programs. Methodology to design and to develop evaluations for determining the effectiveness, the benefits and costs of the health promotion activities, and the processes and outcomes of worksite health promotion activities were demonstrated in the literature and serve as a foundation for future worksite evaluation efforts.

CHAPTER III

METHODOLOGY

The methodology of this descriptive study is discussed in relation to its population, sample, procedures utilized to survey the population, instruments utilized to measure the variables, and procedures utilized to collect the data. Descriptive statistics were utilized to treat the data.

Population and Sample

The population of this study included the members of the Association for Fitness in Business, who were listed in the 1990-1991 edition of the directory of members (AFB, 1990), lived in the United States, and were identified as corporate in-house professional members. As the survey was delimited to only one professional from each worksite, a random data sort of the member list was made with the first name listed for each worksite included in the population. The population was comprised of 587 professionals and the sample was comprised of the first 221 who returned completed questionnaires.

Procedures

Questionnaires were mailed to the population on January 19, 1992, with a requested return date of February 5, 1992. A personalized letter to each AFB member (see Appendix A) and a self-addressed, stamped, return envelope were included with each questionnaire. The initial mailing was followed by a mailed postcard (see Appendix B) to all members of the population on January 30, 1992. The cut-off date for responses was March 1, 1992. The first 221 respondents to return their completed questionnaires by March 1, 1992, constituted the sample.

Instrumentation

The instrument, Survey of Worksite Health Promotion Evaluation Activities (see Appendix C), was developed specifically for this study by the researcher following an extensive literature review. A source for content development was the National Survey of Worksite Health Promotion Programs (USDHHS, 1987). The 33-item instrument combined forced-choice responses with open-ended questions.

To establish content validity, the questionnaire was sent to 38 experts in corporate health management with responses received from 22 of these experts. The experts reviewed the questionnaire, and provided recommendations

regarding important response options and the appropriateness of the questions.

The questionnaire was assessed for test-retest reliability. The draft questionnaire was mailed in November 1991 to 15 AFB members who were not in the study population, with 10 members responding. The questionnaire was readministered to the same 15 AFB members two weeks later with 7 members responding. The questions consistently produced the same responses from the participants. The questionnaire was revised according to specific comments to increase readability and was mailed again in November 1991 to 25 different AFB members who were not in the study population, with 7 members responding. It was administered again to the same 25 AFB members two weeks later with 10 members responding. The questions again demonstrated reliability with those questions which were revised producing consistent responses. As the data was descriptive and nominal in nature, experts indicated that the use of statistical analysis would not be appropriate to verify the reliability of the instrument.

Treatment of the Data

As the data collected were nominal in nature, frequencies and percentages were utilized for data analyses. Content analysis was conducted for the responses to the

open-ended questions. The data were analyzed according to the general types of business conducted at the worksites employing the health promotion professionals who completed the questionnaire, and according to the educational preparation of these professionals. In addition, data were analyzed according to sizes of the worksite, which were categorized by the total number of people employed. A complete summary of data is provided in Appendix D.

CHAPTER IV
FINDINGS OF THE STUDY

The data collected in this study were analyzed using descriptive analysis techniques. The response to the request for participation in the study is discussed in this chapter and the answers to the research questions are presented. In addition, a complete summary of the data is provided in Appendix D.

In mid-January 1992, 587 questionnaires were mailed to the study population. Response to the request for participation in the study was rapid; approximately 100 questionnaires were received by the date the followup postcard was mailed to the study population. A number (42) of questionnaires were returned by the Postal Service due to a lack of a forwarding address. Twenty-five questionnaires were returned either with significant sections partially completed or not completed in entirety; these questionnaires were not included in the study sample. The cut-off date for including returned questionnaires in the study was February 29, 1992, by which date 221 respondents (38%) constituted the sample population.

Demographic Characteristics

The demographic section of the questionnaire provided data relative to the size of the worksite health promotion staff, the educational background of the health promotion manager, and the size of the worksite in which the health promotion activities were conducted.

As indicated in Table 1, the size of the full-time health promotion nonmanagement staff ranged from 0-52 staff members. The size of the full-time nonmanagement staff most frequently found was between 1 and 3 individuals, with 47% of the sample in this category. The size of the full-time health promotion management staff ranged from 0-45 managers. The size of the full-time management staff most frequently found was between 1 and 3 managers, with 77% of the sample in this category.

All sample members identified themselves as having a college degree. As indicated by the respondents, most of the managers of their health promotion programs (137, or 64%) held Master's degrees, 66 (31%) held a Bachelor's degree, and only 11 (5%) held doctorates. The educational degrees were identified in the following fields: health promotion/education/sciences, physical education/exercise sciences, nursing, business, and in other fields (see Table 2). Other educational fields identified included: combined health/physical education, recreation, and nutrition. Not

Table 1

Sizes of Full-time Health Promotion Nonmanagement and Management Staffs (N=221)

Size	Nonmanagement Staff		Management Staff	
	#	%	#	%
0	65	(29%)	29	(13%)
1-3	103	(47%)	170	(77%)
4-10	42	(19%)	17	(8%)
11 or more	11	(5%)	5	(2%)

Table 2

Educational Preparation of Health Promotion Managers (n=187)

Field	Degree						Total	
	Bachelor's		Master's		Doctoral		#	%
	#	%	#	%	#	%	#	%
Health Promotion/ Education/Sciences	14	(7%)	26	(14%)	0	(0%)	40	(21%)
Physical Education/ Exercise Sciences	27	(14%)	63	(34%)	2	(1%)	90	(48%)
Nursing	3	(2%)	5	(3%)	1	(<1%)	9	(5%)
Business	4	(2%)	7	(4%)	0	(0%)	11	(6%)
Other	9	(5%)	25	(13%)	3	(2%)	37	(20%)
Total	57	(30%)	126	(67%)	6	(3%)	187	(100%)

all members of the sample population indicated the fields of their managers' educational preparation ($n=187$).

Most health promotion managers (135, or 61%) reported to a middle-level manager, and 68 (31%) reported to an upper-level manager. Most health promotion managers (113, or 51%) reported to human resources departments, 32 (14%) reported to occupational health/medicine departments, 6 (3%) reported to safety departments, 5 (2%) reported to service departments, 4 (2%) reported to operations/manufacturing departments, and 3 (1%) reported to sales/marketing departments. "Other" departments (42, or 19%) in which the health promotion manager reported included administrative services, employee services, and directly to the president of the company. The most prevalent reporting scheme was for the health promotion manager to report to a middle-level manager in the human resources department specifically; 72 (33%) respondents indicated this combination of responses.

Most respondents (161, or 73%) were employed in worksites with 750 or more employees; only 4 (2%) were employed in worksites with 50-99 employees (see Table 3). The following categories combined represented the worksites of less than 8% of the sample: less than 50 employees, 50-99 employees, and 100-249 employees (see Table 3). The three types of business organizations at which the majority of the respondents were employed (172, or 78%) included:

"other" businesses (73, or 33%), manufacturing/engineering (64, or 29%), and finance/insurance/real estate (35, or 16%). "Other" businesses included: oil and gas companies, research and development firms, communications corporations, pharmaceutical companies, and corporate headquarters. The remaining respondents were employed in service-providing organizations (17, or 8%), governmental agencies (12, or 5%), retail/marketing (7, or 3%), health care (7, or 3%), and hospitality (1, or <1%).

Table 3

Size of Worksites at Which Respondents Were Employed (n=220)

<u>Size</u>	<u>#</u>	<u>%</u>
less than 50 employees	4	2%
50-99 employees	1	<1%
100-249 employees	11	5%
250-499 employees	20	9%
500-749 employees	23	11%
750 or more employees	161	73%

Note. The total does not equal 100% due to rounding.

Of the health promotion programs in which respondents worked, funds for the health promotion program were provided by budgeted dollars from the company/business (179, or 81%),

employee fees or donations (77, or 35%), a combination of employee/company/public funds (39, or 18%), or public funds (1, or <1%). "Other" methods (6, or 3%) of funding the health promotion programs included profits from vending machine sales, sales income, and workers' compensation funds. Health promotion activities were open to employees (212, or 96%), retirees (94, or 43%), employee family members covered by insurance plan (78, or 35%), employee family members not covered by insurance plan (38, or 17%), employees of other companies (14, or 6%), and community members or students (4, or 2%). "Other" people (43, or 19%) to whom the health promotion activities are open included spouses, contract employees, and clients.

Research Questions

Eight research questions were introduced in the study and were answered from data generated by responses to the "Survey of Worksite Health Promotion Evaluation Activities". Data were analyzed in relation to each question. The research questions were addressed in sequential order.

