

**MUNICIPAL GOVERNMENT EMPLOYEE SURVEY:
PREFERENCES FOR AND PERCEPTIONS OF EMPLOYEE HEALTH AND
ASSISTANCE PROGRAMS**

by

DEB JONES

B.Sc. Home Economics (Nutrition)

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF PHYSICAL EDUCATION

in

THE FACULTY OF GRADUATE STUDIES
SCHOOL OF PHYSICAL EDUCATION

We accept this thesis as conforming
to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA

August, 1990

© Deborah Kay Jones, 1990

In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the head of my department or by his or her representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of Physical Education

The University of British Columbia
Vancouver, Canada

Date Sept 20, 1990

ABSTRACT

Promoting participation in EHAPs (employee health and assistance programs) by those employees most in need of health improvements is important to increasing the effectiveness of these programs. Programs which are designed to reduce perceived barriers to participation and to meet the specific needs and interests of these employees have resulted in higher participation. The purpose of this investigation was to determine the extent to which demographics and perceived health status were associated with employees preferences and perceptions of EHAPs. This was done through survey analysis of four hundred and one employees of a municipal government. It was found that there were no significant differences in employees' anticipated use of these programs based on any of the demographic or perceived health variables studied with the exception of the variable "current frequency of exercise". However, different interests in program components were apparent among the various sub-groups of employees. There were also reported differences among the sub-groups for preferred program times and facilities. There were significant differences among some of the sub-groups in reported barriers to the use of EAPs and in reported comfort in exercising with fellow workers. It was also found that current frequency of exercise was significantly related to perceived health status. From these observations, recommendations for promoting participation among these sub-groups have been made. This research has added to the understanding of the differences between the various sub-groups of employees in terms of their preferences for EHAP components and the barriers they perceive toward participating in these programs. A better understanding of these factors as they pertain to employees in other workplaces may aid in the development of programs which better meet the needs of these employees, and hence, may increase their participation in EHAPs.

TABLE OF CONTENTS

	PAGE
Abstract.....	ii
List of Tables.....	vi
List of Figures.....	viii
Acknowledgements.....	x
CHAPTER	
1 INTRODUCTION TO THE PROBLEM.....	1
A. Statement of the Problem.....	2
B. Hypotheses.....	3
C. Definitions.....	4
D. Generalizability, Assumptions and Limitations.....	11
E. Significance of the Study.....	11
2 LITERATURE REVIEW.....	13
A. History.....	13
B. The Corporate Perspective.....	15
C. Participation.....	18
1. The Importance of Participation in Worksite Health Programs.....	18
2. Interpreting Participation Rates.....	18
3. Factors Influencing Participation.....	20
D. Summary of Literature Review and Implications for Influencing Participation.....	42
3 METHODS.....	46

	A. The Survey.....	46
	1. The Needs Assessment Project.....	46
	2. Format.....	46
	3. Distribution and Retrieval.....	47
	4. Respondents.....	48
	5. Data Analysis for the N.A.P.....	50
	B. Analytical Procedures for the Current Investigation.....	50
	1. Division of the Data.....	51
	2. Data Analysis.....	54
4	RESULTS.....	55
	A. Differences in Responses Based on Demographics.....	55
	1. Preferences.....	56
	2. Barriers.....	101
	3. Benefits.....	112
	B. Differences in Responses Based on Perceived Health.....	113
	1. Preferred Program Content.....	113
	2. Anticipated Participation and Interest.....	118
5	DISCUSSION.....	125
	A. Demographics.....	126
	1. Age.....	126
	2. Sex.....	128

	3.	Classification of Worker.....	133
	4.	Exercise Habits.....	139
	B.	Perceived Health Status.....	142
	C.	General Discussion.....	145
6		SUMMARY AND CONCLUSIONS.....	150
	A.	Summary.....	150
	B.	Conclusions.....	152
	C.	Limitations.....	155
	D.	Recommendations.....	155
		REFERENCES.....	161
		APPENDICES.....	166

LIST OF TABLES

TABLE	PAGE
1. Comparison of Survey Respondents to the Total Employee Group.....	49
2. Preference for EHAP Components - All Employees.....	57
3. Differences in Preferences for EHAP Components Based on Age.....	60
4. Differences in Preferences for EHAP Components Based on Sex.....	61
5. Differences in Preferences for EHAP Components Based on Collar Type.....	63
6. Differences in Preferences for EHAP Components Based on Worker Type.....	65
7. Differences in Preferences for EHAP Components Based on Present Frequency of Exercise.....	66
8. Preference for Method of Instruction - All Employees.....	67
9. Results of the Chi-Square Analysis: Significant Differences ($p \leq 0.05$) in Employees' Preferences for EHAP Components Based on Demographics.....	69
10. Anticipated Participation in Health Promotion Programs/Seminars.....	71
11. Anticipated Participation in Exercise Programs.....	72
12. Preferred Time of Day for Health Promotion Programs/Seminars and Exercise Programs.....	74
13. Preference for Type of Fitness Facility on the Worksite.....	80
14. Preference for Type of EAP to be Implemented.....	84
15. Preference for Location of EAP Contact Person.....	85
16. Anticipated Use of an EAP.....	87

17.	Preference for Family Usage of EHAP.....	88
18.	Preference as to Retired Employee's Use of Program.....	90
19.	Preference as to Volunteer Capacity.....	94
20.	Preference for Implementation of an EHAP.....	100
21.	Results of the Chi-Square Analysis: Significant ($p \leq 0.05$) Differences in Possible Barriers to EHAP Participation Based on Demographics.....	102
22.	Biggest Concern Regarding an EHAP.....	103
23.	Preference as to Payment for Exercise Programs.....	104
24.	Preference as to Payment for Health Promotion Programs and Seminars.....	105
25.	Reported Comfort in Exercising with Fellow Workers.....	105
26.	Perceived Barriers to Using Community Services.....	108
27.	Perceived Barriers to Using an EAP.....	110
28.	Perceived Benefit from an EHAP.....	112
29.	Differences in Preferences for EHAP Components Based on Perceived General Health.....	114
30.	Differences in Preferences for EHAP Components Based on Perceived Fitness Level.....	115
31.	Differences in Preferences for EHAP Components Based on Perceived Level of Stress.....	116
32.	Differences in Preferences for EHAP Components Based on Self-Reported Eating Habits.....	117
33.	Results of the Chi-Square Analysis: Significant ($p \leq 0.05$) Differences in Employees' Perceived Participation Based on Perceived Health Status.....	119

LIST OF FIGURES

FIGURE	PAGE
1. Perceived Participation in an Exercise Program (Based on Perceived Frequency of Exercise).....	73
2. Preferred Time for Health Promotion Programs/Seminars (Based on Sex).....	75
3. Preferred Time for Exercise Programs (Based on Sex).....	76
4. Preferred Time for Health Promotion Programs/Seminars Based on Collar Type.....	78
5. Preferred Time for Exercise Programs Based on Collar Type.....	79
6. Preferred Type of Facility Based on Age.....	81
7. Preferred Type of Facility Based on Sex.....	82
8. Preferred Type of Facility (Based on Collar Type).....	83
9. Preferred Location of EAP Referral Person (Based on Collar Type).....	86
10. Preference as to Whether Family Members Should be Able to Use Programs (Based on Collar Type).....	89
11. Preference as to Whether Retired Employees Should be Able to Use Programs (Based on Sex).....	91
12. Preference as to Whether Retired Employees Should be Able to Use Programs (Based on Collar Type).....	92
13. Preferred Volunteer Capacity Based on Age.....	95
14. Preference for Volunteer Capacity Based on Sex.....	97
15. Preference for Volunteer Capacity Based on Collar Type.....	98
16. Perceived Volunteer Capacity (Based on Present Frequency of Exercise).....	99

17.	Comfort in Exercising with Fellow Workers (Based on Frequency of Exercise).....	107
18.	Barriers to Using Community Services (Based on Collar Type).....	109
19.	Barriers to Using and EAP (Based on Sex).....	111
20.	Cross-Tabulation of Self-Reported Frequency of Exercise and Perceived Health Status.....	122
21.	Cross-Tabulation of Self-Reported Frequency of Exercise and Perceived Fitness Level.....	123
22.	Cross-Tabulation of Self-Reported Frequency of Exercise and Energy Level After Work.....	124

ACKNOWLEDGEMENTS

I wish to thank all of my committee members, Dr. Patricia Vertinsky, Dr. John Milsum, Dr. Eric Broom, and Dr. Susan Crawford for their assistance with this thesis. A special thank you to Susan Crawford for her continual enthusiasm, encouragement, and suggestions, and for the hours and hours of time she spent with me over the past two years. Thanks also to Carol Schneider for proof-reading, and to Colin, whose support is always appreciated.

CHAPTER ONE

INTRODUCTION TO THE PROBLEM

There is abundant evidence showing worksite health promotion programs (HPPs) and employee assistance programs (EAPs) to be cost-effective in terms of reducing on-the-job accidents, absenteeism and job turnover, and improving productivity and morale (Chen 1988; Conrad 1988a; Zavela, 1988). There is also a wealth of literature discussing the individual benefits that employees can gain from these programs, such as improved fitness and health, increased coping skills, reduction of risk factors, etc. (Blair et al, 1986; Chen, 1988; Conrad, 1988a; Hill et al, 1988; Patton et al, 1986).

Now that EAPs and HPPs (collectively called employee health and assistance programs or EHAPs) have been in operation long enough to show measurable results, they are being recognized as wise investments rather than just "passing fads" (Chen, 1986; Metcalfe, 1987). The question is no longer "are these programs beneficial?", but rather, "how can we improve their effectiveness?".

One of the major issues in employee health programming today deals with how to improve and maintain participation in these programs. Most of the work in this area (Conrad, 1987b; Davis et al, 1987; Davis et al, 1984; Patton et al, 1986), has tended to look at the issue exclusively from a management or health-professional point of view, while some of the more recent research is addressing the employee's perspective (Blozis et al, 1989; Conrad, 1988a; Harris and Fennell, 1988; Tetting, 1989; Zavela, 1988). This perspective could be a missing link in the understanding of how to increase participation amongst those individuals who most need such a program. The employee - the individual affected by our health policy decisions, the target for our health and fitness program campaigns, and the one whose lifestyle habits are being challenged - is also the one who

INTRODUCTION

will make or break the success of an EHAP. Without the participation of those employees who could most benefit from an EHAP, the program will not likely be successful in improving health and/or retaining health care costs. In order to achieve that participation, managers and health professionals must put themselves in the employees' shoes by looking at their preferences for program content, as well as preferences for times, locations, cost, etc. Identifying the barriers and benefits employees perceive in regard to participation in these programs is also fundamental.

It has been noted that the needs and interests of different sub-populations of employees (ie: blue vs white collar workers, males vs females, etc.) may be very different (Pechter, 1986). In order to develop programs which may better meet the needs of these sub-populations, it is important to study the differences between them, regarding needs, preferences, barriers and benefits.

Therefore, the objective of this research was to explore the preferences and perceived benefits and barriers reported by a large employee group (of a municipal government) regarding employee health and assistance programs, and to discuss the implications of these perceptions on program development.

A. STATEMENT OF PROBLEM

The first aim of this research was to determine the extent to which demographics (age, sex, classification of worker, and exercise habits) were associated with employees' preferences for, and perceptions of EHAPs. (These perceptions include the "barriers to" and "benefits from" participating in these programs.)

INTRODUCTION

The second aim was to determine whether or not employees' perceived health status was associated with their anticipated use of, and interest in, employee assistance and health promotion programs.

B. HYPOTHESES

Hypothesis 1: Associations exist between specific demographic characteristics and employee preferences and perceptions (barriers and benefits) of EHAPs in this population.

Hypothesis 2: Associations exist between perceived health status and perceived use of, and interest in, EHAPs in this population.

INTRODUCTION

C. DEFINITIONS

Health Promotion - "the process of enabling people to increase control over, and to improve their health" (W.H.O., 1984)

Health Promoting Behavior - "... behavior which sustains or increases well being" (Walker et al, 1988)

Health Protecting Behavior - behavior which is carried out for the purposes of preventing illness (Walker et al, 1988)

(Worksite) Health Promotion Program (HPP) - "...an ongoing series of activities funded or endorsed by the organization that are designed to promote the adoption of personal behavior and corporate practices that are conducive to employee fitness, health and wellness." J. Terber, 1986 (as reported by Roman and Blum, 1988)

Employee Assistance Program (EAP) - "Job-based programs operating within a work organization for the purposes of identifying "troubled employees", motivating them to resolve their troubles, and providing access to counselling or treatment for those employees who need these services." Sonnenstuhl W and Trice H, 1986 (as reported by Roman and Blum, 1988)

Employee Health and Assistance Program (EHAP) - an employee health program which includes both an HPP and an EAP. (Note: "Wellness Program" is often used interchangeably with Health Promotion Program in the literature, but for the

INTRODUCTION

purposes of this investigation will be used to mean EHAP. When designing the employee questionnaire, it was decided that the term Wellness Program would be more easily understood by the employees.)

HMOs (Health Maintenance Organizations) - "...group practices that accept annual prepayment from individuals for health services. Employees of HMOs usually accept a salary rather than fees based on services, so the HMO can better predict its labor costs. Also, through preventive medicine HMOs can decrease the onset of catastrophic diseases in their clients, thereby avoiding having to provide costly care." (Patton et al, 1986)

PPOs (Preferred Provider Organizations) - agreements between the purchaser (corporation) and provider (individual practitioners or institutions), whereby the provider will reduce their fees in return for the corporation promoting the provider's services and encouraging (sometimes through economic incentives) employees to use the practitioner (Patton et al, 1986)

Lifestyle - "...all those behaviors over which an individual has control, including actions that affect a person's health risks." (Ardell, 1979 as cited in Walker et al, 1987)

Municipal Government - the organization which is responsible for the administration of the affairs of a City, and all the employees who work within that organization.

INTRODUCTION

Perceived Health Status - self-reported perception of health, based on the employee's perception of his/her general health, fitness level, level of stress, eating habits, and energy level after work

Type of Employee Categories:

Since this study involved a specific organization, the classification of employees used by this organization was used to describe "worker types". Following are the definitions of the various worker types who completed the survey:

Director/Manager - Manager refers to a Department Head; In this organization, there are also three Directors who supervise the Department Heads and are directly responsible to the City Commissioner.

Office Worker/Office Supervisor/Programmer - includes any office employee (excluding clerical workers, directors and managers); includes computer program analysts, accountants, draftpersons, office supervisors, recreation program supervisors, etc.

Facility Worker - any employee whose job involves maintaining or operating one of the City's facilities, such as the arenas, swimming pool, etc; includes facility caretakers, facility supervisors, facility operators, etc.

Enforcement/Inspection - Includes building inspectors, by-law enforcement officers, mechanical inspectors, fire inspectors, etc.

INTRODUCTION

Firefighter - includes all firefighting personnel, (other than office workers, clerical staff, and managers); includes platoon chiefs, captains, lieutenants, officers, firefighters, etc.

Labourer - an individual who performs various labouring duties such as construction and operating small motorized equipment; definition includes public works labourers, water treatment plant labourers, waste and sewage labourers, roads labourers, parks labourers, etc.

Equipment/Bus Operator - any operator of a vehicle or large equipment; includes roads equipment operators, water treatment plant operators, bus operators, parks equipment operators, etc.

Maintenance/Repair Worker - includes heavy duty mechanics, welders, building maintenance persons, etc.

Classification of Employees by Collar Type:

Employees have been classified according to collar type (blue, white or pink), only to analyze the extent to which preferences and perceptions differ between these groups. Following is a brief discussion which deals with the classification of employees to these collar types, and the definitions which were used for this investigation.

INTRODUCTION

Historically, the differentiation between blue and white collar employees was simply "manual" vs "non-manual" workers, or "manual" vs "intellectual" workers. For many reasons there is no longer as clear a distinction between these two categories as there once was. These reasons include the changed nature of many occupations and the heterogeneity of occupations in our society today. Although society still assumes that there is a clear division between blue and white collar workers, the fact is that many occupations do not fall into one category or the other (Hyman and Price, 1983). It has been suggested that a continuum exists with strictly blue collar workers on one side, strictly white collar on the other, and the majority of employees falling somewhere in between.

While recognizing the problems which exist in trying to define and classify these workers, for the purposes of this investigation it was necessary to establish a division between the two. In light of the literature which suggests differing needs, interests, and perceived barriers and benefits between blue and white collar workers with respect to employee health programs, it was of interest to determine if these differences existed in this population.

Therefore, for the purposes of this study, the following definitions have been established to describe blue and white collar employees:

White Collar Employees - those employees in possession of, or in close proximity to authority; closer in the chain of command to the employer; functions tend to be predominantly non-manual and often less routinized than blue collar workers, and generally include one or more of the following: administration, design, analysis, planning, supervising, managing, or coordinating; education level is often more

INTRODUCTION

advanced than that of blue collar workers; tend to be on salary vs hourly wage.

This definition includes directors and managers, office workers (other than clerical workers; see discussion of clerical workers which follows), office supervisors, computer programmers, etc.

Blue Collar Employees - those employees who are further from authority; functions are predominantly manual or production related (including processing, machining, assembling and repairing jobs), as opposed to administrative or supervisory-related. This definition includes labourers, firefighters, maintenance workers, equipment and bus operators, caretakers, etc.

Clerical workers have typically been classified as "white collar", as they tend to work in offices and therefore subjectively identify themselves with management (and hence, may share some of the attitudes of management in regard to exercise, health, etc.). However, clerical workers are almost always in a subordinate position and do not often exercise control over other workers (with exception to some executive secretaries, and clerical workers who also supervise the office). As with blue collar workers, their salaries are usually hourly, education levels are usually less advanced than white collar workers, and their jobs are often very routine, yet they usually do not carry out "heavy physical work". Clerical workers seem to make up an entirely different category of employees, possessing some of the characteristics of both blue and white collar workers, yet being additionally unique in that this group is predominantly female.

INTRODUCTION

In order to study blue and white collar employees as separate groups and to also determine whether or not the clerical workers were unique in their needs, interests, and perceived barriers and benefits with respect to worksite health programs, clerical workers were defined as a separate group and treated as such in the analysis. This group has occasionally been referred to as "pink collar employees", which will be the term used to describe them in this study.

Pink Collar Employees - those employees performing clerical duties such as secretaries, typists, clerks, receptionists, stenographers and cashiers; usually further down the chain of command from the employer than white collar workers; usually less-educated and lower paid than white collar workers; tend to be on an hourly wage; tasks are usually non-manual but are often routinized.

INTRODUCTION

D. GENERALIZABILITY, ASSUMPTIONS AND LIMITATIONS

This study was designed to explore the differences in needs, preferences, and perceived barriers and benefits between different sub-groups of this employee population. The types of conclusions that can be drawn from these results, especially with regard to generalization to other Canadian municipal government organizations are limited, due to the focus of this study on only one organization.

Assumptions being made include:

- (1) that self-reported health status and demographics are honest and accurate.
(Possible limitation: due to the concern some employees had for the confidentiality of the survey, they may not have always given honest answers to perception questions, or alternatively, they may have tried to disguise themselves by filling in inappropriate age, sex or type of worker categories.)
- (2) that employees understood the concepts to which they were being asked to respond.

While the questionnaire used for the survey was examined for ambiguity and redundancy, a limitation is that under the constraints of the original survey, it was not feasible to formally test the questionnaire.

E. SIGNIFICANCE OF THE STUDY

Worksite health programs are being developed and implemented faster than the research about them can take place (Roman and Blum, 1988). Although they have been present on the worksite for two decades, it is only within the last five to six years that

INTRODUCTION

research in this area has begun to address participation in these programs. An area where current research on participation of employees is scant, is the examination of the differing perceptions towards these programs among the various sub-populations of employees (eg. between blue and white collar workers, males and females, etc).

This is important because as workforce demographics shift (ie: the amount of females and the average age of employees is increasing), it is imperative to understand the differing health needs and concerns of these sub-groups in order to provide appropriate programs.

It was beyond the scope of this research to actually develop an employee health program based on these results, yet the investigation is significant in adding to our limited knowledge of the differing preferences and perceptions (barriers and benefits) of various employee sub-populations in regard to EHAPs. Although each work organization varies in its focus, size, demographics, etc., the results of this investigation could be useful to organizations of similar size and demographic profile, who wish to increase the participation of similar sub-groups of their employees.

It is only within the last two to three years that investigations which examine the employee's viewpoint of EHAPs have begun to appear in the literature. Many of these, while providing some useful information, were limited to a particular classification or age group of employees. The present investigation is unique in that it provides a comparison of the preferences and perceptions of different sub-groups of employees within the same population. Knowing more about the particular program preferences and the perceived barriers to participation in these programs will aid in the planning, development, and marketing of programs which should increase participation among these sub-groups.

CHAPTER TWO

LITERATURE REVIEW

A. HISTORY

Health Promotion Programs (HPPs) and Employee Assistance Programs (EAPs) have developed on the worksite during the past two decades. Aside from occupational health and safety, and medical/dental benefits, few companies had adopted employee health programs before the 1970s.

Today, estimates are that one-quarter (Conrad, 1987a) to two-thirds (Chen, 1988) of all U.S. companies with 50 employees or more offer some component(s) of a HPP. EAPs are provided in the majority of larger U.S. companies (Walsh, 1982), being estimated to exist in 60-70% of U.S. companies with 3000 employees or more (Hellan, 1986). In Canada, results of a national employee fitness survey reported that of companies with 100 employees or more, 13% offer some type of fitness activities, 25% offer health education and lifestyle programs, and 44% offer sport/recreation programs (Canadian Chamber of Commerce, 1987). As there is a vague definition of what actually constitutes an EAP, it is difficult to find statistics on the number of Canadian companies that operate EAPs. Small Business Magazine (Klarreich, 1989), reported that up until 10 years ago only 5-10% of Canadian companies had EAPs, whereas today they are present in approximately 25% of companies across the country.