Question 1. What health promotion activities were provided in the worksite? Only 164 members of the sample (N=221) responded to this question (survey item 11). "Exercise and physical fitness" was identified as the health promotion activity most frequently offered; "employee

Table 4

Distribution of Worksite Health Promotion Activities,
Outcome Evaluations, and Process Evaluations (N=164)

Activity	<u>Offered</u>		<u>Outcome</u> <u>Evaluated</u>		<u>Process</u> <u>Evaluated</u>	
	#	%	#	%	#	%
Accident Prevention/ Safety Promotion	99	(60%)	52	(32%)	44	(27%)
Exercise and Physical Fitness	164	(100%)	127	(77%)	111	(68%)
Nutrition/Weight Control	155	(95%)	104	(63%)	93	(57%)
Alcohol/Drug use	80	(49%)	40	(24%)	40	(24%)
Smoking Control or Cessation	125	(76%)	90	(55%)	83	(51%)
Blood Pressure Screening	152	(93%)	91	(55%)	79	(48%)
Stress Management	126	(77%)	63	(38%)	70	(43%)
Health Risk Assessment	128	(78%)	94	(57%)	83	(51%)
Employee Motivation	64	(39%)	34	(21%)	33	(20%)
Back Care	125	(76%)	70	(43%)	72	(44%)
Other	34	(21%)	24	(15%)	22	(13%)

motivation" was the health promotion activity least frequently offered. Activities identified during the study as being offered in the "other" category included: prenatal care, cancer screening, cholesterol screening, and

mammography. Table 4 shows the distribution of responses for all categories of health promotion activities offered.

Question 2. To what extent were process and outcome evaluations performed for worksite health promotion activities? As indicated in Table 4, exercise and physical fitness activities were offered by 164 members of the sample with 127 evaluating the outcome of these activities and 111 evaluating the process of delivering exercise and physical fitness activities (survey item 11). Nutrition/weight control activities were offered by 155 members of the sample with 104 evaluating the outcome of these activities and 93 evaluating the process of delivering the nutrition/weight control activities. Employee motivation activities were only offered by 64 members of the sample with 34 evaluating the outcome of these activities and 33 evaluating the process of delivering employee motivation activities.

Question 3. Were evaluations related to the goals and objectives of the health promotion activities? Of the 219 sample members who responded to survey item 9 of the questionnaire, 189 (86%) of the sample responded "yes" to having written goals and objectives. Responses to the question, "Are formal evaluations currently conducted for the health promotion activities provided at your worksite?" (survey item 10) revealed that 146 (67%) members of the sample ($n=218$) conducted evaluations of health promotion

activities. Of the 72 respondents who indicated that they did not conduct evaluations, 13 (18%) indicated that a lack of goals and objectives was a reason for not conducting the evaluations. Objectives of the health promotion activities (survey item 26) were evaluated by 162 (73%) of the sample. Compliance to health promotion objectives by the individual employee (survey item 26) was evaluated by 101 (46%) members of the sample. Compliance to health promotion objectives by the company (survey item 26) was evaluated by 88 (40%) members of the sample. The results of evaluations were used for the planning of health promotion activities (survey item 28) by 195 (88%) members of the sample.

Question 4. For what reasons were evaluations of health promotion activities conducted or not conducted? As indicated in Table 5, in response to survey item 27, respondents indicated that evaluation activities were used most frequently by the participants for the following reasons: to review or revise the activities (189, or 86%), to determine the overall effectiveness of the health promotion activities (174, or 79%), to determine the strengths and weaknesses of the activities (174, or 79%) to improve the effects of the health promotion activities (173, or 78%), or to justify the health promotion activities (136, or 62%). As indicated in Table 6, the six responses most frequently identified by the 72 respondents answering survey

item 23 as reasons for not conducting evaluations of health promotion activities were: lack of health promotion personnel (57, or 79%), lack of financial resources (47, or 65%), lack of time (46, or 64%), lack of interest by supervisor/executive (35, or 49%), lack of support for evaluation research (34, or 47%), and evaluation was not part of the program plan (30, or 42%).

Table 5

Reasons Evaluations Utilized at Worksites (N=221)

<u>Evaluation Use</u>	<u>#</u>	<u>%</u>
Improve the effects of the health promotion activities	173	78%
Determinine the strengths and weaknesses of the activities	174	79%
Justify the activities	136	62%
Review/revise the activities	189	86%
Determine the overall effectiveness of the activities	174	79%

Table 6

Reasons Formal Evaluations of Health Promotion Activities
Were Not Conducted (n=72)

<u>Reason</u>	<u>#</u>	<u>%</u>
Lack of Personnel	57	79%
Lack of Time	46	64%
Lack of Financial Resources	47	65%
Lack of Expertise	26	36%
Concern How Results Will Be Accepted	2	3%
Lack of Interest by Health Promotion Staff	4	6%
Lack of Interest by Supervisors/Executives	35	49%
Fear of Results	2	3%
Not Part of Program Plan	30	42%
Lack of Goals and Objectives	13	18%
Too Difficult to Perform	13	18%
Lack of Models to Use in Worksite Setting	13	18%
Lack of Support for Evaluation Research	34	47%
Company Politics	21	29%
Other	18	25%

Question 5. What evaluation methods were used by worksite health promotion professionals? A list of 20 methods of evaluations was provided to the study participants from which to indicate the methods utilized in the recent past (survey item 12). Experts reviewing the study questionnaire for content validity offered suggestions to the method list and did not comment on the length of the method list. However, during reliability testing of this question a concern for the size of the method list was identified. The question was included in the study to obtain a baseline response frequency which can be used for further research into the appropriate methods of evaluation for the worksite health promotion programs. As indicated on Table 7, the evaluation methods evaluation methods utilized most frequently by the participants were: questionnaires (134, or 92%), user satisfaction surveys (105, or 72%), the use of pre-tests and post-tests (91, or 62%), and assessment of changes in biometric measures (88, or 60%).

Question 6. Were the quality, appropriateness, and effectiveness of the health promotion activities evaluated? The quality of the health promotion activities have been evaluated personally by 123 (75%) participants (survey item 15). The appropriateness of the activities have been personally evaluated by 115 (72%) participants (survey item 16). The effectiveness of the health promotion

Table 7

Distribution of Evaluation Methodology (n=146)

Method	#	%
Pretests	79	54%
Posttests	85	58%
Pretests and Posttests	91	62%
Interviews	82	56%
Skill Tests	26	18%
Observation	84	57%
Control Groups	30	21%
Time Series Analysis	12	8%
Attitude Inventory	53	36%
Retrospective Record Review	31	21%
Financial Audits	17	12%
Assessment of Changes in Biometric Measures	88	60%
Assessment of Health Behavior Changes	72	49%
Analysis of Cost Benefits	41	28%
Analysis of Cost Effectiveness	39	27%
Knowledge Tests	28	19%
Statistical Comparisons	35	24%
Questionnaires/Surveys	134	92%

(table continues)

Table 7 continued

Method	#	%
Trend Analysis	26	18%
User Satisfaction Surveys	105	72%
Focus Groups	48	33%
Other	5	3%

activities have been evaluated personally by 111 (69%) participants (survey item 17). Of the participant who responded "no" to any of the questions regarding quality, appropriateness, or effectiveness, 9 respondents (< 8%) identified who may have performed these evaluations (i.e., consultants, outside company, upper management, or the health promotion manager). Notably, 91 (90%) of the participants identified specific evaluation methods in response to survey item 15, 61 (67%) in response to survey item 16, and 49 (56%) in response to survey item 17. Content analysis revealed that the evaluation methods most frequently identified were the use of observation, user satisfaction surveys or questionnaires, attendance figures, interviews, and focus groups. A smaller number of participants (13, or 10% for item 15; 19, or 24% for item 16; and 39, or 44% for item 17) described a strategy/method

to evaluate the uniqueness of the particular subject, for example, evaluating the categories of health care costs or health risk assessments to determine what health promotion activities would be appropriate for the worksite population.

Question 7. What were the similarities and differences among evaluations conducted in the various worksite settings? As indicated on Table 8 and in response to survey item 26, participants from large worksites with 750 or more employees were more likely to evaluate the following: the needs of the participants, the health needs of the individual, the objectives of the activities, and the settings of the activities. As indicated on Table 9 and in response to survey item 27, evaluations were used to review/revise the activities, determine strengths and weaknesses of the activities, determine overall effectiveness of the activities, and improve the effectiveness of the activities at large worksites of 750 or more employees. Participants from smaller worksites with 100-249 employees were more likely to evaluate needs of the participants, the health needs of the individual, and compliance by individuals to the objectives of the activities (see Table 8). Evaluations were used for the same purposes as identified for larger worksites. Results of evaluations were used by all size worksites to plan health promotion activities (see Table 9).