Emerging significantly in the early 1970's, EAPs have a longer workplace history than HPPs (Conrad, 1988a; Hellan, 1986; Roman & Blum, 1988). Many of the first EAPs were largely alcoholism programs, later developing into more multi-faceted services

LITERATURE REVIEW

(Minter, 1986). Increased awareness and adoption of these programs followed the creation of the (U.S.) NIAAA (National Institute of Alcohol Abuse and Alcoholism) in 1970, which provided grants to each state to help fund development and implementation of EAPs in workplaces (Conrad, 1988a; Roman & Blum, 1988).

One of the early initiatives which encouraged increased worksite HPPs in the U.S., was the Surgeon General's Report from 1979, which identified the workplace as a suitable setting for health promotion (Chen, 1988; Surgeon General, 1979). This was followed that same year, by the "1st National Conference on Health Promotion Programs in Occupational Settings", sponsored by the U.S. Federal Government (Chen, 1988).

In Canada, Hill et al (1988), have identified three major reasons for the increase in HPPs on the worksite. The first was the trend for Canada's Health Care System to move toward health promotion and health education programs as an alternative to traditional health care. The second was the wealth of literature linking lifestyle to morbidity and mortality. The Lalonde report of 1974 was instrumental to this way of thinking. Although the report has been criticized for "putting too much blame on the victim" and not enough emphasis on the environment and other areas which affect the health of the individual, it outlines the importance that lifestyle changes can have on health. The third reason identified for the growth of worksite HPPs in Canada was the public's trend toward self-help and away from the reliance on institutional (medical) help. Hill et al, state that the combination of the above three factors has provided a framework for the development of Employee Fitness and Lifestyle in Canada.

Employee Health Promotion Programs have evolved out of three different arenas: that of the public, that of businesses, and that of the health care providers. As health promotion has become more and more accepted in the public domain, there is an increasing

LITERATURE REVIEW

demand for this type of programming by employees (Orlandi, 1986; Roman & Blum, 1988; Warner, 1987). Businesses seem to have many motives for the development of HPPs, ranging from reducing health care costs to improving the health of the employees (Chen, 1988; Conrad, 1988a; Walsh, 1988; Warner, 1987). (The reduction or containment of health care costs is a bigger issue in the U.S. than in Canada, as corporations are usually responsible for their employees' health care premiums. In Canada, the cost-benefit issue is usually linked more with reducing absenteeism, increasing productivity, etc.) Health care providers of course, are also interested in the welfare of the employees, and see the workplace as a suitable "target" setting for reaching large numbers of the population (Conrad, 1988a; Roman & Blum, 1988).

Health Promotion and Employee Assistance Programs have historically been developed and administered by entirely different groups: health and fitness specialists in the case of HPPs, and mainly psychologists and alcoholic treatment specialists in the case of EAPs. For this reason, although the combining of EAPs and HPPs into one program has been proposed, it has been postulated that this amalgamation may be difficult (Shain et al, 1986). However, the integration of these programs into what has been termed "Employee Health and Assistance Programs" (EHAPs) is gaining support, due to the potential to reach more employees, to draw on each other's resources, and to achieve greater economic benefit (Shain et al, 1986).

B. THE CORPORATE PERSPECTIVE

Although it might seem that the major reason for businesses to be interested in HPPs and EAPs would be to help curb the direct or indirect cost that unhealthy employees

LITERATURE REVIEW

place on the organization, many corporations say otherwise. Warner (1987), cites a survey of Colorado businesses conducted in 1984. The most common reason given by companies who already had programs, as to why they initiated them, was for the welfare of the employees. (Although it could be argued that this may lead to reduced health care costs, many companies state that the improvement in employee morale, and showing the employees that the company cares about them, are more important reasons for initiating programs.) Among those companies surveyed who did not already have programs, but were considering them, the number one reason given was still the welfare of the employees, although this answer was just slightly higher than "reducing health care costs".

Although the benefits of these programs to the company have been well documented, in terms of reducing or retaining health care costs (Chen, 1988; Conrad, 1988a; Roman and Blum, 1988; Zavela, 1988), reducing job turnover (Warner, 1987; Yenney, 1986; Zavela, 1988), reducing on-the-job accidents (Smith, 1990; Yenney, 1986; Zavela, 1988) and absenteeism (Yenney, 1986; Zavela, 1988), improving productivity (Roman and Blum, 1988; Warner, 1987), and reducing employee grievances (Yenney, 1986), their long term cost-savings or cost-containment for the company is still being questioned (Warner, 1987).

Warner stated that past assessments which have concluded that HPPs are financially profitable may have contained some problems, such as drawing conclusions from simplistic evaluations, and not considering the possible increases in pension payouts due to decreased morbidity and mortality (Warner, 1987).

He suggested that in terms of effectiveness, there are four types of HPPs: (1) those that are effective in producing the desired health related behavior changes in the

LITERATURE REVIEW

employees, and which genuinely save the company money, (2) those that produce effective behavior changes and are cost-retaining, (3) those that produce the desired behavior changes but are not cost effective, and (4) ineffective programs that are costly to the company and do not produce behavior changes. (Although his view of worksite health promotion programs appears to be limited to changing lifestyle behaviors, and does not include producing changes to the work environment which would be conducive to health, the term "effectiveness" could be taken to include any change which brings about improved health of the employee.)

There are many other strategies being used by employers to contain health care costs, such as Health Maintenance Organizations (HMOs), Preferred Provider Organizations (PPOs), health service review programs, etc. (Please see definitions of HMOs and PPOs in Chapter One.) However, the advantage that HPPs have over these other strategies is that they have the potential to contain costs plus improve health, whereas the other programs do not attempt to improve the employees' health in their cost-containment efforts (Warner, 1987).

Whether HPPs and EAPs are being used as health efforts, cost-containment devices, or a combination of the two, there remains much that can be learned through further research efforts to improve their effectiveness. Achieving high employee participation rates (or at least assuring participation by those employees who are in need of such programs) is fundamental in running effective programs.

LITERATURE REVIEW

C. PARTICIPATION

1. The Importance of Participation in Worksite Health Programs

In their review of the literature regarding participation in workplace health programs, Lovato and Green (1990), summarized the reasons that "maintaining participation" in programs is important as follows:

- (1) to justify the program's existence to management,
- (2) for effective delivery of programs, and
- (3) to realize the intended health and/or economic benefits.

2. Interpreting Participation Rates

Reported participation rates in worksite programs vary throughout the literature, but in a review of the research done in this area, Conrad (1987b) reported that participation averages from 20-40% of the employees for onsite programs, and 10-25% for offsite programs. Shephard (1988) reported that the situation in Canada is very similar to that in the United States, with average recruitment to employee fitness programs being 20%.

There are two inherent problems in interpreting these rates. The first is the fact that the definition of participation varies from study to study making it impossible to compare one to the next. The second is that unless we know the health status of those who make up the percentage that are participating, the numbers are meaningless.

The problem with defining participation involves deciding how many classes or activities an employee must participate in, in order to be classified as a "participant" (Conrad, 1987b). If the employee shows up once, is he or she classified as a participant, or

LITERATURE REVIEW

is attendance every week necessary? Is an employee who signs up but does not show up very often a participant or not?

Lovato and Green (1990) defined "maintaining participation" as continued use of the Health Promotion Program or of the recommended behavior. In other words, if the employee no longer participates in the smoking cessation program, but has continued to abstain from smoking, he or she is still considered to be "maintaining participation". This definition will be used hereafter when discussing participation.

As noted, the second problem in interpreting employee participation rates is that it is not always clear who is participating. An employee health program with high participation rates, that does not reach those employees who are in need of the program, cannot be considered successful if the intended goals were improved health and/or economic benefits. However, a participation rate of 15% may meet the company's objectives if those 15% are "at risk".

Conrad (1987b) stated that the question of who comes to worksite wellness programs is an important one because there is the risk of self-selection based on health (only those who are already healthy attend), and on demographics (eg. greater attendance by white collar workers, younger age groups, etc.). Both of these issues will be discussed in the following sections of this chapter ("The Effects of Demographics on Participation", and "The Effects of Perceived Health Status on Participation").

Aside from the two problems discussed here with respect to interpreting participation rates, there is the issue of differing perspectives on what is an "acceptable" or "successful" level of participation. For example, participation or maintenance rates of 20-40% in worksite health programs are often viewed as failure, whereas in the public

LITERATURE REVIEW

health or commercial world, to convert 20% of the public to change a habit or adopt a behavior would be considered very successful (Lovato and Green, 1990).

Some of the research on participation has dealt with the differences between participants vs nonparticipants of EHAPs, whereas other research has looked at "intenders" vs "nonintenders". It should be noted that "intent" does not necessarily lead to actual participation. However, as will be seen in the following section, many established models of health behavior have shown a correlation between behavioral intention and actual behavior (Davis et al, 1984; Dishman, 1988; Hawthorne, 1990; Sloan & Gruman, 1988).

The study of those who "intend to participate" deals with what influences people to decide to participate (eg: demographics, perceived health, etc.) as opposed to what causes them to actually start and continue participating. By studying the issue in this way it is possible to determine what subgroups of employees are attracted to these programs and possibly provide a profile of those who are not (to whom we should be targeting our health promotion efforts).

3. Factors Affecting Participation

a) The Use of Health Behavior Models in Explaining Participation

Many attempts have been made to explain individual's health protecting and health promoting behaviors through theoretical models. Some of these models have been extended to try to explain participation in health promotion programs such as those on the worksite.

LITERATURE REVIEW

One of the first, and probably the most well known of the models of health behavior is the Health Belief Model (HBM). This model was originally developed by a group of researchers with the U.S. Public Health Service in 1952, and was designed to measure factors affecting a person's decision to change a health behavior (Dishman, 1988; Hawthorne, 1990).

The HBM basically deals with health protection as opposed to health promotion. It includes primary factors thought to have an immediate effect on a person's likelihood of taking recommended preventive health action (benefits minus barriers; perceived threat of disease), and modifying factors which affect the primary factors (demographics, sociopsychological factors, perceived susceptibility to disease, cues to action, etc.).

This model has been extensively tested and has been found to be effective in predicting changes in preventive health behavior. In a review of the studies which have tested its effectiveness, it was found that "perceived barriers" was the factor most closely associated with individuals likelihood of taking preventive action. "Perceived susceptibility to disease" was also closely associated (Hawthorne, 1990).

As noted, the Health Belief Model was based on prevention of illness, and not on health promotion and therefore has not been found to be a particularly good model for predicting behavior in health promoting activities such as exercise (Dishman, 1988). (Please refer to definitions of health promotion and health promoting behavior in Chapter One.)

Ajzen and Fishbein developed the "Reasoned Action Model" (RAM), in 1967, which was based on the premise that behavioral intention predicts behavior (Hawthorne, 1990). This model has been tested to some degree with adherence to health preventing and health

LITERATURE REVIEW

promoting programs. In Dishman's (1988) review of research used to test the RAM, he cited a study by Olsen and Zanna where regular attenders in an exercise program were found to have stronger intentions to exercise regularly, and stronger motivation to meet expectations of significant others than the occasional exercisers and drop outs of the program.

Davis et al (1984) stated that "behavioral intention has been demonstrated to be one of the most consistently relevant predictors of continued participation in health improvement programs". However, others have suggested that although the RAM (based on intentional behavior) may be good at predicting immediate and short term adherence, it has not been used extensively to predict long-term adherence (Dishman, 1988).

Although the Reasoned Action Model, as will be seen, has been used in the development of further models of health behavior, it was also based on illness prevention, and therefore can hardly be used to predict health promoting behavior (Hawthorne, 1990).

Davis and colleagues (1984) developed a model based on components of both the HBM and the RAM, called the "Theoretical Model of Modifiers of Participation in HPPs and Linkage to Health Behaviors and Health Benefits" (hereafter called the Participation Model).

This model was intended to measure factors influencing participation in worksite HPPs, as well as the perceived benefit accrued from this participation. The model assumes that the primary motivators for satisfaction or dissatisfaction with health are risk factors (weight, alcohol use, exercise, etc.) and psychosocial factors (personal efficacy, job stress and anxiety). According to the model, "level of satisfaction with health" is used to explain "intent to change", which in turn leads to "level of participation". Participation is

LITERATURE REVIEW

also thought to be affected by social-ecological factors (opportunity, social and environmental support, and life cycle position). The model also predicts participation adherence (positive health behaviors) and perceived benefit from participation.

Parts of the Participation Model were tested by Davis's group in 1984. This testing did not examine actual participation, but looked at: (1) the extent to which risk factors affected satisfaction with a health state and intention to change that state, and (2) the extent of variance in "satisfaction" or "intent to change" which could be explained by the psychosocial variables.

Results showed that risk factors were associated with dissatisfaction with health and greater intent to participate in relevant HPPs in the areas of weight loss, exercise, stress and tension. For alcohol use, nutrition and smoking cessation, this was not the case. Of the psychosocial variables, personal efficacy explained the most variance in "satisfaction with health" and "intent to change", although job stress and anxiety were also significantly related (Davis et al, 1984).

The model was evaluated again in 1987 with the same sample, to look at the effects of "degree of satisfaction" and "intent to change" on actual participation (Davis et al, 1987). Neither of these variables were found to be consistently associated with actual participation. Factors associated with participation were high job stress and high anxiety. In stress management and weight control programs, those people at higher risk were more likely to participate. This was not true however, for exercise and alcohol awareness programs.

Spilman (1988) tested this model to predict sex differences in participation in a workplace program. He concluded that the model was better for predicting participation in preventive programs than in health promotion (wellness) programs. For example, the

LITERATURE REVIEW

model worked well for programs where risk factors were likely to be the main motivator for joining (ie: smoking cessation), but not well for programs where the motivators were likely reasons other than risk factors (ie: exercise programs). The model predicted participation better for women in certain programs (smoking and low back pain), and for men in the other programs offered.

Sloan and Gruman (1988) expanded on the Davis model of participation by adding "organizational factors" (such as clarity of responsibilities, workload, etc.) to the model. They acknowledged the relationship between risk of disease, health satisfaction, intention to make changes to health behaviors and participation in HPPs. However, since inconsistent results have been found between satisfaction, intention and actual participation, they suggested there must be other factors (such as organizational factors) which affect participation.

Therefore, their "Theoretical Model of Participation in Workplace Health Promotion Programs" includes organizational factors as indirectly affecting (through having an effect on perceived risk and health satisfaction), and directly affecting participation (through perceived management support) (Sloan and Gruman, 1988).

The model was tested by its developers, on 192 employees (Sloan and Gruman, 1988). The results showed that there was a causal link between perceived risk of disease, health satisfaction, intention to change and participation, but the study also showed that organizational factors (and other factors such as demographics) were significantly related to participation. The researchers concluded that improvements in the organizational climate (supportiveness of supervisors, appropriate workload, etc.) would improve participation in worksite HPPs.

LITERATURE REVIEW

There were several limitations to this study, one of which was that "participation" in this case meant coming to a "wellness orientation meeting" and therefore was not actual participation in an ongoing program. There could have been many reasons why employees did not show up for this session, which may not be related to why they may or may not participate in further programs of interest. However, this study does provide a first look at the issue of environmental or organizational factors (as opposed to personal factors) affecting participation.

The final model to be discussed deals strictly with health promoting behavior. Originally developed by Pender in 1982, the Health Promotion Model (HPM) is in part based on the HBM, but was intended to measure "behavior which sustains or increases well-being, self actualization and personal fulfillment" (Walker, 1988). It consists of three major elements: (a) cognitive/perceptual or psychological elements (eg. the importance placed on health, perceived health status, etc.), (b) modifying factors such as demographic characteristics, interpersonal influences, etc., and (c) the likelihood of action directed toward enhancing or maintaining well-being (Weitzel, 1989).

A tool to measure the dimensions of this behavior was subsequently developed, called the "Health Promoting Lifestyle Profile" (HPLP), which has been extensively tested with many demographic groups (Tetting, 1989; Walker et al, 1987; Walker et al, 1988; Weitzel, 1989).

Weitzel tested the HPM on a group of blue collar workers and found that health status and self efficacy accounted for the most variation in these employee's health promotion behaviors (Weitzel, 1989). Of the demographic variables, age was found to account for the greatest amount of variance. Although components of the HPM have been

LITERATURE REVIEW

tested with various demographic groups, ongoing research will determine its overall effectiveness in predicting health promoting behavior (Walker et al, 1988).

The health behavior models discussed have been attempts to combine various factors which may contribute to the prediction of health protecting and promoting behaviors, and participation in worksite health programs. The following sections of this chapter will deal with some of these factors more specifically, especially with regard to their effect on participation, and the implications of this.

b) The Effects of Demographics on Participation

i) Age.

Fourteen studies were reviewed to examine the differences among age groups as to their participation in health protecting and promoting behaviors. Some studies have indicated that desirable health practices seem to increase with age (Kronenfeld et al, 1988; Walker et al, 1988). This does not appear to be true for participation in exercise however (Walker et al, 1988; Yoshida et al, 1988). Yoshida and associates (1988) report that "it is well established that exercise decreases with age" (Yoshida et al, 1988).

These health behaviors are paralleled in employee health programs. For example, in Sloan and Gruman's study (1988) of participation in workplace health promotion programs, it was found that with increasing age, individuals reported a greater perception of health risks, which led to an increased interest in modifying their health-related behaviors, and hence led to increased participation in HPPs. However, many programs

LITERATURE REVIEW

have reported a lower participation rate among older employees (Blozis et al, 1989; Kronenfeld et al, 1988; Zavela et al, 1988), and others have reported no difference in age between participants and non-participants (Conrad, 1988a; Walker et al, 1988).

A possible explanation for this discrepancy may be that many programs are perceived by the employees to be primarily "fitness oriented", which may be of lesser interest to the older employee. As well, worksite health promotion programs have been described as having a "young image" which may be another inhibiting factor for participation by older employees (McDaniel, 1988).

Addressing the influence of age on participation is important to the issues of assuring equal access to EHAPs, and reaching the employees who are in need of such programs.

Most employee health programs to date have been focused on middle-aged, male executives (McDaniel, 1988), and very little attention has been given to the needs of the older workers (Walker et al, 1988). Employers may wish to focus these programs on young and middle aged employees, as they may perceive that these employees have more working years left with the company. However, if population predictions hold true, the 1990's will see increasing numbers of older workers (aged 50 and over) who are not yet interested in retirement, staying with the company well into their sixties and seventies (Barker, 1987; Heirich et al, 1989). Having an older workforce may bring with it a number of health problems that are specific to that age group (eg. arthritis). It would therefore seem to be in a company's best interest to promote healthy lifestyle practices and provide programs aimed at preventing and treating the health problems specific to this group (Heirich et al, 1989).

LITERATURE REVIEW

As mentioned elsewhere in this report, there is a theory that health promotion efforts on the worksite may not be as financially beneficial as is commonly thought, due to the possibility that they may increase longevity of the employees involved and therefore cost the company more in pensions later on (Warner, 1987). However, there is also the argument that if employees are working to a more advanced age, and the health promotion efforts are able to prevent some of the illness and disability which often occurs during these years, that employees will be more productive right up until retirement (McDaniel, 1988).

The major hurdles to overcome in increasing participation among older workers appear to be:

- (1) assuring that a variety of programs other than fitness programs are offered
- (2) assuring through proper marketing techniques, that employees do not perceive a well-rounded program as "just a fitness program".

Very little empirical data have been gathered which examine the differing needs and interests of employees, based on age. Heirich and associates (1989) studied an older group of blue collar employees (males and females) to examine ways of increasing their participation in company sponsored fitness and wellness activities. These authors found that in terms of encouraging older workers to participate, the three most important aspects were:

- (1) Making one-on-one contacts with the employees. (The wellness staff counselled them individually on how to improve their lifestyles and how the worksite program could be of benefit to them.)
- (2) Providing simple, enjoyable activities that they could do on their own time and at their own pace (ie: a walking track).
- (3) Providing contests (where everyone could be a winner) to draw attention to the programs. (eg. teams of three could enter the walking contest; for the

LITERATURE REVIEW

first team to walk a pre-determined distance, a prize was awarded; for each individual who walked 50 miles, a prize was awarded, etc.)

ii) Sex.

There are conflicting reports of the differences between males and females in terms of their participation in employee health programs. While some studies have shown no differences (Harris and Fennel, 1988), a few have reported higher participation among men (Blozis et al, 1989; Tetting, 1989), and the majority have reported higher participation among women (Kronenfeld et al, 1988; Sloan and Gruman, 1988; Spilman, 1988; Zavela et al, 1988).

Harris and Fennel (1988) surveyed a group of (white collar) employees to study their perceptions and anticipated use of resources for alcohol abuse (including EAPs). Although previous studies have suggested differences between males and females in anticipated use of these programs, this study showed that males and females were equally willing to use an EAP.

Although the majority of programs reviewed found higher participation among women, Blozis et al (1989) and Tetting (1989) studied participants of company sponsored fitness centers, and found participants to more often be male. The distinguishing feature of the programs described by these investigators is that although other wellness activities were offered, these programs seemed to be very "fitness-oriented", whereas those programs boasting higher female participation were described as more comprehensive programs.