Table 8

Distribution of Evaluations Conducted at Worksites (N=221)

Areas of Evaluation	Size of Worksite											
	<50		50-99		100-249		250-499		500-749		>750	
	#	%	#	%	#	%	#	%	#	%	#	%
Needs of Participants	3	(1%)	1	(>1%)	10	(5%)	16	(7%)	72	(33%)	141	(64%)
Settings of Activities	1	(>1%)	1	(>1%)	7	(3%)	12	(5%)	14	(6%)	115	(52%)
Objectives of Activities	0	(0%)	1	(>1%)	4	(2%)	13	(6%)	18	(8%)	120	(54%)
Health Needs of Individual	1	(>1%)	1	(>1%)	10	(5%)	16	(7%)	20	(9%)	126	(57%)
Health Outcomes of Individual	1	(>1%)	1	(>1%)	8	(4%)	13	(6%)	16	(7%)	94	(43%)
Compliance to Health Promotion Objective by Individual	0	(0%)	1	(>1%)	7	(3%)	6	(3%)	13	(6%)	74	(33%)
Health Needs of Company	0	(0%)	1	(>1%)	8	(4%)	14	(6%)	12	(5%)	97	(44%)
Health Outcomes of Company	0	(0%)	1	(>1%)	6	(3%)	10	(5%)	8	(4%)	65	(29%)
Compliance to Health Promotion Objective by Company	0	(0%)	1	(>1%)	5	(2%)	8	(4%)	9	(4%)	65	(29%)

Table 9

Distribution of Uses of Evaluations Conducted at
Worksites (N=221)

Uses of Evaluation	Size of Worksite											
	<50		50-99		100-249		250-499		500-749		>750	
	#	%	#	%	#	%	#	%	#	%	#	%
Improve the Effects of the Health Promotion Activities	2	(1%)	1	(>1%)	10	(5%)	13	(6%)	18	(8%)	128	(58%)
Determine Strengths and Weaknesses of the Activities	1	(>1%)	0	(0%)	10	(5%)	12	(5%)	18	(8%)	132	(60%)
Justify the Activities	0	(0%)	0	(0%)	8	(4%)	11	(5%)	15	(7%)	102	(46%)
Review/revise activities	2	(4%)	1	(>1%)	11	(5%)	14	(6%)	20	(9%)	140	(63%)
Determine Overall Effectiveness of the Activities	2	(1%)	1	(>1%)	10	(5%)	14	(6%)	19	(9%)	128	(58%)
Administration of Health Promotion Activities	0	(0%)	1	(>1%)	9	(4%)	13	(6%)	11	(5%)	112	(51%)

(table continues)

Table 9 continued

	Size of Worksite											
	<50		50-99		100-249		250-499		500-749		>750	
Uses of Evaluation	#	%	#	%	#	%	#	%	#	%	#	%
Planning of Health Promotion Activities	3	(6%)	1	(>1%)	11	(5%)	15	(7%)	21	(10%)	143	(65%)
Financing of Health Promotion Activities	0	(0%)	1	(>1%)	6	(3%)	9	(4%)	16	(7%)	83	(38%)

Question 8. What were the similarities and differences in the educational preparation of health promotion professionals in the various worksite settings? The most prevalent educational degree recorded by the participants was the master's degree (137, or 64%). Table 10 presents the frequency of the respondents' educational degrees by the sizes of their worksites. In worksites of 100 or more employees, the percentage of master's educated managers was at least twice that of bachelor's degreed respondents. Two of the participants with doctoral degrees worked in small worksites of fewer than 50 employees; the other nine worked in large worksites of more than 750 employees.

Table 10

Distribution of Respondents' Educational Degrees
by Size of Worksite

Size of Worksite	Degree						Total	
	Bachelor's		Master's		Doctoral		#	%
	#	%	#	%	#	%		
Less than 50	2	(1%)	0	(0%)	2	(1%)	4	(2%)
50-99 employees	1	(>1%)	0	(0%)	0	(0%)	1	(>1%)
100-249 employees	4	(2%)	7	(3%)	0	(0%)	11	(5%)
250-499 employees	4	(2%)	16	(8%)	0	(0%)	20	(9%)
500-749 employees	8	(4%)	12	(6%)	0	(0%)	20	(9%)
750 or more	46	(22%)	102	(48%)	9	(4%)	157	(74%)
Total	65	(31%)	137	(64%)	11	(5%)	213	(100%)

Table 11 presents the frequency of the of the respondents' educational degrees by the types of business conducted at their worksites. The only pattern noted was, again, that in every type of work setting, with one exception, the proportion of master's prepared to bachelor's degreed participants was at least a 2 to 1 ratio.

Table 11

Distribution of Respondents' Educational Degrees by
Type of Worksite

Type of Business	Degree						Total	
	Bachelor's		Master's		Doctoral		#	%
	#	%	#	%	#	%	#	%
Manufacturing	23	(11%)	36	(17%)	3	(1%)	62	(29%)
Finance/Insurance	9	(4%)	25	(12%)	1	(>1%)	35	(16%)
Hospitality	0	(0%)	0	(0%)	1	(>1%)	1	(>1%)
Service producing	4	(2%)	12	(6%)	1	(>1%)	17	(8%)
Health Care	4	(2%)	3	(1%)	0	(0%)	7	(3%)
Retail/Marketing	3	(1%)	3	(1%)	0	(0%)	6	(3%)
Government Agency	4	(2%)	7	(3%)	0	(0%)	11	(5%)
Education	0	(0%)	5	(2%)	0	(0%)	5	(2%)
Other	19	(9%)	46	(21%)	5	(2%)	70	(33%)
Total	66	(31%)	137	(64%)	11	(5%)	214	(100%)

CHAPTER V
SUMMARY, DISCUSSION, AND RECOMMENDATIONS

This chapter is presented in three sections. The first section provides a summary of the study, including the purpose of the study, the research questions posed in the study, the methodology and analysis of data. The second section is a discussion of the findings. The last section presents recommendations for future research in the field of worksite health promotion evaluation.

Summary

The purpose of the study was to conduct an exploratory, baseline descriptive analysis of health promotion activity evaluations conducted in corporate worksites. The types of health promotion activities and the evaluation activities conducted at the worksite were assessed. The following research questions were answered by the study:

1. What health promotion activities were provided in corporate worksites?
2. To what extent were process and outcome evaluations performed for worksite health promotion activities?
3. Were evaluations related to the goals and objectives of the health promotion activities?

4. For what reasons were evaluations of health promotion activities conducted or not conducted?
5. What evaluation methods were used by worksite health promotion professionals?
6. Were the quality, appropriateness, and effectiveness of the health promotion activities evaluated?
7. What were the similarities and differences among evaluations conducted in the various worksite settings?
8. What were the similarities and differences in the educational preparation of health promotion professionals in various worksite settings?

Analysis of the evaluation activities conducted in worksite health promotion programs was conducted from December 1991 through February 1992. Questionnaires were mailed to 587 corporate in-house members of the AFB as listed in the 1990-1991 edition of the membership directory and who lived in the United States. Participation in the study was concluded on February 28, 1992, with 221 respondents constituting the sample.

Demographic analysis revealed that the health promotion manager most frequently had a Master's degree in Physical Education/Exercise Science, and reported to a middle level manager in the Human Resources department. The size of the worksite most frequently identified by the participants was a worksite with 750 or more employees. The type of business

most frequently reported in the study was manufacturing/ engineering.

All of the study's research questions were answered. The type and frequency of health promotion activities offered were analyzed, and the extent of the use of process and outcome evaluations was described. The three most frequent activities offered included: exercise and physical fitness, nutrition and weight control, and blood pressure screening. The conduct of outcome evaluations ranged from the evaluation of 77% of the outcomes of exercise and physical fitness activities to 21% of the outcomes of employee motivation activities. The conduct of process evaluations ranged from the evaluation of 68% of the process delivering exercise and physical fitness activities to 20% of the process delivering employee motivation activities. Evaluations were found to be related to the goals and objectives and to the planning of the health promotion activities. Evaluations of health promotion activities were most frequently not conducted for the following reasons: lack of health promotion personnel, lack of financial resources, and lack of time. The evaluation methods most frequently identified by the participants were questionnaires, user satisfaction surveys, and assessment of changes in biometric measures. Participants reported that they evaluated the quality, appropriateness, and

effectiveness of the worksite health promotion activities most frequently through the use of observation, user satisfaction surveys, and questionnaires. Participants from all sizes of worksites were most likely to evaluate: the needs of the participants, the health needs of the individuals at the worksites, and the objectives of the health promotion activities. Educational degrees and categories were found proportionally in all categories of worksite size and worksite type.

Discussion

The results of this baseline descriptive analysis study have implications for the practice of evaluation in the worksite setting, as well as, for the education of professionals who practice health promotion in the worksite setting. This study suggests, at present, formal evaluation is not fully established as one of the basic structural components of worksite health promotion activities. This study provided an assessment of the evaluation activities of members of a professional organization not an assessment of the evaluation activities of various corporate worksites. The comparison of the results of this study to the National Survey of Worksite Health Promotion Programs conducted in 1985 must reflect the differences between the populations studied.

The evaluation component is vital to the determination of the quality, appropriateness, and effectiveness of the health promotion activities, and, therefore, vital to the overall success of the activities. As was addressed by several authors including the Association for Fitness in Business in their 1992 Guidelines for Employee Health Promotion Programs, the development of the plan for the worksite health promotion program/activities should include an evaluation component the health promotion activities. By incorporating the evaluation component into the worksite plan and by incorporating the acquisition of data for evaluation purposes into daily activities, the health promotion professional is more likely to conduct formal evaluation activities. Failure of the worksite health professional to conduct formal evaluations, whether required or not by their superiors, contribute to the inability to recognize deviations from the basic purpose and philosophy of the worksite health promotion plan, prevent valid measures of the benefits of the activities, and inhibit the ability to strengthen the quality and effectiveness of the health promotion activities appropriate for each unique worksite population.

To assure the incorporation of evaluation as a fundamental component of worksite health promotion activities, the education of health promotion professionals

who will practice in the worksite setting should include a broad preparation in the methods and techniques of evaluation appropriate for and unique to the worksite setting. To this purpose, information regarding methods and techniques used in community health evaluations, individual health behavior models, and project evaluations combined with evaluation methods used in the business setting should be considered. The impact of organizational influences on health behavior is a concept to be considered in the presentation of the theories and models of health behavior/health education. Education in the methods and utilization of more advanced evaluation strategies such as cost-benefit analysis and cost-effectiveness analysis would provide the health promotion professional with invaluable tools. While these strategies are promoted in literature, less than one-third of the respondents conducted such evaluations.

Recommendations

Based on the results of this study, the following recommendations are offered for future studies:

1. Replicate the study using larger samples which would include individuals managing worksite health promotion activities who are not members of a professional health promotion organization to reduce sampling errors and to ensure generalization to the worksite setting.

2. Evaluate the worksite health promotion professionals' values and beliefs relative to the conduct of evaluation activities.

3. Evaluate the utilization and knowledge of evaluation methods unique to the worksite setting.

4. Evaluate the organizational influences on health behavior and evaluate the development of evaluation methods to determine the impact of these influences.

5. Evaluate the types of evaluation utilized by professionals of various educational backgrounds.

6. Evaluate the data bases of the worksite health promotion activities and their relationship to the formal evaluation of the worksite health promotion activities.

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APPENDIX A
COVER LETTER

COVER LETTER

Dear _____,

An important survey of worksite health promotion professionals in the United States is being conducted January-February, 1992. The purpose of this study is to assess what evaluation activities, if any, are conducted of worksite health promotion programs.

I would appreciate your cooperation in completing this voluntary survey. Participation by professionals such as yourself will greatly benefit the survey.

The information you provide will be kept confidential. Survey data will be used for statistical purposes only. Information will be reported only in a manner that does not identify any individual or worksite.

The time needed to complete the survey questions is approximately 15 minutes. Please place the completed survey in the enclosed envelope and return by February 5, 1992. Highlights of the survey results will be available later in the year following data analysis.

Thank you for your participation!

Ann Corrigan

APPENDIX B
CONTENT OF FOLLOWUP POST CARD

CONTENT OF FOLLOW UP POST CARD

Dear Health Promotion Professional,

A survey of Worksite Health Promotion Evaluation Activities was recently sent to you.

If you have completed and returned the survey, THANK YOU! Your participation in this survey is greatly appreciated.

If you have not completed the survey, will you please do so now. Your participation is very important to the success of the study.

Results of the study will be available in summer, 1992. If you are interested in receiving a synopsis of the results, please indicate at the bottom of the card and return to my address.

Again, thank you for your participation!

Ann Corrigan

[] I would like to receive a synopsis of the results of the Worksite Health Promotion Evaluation Activities study.

APPENDIX C
SURVEY OF WORKSITE HEALTH
PROMOTION EVALUATION ACTIVITIES

Survey of Worksite Health Promotion Evaluation Activities

DIRECTIONS: Please fill in or check your responses to each of the following questions as they pertain to your present worksite health promotion activities. Be sure to check or respond to all that apply to each item.

1. What is the size of your health promotion staff?

- a) Number of full time non-management staff who are directly involved in health promotion activities _____
- b) Number of full time health promotion management staff _____

2. What is the highest degree earned by the health promotion manager?

- Bachelor's Degree
- Master's Degree
- Doctoral Degree
- Health Promotion/Education/Sciences
- Physical Education/Exercise Sciences
- Nursing
- Business
- Other, please specify field: _____

3. To whom does the health promotion manager directly report, and in which department?

- Middle level manager (department director, manager, supervisor, section leader)
- Upper level manager (vice president, executive)
- Human Resources/Personnel
- Operations/Manufacturing
- Occupational Health/Medical Services
- Safety
- Sales/Marketing
- Service
- Other _____

4. What is the size of your worksite? (Include full time and part time employees.)

- less than 50 employees
- 50-99 employees
- 100-249 employees
- 250-499 employees
- 500-749 employees
- 750+ employees

5. What type of business organization is the worksite?

- Manufacturing/Engineering
- Finance/Insurance/Real Estate
- Hospitality (food, hotel)
- Service producing organization (transportation, utilities)
- Health care (hospitals, rehabilitation centers)
- Other _____
- Retail/Marketing
- Governmental agency
- Education

6. How are the health promotion activities funded? Check all that apply.

- Employee fees or donations
- Public funds
- Budgeted dollars by the company/business
- Combination of employee/company/ public funds
- Other _____

7. What percent of the company budget is spent on employee health promotion activities?

- Unknown
- Less than 1%
- 1% - 5%
- Greater than 5%
- Other _____

8. To whom are the health promotion activities open? Check all that apply.

- Employees
- Employees of other companies
- Retirees
- Employee family members covered by insurance plan
- Employee family members not covered by insurance plan
- Community members, students
- Other _____

9. Are written goals and objectives developed for the health promotion activities?

- Yes No

If yes, which of the following are considered in the development of the goals and objectives for the health promotion activities? Check all that may apply.

- Program philosophy
- Participation rates
- Absenteeism
- Satisfaction of user
- Changes in health behavior
- Changes in health knowledge
- Changes in attitude
- Changes in biometric measures
- Changes in risk factors
- Cost benefits of program
- Program theory
- Cost savings of program
- Attendance rates
- Productivity
- Degree of goal achievement
- Medical care costs and utilization
- Quality of programs/activities
- Employee needs/interest areas
- Trends in any of the items listed
- Other _____

10. Are formal evaluations currently conducted for the health promotion activities provided at your worksite? (If "no", proceed to question # 23)

- Yes No

Who conducts the evaluations? Check all that may apply.

- Upper management/executives
- Middle management
- Physician
- Consultant
- Health promotion professionals/staff
- Person completing this survey
- Title: _____
- Other _____

Who requires the evaluations to be conducted? Check all that may apply.

- Upper management/executives
- Middle management
- Physician
- Consultant
- Health promotion professionals/staff
- Person completing this survey
- Other _____

11. Which of the following activities are offered? Is the result/effect (the outcome) of the activity evaluated? Is the manner of the delivery (the process) of the activity evaluated? Check all that apply.

	Is <u>Offered</u>	Outcome Is <u>Evaluated</u>	Process Is <u>Evaluated</u>
Accident prevention/safety promotion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exercise and physical fitness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nutrition/weight control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alcohol/drug use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smoking control or cessation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blood pressure screening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stress management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health risk assessment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employee motivation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Back care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. What methods of evaluation have you utilized in the recent past (3-5 years) to evaluate your health promotion activities? Check all that apply.

<input type="checkbox"/> Pre-tests	<input type="checkbox"/> Assessment of changes in biometric measures
<input type="checkbox"/> Post-tests	<input type="checkbox"/> Assessment of health behavior changes
<input type="checkbox"/> Pre-tests and post-tests	<input type="checkbox"/> Analysis of cost benefits
<input type="checkbox"/> Interviews	<input type="checkbox"/> Analysis of cost effectiveness
<input type="checkbox"/> Skill tests	<input type="checkbox"/> Knowledge tests
<input type="checkbox"/> Observation	<input type="checkbox"/> Statistical comparisons
<input type="checkbox"/> Control groups	<input type="checkbox"/> Questionnaires/surveys
<input type="checkbox"/> Time series analysis	<input type="checkbox"/> Trend analysis
<input type="checkbox"/> Attitude inventory	<input type="checkbox"/> User satisfaction surveys
<input type="checkbox"/> Retrospective record reviews	<input type="checkbox"/> Focus groups
<input type="checkbox"/> Financial audits	<input type="checkbox"/> Other _____

13. Which of the following databases are utilized in the evaluation of your health promotion activities?

	Manual <u>Database</u>	Computer <u>Database</u>	Not <u>Used</u>
Payroll data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sick leave records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Workers' compensation claims	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health promotion activity attendance records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employee health/ medical records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health risk appraisal records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insurance claims data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employee assistance records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Disability statistics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mortality statistics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. What health promotion activities would you prefer to evaluate if you had a choice?
-
-