One study showed that not only did more women participate in an HPP, but they tended to participate in more programs, for longer periods of time, and drop out rates were

LITERATURE REVIEW

lower (Spilman et al, 1988). This greater participation did not appear to be related to increased health risk, as this was reported to be similar for both women and men. Women did, however, report greater intention to change behaviors than men, which according to the Davis model of participation in HPPs (1987), is significantly related to participation. In Sloan and Gruman's (1988) research however, although women participated more in the HPP, sex appeared to be unrelated to perceived health risk and intention to change behaviors.

In research, using the Davis model, it was shown that the factors predicting participation were somewhat different for women than for men (Spilman et al, 1988). For example, in the weight control program, women tended to participate whether or not they were classified as "overweight", whereas only overweight men participated. These researchers concluded that sex-based socialization experiences and roles have a definite effect on individual perceptions and reactions to health related issues.

Women's greater participation in health promotion programs may in part be explained by the medical expansionist theory described by Spilman et al (1988). This theory claims that doctors tend to encourage women to define more of their life problems as "medical problems", and therefore tend to be more concerned about these problems and seek help in treating or preventing them more readily than men would. The data in Spilman and associates (1988) study supports this theory in that women's greater participation tended to be in programs which were treatment oriented, and women were more apt to say they participated in other programs for these reasons.

Walker et al (1988) cited evidence which indicated that in general, women tend to participate in more preventive health behavior than men. In their study which used the Health Promotion Model, women tended to have higher scores in overall health promoting

LITERATURE REVIEW

lifestyles, as well as in the HPM dimensions of exercise, health responsibility, nutrition and interpersonal support. However, it has often been shown that women are less likely to participate in exercise and competitive sport than men due to more perceived or actual barriers (Yoshida et al, 1988).

Some of the major barriers to exercising reported by women include lack of time due to work and family responsibilities; health reasons; and lack of energy, motivation or need (Yoshida et al, 1988). Studying these barriers, as well as the barriers that men perceive toward participating in various worksite health programs, and the preferences of each sex, are fundamental steps to developing programs which will better meet the needs of each group and encourage greater participation.

Freedman and Bisesi (1988), in their examination of women and workplace stress pointed out that stress manifests itself differently for women and men, and therefore, workplace stress management programs must address different issues for each sex. As indicated earlier, many of the original workplace wellness programs were designed mainly for male executives, and therefore may not fit the needs of women. Workforce demographic projections suggest that in the 1990's the number of women in the workforce will continue to increase, and therefore the importance of developing health programs designed to meet their specific needs is critical (Barker, 1987).

The literature provides some possible solutions for increasing participation in EHAPs by women. Some of these include providing quality day care arrangements on the worksite and providing flexible working schedules to allow for fitness and health promotion program participation during the work day (Freedman and Bisesi, 1988).

For males, participation is likely to improve with the provision of programs which specifically meet their needs (eg. stress management programs focusing on the stressors

LITERATURE REVIEW

which are more common to men). Participation by white collar men does not seem to be a major issue, but the lack of participation by the blue collar workforce is well documented. Since this is a separate issue from the effects of sex on participation, it will be discussed in much more detail in the next section of this chapter.

LITERATURE REVIEW

iii) Classification of Worker.

According to numerous surveys, the level of exercise and other health promoting behaviors is reported to be lower among blue collar workers than white collar workers (Allison & Coburn, 1985; Canada Health Survey, 1981; Canada Fitness Survey, 1982). This behavior seems to be mirrored in the participation of blue collar workers in EHAPs on the worksite. The higher participation of white collar workers in EHAPs may be a reflection of their health promoting behaviors away from the worksite. The health promotion message seems to have been accepted more readily by white collar workers as seen in the increased exercise and lower prevalence of smoking among this group (Warner, 1987).

Over the past two decades, one of the principal reasons for lower participation by blue collar workers in employee health programs has been their lack of access to them (Blozis et al, 1989; Metcalfe, 1987). This stems in part from many programs being implemented in a "top-down" manner, meaning that they are initially offered to the company executives, and then later made available to the blue collar workers (Roman & Blum, 1988). Today there remain fewer worksite programs available to the blue collar segment of the workforce than to the white collar segment (King et al, 1988), although more and more programs are becoming available to all workers.

Even when there is equal access to programs, blue collar participation has been reported to be lower, and drop out rates higher (King et al, 1988). There are many theories which have attempted to explain this, but very few empirical investigations which have actually examined the blue collar workers reported barriers to participation or their preferences for employee health programming.

LITERATURE REVIEW

A few theoretical reviews of this issue have offered a number of possible barriers to blue collar employee's participation in worksite health programs, which are summarized below (Allison & Coburn, 1985; Metcalfe, 1987; Pechter, 1986):

- lack of time to participate due to varying shifts, clocking in and out of work, short lunch breaks, six day work weeks, work and family responsibilities
- fear that screening test results may be used against them
- feel a lack of commitment from management (ie: they are offered smoking cessation programs, yet nothing is done about the unhealthy conditions they have to work in)
- "carpeted-floor syndrome" - the facilities usually being located in head office, where the blue collar workers may feel intimidated about going
- programs are not designed with the blue collar workers needs and interests in mind, but are adaptations of programs designed for white collar workers
- lack of trust between blue and white collar workers
- disinterest in physical fitness programs due to the physical nature of their jobs and tiredness after work
- less awareness of the health benefits of exercise and other health promoting practices

Much of the research on employees' participation in, and preferences for worksite health programs has also been oriented toward white collar workers, although a few studies have dealt strictly with blue collar workers (Blozis et al, 1989; Weitzel, 1989).

Blozis et al (1989) surveyed participants versus nonparticipants of a company fitness center for industrial workers. The study was limited to observing the types of activities these workers participated in and surveying them as to further activities in which they may be interested. Barriers and benefits to participation were not addressed. Thirty-six percent of the workforce were found to be participating in this center, which is a comparatively high rate, but participation was only defined as "fitness center membership", which could include those who use the facility every day to those who only use it once per month or less.

LITERATURE REVIEW

The most popular activities (listed in descending order) were: stationary bike, aerobics, weight training, rowing machine, walking and jogging. When asked their preferences for health education, the programs chosen (in descending order) were: weight loss, cancer screening and education, cholesterol education, nutrition, back care and blood pressure education. Other choices (chosen much less often) were stress management, CPR and free weights (Blozis et al, 1989).

King et al studied a very small sample ($n=38$) of blue collar workers to explore methods for increasing their leisure time exercise (King et al, 1988). Results of an evaluation questionnaire given to the workers showed that these employees preferred to have programs offered immediately after, and within walking distance from work. They also expressed a concern to be involved in program development and to have genuine supervisory support for the program.

Warner (1987) states that one of the major challenges in increasing both the amount of programs offered to blue collar workers and their participation in these programs, is convincing the blue collar workforce that they can benefit from them. If their fear of EHAPs cutting into their basic benefits (such as medical and dental benefits) can be overcome, and they start demanding more programs, he predicts that we will see more widespread program development for this sector (Warner, 1987).

Aside from the few studies mentioned, there are virtually no other empirical data investigating the perceived barriers of blue collar workers toward EHAPs, and their specific preferences for programming.

Some solutions which have been suggested for increasing blue collar participation are listed below:

LITERATURE REVIEW

- hire a well trained, energetic professional to run the program
- make the program fun
- if the blue collar workers in the organization are at the greatest health risk, start the program in a "bottom-up" fashion vs "top-down" (ie: invite the blue collar workers first and management later)
- include improvements to worksite risks as part of the program, or they won't take other parts of the program seriously
- stress the confidentiality of any medical (or other) records involved
(Pechter, 1986)
- for off-site programs, or programs employees must pay to use, try a fee structure based on attendance (ie: if the employee shows up three times/week or more, the company pays 75% of the attendance fee and the worker pays 25%; if the employee participates twice/week the fees are distributed 50%-50%; if he shows up once per week or less the company only pays 25%) (Metcalf, 1987)
- provide childcare services for after work programs if possible
- provide family activities
(Ontario Government, 1985)

Further research in this area will lead to an increased understanding of why blue collar employees participate less and what can be done to remedy this.

LITERATURE REVIEW

iv) Exercise Habits.

It has been noted that those individuals who have been previously active are more apt to join an employee fitness program (Lovato & Green, 1990). Also, although very little data are available in this area to date, it has been postulated that those individuals who are involved in exercise may tend to be more willing to participate in other positive health behaviors (Blair et al, 1985). Therefore, a person's current frequency of exercise may also be a predictor of his/her participation in EHAPs.

Some research has compared participants of corporate wellness programs to non-participants and found that the participants are more likely to exercise frequently and for longer time span than nonparticipants (Conrad, 1988a). However, it could be argued that this is a result of the program, not that these individuals exercised more frequently before joining the program.

Other studies have looked at frequency of exercise prior to joining a HPP and have found that those who have exercised frequently in the past are more likely to participate (Eakin et al, as cited in Lovato & Green, 1990; Godin, 1988).

It has been found that previous exercise experience may be an important factor in establishing intentions to participate in exercise and health promotion programs (Godin et al, 1988). These researchers suggest that when promoting exercise on the worksite to previously inactive employees, it should be promoted as a "pleasurable experience" rather than attempting to get long-term commitment from those employees who may be unsure of what they are getting into.

LITERATURE REVIEW

Further research which adds support to these observations will be important in establishing that it is, in fact the current exercisers who more often participate in worksite HPPs. If this is the case, methods of enhancing participation among the inactive employees are needed.

c) The Effects of Perceived Health Status on Participation

Many of the initial worksite health programs have been criticized for "cleansing the clean", suggesting that they were only reaching the segment of the employee population who were already well, or already converted to making health behavior changes. Therefore, a number of investigations have begun to evaluate health status in relation to participation in these programs, in order to determine the extent to which an employee's health (or perception of health) affects his or her decision to participate. Obviously, if the objectives of a program are to improve the health of employees and/or reduce costs associated with poor health, a program which is not reaching those employees who are in "poor" or "fair" health, who could benefit the most from an EHAP, will not be entirely effective in meeting these goals.

Individuals' perceptions of their own health are not *always* congruent to their actual health status, although many recent studies have reported that perceived health is a reasonably valid estimation of actual health (six studies cited by Kronenfeld et al, 1988; studies cited in Canada's Health Promotion Survey, Health and Welfare Canada, 1988). Although perceived and actual health may not be congruent, both are thought to have an effect on participation, and therefore the variable "perceived health" was dealt with in this investigation.

LITERATURE REVIEW

Five recent investigations have specifically addressed the relationship between perceived health status and participation in worksite health programs. Zavela et al (1988) studied a number of factors including self-reported physical and emotional health status of employees in relation to their intention to attend a worksite HPP. A higher percentage of "intenders" perceived their health as only fair or poor, whereas significantly more "non-intenders" rated their health as excellent. These results suggest that in this population, those employees who may be in need of health improvement are attracted to employee health programs.

Sloan and Gruman (1988), in their test of the "Theoretical Model of Participation in Workplace Health Promotion Programs" found increased perceived risk of illness to be related to program participation. Their model supported the Davis model (1984), in that increased perceived risk of illness led to decreased health satisfaction, which led to increased intention to change habits, leading to increased participation.

In other studies (Conrad, 1987b; Weitzel, 1989), results conflicted with those discussed above. Conrad found participants of a worksite wellness program to be significantly more inclined to rate their overall health better than non-participants. However, he was studying "participants" (as opposed to those who "intend to participate"). It is possible that the participants rated their health better as a result of the program and did not perceive their health to be as good *before* joining the program. No significant differences were found between the two groups in terms of perceived *overall* stress, although participants were significantly more likely to perceive some, to a great deal of *job related* stress. In Weitzel's test of the HPM on blue collar workers (1989), perceived health status was a very powerful predictor of engagement in health promoting behaviors.

LITERATURE REVIEW

(Those employees who perceived themselves to be in better health participated in more health promoting behaviors than those with poor perceived health.)

Morgan et al (1984), found that enrollment in an employee fitness program was associated with higher perceived health for men, but not for women. There was increased participation among men with higher perceived health, whereas for women, enrollment was associated with a lower perception of health.

From the conflicting results of these recent studies, it can be seen that there is as of yet no consensus on how perceived health status affects participation in worksite health programs. The results from Morgan's study (1984) indicate that these effects may vary according to sex. It follows, that other demographics, such as age, may also be inter-related with the effects of perceived health on participation.

The lack of consensus on perceived health and participation implies that further research is necessary to determine if EHAPs are reaching those employees with low perceived health and who are possibly in need of such programs, or alternatively, if the EHAPs are just reaching those who perceive their health as good or excellent, and therefore in effect are just "cleansing the clean".

LITERATURE REVIEW

d) Other Factors Affecting Participation

Research to date on participation has largely dealt with determining the effects of demographics on employees' decisions to participate. Since demographics have not explained a large amount of variance in the reasons individuals do or do not participate, other factors are being addressed, such as organizational factors.

As indicated in the discussion of Sloan and Gruman's model of participation (1988), organizational factors may be important in explaining employee's participation in workplace health programs. These investigators found many organizational factors to have both direct and indirect effects on participation.

Perceived supportiveness of supervisor was found to have a direct effect on increasing participation (King et al, 1988; Sloan and Gruman, 1988). In one study, the employee group with a supervisor who joined into fitness programs with the other employees and who strongly encouraged them to participate, had greater participation than other employee groups (King et al, 1988).

Perceived lack of control over work, lack of clarity of responsibilities, role ambiguity and work overload tended to have indirect, negative effects on participation, through increasing stress, causing increases in perceived risk of disease and health satisfaction, which then led to decreased participation levels.

Cost has often been implicated as a possible barrier to participation, but survey results have shown that enrollment fees are not usually perceived as barriers by employees (Dishman, 1985).

LITERATURE REVIEW

D. SUMMARY OF LITERATURE REVIEW AND IMPLICATIONS FOR INFLUENCING PARTICIPATION

Assuring participation by those employees in need of EHAPs is important for the realization of improved health of the employees and/or economic benefits for the corporation. The actual numbers are not as important as securing participation of employees other than those who are in excellent health (or who are already "converted" to making health behavior changes). Heirich et al (1989) state that approximately 15% of any employee population are the "conspicuously healthy" group, with another 15% being the very "at risk" segment. The 70% of employees in between these two segments usually have a number of risk factors which predispose them to becoming at risk, and therefore the challenge is to encourage participation by this segment. A participation rate of at least 20% suggests that perhaps not only the "conspicuously healthy" are attending, participation rates should be at least 20%.

Many theoretical health behavior models have been designed to try to explain the influences on health behavior and participation in health promotion programs. The Health Belief Model and the Reasoned Action Model have been effective in predicting changes in preventive health behavior, but not in health promoting behavior (Dishman, 1988; Hawthorne, 1990). Davis's "Participation Model" (1984) showed that risk factors were associated with dissatisfaction with health and greater intent to participate in some HPPs, namely in weight loss, exercise, stress and tension programs. When this model was tested with participants vs non-participants of an employee health program, factors found to be associated with participation were high job stress and high anxiety (Davis et al, 1987). Spilman (1988) found this model to also be better at predicting participation in preventive health, (as opposed to health promotion) programs. Sloan and Gruman's model (1988)

LITERATURE REVIEW

showed that organizational factors also had an effect on participation. Pender (1987) developed the Health Promotion Model, which has shown good initial results in predictions of health promoting behavior, yet research on this model is ongoing.

Although in general, health protecting and promoting behaviors seem to increase with age, many EHAPs report lower participation by older employees. This is possibly due to the "young image" of these programs and their emphasis on "fitness". This implies that the development and marketing of employee health programs should emphasize a well-rounded program designed for all age groups.

In strictly "fitness-oriented" programs, male participation has been reportedly higher than that of females, whereas the participation is often reversed in more comprehensive programs. This suggests that to assure high participation by females, a more comprehensive approach to programming is needed. For males, it appears that participation will be higher as long as sport and fitness programs are included in the package. Fitness programs have often been shown to be a catalyst to participation in other programs (Blozis et al, 1989; Conrad, 1988a).

Blue collar worker participation in EHAPs has usually been reported to be lower than white collar worker participation. This is due in part to limited access to programs for blue collar workers, but has also been reported to be prevalent when programs are offered to all workers. Many barriers which need to be overcome to improve this situation were reviewed. Solutions include involving this segment of the workforce in program development, starting the programs in a "bottom-up" fashion, and emphasizing improvements to worksite risks as part of the program.

Previous exercise experience appears to be an influencing factor in individual's decisions to partake in employee health programs. Therefore, methods of enhancing

LITERATURE REVIEW

participation among inactive employees, such as promoting worksite fitness as a "pleasurable experience" (and assuring that it is one!) are important.

It is clear that demographics do at least explain some of the variance in individuals decisions to participate in worksite health programs. In order to develop programs which may increase the participation of those demographic groups who are not participating, it is essential to have a better understanding of these sub-groups. The current investigation will aid in this understanding, by providing information with respect to the needs, preferences, barriers and benefits reported by each of these groups.

There is no consensus on how perceived health status affects participation, implying that further research is needed in this area. Initial studies on the effects of organizational factors such as supervisor support, and work overload, indicate that these factors may have a considerable impact on participation.

Lovato and Green (1990) suggest that sustaining participation requires that both individual and environmental motivational approaches be used. Individual approaches include determining the needs and interests (including barriers) of each group in question and attempting to meet those needs, and providing regular follow-up from programs (Wilbur, 1983). King et al (1988) showed that by tailoring a program to meet the needs and interests of blue collar workers they were able to significantly affect participation rates.

Environmental approaches include assuring program locations are convenient and accessible, establishing worksite policies aimed at improving health (eg. nonsmoking policies), and incorporating flex-time arrangements to further facilitate employees' access to programs (Godin et al, 1988; Lovato and Green, 1990).

LITERATURE REVIEW

Further research will undoubtedly reveal more factors which affect participation, and hence improve our ability to provide programs which surpass the critical 15-20% participation levels.

CHAPTER THREE

METHODS

A. THE SURVEY

1. The Needs Assessment Project

The data used in this analysis were extracted from a survey conducted for a municipal government to determine the needs and interests of its employees for an Employee Health and/or Assistance Program. The survey was conducted during May and June of 1989 by this investigator, under the direction of the Personnel Director for this municipal government.

It was designed as part of another project (hereafter called the Needs Assessment Project or NAP) to study the feasibility for implementation of a Health Promotion and/or Employee Assistance Program. The NAP also included a health screening survey, interviews with the City managers and directors, and gathering of information regarding resources and facilities available for the City's use.

2. Format

The survey was in the format of a 36 item, self-administered questionnaire designed by the investigator, following questionnaire design guidelines (Patton, 1986; Simon Fraser University Computing Services, 1988). The major function of the questionnaire was to determine the overall needs and interests of the employee sample for

METHODS

the City's use in deciding whether or not to implement an Employee Assistance and/or Health Promotion Program.

The questionnaire was composed of four sections dealing with interests, health knowledge and beliefs, perceived health, and demographics. The questions were in a closed-ended, multiple choice format. The questionnaire was examined for ambiguity and redundancy by the investigator, as well as two individuals who were experienced in questionnaire development. (Please see Appendix I for a copy of the questionnaire.)

3. Distribution and Retrieval

All permanent employees of the City ($n=560$) were requested to complete the Needs/Interest Questionnaire by the investigator. An attempt was made to distribute all questionnaires to individual departments, and when possible, explain the project to each group before having employees complete the questionnaires. However, the manager of each department made the decision as to whether the investigator would personally distribute surveys to the employees or whether the manager would have them distributed. A covering letter was attached to each questionnaire (see Appendix I). So in the cases where the managers distributed them, there was at least a brief explanation of the project preceding the questionnaire, with the investigator's phone number to call if questions arose. In most cases, employees were given work time to complete the surveys.

One week after the questionnaires were distributed, a memo was sent to each manager requesting that they remind employees who had not already returned their questionnaires to the investigator to do so. The City was not in favor of any further

METHODS

reminders being sent. Four hundred and one surveys were collected, comprising a 72% return rate.

4. Respondents

The respondents to the Needs/Interest survey comprised the subjects for the present investigation. The demographic profile of the survey respondents has been compared with that of the total employee group (all permanent employees) in Table 1. As can be seen, the respondents were very representative of the total employee sample, which (along with the high return rate), reduced the likelihood of a non-response bias.

METHODS

**Table 1. Comparison of Survey Respondents to the
Total Employee Group**

DEMOGRAPHICS:		PERMANENT EMPLOYEES:	RESPONDENTS:
SEX:	Male	73%	71%
	Female	27%	26%
			(3% No Response)
AGE:	16-35	43%	42%
	36-50	38%	40%
	Over 50	19%	16%
		(Mean: 39.7)	(3% No Response)
COLLAR:	Blue	* 60.6%	32.7%
	White	39.4%	30.4%
			(12.5% Pink)
			(* 24.4% Unknown)
TYPE:	Office Worker	19%	24%
	Labourer	13%	13%
	Clerical Worker	16%	13%
	Facility Worker	12%	11%
	Equip. Operator	14%	9%
	Manager/Director	3%	*** 7%
	Maintenance/Repair	4%	8%
	Firefighter	13%	4%
	Enforcement/ Inspection	3%	4%
	Other	5%	6%

* The percentages of blue and white collar workers in the permanent employee group were provided by the City, and were categorized differently than they were for this investigation. In the City's division they have included all clerical workers in with the white collar group, whereas for this investigation clerical workers are in a division called "Pink Collar Workers".

** It was impossible to determine collar type from worker classification for 24.4% of employees. These workers were not used in the analysis based on collar type. The majority of these employees were estimated to be blue collar workers however, and therefore if counted in the summation the actual

METHODS

percentage of blue collar employees who responded to the survey is likely over 50%.