15. Have you personally evaluated the **quality** of health promotion activities at your worksite?
 Yes No If not, who did? _____
 Briefly, describe the evaluation used: _____

16. Have you personally evaluated the **appropriateness** of health promotion activities at your worksite?
 Yes No If not, who did? _____
 Briefly, describe the evaluation used: _____

17. Have you personally evaluated the **effectiveness** of health promotion activities at your worksite?
 Yes No If not, who did? _____
 Briefly, describe the evaluation used: _____

18. Which elements are generally included in your written reports of evaluation results? Check all that apply.
- | | |
|---|--|
| <input type="checkbox"/> Discussion of evaluation method used | <input type="checkbox"/> Graphs, tables, or charts |
| <input type="checkbox"/> Narrative discussion of results | <input type="checkbox"/> Recommendations |
| <input type="checkbox"/> Other _____ | |
| <input type="checkbox"/> None of the above; verbal reports are provided | |
19. Based on the results of these evaluation reports, who makes decisions about the health promotion activities?
 Check all that apply.
- | | |
|---|--|
| <input type="checkbox"/> Upper management/executives | <input type="checkbox"/> Middle management |
| <input type="checkbox"/> Health promotion professionals/staff | <input type="checkbox"/> Physicians |
| <input type="checkbox"/> Person completing this survey | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Employees | |
20. Have "outside" consultants been involved in your health promotion activities?
 Yes No
 If yes, briefly describe their activities _____

21. Are there health promotion activities at your worksite in which the professional health promotion staff are not involved? Yes No
 If yes, briefly describe these activities _____

22. In your opinion, is the most appropriate person at your worksite conducting the evaluation of the health promotion activities? Yes No
 If no, in your opinion, who should conduct the evaluations? Title: _____
23. If formal evaluations are NOT conducted, which of the following are reasons the evaluations are not conducted? Check all that apply.
- | | |
|---|---|
| <input type="checkbox"/> Lack of health promotion personnel | <input type="checkbox"/> Not part of program plan |
| <input type="checkbox"/> Lack of time | <input type="checkbox"/> Lack of goals and objectives |
| <input type="checkbox"/> Lack of financial resources (funding) | <input type="checkbox"/> Too difficult to perform |
| <input type="checkbox"/> Lack of expertise | <input type="checkbox"/> Lack of models to use in workplace setting |
| <input type="checkbox"/> Concern how results will be accepted | <input type="checkbox"/> Lack of support for evaluation research |
| <input type="checkbox"/> Lack of interest by health promotion staff | <input type="checkbox"/> Company politics |
| <input type="checkbox"/> Lack of interest by supervisors/executive | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Fear of results | |

DIRECTIONS: Please check your response to each of the following questions as they pertain to formal evaluation of your present worksite health promotion activities. Please check only one response per question.

	<u>YES</u>	<u>NO</u>	<u>DO NOT KNOW</u>
24. Do you evaluate participation in health promotion activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Do you evaluate satisfaction with the health promotion activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Are the following evaluated:			
needs of participants?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
settings of the activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
objectives of the activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
health needs of the individual?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
health outcomes of the individual?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
compliance to health promotion objectives by the individual?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
health needs of the company?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
health outcomes of the company?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
compliance to health promotion objectives by the company?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. Is evaluation used to :			
improve the effects of the health promotion activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
determine strengths and weaknesses of the activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
justify the activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
review/revise activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
determine overall effectiveness of activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Are results of evaluation used for:			
administration of health promotion activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
planning of health promotion activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
financing of health promotion activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Are the presentation methods used in health promotion activities evaluated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Do you evaluate for factors outside the health promotion activity that may impact the effectiveness of the activity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Is a follow-up of participants a part of your plan? If yes, how frequently is follow-up performed? _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Do you perform screenings of biometric measures (BP, cholesterol levels, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Do you perform health risk appraisals? If yes, how frequently? _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX D
SUMMARY OF DATA

Summary of Data

Survey of Worksite Health Promotion Activities

DIRECTIONS: Please fill in or check your responses to each of the following questions as they pertain to your present worksite health promotion activities. Be sure to check or respond to all that apply to each item.

1. What is the size of your health promotion staff?

a) Number of full time non-management staff who are directly involved in health promotion activities

65 0 non-management staff
103 1-3 non-management staff
42 4-10 non-management staff
11 11 or greater non-management staff

b) Number of full time health promotion management staff

29 0 management staff
170 1-3 management staff
17 4-10 management staff
5 11 or greater management staff

2. What is the highest degree earned by the health promotion manager?

66 Bachelor's Degree
137 Master's Degree
11 Doctoral Degree

40 Health Promotion/Education/Sciences
92 Physical Education/Exercise Sciences
12 Nursing
12 Business
37 Other, please specify field:
Industrial/organizational psychology;
biology; health education and physical
education; social work; physical education
and nursing; nursing education; health
education and physical education; health
education and physical education; nutrition;

recreation; adult fitness management; business and other unspecified; management and human resources; exercise physiology; health education and physical education; physical education and business; medicine; health education and nursing; physical education and nutrition; physical education and sports medicine; nursing and public health; health education and physical education; management education; sports administration; physical education and health education; physical education and business; health education and nursing; health fitness and recreation; nutrition; nutrition; recreation education; nutrition and public health; psychology; physical education and therapeutic recreation; nursing and business; physical therapy and physical education; health education and physical education.

3. To whom does the health promotion manager directly report, and in which department?

- 135 Middle level manager (department director, manager, supervisor, section leader)
- 68 Upper level manager (vice president, executive)
- 118 Human Resources/Personnel
- 4 Operations/Manufacturing
- 32 Occupational Health/Medical Services
- 6 Safety
- 3 Sales/Marketing
- 5 Service
- 42 Other:
 To president; support services; HR & health services; benefits; property management; general manager; building management; administration; administrative services; administrative services; employee programs; medical director; administration; communications; president-consulting; health & safety; labor/management relations; engineering/facility maintenance; advisory program administration; administrative services; company president; health & safety; president; HR & health services; manager,

health & fitness; office services; VP of bank; employee services; president; training integration; employee services; health & safety; risk management; employee services; nursing service; training & development; Dean of college; director, health management; health & safety; facilities management; employee services; administration.

4. What is the size of your worksite? (Include full time and part time employees.)

4 less than 50 employees
 1 50-99 employees
 11 100-249 employees
 20 250-499 employees
 23 500-749 employees
 161 750+ employees

5. What type of business organization is the worksite?

64 Manufacturing/Engineering
 35 Finance/Insurance/Real Estate
 1 Hospitality (food, hotel)
 17 Service producing organization
 (transportation, utilities)
 7 Health care (hospitals,
 rehabilitation centers)
 7 Retail/Marketing
 12 Governmental agency
 5 Education
 73 Other:
 Parent company headquarters; manufacturing
 and retail; manufacturing, finance, and
 computers; petroleum company; direct
 marketing; forest products; complex of 30
 companies; food distribution; telephone
 company; professional office building;
 utilities; oil and gas; research &
 development; corporate communications;
 research & development; bank; consumer
 products; publishing; manufacturing, retail,
 and education; corporate headquarters; law
 enforcement and government; manufacturing and
 finance; media; oil company; utility; food
 company; postal service; telecommunications;
 corporate headquarters; telecommunications;

telecommunications; pharmaceuticals;
 manufacturing and governmental agency;
 advertising agency; telecommunications;
 petroleum; corporate headquarters - textiles;
 oil & gas; research; communications; electric
 utility; insurance and agriculture; corporate
 headquarters; law office; brokerage and oil
 refining; lumber mill; telecommunications;
 bank; wholesale distribution; consultant;
 newspaper; pharmaceutical;
 telecommunications; pharmaceutical; research
 & development; construction; oil & gas;
 pharmaceutical; pharmaceutical; manufacturing
 and hospitality; information services
 technology; communications; Rockwell
 International; telecommunications; defense
 industry; food and tobacco; customer services
 and hospital services; telecommunications;
 mental health center; computer software
 development; manufacturing and service; oil
 company.

6. How are the health promotion activities funded? Check
 all that apply.

- 77 Employee fees or donations
- 1 Public funds
- 179 Budgeted dollars by the company/business
- 39 Combination of employee/company/ public funds
- 6 Other:
 Profits from vending machines; law partners
 contributions; sales income; workers' comp fund;
 vending revenues; fundraisers.

7. What percent of the company budget is spent on employee
 health promotion activities?

- 120 Unknown
- 69 Less than 1%
- 22 1% - 5%
- 4 Greater than 5%
- 0 Other

8. To whom are the health promotion activities open? Check all that apply.

212 Employees
 14 Employees of other companies
 94 Retirees
 78 Employee family members covered by insurance plan
 38 Employee family members **not** covered by insurance plan
 4 Community members, students
 43 Other:
 Spouses; spouses and clients; children; salaried employees; building tenants; spouses; spouses; auxillians and interns; some for all family; contract employees; spouses; spouses; enrolled groups; spouses; employees of subsidiaries; spouses; spouses; spouses; guests at facility; spouses; temporary employees; international fellows; family members; attorneys only; employee families; spouses, no dependents; spouses; spouses; spouses; spouses; spouses; EAP by family members; family members; spouses; spouses; spouses; friends; spouses; spouses; varies by site; spouse; contract employees.

9. Are written goals and objectives developed for the health promotion activities?

189 Yes

30 No

If yes, which of the following are considered in the development of the goals and objectives for the health promotion activities? Check all that may apply.

141 Program philosophy
 135 Participation rates
 44 Absenteeism
 123 Satisfaction of user
 135 Changes in health behavior
 123 Changes in health knowledge
 91 Changes in attitude
 62 Changes in biometric measures
 106 Changes in risk factors
 86 Cost benefits of program
 42 Program theory
 65 Cost savings of program
 73 Attendance rates

- 46 Productivity
- 52 Degree of goal achievement
- 66 Medical care costs and utilization
- 121 Quality of programs/activities
- 152 Employee needs/interest areas
- 46 Trends in any of the items listed
- 3 Other:
Company image; improve the quality of life; low cost to employee

10. Are formal evaluations currently conducted for the health promotion activities provided at your worksite? (If "no", proceed to question # 23)

146 Yes 72 No

Who conducts the evaluations? Check all that may apply.

- 18 Upper management/executives
- 15 Middle management
- 7 Physician
- 10 Consultant
- 125 Health promotion professionals/staff
- 60 Person completing this survey; Title:
Fitness center program director; manager support services; wellness program coordinator; manager of corporate fitness; wellness program supervisor; health promotion coordinator; manager; manager employee health services; safety and wellness administrator; supervisor; health fitness manager; fitness specialist; AVP health services manager; manager fitness center; project manager; outside company; health fitness supervisor; senior wellness administrator; health fitness coordinator; manager and health fitness coordinator; employment manager; wellness manager; area nursing manager; health and fitness director; manager; manager employee services; program director; program/facility manager; exercise specialist; director corporate wellness; physical fitness specialist; health promotion coordinator; director; wellness administrator; regional

wellness/fitness; fitness director; health fitness manager; wellness coordinator; wellness program supervisor; health promotion manager; fitness/wellness coordinator; health & fitness specialist; fitness center manager.

- 5 Other:
University cooperation; guests; data processing companies; wellness committee members; students, interns.

Who requires the evaluations to be conducted? Check all that may apply.

- 51 Upper management/executives
29 Middle management
8 Physician
3 Consultant
95 Health promotion professionals/staff
50 Person completing this survey
5 Other:
No one; participants; quality initiative; wellness center members; company guidelines

11. Which of the following activities are offered? Is the result/effect (the outcome) of the activity evaluated? Is the manner of the delivery (the process) of the activity evaluated? Check all that apply.

	<u>Is Offered</u>	<u>Outcome Is Evaluated</u>	<u>Process Is Evaluated</u>
Accident prevention/ safety promotion	99	52	44
Exercise and physical fitness	164	127	111
Nutrition/weight control	155	104	93
Alcohol/drug use	80	40	40
Smoking control or cessation	125	90	83
Blood pressure screening	152	91	79
Stress management	126	63	70
Health risk assessment	128	94	83
Employee motivation	64	34	33
Back Care	125	70	72
Other:	34	24	22
Cholesterol screens; ergonomics; cancer prevention and			

health care consumer guides; prenatal care; cholesterol screen; cancer screenings; "baby and you" and family program; various cancer screens; cholesterol screens and mammography; AIDS; massage, tai chi exercise classes; cholesterol screen; cholesterol education; parenting, cholesterol screening, mammography, vision and hearing screening; sports and recreation; self defense, communication with family; self esteem; work & family related; ergonomic assessment; health fairs; prenatal care; disease control and education; general rehabilitation; cancer prevention; team building; massage; mammography and prenatal care; hazardous material handling; cholesterol screen; healthy babies and medical self care; health culture audit, educational mini-sessions; EAP; cholesterol screen and cancer prevention; adult fitness, vision screening, blood analysis; cardiac rehabilitation.

12. What methods of evaluation have you utilized in the recent past (3-5 years) to evaluate your health promotion activities? Check all that apply.

- 79 Pre-tests
- 85 Post-tests
- 91 Pre-tests and post-tests
- 82 Interviews
- 26 Skill tests
- 84 Observation
- 30 Control groups
- 12 Time series analysis
- 53 Attitude inventory
- 31 Retrospective record reviews
- 17 Financial audits
- 88 Assessment of changes in biometric measures
- 72 Assessment of health behavior changes
- 41 Analysis of cost benefits
- 39 Analysis of cost effectiveness
- 28 Knowledge tests
- 35 Statistical comparisons
- 134 Questionnaires/surveys
- 26 Trend analysis
- 105 User satisfaction surveys
- 48 Focus groups
- 5 Other:
 Personal feedback; evaluation forms; weekly surveys; integrated data review; phone surveys and interviews.

13. Which of the following databases are utilized in the evaluation of your health promotion activities?

	<u>Manual Database</u>	<u>Computer Database</u>	<u>Not Used</u>
Payroll data	4	31	61
Sick leave records	5	45	54
Workers' compensation claims	12	46	49
Health promotion activity attendance records	75	71	10
Employee health/ medical records	37	51	34
Health risk appraisal records	34	78	24
Insurance claims data	7	51	48
Employee assistance records	9	17	54
Disability statistics	7	30	54
Mortality statistics	2	14	63
Other:	4	6	7

Yearly survey; job performance; attendance and participation numbers; laboratory tests; medical/physical evaluations; fitness center attendance; attitude and behavior survey; fitness data.

14. What health promotion activities would you prefer to evaluate if you had a choice?

Effect of exercise on absenteeism and medical usage; exercise, fitness, nutrition and weight control, BP, cholesterol, and back care; insurance; onsite weight loss program offered by outside vendor; all; screening of pre-cancerous conditions; workers' compensation claims, health risk appraisals; fitness stress; all; exercise and physical fitness; health promotion activity attendance and health trends; impact of exercise on health care costs and workers' comp; all; stress management, medical self care, fitness; lifetime changes - impact process data; prefer to evaluate all programs offered; health plan costs, physiological measurements; cost-benefit analysis, attendance, turnover, adherence factor; every program; sick leave records, HP attendance records; all; exercise, blood pressure; accident prevention, safety, exercise, physical fitness; productivity, absenteeism, illness, sick leave, injuries; how fitness relates to reduced medical costs and sick leave; stress management; all;

risk reduction programs; stress management; facility usage, health education attendance; fitness; evaluate by participation level those which are of interest; site specific data; exercise and nutrition programs; all; all; behavior change in relation to health claims, absenteeism, attitude; claims and sick leave, fitness, attendance data, HP activities; I don't know; all; employee attendance percentage, insurance claims; health risk factors and medical claims; health risk appraisal, employee health/medical records, insurance claims; incentives; exercise adherence; levels of physical fitness; sick leave, performance, insurance claims more intensively; all; all, especially claims; all, but I have no staff; every program which can be measured, especially health and wellness; weight control; all; disability stats, sick leave records; cost-effectiveness; I prefer activities that show good short term changes; better cholesterol and BP tracking; medical insurance claims data; risk data both individual and aggregate; incentive activities, in the area of motivation and morale; preventative maintenance programs; absenteeism, health care cost containment; absenteeism, medical care costs; productivity, absenteeism, insurance claims; number of smoking employees, HRA variables for non-participating employees; all activities; exercise, weight loss, cholesterol reduction; all we offer; compliance, disability, cost-effectiveness, cost-benefit, fitness, quality; sick leave records, disability statistics; all; screenings, fitness center participation; all; total program; screenings, HRA, behavior modification programs.

15. Have you personally evaluated the quality of health promotion activities at your worksite?

123 Yes 39 No

If not, who did?

Corporate quality assessment; director; staff and consultants; consultant; institute of aerobic research; nurse-health unit; health education manager; employees; participants; health promotion manager; upper management.