*** Although there are only 19 Managers and Directors who work for the City, 27 individuals filled in this category. These are likely supervisors who were not clear that the Director/Manager category referred to Department Heads. This category has not been eliminated from the analysis of collar type however, as those who mistakenly filled in that category are presumably white collar employees.

5. Data Analysis for the Needs Assessment Project

The data were entered into the IBM Systat Statistics Program (U.B.C. Systat 1988), checked for outliers and cleaned. For the Needs Assessment, the data analysis consisted of reporting frequencies of responses to each question for all respondents. The Needs Assessment Project ended at this point, with the total response frequencies being provided to the City for their use in program development.

B. ANALYTICAL PROCEDURES FOR THE CURRENT INVESTIGATION

In the current investigation, the data from the previously described Needs Assessment Project were further analyzed in this investigation to determine if the responses were associated with demographics and perceived health status. Chapter One (Introduction to the Problem) provides a more thorough description of this study. The statistical program used to analyze the data was the IBM Systat Statistical Package (U.B.C. Systat 1988).

METHODS

1. Division of the Data

There were 3 sets of variables derived from the questionnaire:

- (a) Employees' preferences and perceptions (regarding barriers and benefits) of Health Promotion and Employee Assistance Programs,
- (b) Demographics, and
- (c) Perceived Health Status.

Each questionnaire item within these sets was treated as an independent variable, with the frequencies of responses to each question being the dependent variables.

METHODS

a) Preferences, Barriers and Benefits

i) Program Preferences. Respondents were asked to indicate their preferences for EHAP components in 14 survey questions. Generally, each question required one answer unless otherwise specified. The preferences that the employees were asked to respond to were as follows:

- 1) Preference for method of instruction (5 choices; asked to rank order them)
- 2) Preference for type of EHAP activities (19 choices: asked to pick 7 activities and rank order them)
- 3) Anticipated participation in Health Promotion Programs and Seminars (5 choices)
- 4) Anticipated participation in an exercise program (4 choices)
- 5) Preferred time of day for programs and seminars (6 choices)
- 6) Preferred time of day for exercise programs (6 choices)
- 7) Preference for type of fitness facilities (6 choices)
- 8) Preference for type of EAP (3 choices)
- 9) Preference for whether EAP contact person is onsite or offsite (2 choices)
- 10) Anticipated use of an EAP (3 choices)
- 11) Preferences regarding family members usage of programs (5 choices)
- 12) Preferences regarding retired employees usage of programs (2 choices)
- 13) Preference as to volunteer capacity (6 choices)
- 14) Preference as to whether or not an EHAP program should be implemented (3 choices)

ii) Perceived Barriers to Participation. Perceived barriers were derived from six survey questions in which respondents were asked to select one answer. The barriers on which employees were questioned were as follows:

- 1) Greatest concern regarding an EHAP on the worksite (5 choices)
- 2) Acceptable cost per week for an exercise program (5 choices)

METHODS

- 3) Acceptable cost per month for health promotion programs and seminars (5 choices)
- 4) Comfort in exercising with all your fellow workers (3 choices)
- 5) Perceived barriers to using available community services (6 choices)
- 6) Perceived barriers to using an EAP (6 choices)

iii) Perceived Benefit from Participation. One survey question with six response choices asked employees for their perception of personal benefit from participating in an EHAP.

b) Demographics

The demographic data of the respondents were gathered from an optional section of the survey which requested the following information:

- i) Type of worker (10 categories, including clerical worker, labourer, manager, etc.)^{*}
- ii) Age (3 categories)
- iii) Sex
- iv) Exercise habits (current frequency of physical exercise; 5 point scale)

^{*} Classification of worker as to blue, white or pink collar worker was determined from worker type. Please see Chapter One for definitions of each classification.

c) Perceived Health Status

One section of the questionnaire asked respondents to rate their current level of health (on 4 or 5 point scales; eg: from poor to excellent), for the following health variables:

- 1) General health

METHODS

- 2) Fitness level
- 3) Energy level after work
- 4) Level of stress
- 5) Eating habits

2. Data Analysis

For two questions (preference for program content and preference for method of instruction), respondents were asked to rank their choices from highest to lowest interest. To determine the overall interest of the group, these choices were weighted according to where they were ranked, and the overall ranking for each sub-group of employees is reported. (Please see Appendix II for an explanation of how the choices were weighted.)

The Chi-square test of independence was performed to determine whether the distribution of responses to each survey question (preferences, barriers and benefits) was independent of each of the demographic variables (age, sex, classification of employee and exercise habits).

This test was also performed to determine whether the distribution of responses to questions dealing with anticipated use of, and interest in EHAPs were independent of the perceived health status variables (perceived general health, fitness, stress, energy and diet).

In order to assure that all assumptions of this statistical test were met, in each test, if more than one-fifth of the cells contained frequencies of less than five, categories were collapsed or eliminated according to criteria of subjectively determined relevance.

CHAPTER FOUR

RESULTS

A. DIFFERENCES IN RESPONSES BASED ON DEMOGRAPHICS

As indicated in Chapter Three (Methods), the data on which this analysis was based were derived from an EHAP Needs and Interest Questionnaire completed by 401 employees of a municipal government. While the original purpose of the questionnaire was to collect general information regarding the need for an EHAP, the data offered more specific information regarding demographics and perceived health which are analyzed in this investigation. The survey was divided into three categories covering preferences for EHAP components, perceived barriers toward participation in an EHAP, and perceived benefits from participation in an EHAP. The results in this first section deal with one of the major purposes of this investigation, which was to determine if associations exist between demographic characteristics and employee perceptions of Employee Health and Assistance Programs. The responses to each survey question are reported, with the response of the complete sample being listed first, followed by a breakdown of responses for each demographic variable being studied (age, sex, classification of worker by collar type and employee type, and exercise habits).

RESULTS

1. Preferences

a) Preference for Type of EHAP Activities (Survey Question #2)

Fourteen survey questions dealt with employees' preferences for EHAP components. In one question, (survey question #2; please see Appendix I), respondents were asked to pick seven services or activities (of the 19 listed), in which they were most interested and rank them accordingly, from highest to lowest preference. To determine the overall interest of the group, the choices were then weighted according to where the employees ranked them. (Please see Appendix II for an explanation of the weighting.) The following table shows the order in which the employees chose the various activities and services, (listed from highest to lowest interest):

RESULTS

Table 2. Preference for EHAP Components - All Employees

Rank Order:	Programs and Activities Preferred:
1	Stress Management Programs
2	Health Education Seminars
3	Personal/Professional Education
4	Financial Management/Budgeting
5	Health Screening Assessments
6	CPR/First Aid
7	Sport/Recreation Programs
8	Employee Assistance Program
9	Preventive Back Care Programs
10	Individual Exercise Programs
11	Nutrition Asmts/Counselling
12	Fitness Assessments/Counselling
13	Weight Management Programs
*13	Stop Smoking Programs
14	Cut-rates at Fitness Facility
15	Walking/Running Programs
16	Group Exercise Programs
*16	Weight Training Programs
17	**Other

* At both 13th and 16th preference, two programs were ranked equally.

**Some of the other activities/services suggested included retreats, time management seminars, cultural programs, "Search for Excellence" seminars, and more attention be given to hazards and conditions at work.

The following key provides a brief description of the various programs and services which are abbreviated where necessary in Tables 2 through 7.

RESULTS

Key:

Health Education Seminars (or Health Ed):	eg. heart health, cancer prevention, aging, etc.
Personal/Professional Education (or Per/Pro):	eg. retirement planning, coping with change, etc.
Health Screening Assessments (or Health Screening, Screen):	eg. blood pressure, blood cholesterol, etc.
Sport/Recreation Programs (or Sport):	eg. volleyball, baseball, curling, etc.
Individual Exercise Programs (or Individual Ex, IndivEx):	eg. having a personalized exercise program prescribed
Group Exercise Programs (or Group Exercise, GroupEx):	eg. Aerobics
Stress (or StressMgt):	Stress Management Programs
Back Care:	Preventive Back Care Programs
CPR:	CPR/First Aid
Financial Mgt (or FinMgt):	Financial Management and Budgeting
EAP:	Employee Assistance Program
Smok:	Stop Smoking Programs
Wt Control (or WtMgt):	Weight Management Programs
Fitness Asmt (or FitAsmt):	Fitness Assessments and Counselling
Wt Training (or WtTrain):	Weight Training
Walk/Run (or W/Run):	Walking/Running Programs
Cut Rates (or CutRate):	Cut rates at a local Fitness Facility
Nutrition Assessment (or NutrAsmt):	Nutrition Assessments and Counselling

RESULTS

Table 3 outlines the differences among the age categories as to their preferences for program components. There was a tendency for health screening and weight control to be ranked higher as age increased. CPR/First Aid was ranked as the third highest choice by the 16-35 year age group, as compared with sixth and seventh by the other two groups. Stress Management appeared to be a more popular item among the younger age groups (picked first among the 16-35 and 36-50 year age groups, versus fourth for the over 50 age group). There was no apparent difference among the age groups as to preference for an Employee Assistance Program. It is interesting to note that although "group exercise" was ranked very low by all groups, the over 50 group ranked all of the fitness activities very low.

RESULTS

Table 3. Differences in Preferences for EHAP Components Based on Age

Rank Order:	16-35: (n = 167)	36-50: (n = 159)	Over 50: (n = 62)
1	Stress Mgt	Stress Mgt	Health Ed
2	FinMgt	Per/Pro	Per/Pro
3	CPR	Health Ed	Screen
4	Health Ed	Screen	Stress Mgt
5	Per/Pro	FinMgt	FinMgt
6	Sport	IndivEx	CPR
7	Screen	CPR	Wt Control
8	EAP	Back Care	Back Care
9	Back Care	EAP	EAP
10	Cut Rates	Wt Control	Stop Smoking
11	NutrAsmt	Fitness Asmt	IndivEx
12	Fitness Asmt	Sport	NutrAsmt
13	IndivEx	Walk/Run	Sport
14	Stop Smoking	NutrAsmt	GroupEx
15	Wt Training	Cut Rates	Walk/Run
16	GroupEx	Stop Smoking	Fitness Asmt
17	Wt Control	Wt Training	Cut Rates
18	Walk/Run	GroupEx	Wt Training
19	Other	Other	Other

RESULTS

The differences between males and females in their preferences for EHAP components are described in Table 4. Preventive back care programs were ranked much higher by the males than by the females (8th vs 17th). Females tended to rank nutrition assessments/counselling, weight control programs, and group exercise much higher than males (8th vs 14th, 10th vs 16th, and 11th vs 18th, respectively).

Table 4. Differences in Preferences for EHAP Components Based on Sex

Rank Order:	Males: (n = 283)	Females: (n = 103)
1	Health Education	Stress Management
2	Per/Pro	Per/Pro
3	Stress Management	Financial Mgt
4	Health Screening	Health Education
5	Financial Mgt	CPR/First Aid
6	CPR/First Aid	Health Screening
7	Sport	EAP
8	Back Care	Nutrition Asmt
9	EAP	Individual Ex
10	Individual Ex	Wt Control
11	Fitness Asmt	Group Exercise
12	Stop Smoking	Sport
13	Cut Rates	Cut Rates
14	Nutrition Asmt	Walk/Run
15	Wt Training	Fitness Asmt
16	Wt Control	Stop Smoking
17	Walk/Run	Back Care
18	Group Exercise	Wt Training
19	Other	Other

Table 5 illustrates the differences in preferences for EHAP components based on collar type. Blue collar workers tended to rank preventive back care programs much higher (4th), than white and pink collar workers did (17th and 16th respectively). Sport

RESULTS

and recreation programs were also more popular with the blue collar workers, who ranked them 7th, (as compared to 10th and 11th, for pinks and whites). White and pink collar employees were similar in ranking stress management first, as compared to blue collar employees who ranked it third. Of the fitness-related activities, white collar workers chose individual exercise programs as their first choice (7th choice overall), which was much higher than its ranking for blue and pink collar workers. For the pink collar workers, walking/running programs were the first on their list for fitness-related activities.

RESULTS

**Table 5. Differences in Preferences for EHAP
Components Based on Collar Type**

Rank Order:	Blue: (n = 131)	White: (n = 122)	Pink: (n = 50)
1	Health Ed	Stress Mgt	Stress Mgt
2	Per/Pro	Per/Pro	FinMgt
3	Stress Mgt	Health Ed	Per/Pro
4	Back Care	FinMgt	Health Ed
5	FinMgt	Screen	CPR
6	Screen	CPR	Screen
7	Sport	IndivEx	EAP
8	CPR	EAP	NutrAsmt
9	EAP	NutrAsmt	Walk/Run
10	Cut Rates	Wt Control	Sport
11	Stop Smoking	Sport	Group Ex
12	FitAsmt	FitAsmt	Wt Control
13	Wt Training	Group Ex	Cut Rates
14	IndivEx	Walk/Run	IndivEx
15	NutrAsmt	Stop Smoking	Stop Smoking
16	Wt Control	Cut Rates	Back Care
17	Group Ex.	Back Care	FitAsmt
18	Walk/Run	Wt Training	Wt Training
19	Other	Other	Other

RESULTS

A more specific breakdown of worker classification showed further differences in preferences for program components. The following table (Table 6) represents the rank order of preferred activities for those worker types which appeared to differ notably from that of the whole sample. (Please refer to the beginning of this chapter for preference based on complete sample.) The firefighters tended to differ the most from the overall employee sample, in that they chose sport/recreation programs as their first choice, and EAP, CPR/first aid, and weight management programs were ranked much lower than the other types of employees ranked them. Labourers and firefighters ranked preventive back care programs much higher than the other types of workers. Individual exercise programs appeared to be more popular with managers, office workers and firefighters than with labourers and clerical workers. The most popular fitness activity among the clerical workers was walking/running programs (ranked 9th as opposed to 14th to 17th for the other worker types).

RESULTS

Table 6. Differences in Preferences for EHAP Components Based on Worker Type

Rank Order:	Manager (n = 271)	Fire (n = 16)	Office (n = 95)	Labourer (n = 51)	Clerical (n = 50)
1	HealthEd	Sport	Stress	HealthEd	Stress
2	Per/Pro	Screen	Per/Pro	BackCare	FinMgt
3	Screen	Stress	FinMgt	Stress	Per/Pro
4	Stress	BackCare	HealthEd	CPR	HealthEd
5	FinMgt	HealthEd	CPR	Per/Pro	CPR
6	EAP	IndivEx	Screen	FinMgt	Screen
7	IndivEx	FitAsmt	IndivEx	Screen	EAP
8	Smok	WtTrain	EAP	Sport	NutrAsmt
9	WtMgt	Per/Pro	NutrAsmt	Smok	W/Run
10	FitAsmt	CutRate	Sport	FitAsmt	Sport
11	NutrAsmt	GroupEx	WtMgt	EAP	GroupEx
12	BackCare	FinMgt	FitAsmt	CutRate	WtMgt
13	CPR	NutrAsmt	GroupEx	WtTrain	CutRate
14	GroupEx	Smok	W/Run	WtMgt	IndivEx
15	Sport	W/Run	CutRate	IndivEx	Smok
16	WtTrain	EAP	BackCare	NutrAsmt	BackCare
17	W/Run	CPR	Smok	W/Run	FitAsmt
18	CutRate	Other	WtTrain	GroupEx	WtTrain
19	Other	WtMgt	Other	Other	Other

RESULTS

Table 7 shows the variations in preferred EHAP components based on the employee's present frequency of exercise. There was a tendency for sport/recreation programs to increase in popularity from those who do not exercise to those who exercise three or more times per week. There was no apparent difference in interest for a stress management program between those who exercise very little and those who exercise a lot. Those who do not exercise ranked "stop smoking program" as 6th, versus 18th for those who exercise three or more times per week. Interest in weight management also appeared to decrease among those who exercise regularly.

**Table 7. Differences in Preferences for EHAP
Components Based on Present Frequency of Exercise**

Present Frequency of Exercise:					
Rank Order	None (n=60)	<Once/Wk (n=28)	Once/Wk (n=45)	Twice/Wk (n=77)	3 or > (n=182)
1	Stress	Stress	HealthEd	HealthEd	Stress
2	Per/Pro	Per/Pro	Per/Pro	Per/Pro	HealthEd
3	HealthEd	FinMgt	Stress	Stress	Per/Pro
4	FinMgt	EAP	FinMgt	FinMgt	Screen
5	Screen	HealthEd	CPR	CPR	FinMgt
6	Smok	Screen	Screen	Screen	Sport
7	EAP	CPR	Sport	Sport	CPR
8	WtMgt	IndivEx	CutRate	EAP	BackCare
9	CPR	WtMgt	BackCare	IndivEx	EAP
10	BackCare	NutrAsmt	FitAsmt	Smok	CutRate
11	IndivEx	W/Run	IndivEx	WtMgt	NutrAsmt
12	NutrAsmt	Sport	EAP	BackCare	FitAsmt
13	Sport	GroupEx	Smok	FitAsmt	IndivEx
14	GroupEx	CutRate	W/Run	NutrAsmt	WtTrain
15	W/Run	BackCare	NutrAsmt	WtTrain	GroupEx
16	FitAsmt	Smok	WtMgt	W/Run	W/Run
17	CutRate	FitAsmt	GroupEx	CutRate	WtMgt
18	WtTrain	WtTrain	WtTrain	Group	Smok
19	--	--	Other	Other	Other

RESULTS

b) Preference for Method of Instruction (Survey Question #1)

A second question which requested employees to rank items, asked them to identify the methods of learning they most prefer, by listing the five choices in order from highest to lowest preference. The choices were again weighted according to rank, (see Appendix II for weighting) and the preferences of the total group are listed in Table 8.

Table 8. Preference for Method of Instruction - All Employees

Rank Order:	Method:
1	Hands-On Activities
2	Films/Videos
3	Seminars/Lectures
4	Books/Pamphlets/Posters
5	* Other

* Some of the other methods suggested included small group discussions, correspondence courses, tours and projects.

When broken down based on the various demographic variables, the order in which these methods were chosen did not appear to differ much from the order listed above. In a few cases, hands-on activities were not chosen as first choice, but were replaced by films and videos (for the over 50 age group, the enforcement/inspection worker type, and for those who do not exercise, or exercise twice per week).

c) Other Preferences

For each of the other "preference" questions on the survey, chi square analysis was performed to determine if any significant differences in responses occurred between

RESULTS

the levels of each demographic variable (cross-tabulation of each preference question by each demographic variable).

Table 9 summarizes the results of the chi square analysis where significant differences in responses occurred.

RESULTS

**Table 9. Results of the Chi-Square Analysis:
Significant Differences ($p \leq 0.05$) in Employees'
Preferences for EHAP Components Based on
Demographics**

PREFERENCE QUESTIONS:	DEMOGRAPHICS:				
	Age:	Sex:	Collar:	Type:	Freq:
Parthp					
Partex					**
Timehp		**	**		
Timex		**	**		
Facility	*	**	**		
EAPtype					
Site			*		
EAPuse					
Family			*		
Retired		**	**	**	
Volunteer	**	*	*		**
EHAP					

* $p \leq .05$

** $p \leq .01$

KEY:

Freq	- Self-reported frequency of exercise
Parthp	- Anticipated frequency of participation in Health Promotion Programs/Seminars
Partex	- Anticipated frequency of participation in exercise programs
Timehp	- Preferred time of day for health promotion programs/seminars
Timex	- Preferred time of day for exercise programs
Facility	- Preference for type of fitness facilities
EAPtype	- Preference for type EAP
Site	- Preference for whether EAP contact person is onsite or offsite
EAPuse	- Anticipated use/non-use of an EAP

RESULTS

Family	- Preference to whether or not family members should be able to use program
Retired	- Preference for whether or not retired employees should be able to use program
Volunteer	- Preference as to volunteer capacity
EHAP	- Preference as to whether or not an EHAP should be implemented.

Following are the frequency distributions for each preference question listed in Table 9. For those cross-tabulations where significant differences in responses occurred between different demographic groups, histograms illustrating the differences are presented. In each histogram, the results are presented as percentages of each group being represented. In the discussion of each histogram these percentages have been rounded off to the nearest whole number.

i) Anticipated Participation in Health Promotion Programs and Seminars (Survey Question #5).

Anticipated frequency of participation in Health Promotion Programs/Seminars (eg. heart health, retirement planning, health screening, stress management, etc.) for the whole sample is shown in Table 10.

RESULTS

**Table 10. Anticipated Participation in Health
Promotion Programs/Seminars**

Percentage of employees:	Anticipated frequency of participation per month:
30%	Once
22%	Twice
20%	Three or more times
16%	Less than once
10%	Not at all
2%	Did not answer

As indicated in Table 9, there were no significant differences in anticipated participation in health promotion programs and seminars based on age, sex, collar and type of worker, or frequency of exercise.

RESULTS

ii) Anticipated Participation in an Exercise Program (Survey Question 5).