Briefly, describe the evaluation used

Questionnaire to all employees on all services provided; surveys, satisfaction index, pre and post tests; survey user; comparison to others,

surveys from participants; interviews - CPI style; survey and management from vendor; written evaluation which participants fill out, I observe; satisfaction/needs questionnaire to all employees; survey; survey after each program; questions at completion of activity; series of surveys to users and non-users of programs offered; feedback questionnaire; confidential satisfaction survey; review materials, monitor delivery; questionnaires, surveys; questionnaire, observation; process and needs assessment; focus group, employee input; fitness center activities by organization development group; goals and action steps reviewed, impact/results, standards and norms; questionnaires, 3-6-12 month follow-up of weight control program; questionnaire and focus groups; participation, verbal feedback, community agency evaluation; satisfaction survey; participants complete evaluation after each presentation; satisfaction surveys, program evaluations; using the HRA and noting decrease in absenteeism; utilization, biometric tests, satisfaction survey, retention; success rate, cost , services provided must meet requirements; customer satisfaction survey; suggestion box, interviews, survey, evaluations; survey; ongoing observation and feedback; CQI methods; surveys, interviews; survey; third party focus groups and surveys; benchmarked with 12 peer companies to evaluate quality; survey; focus groups; surveys; participant surveys; based on retention; committee discussion; company market driven quality plan; customer satisfaction survey; customer satisfaction survey; survey; focus groups, satisfaction survey; questionnaire; data and program evaluation with 2 day site visit; pre and post surveys; written evaluation; observation and questionnaires; surveys; user surveys, observation; survey and event evaluation by participants; proprietary evaluation; questionnaire, computer analysis; feedback from users, evaluation forms, communication; surveys, written evaluations, participation numbers; questionnaire to all employees; participation, objectives obtained, member feedback; attendance, participation, surveys; survey to participants; comparison study among similar programs and attendance; personal observation; customer satisfaction survey for health risk appraisal

process; user satisfaction survey, behavior change survey; satisfaction surveys; yearly needs assessment; questionnaire; satisfaction surveys; on site visits; evaluation forms, surveys; personal professional research and comparisons; surveys, focus groups, listening to customer; audits, interviews, supervised screens, instructor training; interview vendors for program content, participant skill change; statistical comparison of yearly participation; attendance, focus groups, satisfaction surveys; satisfaction surveys, quality improvement process; supervise methods and content of delivery information; informal interviews, QA questionnaire; questionnaires; customer satisfaction surveys; survey membership, pre and post testing; survey re customer satisfaction, program content, comprehension; 7 step method for process and outcome, data tracking, surveys; focus group, surveys; discussions with employees, utilization of information, follow-up testing; employee evaluation following programs; participant evaluation questionnaires; questionnaire, usage, performance appraisals, behavior change; satisfaction surveys; comparative studies with other programs; observation, written analysis, pre and post tests; user satisfaction surveys; surveys, focus groups, evaluations; observation of employees after program was stopped; written survey.

16. Have you personally evaluated the appropriateness of health promotion activities at your worksite?

115 Yes 45 No

If not, who did?

Corporate quality assessment; director; staff and consultants; outside company; health education manager; health promotion manager; upper management; steering committee chairman; medical staff.

Briefly, describe the evaluation used

Attendance records; committee selected objectives, evaluating objectives; survey; crossed with needs assessment used previously; QA by vendor; written evaluation which the participants fill out, I observe; cost value

analysis; survey; one of the questions (used) is "appropriateness"; questionnaires, participation, attendance; feedback questionnaire; absentee records, questionnaires; surveys; questionnaires and surveys; questionnaire, observation; use employee feedback after activities; focus group responses in combination with impact/outcome data; task force to review needs assessment and set program goals; questionnaire; participation, verbal feedback, community agency evaluation; satisfaction survey, interest survey, review of medical records; observations, interviews, written evaluation; shift workers versus office workers - timing of each program; survey, evaluations, suggestion box, interviews; surveyed population, stats from medical health services; running it by other employees or supervisors to see if appropriate; ongoing observation and feedback; surveys, interviews; survey; bases on health profiles, medical and EAP data; surveys and program evaluation; survey; focus groups; surveys; participant surveys; committee discussion; survey of specific aspect of health/fitness enrollment process; survey; baseline health audit; members for insurance carriers; questionnaire; lifestyle survey/health profile; surveys; surveys; user survey, observation; proprietary evaluation; cost-benefit ratio analysis; distribution to users and non-users for feedback; surveys, written evaluations, participation numbers; survey; survey; health risk assessment questionnaire; current topics of interest; survey evaluating what needs are pertinent; evaluation of health care costs determines some programs; employee surveys, computerized HRAs; discuss with members; kickoff listing of wants and needs of population; survey tool; current trends study and employee requests; survey; HRAs, interview senior management, analyzed claims data, check preference; provided health culture audit with program based on results; attendance, focus groups, satisfaction surveys; strategic planning, program philosophy versus company needs and expectations; by does it satisfy goal achievement; literature/program review; informal interviews, QA, subjective evaluation; audit; health audit; word of mouth, participation rates, surveys; health risk appraisal, medical claims analysis; employee

survey, comparison to other companies with like populations; cost-benefit; analyzing needs and interests; questionnaire, usage, performance appraisals, behavior change; employee participation studies; questionnaire; highest company risk factors combined with interests of population; observation of employees after program was stopped.

17. Have you personally evaluated the effectiveness of health promotion activities at your worksite?

111 Yes 50 No

If not, who did?

Corporate quality assessment; staff and consultants; outside company; outside company; health education manager; data collector; health professionals; health promotion manager; upper management.

Briefly, describe the evaluation used

Quarterly reports showing changes in participation and fitness levels; number of employees attending, change in behaviors, change in knowledge; currently utilizing data from human resources; QA by vendor; written evaluation which participants fill out, I observe; health care costs analysis; survey; subjective evaluation by participants; pre and post measurements, pre and post survey of behavior change; change in health behaviors were measured; absentee records, questionnaires; trend analysis from phone survey; questionnaire, survey; questionnaire, observation; outcome; measure employee attitudes, behavioral changes, biometric changes; participation costs, impact results, program outcomes; task force and evaluations, workers' comp data, weight loss records; employee usage compared to employee non-usage in facility; employee questionnaire, surveys; participation, verbal feedback, community agency evaluation; satisfaction survey, analyzing computer records; pre and post changes in weight, cholesterol, BP and fitness; employee lifestyle changes as reported, number of participants; program surveys, health care claims, absenteeism rates, participation; observation, interviews, written evaluation; follow-up, attendance records; disability absence study, compare fitness center

users to non-users; survey, evaluations, suggestion box, interviews; survey, pre and post testing; ongoing observation and feedback; surveys, interviews; survey; focus groups, surveys, pre and post objective and subjective evaluation; risk versus health care cost; survey; analysis; quality assurance survey; compared cholesterol levels and annual sick days; committee discussion; participation, evaluation forms; pre and post test comparison, random "health audit"; customer satisfaction survey; survey; repeat health audit, health risk management surveys every 3-5 years; questionnaire; questionnaire, cost estimated savings, absenteeism, medical claims; lifestyle survey/health profile; observation and surveys; surveys; proprietary evaluation; follow-up questionnaires; report rate of returned evaluation forms and participation level; surveys, written evaluations, participation numbers; post-testing, observation; change in health status; surveys, physical exam results pre and post participation; attendance; health risk assessment questionnaire, surveys; computerized number analysis of participation rates; re-test, HRA, screenings; behavior change survey; attendance, feedback; re-evaluations; attendance look-in process; survey; pre and post measures, measures recidivism; look at percentage of company population reached; personal interviews; attendance, focus groups, satisfaction surveys; pre and post fitness evaluations; post evaluation; attendance, usage, demand; audit; statistical analysis of disability data; fitness test and retesting, change in HRA, BP aerobic capacity; behavior change, pre and post testing; customer satisfaction surveys, focus groups, participation data; formal reports; health risk appraisal; biometric measurement; end of session process/content evaluation, 6 month follow-up of behavior change; questionnaire, usage, performance appraisals, behavior change; by questionnaire; follow-up surveys and questionnaires; usage study, interviews, surveys.

18. Which elements are generally included in your written reports of evaluation results? Check all that apply.

- 59 Discussion of evaluation method used
- 103 Narrative discussion of results
- 104 Graphs, tables, or charts
- 101 Recommendations
- 17 Other:
Results of program survey; comments by participants; reported once per month to upper management; plans and goals for future; overview and results; retention figures; follow-up of negative comments; numerical data; usage reports; written result; also provide verbal reports; statistics; executive summary of key results; sample of evaluation form; written monthly report; number of programs conducted and the attendance.
- 14 None of the above; verbal reports are provided

19. Based on the results of these evaluation reports, who makes decisions about the health promotion activities? Check all that apply.

- 75 Upper management/executives
- 51 Middle management
- 127 Health promotion professionals/staff
- 11 Physicians
- 63 Person completing this survey
- 22 Employees
- 9 Other:
President; government project offices; wellness committee; site leadership committee; medical director and human resources; wellness committee input; HRD; medical services; committees.