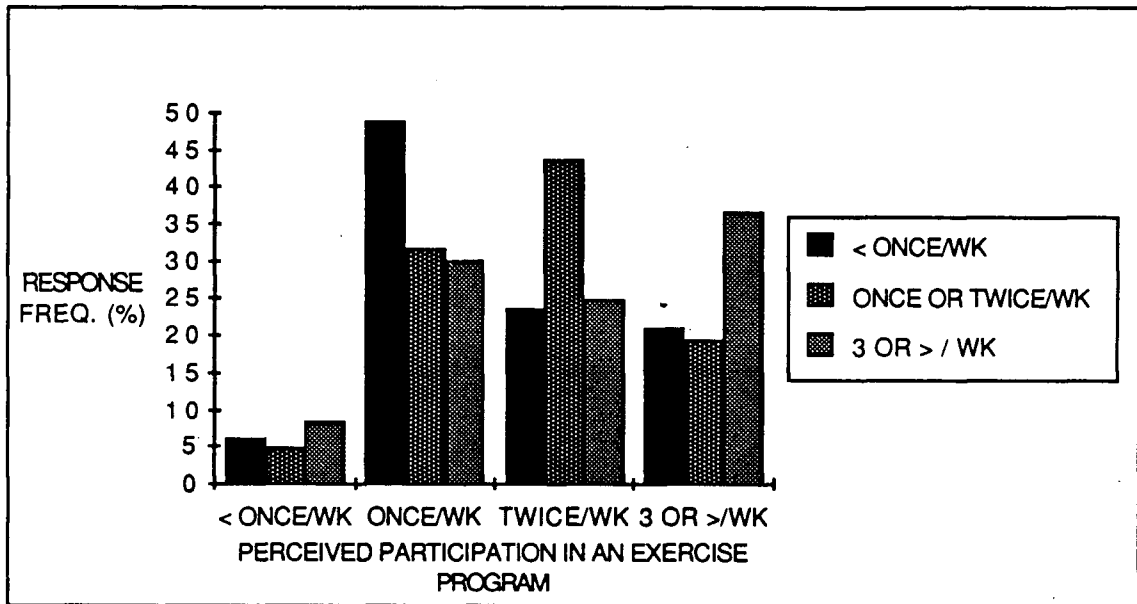
Anticipated frequency of participation in Exercise Programs (individual or group programs) for the total sample is shown in Table 11.

Table 11. Anticipated Participation in Exercise Programs

Percentage of employees:	Anticipated frequency of participation per week:
31%	Once
28%	Three or more times
24%	Twice
9%	Did not answer
6%	None
2%	Less than once

There were no significant differences in anticipated participation in exercise programs based on age, sex, collar or type of worker. The significant relationship ($p < 0.01$) between self-reported frequency of exercise and anticipated participation in exercise programs is shown in Figure 1. The majority of employees who reported currently exercising less than once per week were more apt to anticipate that they would participate in a worksite exercise program once per week (49%), twice per week (24%), or three or more times per week (21%). Only 6% stated they participate less than once per week.

RESULTS



Pearson Chi-Square Statistic = 34.25 with 6 degrees of freedom, $p < 0.01$.

Figure 1.

**PERCEIVED PARTICIPATION IN AN EXERCISE
PROGRAM (BASED ON PRESENT FREQUENCY OF
EXERCISE)**

RESULTS

iii) Preferred Time of Day for Health Promotion Programs/Seminars and Exercise Programs (Survey Question #6).

Preferred time of day for Health Promotion Programs/Seminars and Exercise Programs for the total sample is shown in Table 12.

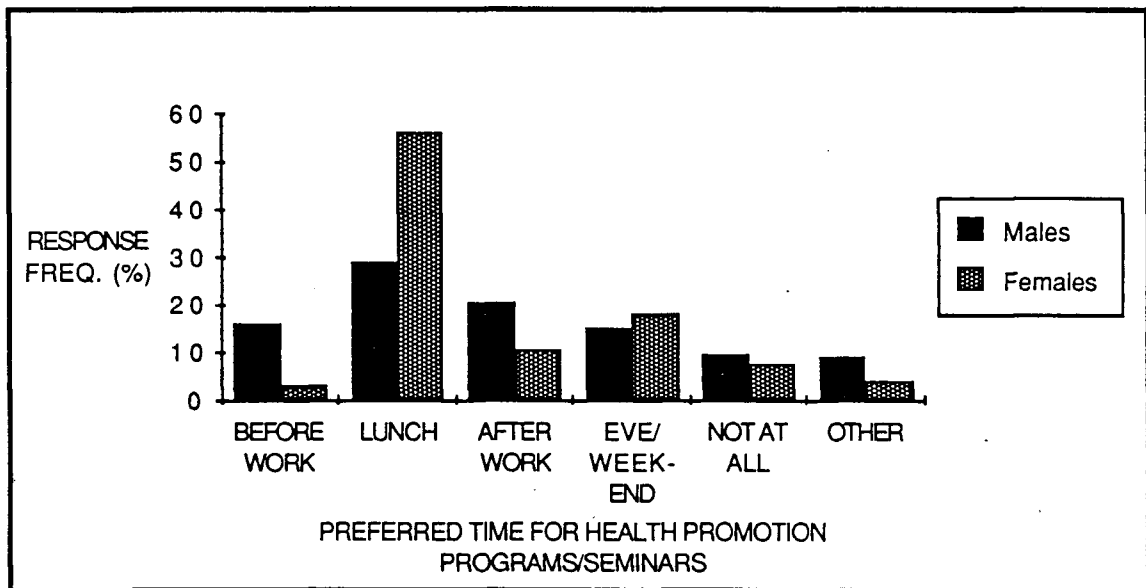
Table 12. Preferred Time of Day for Health Promotion Programs/Seminars and Exercise Programs

Percentage of employees:		
Time of day:	Health Promotion Programs	Exercise Programs:
Lunch break	32%	25%
After work	16%	20%
Evenings/weekends	14%	12%
Before work	12%	15%
Not at all	9%	12%
Did not answer	13%	11%
Other	7%	6%

There was no significant difference in preferred time of day for either Health Promotion or Exercise Programs based on age, type of worker or frequency of exercise. Figures 2 and 3 respectively, illustrate the significant relationships between sex and preferred time for Health Promotion Programs ($p < 0.01$), and between sex and preferred time for Exercise Programs ($p < 0.01$).

RESULTS

In figure 2 it is apparent that although the highest percentage of both males and females preferred to have Health Promotion Programs and Seminars at lunch time, many more females (56%), than males (29%) preferred this. Males tended to choose "before work" and "after work" more often than females did.



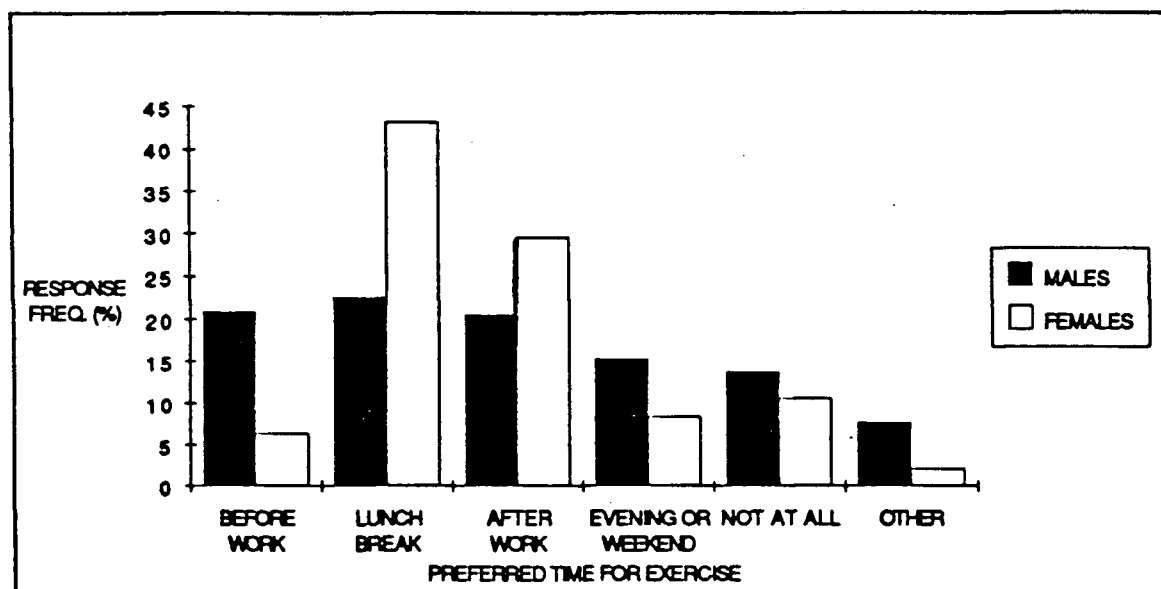
Pearson Chi Square Statistic = 29.10 with 5 degrees of freedom, $p < 0.01$

Figure 2.

**PREFERRED TIME FOR HEALTH PROMOTION
PROGRAMS/SEMINARS (BASED ON SEX)**

RESULTS

Figure 3 shows the significant ($p < 0.01$) differences in preferred time for Exercise Programs between males and females. Again, the highest percentage of both males and females chose to exercise on their lunch break, although with males, the responses were fairly evenly distributed between "before work", "lunch break" and "after work". Forty three percent of the females chose "lunch break" as compared to only 22% of the males. A higher percentage of females (30%) also chose "after work" than males (20%). A higher percentage of females (30%) also chose "after work" than males (20%).



Pearson Chi Square = 27.91 with 5 d.f., $p < 0.01$

Figure 3.

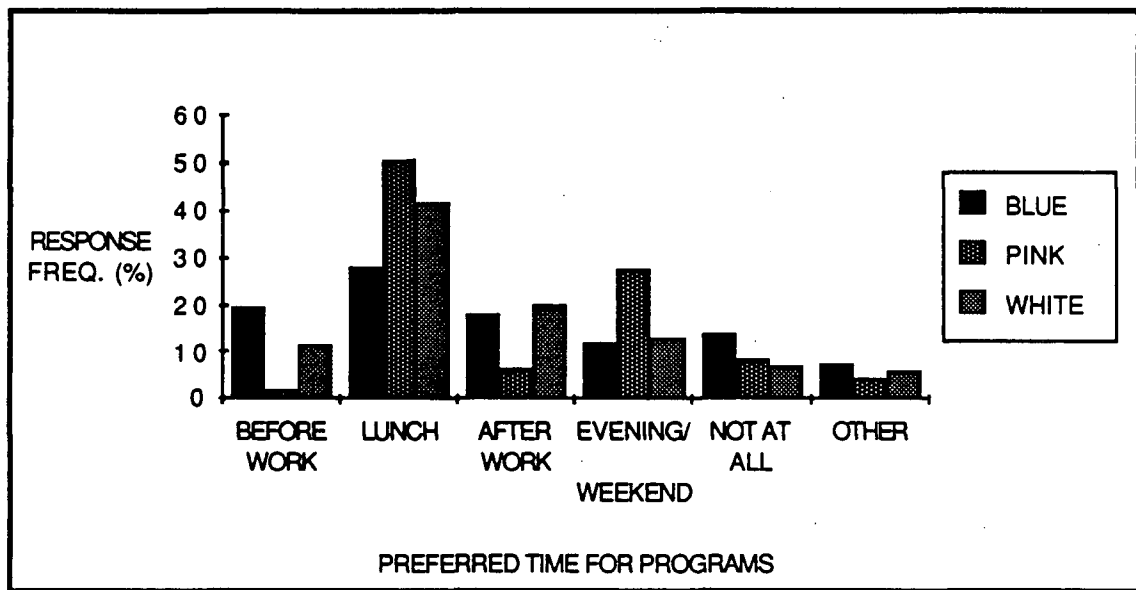
PREFERRED TIME FOR EXERCISE PROGRAMS
(BASED ON SEX)

RESULTS

Figures 4 and 5 respectively, show the significant relationships between collar-type and preferred time for Health Promotion Programs ($p < 0.01$), and between collar-type and preferred time for Exercise Programs ($p < 0.01$).

It can be seen in Figure 4, that although lunch time was the most popular choice for health promotion programs and seminars for all collar types, a greater percentage of pink collar workers (51%), chose lunch time as compared to blues (28%), and whites (42%). Also a much greater percentage of pink collar workers (28%), preferred evenings and weekends for courses as compared with blues (12%), and whites (13%). It appears that more blue collar workers would come to programs "before work" (20%), as compared with whites (12%), and very few pinks (2%). The preferences for programs after work were 20% (whites), 18% (blues), and 6% (pinks).

RESULTS



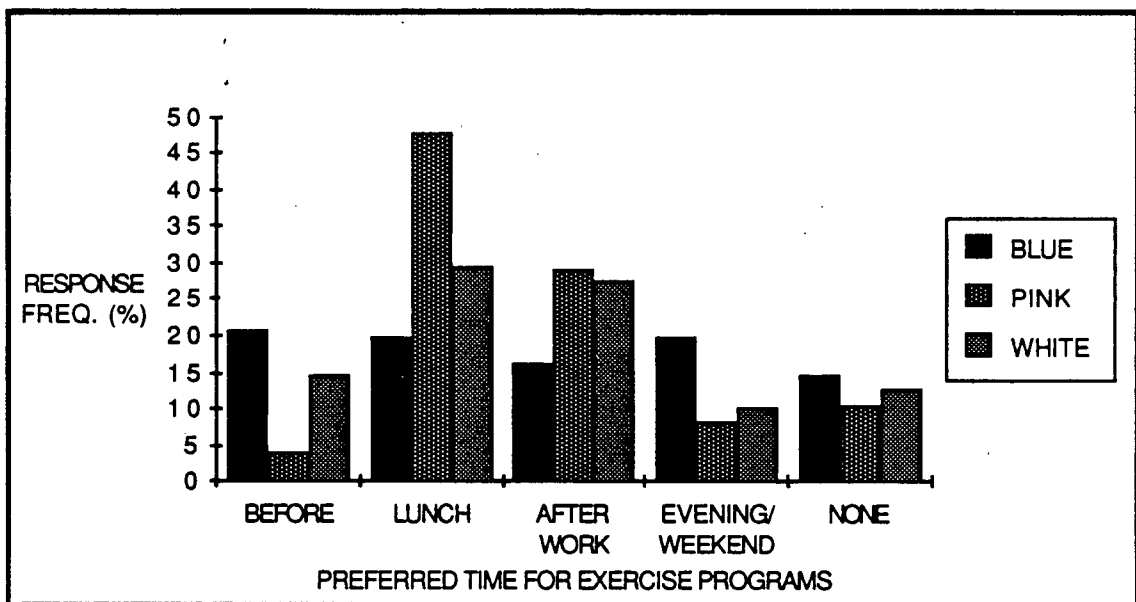
Pearson Chi Square = 24.39 with 8 d.f., $p < 0.01$

Figure 4.

**PREFERRED TIME FOR HEALTH PROMOTION
PROGRAMS/SEMINARS BASED ON COLLAR TYPE**

RESULTS

Figure 5 outlines the variations in preferred time of day for exercise programs, based on collar-type. As can be seen, pink collar workers much preferred lunch time (48%), as compared to whites (29%), and blues (20%). White collar workers choices were fairly evenly distributed between "lunch" and "after work", with a lesser amount choosing the remaining categories. Blue collar workers tended to choose before work (21%), lunch (20%), after work (16%), and evenings/weekends (20%) in fairly even proportions. The percentage of blues (20%), choosing evenings/weekends was higher than pinks (8%), and blues (10%).



Pearson Chi Square = 29.41 with 10 d.f., $P < 0.01$

Figure 5.

**PREFERRED TIME FOR EXERCISE PROGRAMS
BASED ON COLLAR TYPE**

RESULTS

iv) Preference for Type of Fitness Facilities (Survey Question # 10).

The preference for type of fitness facilities employees would like to see on or near the worksite are represented in Table 13:

Table 13. Preference for Type of Fitness Facilities on the Worksite

Percentage of employees:	Preferred type of facility:
44%	* Individual exercise area
19%	Group exercise area
13%	Would not use
9%	Jogging or running area
8%	**Other
5%	Showers/change area
3%	Did not answer

* eg. weight room, exercise bike, etc.

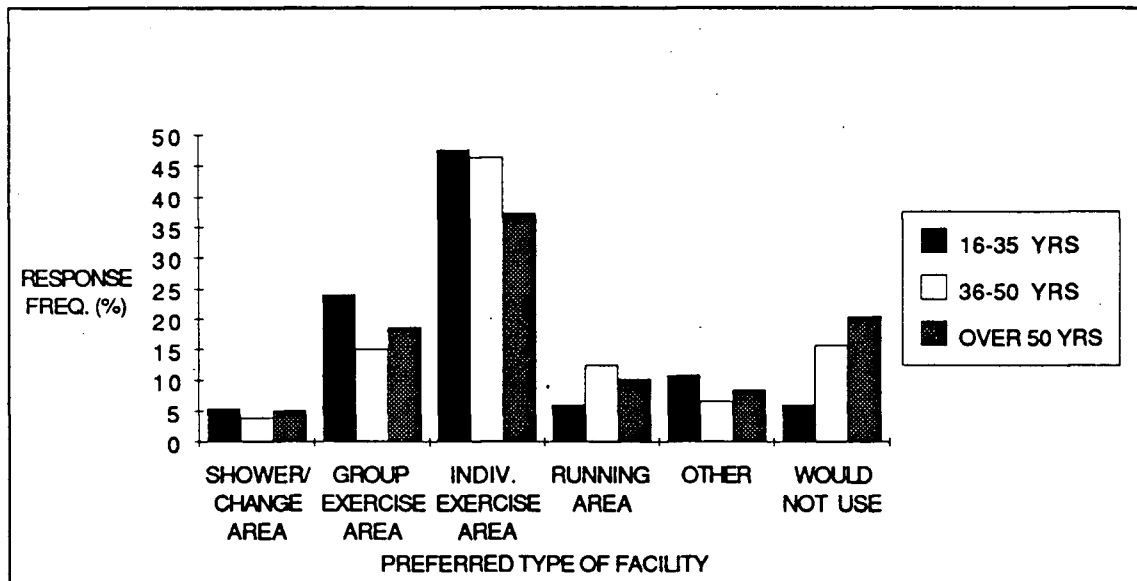
** Some of the other suggestions for fitness facilities included: swimming pool, racquet courts, athletic fields, and gymnasium.

There were significant differences in preference for type of facilities based on age ($p = 0.03$), sex ($p = 0.01$), and collar of worker ($p < 0.01$), but not based on type of worker and frequency of exercise.

Figure 6 shows the differences among the three age groups in their preferences for type of fitness facility on the worksite. Although the largest percentage of each age category chose "individual exercise area" (ie: weights, exercise bike, etc.), there appeared to be a tendency for interest in this type of facility to increase as age decreased. There was also a tendency for more employees to state that they would not use fitness facilities on the worksite, as age increased. Although preference for a group exercise area was

RESULTS

fairly low (<25%), the younger group of employees (16-35 yrs) tended to be more interested in this type of facility (24%) than the two older groups (15% and 19% respectively).



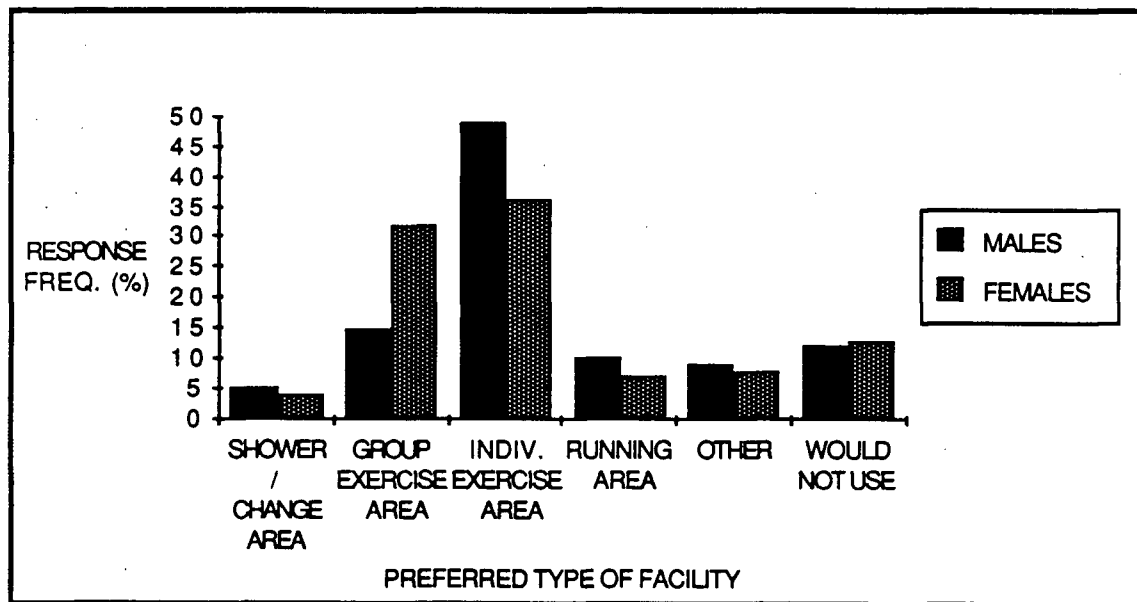
Pearson Chi Square = 20.04 with 10 d.f., $p = 0.03$

Figure 6.

PREFERRED TYPE OF FACILITY BASED ON AGE

RESULTS

Figure 7 illustrates the significant ($p = 0.01$) differences in type of fitness facility preferred, based on sex. The highest percentage of both males and females chose "individual exercise area", but the number of males (49%) was higher than that of females (36%). The percentage of females (32%) who preferred a group exercise area was much higher than for males (15%).



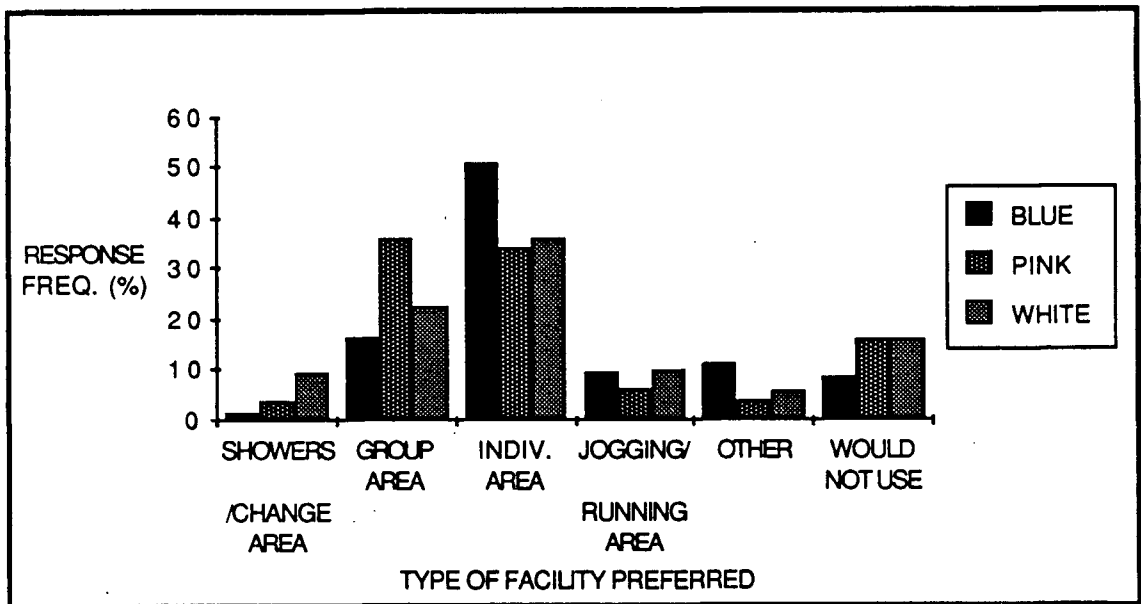
Pearson Chi Square = 14.63 with 5 d.f.), $P = 0.01$

Figure 7.

PREFERRED TYPE OF FACILITY BASED ON SEX

RESULTS

Figure 8 portrays the significant ($p < 0.01$) differences in preferred type of fitness facility, based on collar type. The first preference for blue and white collar workers (51% and 36% respectively), was an individual exercise area (ie: exercise bike, weights, etc.). Pink collar workers chose a group exercise area as their first choice (36%). Although very few employees indicated their preference for "showers/change area" and "jogging/running area", a slightly higher percentage of white collar workers preferred these.



Pearson Chi Square = 26.82 with 10 d.f., $p < 0.01$

Figure 8.

PREFERRED TYPE OF FACILITY (BASED ON
COLLAR TYPE)

RESULTS

v) Preference for Type of EAP (Survey Question #12).

Employees' preferences for type of Employee Assistance Program to be implemented are presented in Table 14.

Table 14. Preference for Type of EAP to be Implemented

Percentage of employees:	Type of EAP preferred:
66%	Health Promotion Model (EAP is offered to employees in combination with a health promotion program)
17%	Assessment/Referral Model (EAP referral person does no counselling, but refers employees on to appropriate professional in the community)
11%	Short-term Counselling Model (EAP contact person provides a limited number of hours of counselling; if problem is not solved in this time, employee is referred on to another professional)
7%	Did not answer

There were no significant differences in preferred type of EAP based on age, sex, collar and type of worker or frequency of exercise.

RESULTS

vi) Preference for Location of EAP Contact Person (Survey Question #15).

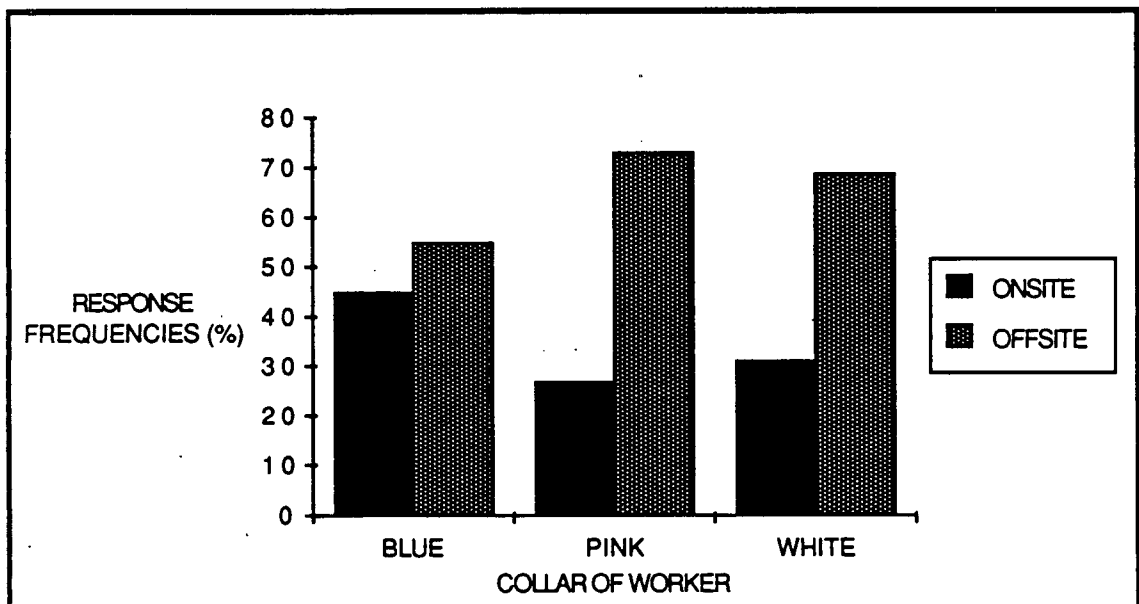
Employees' preferences for whether the EAP contact person should be onsite or offsite are shown in Table 15:

Table 15. Preference for Location of EAP Contact Person

Percentage of employees:	Preference:
62%	Offsite
33%	Onsite
4%	Did not answer

There were no significant differences in whether or not the EAP referral person should be onsite or offsite based on age, sex, type of worker or frequency of exercise. However, when based on collar type, the relationship was significant ($p = 0.03$), as described in Figure 9. All collar types chose offsite more often than onsite, but the percentage choosing offsite was larger for pinks (73%), and whites (69%), than for blues (55%).

RESULTS



Pearson Chi Square = 7.16 with 2 d.f., $p = 0.03$

Figure 9.

**PREFERENCE FOR LOCATION OF EAP REFERRAL
PERSON (BASED ON COLLAR TYPE)**

RESULTS

vii) Anticipated Use/Non-Use of an EAP (Survey Question #18).

There were no significant differences in anticipated use of an EAP based on any of the demographic variables studied. The distribution of responses of the whole group are represented in Table 16:

Table 16. Anticipated Use of an EAP

Percentage of employees:	Perception of EAP use if the employee needed help:
72%	Would use
21%	Don't know
6%	Would not use
1%	Did not answer

RESULTS

viii) Preference as to Usage of an EHAP by Family Members.

Preferences as to whether or not family members should be able to use the EHAP are shown in Table 17.

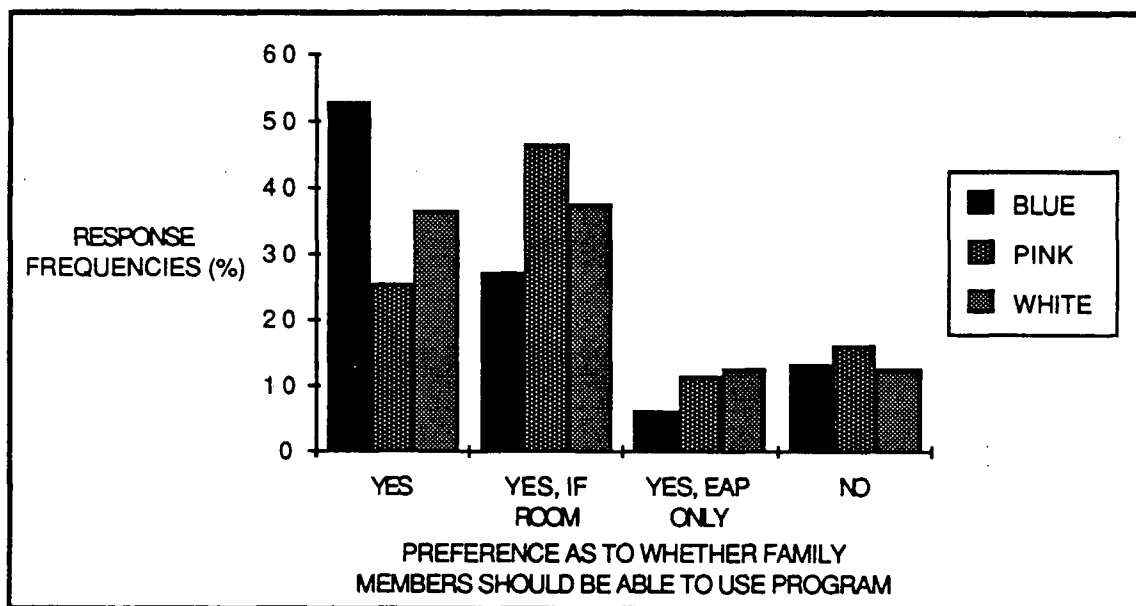
Table 17. Preference for Family Usage of EHAP

Percentage of employees:	Preference as to whether or not family members should be able to use program:
39%	Yes, in all programs
32%	Yes, if room after the employees have all signed up
12%	No
10%	Yes, in EAP only
4%	*Other
3%	Did not answer

*Of those who chose "other", some of the responses were: spouse only; depends on what type of program is set up; Yes - with the stipulation that if any costs are picked up by the City, that family members do not get this financial assistance.

There were no significant differences in the responses to this question based on age, sex, type of worker and frequency of exercise. However, when based on collar-type, the relationship was significant ($p = 0.02$) as described in Figure 10. The largest percentage of the blue collar workers preferred to have family members utilize the program (53%), as compared to white and pink collar workers (37% and 26% respectively). The highest percentage of pink collar workers (47%), felt that family members should have access only after employees had signed up. White collar workers were fairly evenly distributed between both of the above two opinions.

RESULTS



Pearson Chi Square = 14.46 with 6 d.f., $p = 0.02$

Figure 10.

**PREFERENCE AS TO WHETHER FAMILY MEMBERS
SHOULD BE ABLE TO USE PROGRAM (BASED ON
COLLAR TYPE)**

RESULTS

ix) Preference as to Retired Employees' Use of Program (Survey Question # 20).

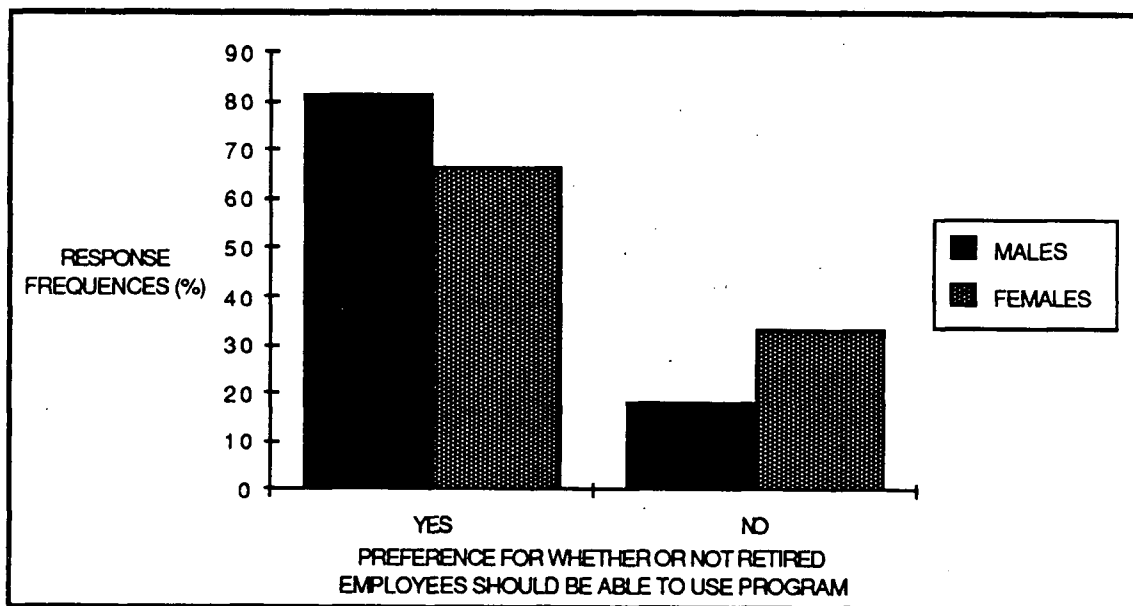
Table 18 shows the responses of the whole group as to whether or not retired employees should be able to utilize the program:

Table 18. Preference as to Retired Employees' use of Program

Percentage of employees	Preference as to whether or not retired employees should be able to use program:
75%	Yes
22%	No
3%	Did not answer

RESULTS

Figure 11 shows the significant ($p < 0.01$) difference between males and females in their responses to this question. The majority of both males and females were in favor of retired employees being able to continue to use the EHAP, yet the percentage of males in favor was higher than for females (82% vs 66%).



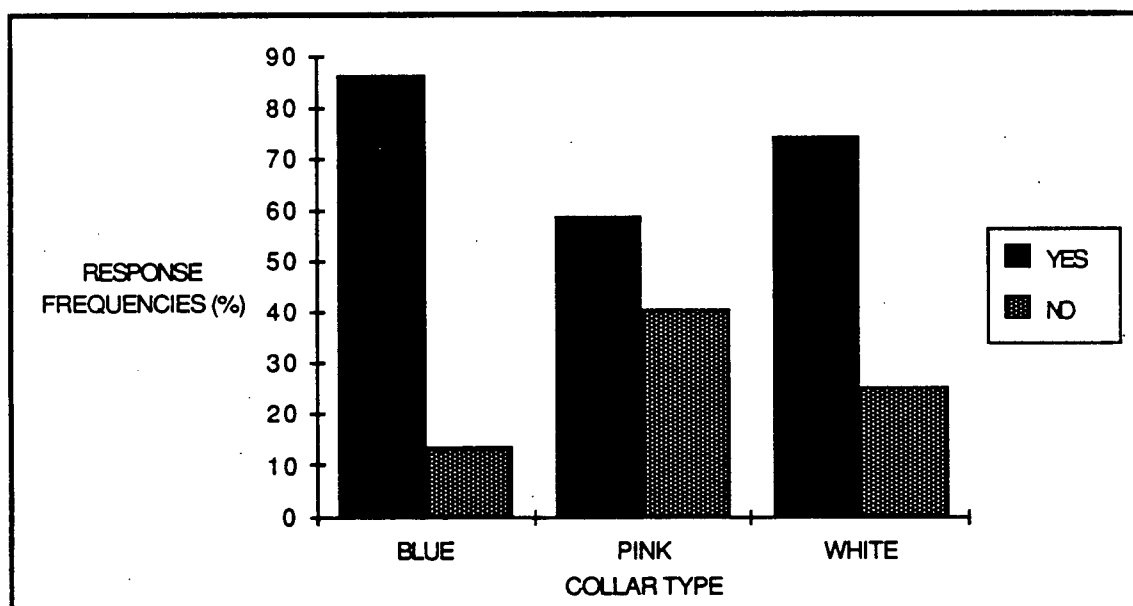
Pearson Chi Square = 9.99 with 1 d.f., $p < 0.01$

Figure 11.

**PREFERENCE AS TO WHETHER OR NOT RETIRED
EMPLOYEES SHOULD BE ABLE TO USE PROGRAM
(BASED ON SEX)**

RESULTS

Figure 12 portrays the significant ($p < 0.01$) difference between the collar types in their preference as to whether retired employees should be able to utilize an EHAP. The majority of all three groups agreed that retired employees should use the program, but the percentages in favor differed between groups. 86% of blue collar workers agreed, as compared with 75% and 59% of white and pink collar workers, respectively.



Pearson Chi Square = 15.60 with 2 d.f., $P < 0.01$

Figure 12.

**PREFERENCE AS TO WHETHER RETIRED
EMPLOYEES SHOULD BE ABLE TO USE PROGRAM
(BASED ON COLLAR TYPE)**

There was a significant ($p < 0.01$) difference in response frequencies to this question among the various worker types. The highest percentage of all worker types

RESULTS

agreed that retired workers should be allowed to use the EHAP, although the frequencies varied considerably. One hundred percent of the firefighters were in favor, as compared with 85-95% of the maintenance workers and equipment operators, 75-85% of the office workers, facility workers and enforcement/inspection workers, and 55-65% of the clerical workers and managers/directors.

Based on age and frequency of exercise, there were no significant differences in preference as to retired employees' use of an EHAP.

RESULTS

x) Preference for Volunteer Capacity (Survey Question #21).

When asked if they would volunteer to help with an EHAP, and if so, in what capacity, the response of the total sample was as depicted in Table 19.

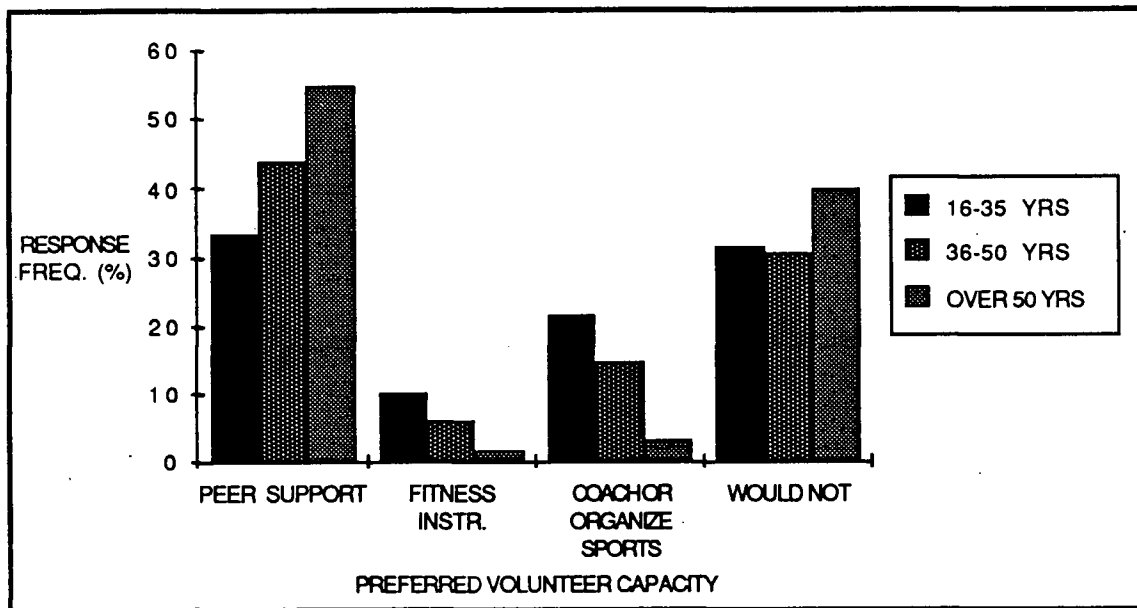
Table 19. Preference as to Volunteer Capacity

Percentage of employees:	Preference:
39%	Work with peer support program
31%	Would not volunteer
15%	Coach/Organizer of sports/recreation programs
7%	Fitness Instructor
4%	Did not answer
3%	Other
1%	Instructor of health promotion seminars

Figure 13 represents the significant ($p < 0.01$) differences among the age categories as to what they would prefer to volunteer for if an EHAP were developed. All three age groups preferred the peer support category, yet there was a tendency for interest in this program to increase with increasing age (16-35 yrs: 34%, 36-50 yrs: 44%, and over 50 yrs: 55%). As age increased, there was a declining tendency for volunteering as a coach or organizer of sports/recreation programs, with 22%, 15% and 3% of the respective age groups (youngest to oldest) choosing this category. Although volunteering

RESULTS

as a fitness instructor was only chosen by a few employees from each group (<10%), there was a tendency for interest in this category to also decrease as age increased.



Pearson Chi Square = 20.27 with 6 d.f., $p < 0.01$

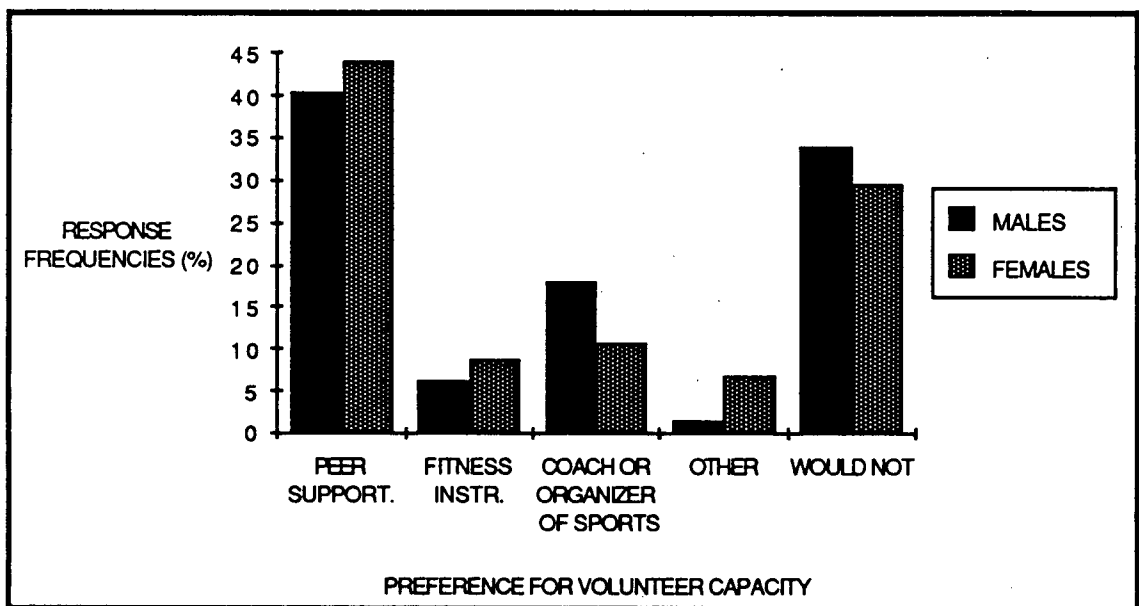
Figure 13.