20. Have "outside" consultants been involved in your health promotion activities?

123 Yes 44 No

If yes, briefly describe their activities

Responsible for current management of all services; as vendors; dietician, physical therapists provided presentations; marketing, programming, management reports; physical therapy, other wellness instructors; started fitness program, provided recommendations; our PPO provides us with many resources and

assistance; coordinate HRAs; lecture series; occasional seminars; teaching specialists; instructors for health education; aerobics, weight watchers; cholesterol screenings, stress management; cholesterol screening, health fair vendors, back care; speakers bureau; cholesterol screening; consultant runs entire fitness center and HP activities; speakers, trainers; for various programs; initiate program, develop new programs, provide expertise; dietician, athletic trainer, mental health counselor, respiratory therapist; special health related lectures/workshops; presenters; seminars and health screenings; lectures, fairs; weight control, stress management, smoking cessation; diet programs, special instructors for activities; dieticians, other outside speakers; stress management, weight loss, fitness, smoking cessation, self defense; stress management, massage; HRA, back care, health screenings; back classes, massage, aerobics, cholesterol screening, smoking cessation; pregnancy instructors; provide certain programs on a one time basis; vendors of expertise; instructing seminars; various health education programs; manages fitness center and organizes wellness programs; data analysis, screening; cholesterol screening; smoking class; contractors to teach various weight management classes; smoking cessation; screenings; nutritionists; health fairs, provide lectures, smoking cessation, back care; health fair; lectures, seminars; teaching classes, facilitating focus groups; presenting seminars; motivational topics, psychological topics; group leaders, lectures, various vendors; to establish the process (program); smoking cessation; program design, implementation, data analysis; testing, health screening; lectures; university corporate wellness department; cholesterol and skin cancer screening, blood drive, stress day, mammography; delivery of company designed programs; health screenings, contract employees for department staff; some classes or offsite activities; hire/fire instructor, program proposals, work with company liaison; experts for training, vendors for classes, other services; presentations, training; cooking series, weight watchers, smoking cessation; teach classes, give seminars, fitness

testing; cancer screening, lectures, EAP program; contracts for specific programming; variety of health screenings; nutrition consultants, physical therapists, social workers; developed an annual plan; education seminars, classes; presentations by local area physicians; training on evaluation techniques; workshops; various special interest programs; vendors, providers; training; surveys, HRAs claims interpretation, long term advisors; planning and designing workshops; initiated and maintained program, now provides many programs; cholesterol screening; delivery of all programs; community organizations; educational chats, organization of events; dietician with one program; program leaders; for programs; health care specialists, luncheon workshop; biometric testing, fitness profs, dietician, exercise facilitator; quality consultants; medical, dietician; smoking cessation, cholesterol screens, seminars; initially when program was provided; they help coordinate, organize, accomplish our objectives; designing and planning operational strategy for fitness center; medical advisors, guest speakers, health screening; services re seminars, blood draw; presentations and seminars; fitness center staff; development of health fair; resources for speakers and screenings; evaluations, staff training, instruction, seminars; seminars, screenings, assessments; vendor products for health promotion; experts in fields.

21. Are there health promotion activities at your worksite in which the professional health promotion staff are not involved?
 69 Yes 94 No

If yes, briefly describe these activities
 Back care education; safety; weight loss schemes, CPR, smoking cessation; safety does programs, many worksites or departments do things on their own; EAP; offered by safety and EAP departments; no direct link to benefits at this time; EAP; AIDS education; CPR training, self defense training; consultant runs them; stress management; employee support groups, self help groups; some provided by other hospital departments such as safety; yearly exams; safety

oriented; EAP program; EAP; lectures, fairs; EAP offered through outside vendor; health services by MD and nurse; family outings, screenings; EAP; accident and safety; EAP; pregnancy, relaxation, nutrition; cholesterol screening, skin cancer detection; vendors hired specifically to do a program; CPR, blood draws, hearing and visual testing; EAP activities; medical screening; stress management; EAP; aerobics, leanline, weight watchers, smoking cessation; cholesterol screening, other health and nursing type activities; smoking cessation; health fairs, provide lectures, smoking cessation, back care; noon seminars, fitness classes, weight control; exercise classes; intervention courses - stress management, smoking cessation; cafeteria service, health and safety, medical center; specific accounts often conduct their own activities; cooking series, weight watchers, smoking cessation; purchased quarterly newsletter from vendor; employee committees planning and implementation with guidance; medically oriented activities; seminars and lectures by departments; weight watchers, cholesterol screening; physical therapy, stress management; recreational and leisure programs; EAP; outside vendors to do screenings or classes; sports, EAP does stress management; injury prevention; weight management, recreational activities; luncheons sponsored by HR or employee club; employee committee often do activities; EAP, safety; total life concept leadership committee, organize events or programs; recreational/activity club/employee club; safety and back care; EAP; employee committees provide.

22. In your opinion, is the most appropriate person at your worksite conducting the evaluation of the health promotion activities?

138 Yes 18 No

If no, in your opinion, who should conduct the evaluations? Title:

Benefits coordinator; benefits analyst; director of human resources; manager; manager of health

benefits; research manager; HR director; a third party; wellness coordinator; physicians with education; statistician; health maintenance manager; manager of health cost containment; do not know; employee health, benefits; statistician.

23. If formal evaluations are NOT conducted, which of the following are reasons the evaluations are not conducted? Check all that apply.

- 57 Lack of health promotion personnel
- 46 Lack of time
- 47 Lack of financial resources (funding)
- 26 Lack of expertise
- 2 Concern how results will be accepted
- 4 Lack of interest by health promotion staff
- 35 Lack of interest by supervisors/executive
- 2 Fear of results
- 30 Not part of program plan
- 13 Lack of goals and objectives
- 13 Too difficult to perform
- 13 Lack of models to use in workplace setting
- 34 Lack of support for evaluation research
- 21 Company politics
- 18 Other:
Total implementation not yet planned; cost of evaluation; lack of computer software; informal surveys for small population; evaluation plans are evolving; is a benefit not a cost containment program; cost; new program in development; not a mature program yet; young age of program; not believed to be needed; service not provided internally; CEO wants to put evaluation monies into the program; feel programs are worth the expense; program is new; no justification required for a benefit.

DIRECTIONS: Please check your response to each of the following questions as they pertain to formal evaluation of your present worksite health promotion activities. Please check only one response per question.

	<u>YES</u>	<u>NO</u>	<u>DO NOT KNOW</u>
24. Do you evaluate participation in health promotion activities?	190	26	3
25. Do you evaluate satisfaction with the health promotion activities?	191	25	2
26. Are the following evaluated:			
needs of participants?	124	19	6
settings of the activities?	150	56	10
objectives of the activities?	162	43	12
health needs of the individual?	174	29	12
health outcomes of the individual?	133	69	14
compliance to health promotion objectives by the individual?	101	89	18
health needs of the company?	133	64	14
health outcomes of the company?	90	91	20
compliance to health promotion objectives by the company?	88	98	16
27. Is evaluation used to :			
improve the effects of the health promotion activities?	173	30	14
determine strengths and weaknesses of the activities?	174	30	13
justify the activities?	136	64	17
review/revise activities?	189	17	11
determine overall effectiveness of activities?	174	28	15

	<u>YES</u>	<u>NO</u>	<u>DO NOT KNOW</u>
28. Are results of evaluation used for: administration of health promotion activities?	146	50	17
planning of health promotion activities?	195	15	8
financing of health promotion activities?	115	74	22
29. Are the presentation methods used in health promotion activities evaluated?	128	77	11
30. Do you evaluate for factors outside the health promotion activity that may impact the effectiveness of the activity?	75	114	10
31. Is a follow-up of participants a part of your plan?	142	62	9
If yes, how frequently is follow-up performed? Depends (29 responses); 4 months (2 responses); every 3 months (10 responses); twice a year (21 responses); 6 months-1 year; quarterly; varies (6 responses); once per year (19 responses); random; at 2 weeks, 6 weeks, and 6 months post program; every 6-12 months (6 responses); 6-8 months; 3-6 months (5 responses); at 3, 6, 12 months (2 responses); every other month; sometimes; on request (3 responses); irregular; at 6 and 18 months; after programs; 3-12 months (2 responses); infrequent; regularly; as necessary; as appropriate; every 3-5 years; monthly (3 responses); weekly; at 6, 12, 18 months; at 1, 3, 6 months; at 1, 3 12 months; ad lib; 30 % of the time.			
32. Do you perform screenings of biometric measures? (BP, cholesterol levels, etc.)	206	8	7

	<u>YES</u>	<u>NO</u>	<u>DO NOT KNOW</u>
33. Do you perform health risk appraisals?	164	48	7

If yes, how frequently?

Annually/once per year (61 responses); every three months; for new members/initially (13 responses); on request (4 responses); twice a year (6 responses); every 3-4 years; every 1-2 years; every 2-5 years (2 responses); every 2-3 years; every 2 years (10 responses); as needed (2 responses); depends (5 responses); every 1-3 years; every 5 years (6 responses); with physical exams (2 responses); ongoing; every 6-12 months; every 3 years (2 responses); every 6 months; quarterly; every 3-4 years; infrequent (2 responses); every 3-6 months, and every 3 years; regularly; every 4 years (2 responses); every 3-5 years; every 3-6 months; monthly; every 3-12 months; every 2-3 years; every 2.5 years; every week; age dependent; every 4-5 years; every 12-18 months; every 2-6 months; varies; varies with risk.