PREFERRED VOLUNTEER CAPACITY BASED ON AGE

RESULTS

Figure 14 outlines the significant ($p = 0.03$) differences between males and females as to what they would prefer to volunteer for if an EHAP were developed. Although the way males and females answered this question was significant overall, within each category the percentages were really very similar. Slightly more females (44%), than males (40%), said they would volunteer to help with a peer support program, and slightly more females (9%), than males (6%), would volunteer to teach fitness classes. More males (18%) would volunteer as a coach or organizer of sports or recreation programs than females (11%). Slightly more males than females said they would not volunteer at all (34% vs 29%).

RESULTS



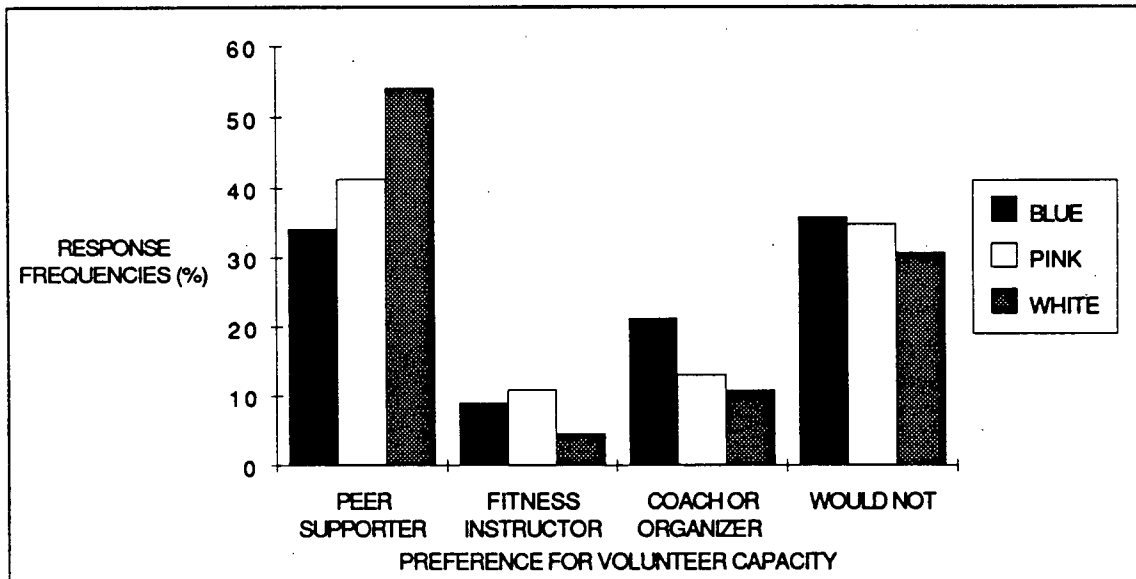
Pearson Chi Square = 10.93 with 4 d.f., $p = 0.03$

Figure 14.

**PREFERENCE FOR VOLUNTEER CAPACITY BASED
ON SEX**

RESULTS

Figure 15 shows the significantly different ($p = 0.05$) response frequencies among the three collar-type categories when asked in what capacity they would volunteer if an EHAP were developed. A higher percentage of white collar workers (51%) were interested in helping with a peer support program as compared with pinks (39%) and blues (33%). More blue collar workers (21%) were interested in coaching or organizing sports and recreation programs than pinks (12%) or whites (10%).



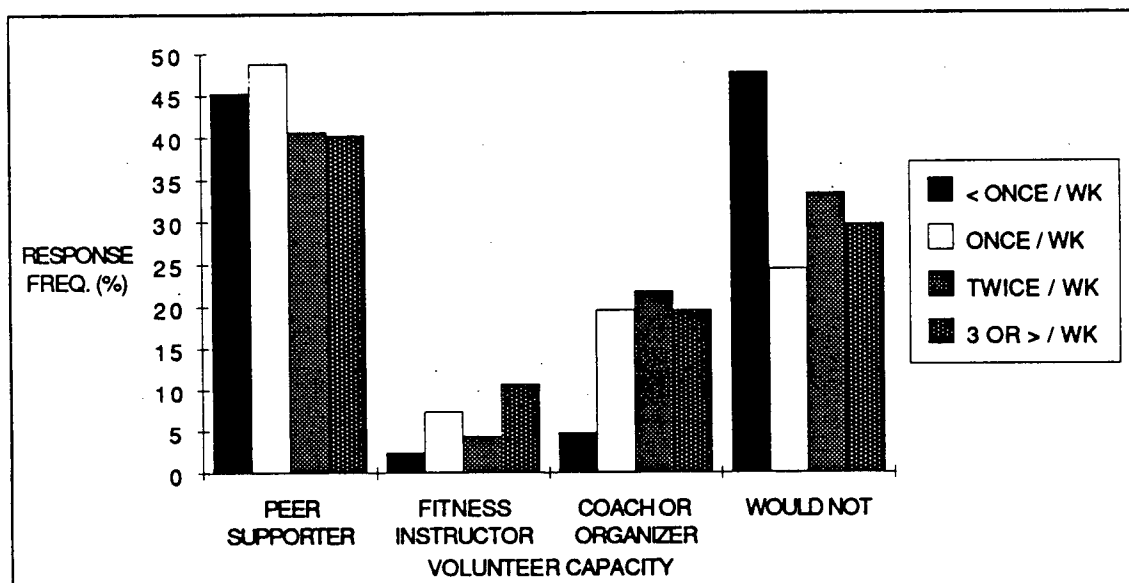
Pearson Chi Square = 12.46 with 6 d.f., $p = 0.05$

Figure 15.

**PREFERENCE FOR VOLUNTEER CAPACITY BASED
ON COLLAR TYPE**

RESULTS

Figure 16 shows the significant ($p = 0.01$) relationship in perceived volunteer capacity based on exercise habits. The highest proportion of those who would not volunteer tended to be those who exercised less than once per week. Most groups chose to volunteer with the peer support program.



Pearson Chi Square = 23.11 with 9 d.f., $p = 0.01$

Figure 16.

**PERCEIVED VOLUNTEER CAPACITY (BASED ON
PRESENT FREQUENCY OF EXERCISE)**

RESULTS

There was no significant difference among the worker types as to their preference for volunteering.

xi) Preference for Implementation of an EHAP (Survey Question # 22).

When the employees were asked if they thought an EHAP was a good idea and should be implemented, there were no significant differences seen in responses based on any of the demographic variables. The response to this question was very positive, with the frequencies of responses as shown in Table 20:

Table 20. Preference for Implementation of an EHAP

Percentage of employees	Preference as to whether or not an EHAP should be implemented:
72%	Yes
21%	Don't know
5%	No

RESULTS

2. Barriers

Six survey questions dealt with issues which may present themselves as barriers to employee use of an EHAP. Each of these questions was cross tabulated with each demographic variable using Chi square analysis, to determine if any significant differences in responses occurred between the levels of the demographic variables. Table 21 summarizes the results of the analysis, representing the significant differences with asterisks.

RESULTS

**Table 21. Results of the Chi Square Analysis:
Significant ($p \leq 0.05$) Differences in Possible
Barriers to EHAP Participation Based on
Demographics**

	DEMOGRAPHICS:				
	Age:	Sex:	Collar:	Type:	Freq:
BARRIERS:					
Concern					
Payex					
Payhp					
Comfort					*
Barrier			*		
EAPBar		**			

* $p \leq .05$

** $p \leq .01$

KEY:

- Freq - Self-reported frequency of exercise
- Concern - Biggest concern regarding an EHAP on the worksite
- Payex - Preference of payment per week for an exercise program
- Payhp - Preference of payment per month for health promotion programs and seminars
- Comfort - Comfort in exercising with fellow workers
- Barrier - Perceived barriers to using available community services
- EAPBar - Perceived barriers to using an EAP

RESULTS

Following are the frequency distributions for each barrier question listed in table 21. For those cross-tabulations where significant differences in responses occurred between different demographic groups, histograms illustrating the differences are presented. In each histogram, the results are presented as percentages.

a) Biggest Concern Regarding an EHAP on the Worksite (Survey Question #3)

When asked what their biggest concern regarding an EHAP on the worksite would be, the responses of the whole sample were as shown in Table 22:

Table 22. Biggest Concern Regarding an EHAP

Percentage of employees:	Biggest concern:
61%	Lack of time to participate
18%	Lack of confidentiality
9%	Lack of privacy
5%	Other
4%	Too much competition among my fellow workers
4%	Did not answer

As indicated in Table 21, there were no significant differences in responses to this question based on age, sex, collar and type of worker, or frequency of exercise.

RESULTS

b) Preference as to Payment for Exercise and Health Promotion Programs (Survey Question # 7)

There were no significant differences seen in response to how much the employees would be willing to pay for exercise and health promotion programs on the worksite. The response of the whole group to these questions was as shown in Tables 23 and 24:

Table 23. Preference as to Payment for Exercise Programs

Percentage of employees:	Preference for payment per week for an exercise program:
29%	\$10 or less
23%	Would not pay
20%	\$10 - 20
12%	Don't know
8%	Did not answer
7%	\$20 - 30

RESULTS

Table 24. Preference as to Payment for Health Promotion Programs and Seminars

Percentage of employees:	Preference for payment per <u>month</u> for health promotion programs and seminars:
30%	Would not pay
28%	\$10 or less
21%	Don't know
9%	\$10 - 20
8%	Did not answer
3%	\$20 - 30

c) Comfort in Exercising with Fellow Workers (Survey Question #9)

When asked if they would be comfortable in exercising with all their fellow workers, the frequency of responses was as shown in Table 25:

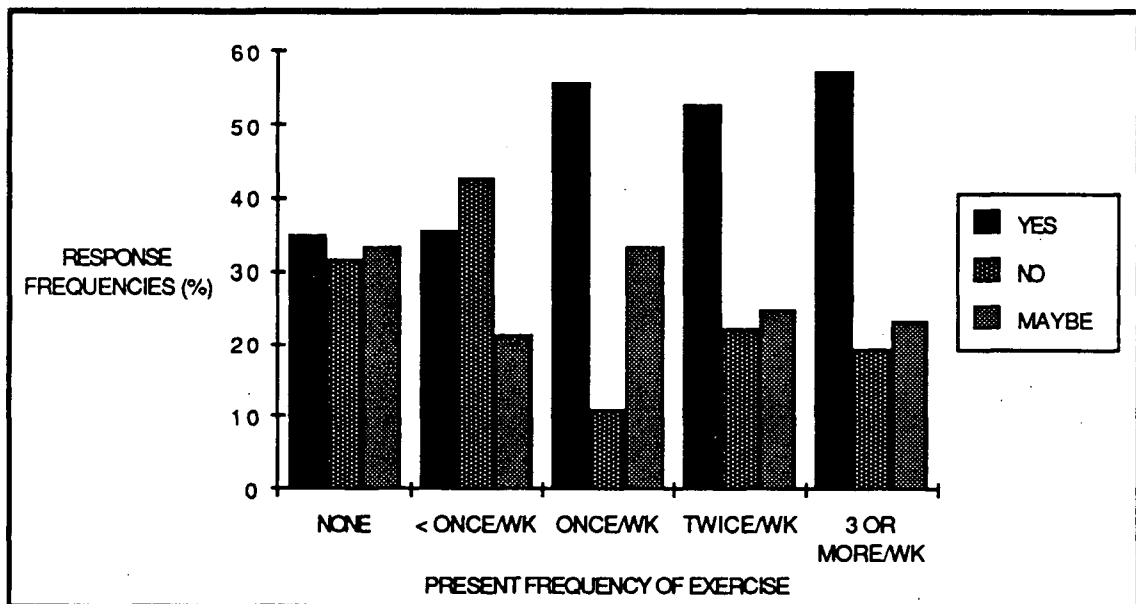
Table 25. Reported Comfort in Exercising with Fellow Workers

Percent of employees:	Reported comfort in exercising with fellow workers:
50%	Yes, I would feel comfortable
23%	No, I would not feel comfortable
25%	Maybe
2%	Did not answer

RESULTS

There were no significant differences in the response to this question based on age, sex, collar or type of worker. However, Figure 17 outlines the significant ($p = 0.01$) relationship between present frequency of exercise and comfort in exercising with fellow workers. For those who stated that they did not exercise, or exercised less than once per week, their answers were fairly evenly distributed between "yes", "no" and "maybe". However, for those who reported exercising once or more per week a higher proportion stated that they would feel comfortable in exercising with their fellow workers.

RESULTS



Pearson Chi Square = 19.67 with 8 d.f., $p = 0.01$

Figure 17.

**COMFORT IN EXERCISING WITH FELLOW
WORKERS (BASED ON FREQUENCY OF EXERCISE)**

RESULTS

d) Perceived Barriers to Using Available Community Services (Survey Question #16)

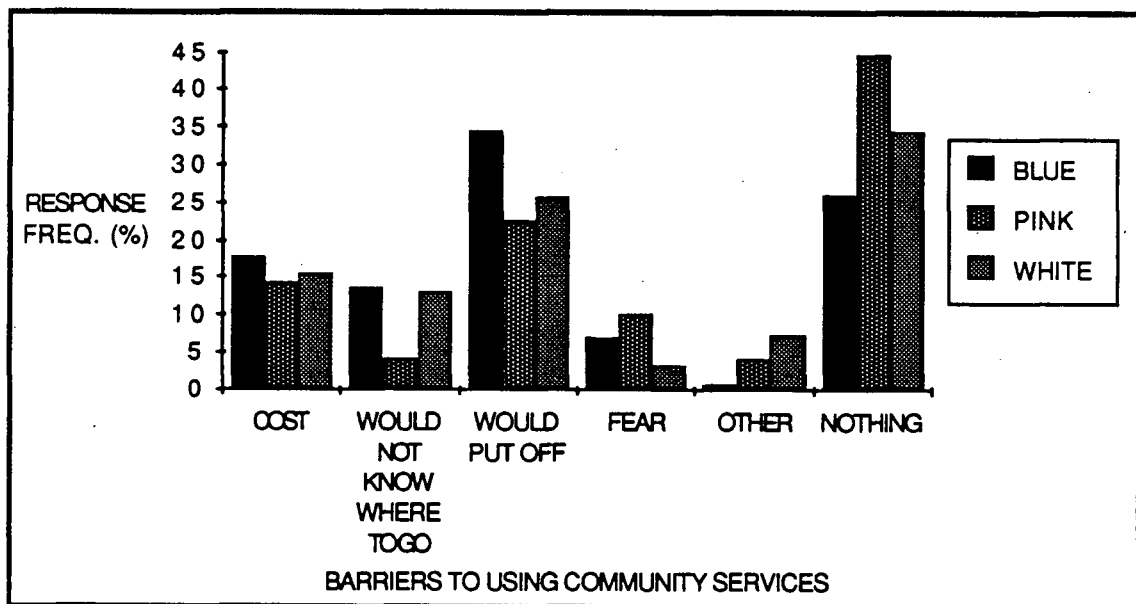
Perceived barriers to using available community services (if no EAP were available) were as outlined in Table 26.

Table 26. Perceived Barriers to Using Community Services

Percentage of employees:	Perceived barriers:
31%	Nothing would stop me; I would use them
30%	I would put off going
16%	Unable to afford it
12%	Would not know where to go
5%	Fear
4%	Other
2%	Did not answer

Figure 18 shows the significant ($p = 0.01$) relationship between collar-types and barriers to using community services. Pink collar workers appeared to see fewer barriers to using these services as compared to blue and white collar workers (45% stated that nothing would stop them from using the services, as compared with 35% for whites and 26% for blues). There was very little difference between collar types in the percentage who chose "cost" as a barrier. The biggest barrier for blue collar workers appeared to be procrastination, whereas the majority of pinks and whites stated that nothing would stop them from using these services. There were no significant differences in response to this question based on age, sex, type of worker or frequency of exercise.

RESULTS



Pearson Chi Square = 14.96 with 5 d.f., $p = 0.01$

Figure 18.

**BARRIERS TO USING COMMUNITY SERVICES
(BASED ON COLLAR TYPE)**

RESULTS

e) Perceived Barriers to Using an EAP:

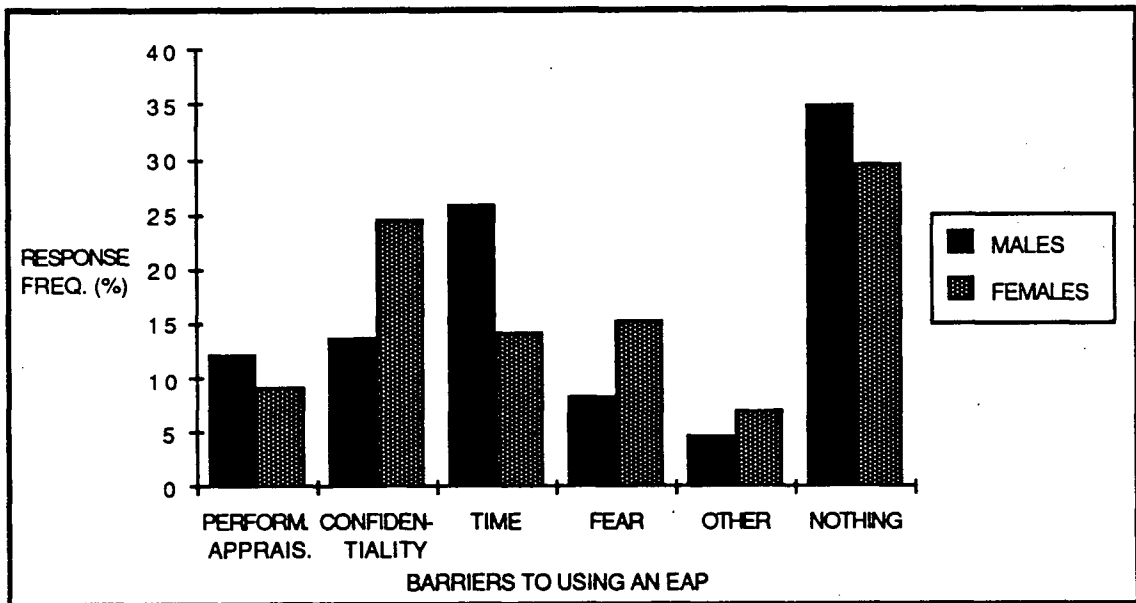
Perceived barriers to using an EAP reported by the whole sample are shown in Table 27.

Table 27. Perceived Barriers to Using an EAP

Percent of employees:	Perceived barriers to using an EAP:
32%	Nothing would stop me; I would use it
22%	Lack of time
16%	Lack of confidentiality
11%	Fear that it might affect my performance appraisal
10%	Fear/intimidation about using it
6%	Other
4%	Did not answer

There was a significant ($p = 0.01$) difference between males and females in the barriers they reported toward using an EAP, shown in figure 19. Although the majority of both sexes indicated that nothing would stop them from using an EAP, the barrier reported most often for males was lack of time to use the services (26 % vs 14% for females). The barrier most often reported by females was confidentiality (25 % vs 14% for males). There were no significant differences in responses to this question based on age, collar and type of worker, or frequency of exercise.

RESULTS



Pearson Chi Square = 14.96 with 5 d.f., $p = 0.01$

Figure 19.

BARRIERS TO USING AN EAP BASED ON SEX

RESULTS

3. Benefits

When asked in what way the employees felt they might benefit most from an EHAP on the worksite, the frequencies of responses were as shown in Table 28:

Table 28. Perceived Benefit From an EHAP

Percentage of employees:	Perceived benefit from an EHAP:
24%	Prevention of stress-related or lifestyle-related diseases/conditions
22%	Improve my ability to cope with everyday situations
19%	Improve my fitness level
17%	Educate me about healthy lifestyles
*8%	Other
5%	I would not benefit
5%	Did not answer

* Some of the other ways employees felt they may benefit included: improvements in working conditions, and increased awareness of resources available to them.

There were no significant differences seem among any of the demographic variables in the way the employees responded to this question.

RESULTS

B. DIFFERENCES IN RESPONSES BASED ON PERCEIVED HEALTH

The following results deal with the second major purpose of this research which was to determine if associations exist between perceived health status and employees' perceptions of EHAPs (particularly their perceived use of the program). A more limited selection of survey questions (the questions dealing with perceived use of and interest in EHAPs) were analyzed in relation to perceived health. The first question (rank order of employees' preferences for program content) was analyzed separately with each of: perceived general health, perceived fitness level, perceived level of stress, and self-reported eating habits, and is presented first, in tables 29 through 31. Please refer to the key at the beginning of this chapter for a brief description of the abbreviations in these tables.

1. Preferred Program Content

In this question, respondents were asked to pick seven services or activities (of the 19 listed), in which they were most interested and rank them accordingly, from highest to lowest preference. The following table (Table 29), shows the order in which the employees chose the various activities and services, based on their perceived general health. There was a tendency for weight management and smoking cessation programs to increase in popularity with decreasing perception of health. Stress management programs were ranked very low by those who perceive themselves as being in poor or fair health. Please refer to Table 2 for the order in which the employees as a whole ranked this question.

RESULTS

**Table 29. Differences in Preferences for EHAP
Components Based on Perceived General Health**

Rank Order:	Poor/Fair: (n=30)	Average: (n=83)	Good: (n=200)	Excellent: (n=84)
1	Per/Pro	Health Ed	Per/Pro	FinMgt
2	FinMgt	Per/Pro	FinMgt	Health Ed
3	Wt Control	Stress Mgt	Health Ed	Per/Pro
4	Screen	FinMgt	Stress Mgt	CPR
5	Health Ed	Screen	Screen	Screen
6	Back Care	CPR	CPR	Stress
7	EAP	EAP	Sport	Sport
8	Smok	Sport	EAP	IndivEx
9	CPR	Smok	Back Care	EAP
10	Sport	Back Care	IndivEx	Cut Rates
11	NutrAsmt	Wt Control	NutrAsmt	FitAsmt
12	FitAsmt	WtTrain	Cut Rates	NutrAsmt
13	IndivEx	Walk/Run	Smok	GroupEx
14	Cut Rates	IndivEx	FitAsmt	Back Care
15	StressMgt	FitAsmt	Wt Control	Walk/Run
16	GroupEx	Cut Rates	Walk/Run	WtTrain
17	Walk/Run	GroupEx	GroupEx	Wt Control
18	WtTrain	NutrAsmt	WtTrain	Smok
19	Other	--	Other	--

RESULTS

Table 30 outlines the order in which program components were chosen depending on perceived fitness level. There was a tendency for interest in weight control programs to decrease as perceived fitness level increased (from 2nd for those who perceive themselves as being "not very fit", to 16th for those who perceive themselves as in much better shape than others their age and sex). Health Screening was the first choice for the "not very fit" group, whereas the other groups tended to choose stress management programs or health education programs as their first choice. The "very fit" group chose smoking cessation programs as their last choice.

Table 30. Differences in Preferences for EHAP Components Based on Perceived Fitness Level

Rank Order	Not Fit (n=15)	< Average (n=32)	Average (n=159)	Better (n=131)	Very Fit (n=60)
1	Screen	Stress	Stress	Stress	HealthEd
2	Wt Mgt	HealthEd	Per/Pro	Per/Pro	Stress
3	Per/Pro	EAP	HealthEd	HealthEd	Screen
4	IndivEx	FinMgt	FinMgt	FinMgt	Per/Pro
5	HealthEd	Per/Pro	CPR	Screen	CutRate
6	FinMgt	Screen	Screen	Sport	Sport
7	Stress	CPR	BackCare	CPR	FinMgt
8	EAP	Wt Mgt	Sport	EAP	CPR
9	FitAsmt	Smok	EAP	BackCare	NutrAsmt
10	BackCare	Sport	IndivEx	FitAsmt	FitAsmt
11	Smok	GroupEx	Smok	IndivEx	BackCare
12	CutRate	NutrAsmt	Wt Mgt	Smok	EAP
13	CPR	FitAsmt	W/Run	NutrAsmt	WtTrain
14	WtTrain	WtTrain	NutrAsmt	CutRate	IndivEx
15	GroupEx	IndivEx	FitAsmt	W/Run	GroupEx
16	NutrAsmt	BackCare	CutRate	GroupEx	Wt Mgt
17	Sport	W/Run	GroupEx	WtTrain	W/Run
18	W/Run	CutRate	WtTrain	Wt Mgt	Smok
19	Other	Other	Other	Other	Other

* Respondents were asked to rate their current fitness level compared to others their age and sex. "Better" refers to "A bit better than average".

RESULTS

The differences in preferred program content based on perceived level of stress are described in Table 31. As might be expected, those individuals who perceived themselves as being under a great deal or a moderate amount of stress chose stress management programs as their highest ranked program choice. Those who perceived themselves as being under very little or no stress chose stress management programs as their 4th and 5th choices. There was a tendency for interest in "individual" exercise programs to increase with increased perception of stress. Perceived stress level did not appear to have much affect on interest in the other fitness activities however, except that for those who perceive themselves as "under no stress", all of the fitness activities were chosen at the end of the list.

**Table 31. Differences in Preferences for EHAP Components
Based on Perceived Level of Stress**

Rank Order:	Very Much (n=54)	Moderate (n=243)	Very Little (n=74)	None (n=25)
1	Stress	Stress	Per/Pro	Screen
2	Health Ed	Health Ed	Health Ed	Per/Pro
3	Per/Pro	Per/Pro	FinMgt	Health Ed
4	FinMgt	FinMgt	Screen	Stress
5	Screen	Screen	Stress	CPR
6	CPR	CPR	CPR	Back Care
7	EAP	Sport	Sport	FinMgt
8	IndivEx	EAP	Back Care	EAP
9	Back Care	IndivEx	EAP	NutrAsmt
10	Sport	Back Care	Wt Train	Wt Mgt
11	NutrAsmt	Cut Rate	FitAsmt	Sport
12	W/Run	NutrAsmt	W/Run	FitAsmt
13	Wt Mgt	Smok	Cut Rate	Smok
14	Smok	FitAsmt	Wt Mgt	Cut Rate
15	FitAsmt	Wt Mgt	GroupEx	W/Run
16	Cut Rate	W/Run	IndivEx	GroupEx
17	WtTrain	GroupEx	Smok	IndivEx
18	GroupEx	WtTrain	NutrAsmt	WtTrain
19	Other	Other	Other	--

RESULTS

Table 32 illustrates the differences in preferences for EHAP components based on self-reported eating habits. The respondents were asked to rate their current eating habits on a 5-point scale from poor to excellent. As can be seen from Table 32, eating habits did not appear to have any effect on order in which individuals chose "nutrition assessments". (ie: "Nutrition assessments" were chosen as the 17th choice by those with poor eating habits, as compared with 18th choice by those with excellent eating habits.) Interest in weight control programs decreased slightly among those with better self-reported eating habits.

Table 32. Differences in Preferences for EHAP Components Based on Self-Reported Eating Habits

Rank Order	Poor (n = 19)	Fair (n = 56)	Average (n = 134)	Good (n = 159)	Excellent (n = 27)
1	Stress	Stress	Stress	HealthEd	HealthEd
2	FinMgt	FinMgt	Per/Pro	Per/Pro	Per/Pro
3	Screen	HealthEd	HealthEd	Stress	Screen
4	HealthEd	CPR	FinMgt	Screen	CPR
5	Per/Pro	Per/Pro	Screen	FinMgt	Stress
6	EAP	EAP	CPR	CPR	Sport
7	CPR	Screen	Sport	Sport	CutRate
8	Smok	Smok	BackCare	EAP	EAP
9	WtMgt	Sport	EAP	IndivEx	IndivEx
10	BackCare	IndivEx	FitAsmt	CutRate	FinMgt
11	IndivEx	BackCare	NutrAsmt	BackCare	Smok
12	CutRate	WtMgt	WtMgt	NutrAsmt	BackCare
13	W/Run	NutrAsmt	Smok	FitAsmt	WtMgt
14	FitAsmt	CutRate	W/Run	WtTrain	FitAsmt
15	Sport	GroupEx	IndivEx	WtMgt	W/Run
16	GroupEx	WtTrain	GroupEx	W/Run	WtTrain
17	NutrAsmt	FitAsmt	WtTrain	GroupEx	GroupEx
18	WtTrain	W/Run	CutRate	Smok	NutrAsmt
19	--	--	Other	Other	Other

RESULTS

2. Anticipated Participation and Interest

For each of the other variables analyzed with perceived health status, Chi square analysis was performed to determine if each of these variables were independent of each perceived health variable. Table 33 summarizes the analysis and shows where the significant differences occurred. For each significant difference, a histogram follows depicting the various responses for each level of the perceived health variables.

RESULTS

**Table 33. Results of the Chi-Square Analysis:
Significant ($p \leq 0.05$) Differences in Employees'
Perceived Participation Based on Perceived Health
Status**

PERCEIVED HEALTH:					
	Health:	Fitness:	Energy:	Stress:	Diet:
ANTICIPATED PARTICIPATION:					
Parthp					*
Partex					
EAPuse					
EHAP					
Benefit			*		
Freqex	*	*	*		

* $p \leq .05$

** $p \leq .01$

KEY:

- Health - Perceived level of general health
- Fitness - Perceived fitness level compared to others of same age and sex
- Energy - Perceived energy level after work
- Stress - Perceived current level of stress
- Diet - Perceived current eating habits
- Parthp - Anticipated frequency of participation in Health Promotion Programs/Seminars
- Partex - Anticipated frequency of participation in exercise programs
- EAPuse - Anticipated use/non-use of an EAP
- EHAP - Preference as to whether or not an EHAP should be implemented
- Benefit - Perception of how an EHAP would be of most benefit to you
- Freqex - Self-reported frequency of exercise at the present time.
(Although this variable does not address perceived participation in an EHAP, it was of interest to determine if those who perceive themselves as being healthier already exercise more, regardless of whether there is an EHAP in existence.)

RESULTS

a) Anticipated Participation in Health Promotion and Exercise Programs

As can be seen in table 33, there were no significant differences in anticipated frequency of participation in health promotion programs and seminars based on any of the perceived health variables, with the exception of diet. There was no apparent trend in the significant ($p = 0.01$) relationship between self-reported eating habits and anticipated participation in HPPs. However, those individuals who rated their nutritional habits as excellent tended to either anticipate that they would participate in HPPs "three or more times per week" or "not at all".

For anticipated participation in exercise programs there were no significant differences in responses based on perceived health.

b) Anticipated Use of an EAP (Survey Question # 18)

There were no significant differences in response to anticipated use of and Employee Assistance Program based on perceived health status.

c) Preference to Whether an EHAP Should be Implemented (Survey Question # 22)

There were no significant differences in response to whether or not an EHAP should be implemented on the worksite based on perceived health status.

RESULTS

d) Perception of Benefit From an EHAP (Survey Question #23)

There were no significant relationships between "perception of benefit from an EHAP" and perceived health, fitness level, stress or diet. There was a significant ($p = 0.02$) difference in the responses to this question when broken down by the variable "perceived energy level after work". There was no apparent trend in this association. However, those who rated their energy level after work as "excellent" appeared to perceive a greater personal benefit in the way of increased fitness than the other groups did.

e) Exercise Habits (Survey Question #8)

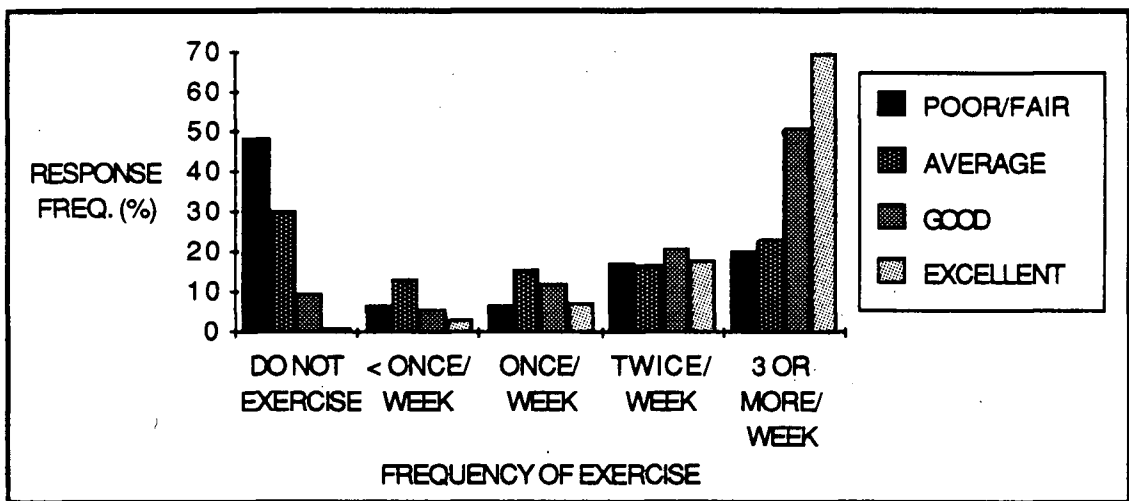
Although self-reported frequency of exercise is not an indication of participation in an employee exercise program, it was of interest to determine if those individuals who perceived themselves as being healthier actually exercised more than those who did not. Therefore, this variable (freqex), was included in the analysis.

There were significant relationships seen between frequency of exercise and perceived general health ($p = 0.01$), fitness ($p < 0.01$), and energy level ($p < 0.01$), which are outlined in figures 20-22. There were no significant differences in frequency of exercise based on the variables stress and diet.

The differences in frequency of exercise per week based on perceived general health are depicted in figure 20. As can be seen, among those who stated they exercise three or more times per week, a higher percentage perceived their health to be good or excellent than among those who exercise less. (ie: Among those who said they exercise three or more times per week 21% rated their health as poor or fair, whereas 70% rated their

RESULTS

health as excellent.) By the same token, among those who said they do not exercise, a higher percentage rated their health as poor or fair (48%), than average (31%), good (10%) or excellent (1%).



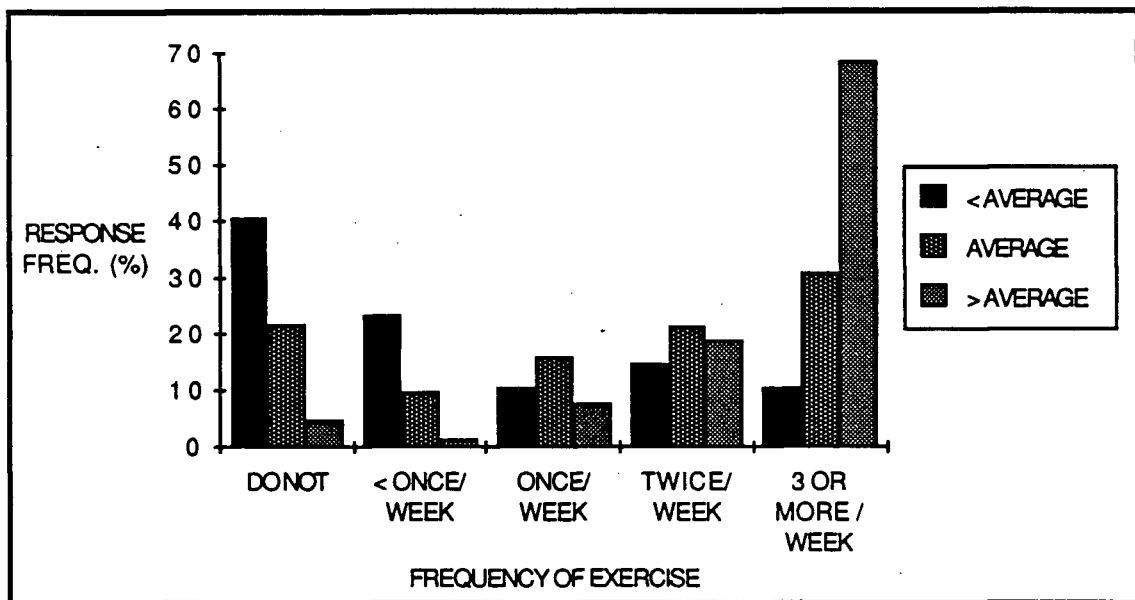
Pearson Chi Square = 82.13 with 12 d.f., $p = 0.01$

Figure 20.

**CROSS-TABULATION OF SELF-REPORTED
FREQUENCY OF EXERCISE AND PERCEIVED
HEALTH STATUS**

RESULTS

Figure 21 illustrates the significant ($p < 0.01$) relationship between frequency of exercise and perceived fitness level. As frequency of exercise per week increased, perception of fitness level tended to increase. (ie: Among those who stated they exercised three or more times per week, only 3% rated their fitness level as less than average, whereas 71% rated it as better than average.) Among those who said they did not exercise, 32% rated their fitness level as less than average and only 10% rated it as better than average.



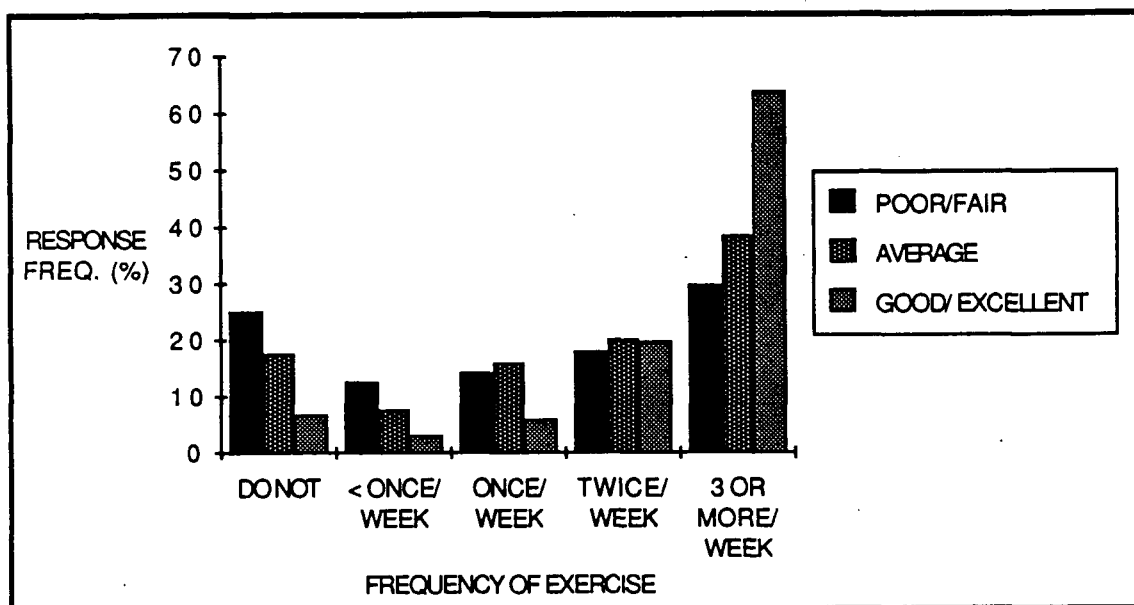
Pearson Chi Square = 117.09 with 8 d.f., $p < 0.01$

Figure 21.

**CROSS-TABULATION OF SELF-REPORTED
FREQUENCY OF EXERCISE AND PERCEIVED
FITNESS LEVEL**

RESULTS

The differences in frequency of exercise based on perceived energy level after work are represented in figure 22. There was a trend for reported "energy level" after work to increase as frequency of exercise increased.



Pearson Chi Square = 49.21 with 8 d.f., $p < 0.01$

Figure 22.

CROSS-TABULATION OF SELF-REPORTED
FREQUENCY OF EXERCISE AND ENERGY LEVEL
AFTER WORK

CHAPTER FIVE

DISCUSSION

The question of whether or not employee health programs, if properly developed, can improve the health of employees is no longer an issue. Nor is the question of whether these programs can be of benefit in increasing productivity and morale, and decreasing absenteeism, job turnover and on-the-job accidents. According to Zavela and associates (1988), we should also quit asking if participation rates in these programs are high, but instead, concentrate health promotion efforts on assuring that the programs are reaching those who need them. This means making sure that more than just the 15-20% of employees who are "conspicuously healthy" are using the program (Heirich et al, 1989; Shain et al, 1986). However, health promotion efforts should not only concentrate on the 10-15% of employees on the other end of the scale who are "very at risk", but also those 70% in the center who are developing risk factors such as hypertension, high blood cholesterol, etc., and could possibly prevent further problems through healthy lifestyle and environmental changes.

As indicated previously (Chapter Two), research describing how factors such as demographics and perceived health status affect participation is limited and often equivocal. Some of these studies have revealed significant differences among various demographic groups in factors affecting their participation in worksite health programs, however, further research is needed to determine whether these differences are also prevalent in different work populations (Spilman, 1988).

Participation in worksite health programs by some sub-populations of employees, such as the blue collar workforce, has been reported to be lower than that of other segments for many years. It is only recently that investigations have begun studying the

DISCUSSION

particular needs and interests of these sub-populations for EHAP programming (including perceived barriers to participating in these programs). In the case of blue collar workers, reports of recent programs which have taken steps to meet the specific needs and interests and to reduce barriers perceived by this group, have reported high participation rates (Blair et al, 1986; King et al, 1988). This indicates that the importance of listening to the employees to solve problems of participation cannot be underestimated.

The present investigation was based on a needs assessment which requested information on preferences, barriers and benefits from different demographic groups. The two major purposes of this research were to determine to what extent associations existed in this population between: (1) specific demographics and employees' preferences and perceptions of EHAPs, and (2) perceived health status and employees' anticipated use of, and interest in EHAPs.

The results indicated that associations existed in both of these cases. In the following sections, these results will be summarized, and the implications of these results for program planning will be discussed.

A. DEMOGRAPHICS

1. Age

The results of this study were consistent with other current research, in that interest in fitness activities tended to decrease with age. The oldest age category consistently ranked all of the fitness activities very low, when compared with other health promotion components. There was also less interest among the older group in volunteering

DISCUSSION

to help with fitness activities, as well as less interest in an individual exercise area (exercise bike, weights, etc.) on the worksite.

There could be a number of explanations for this, including the "young image" many worksite fitness programs have (McDaniel, 1988), the lack of comfort older workers may perceive to exercising with members of the opposite sex (Shephard, 1988), and the fear that fitness programs and testing may jeopardize the older employees' positions (if it is determined that they are not "fit" enough to do the job) (McDaniel, 1988).

The fear of job loss may be especially true in jobs where a high standard of fitness is expected, such as for firefighters. In the present study, a personal conversation with the Fire Chief revealed that in fact, many firefighting personnel were concerned about fitness on the worksite due to their fear that it would become mandatory, and a higher level of fitness would be expected of them.

Although fitness may be a drawing card to enhance participation in EHAPs among younger employees, it may have the opposite effect with the older age groups. Therefore, as indicated previously, to increase participation among this group, a variety of other programs should be offered. In the present study, health screening and weight control were two programs which tended to be more popular as age increased, and therefore could be offered to attract older employees.

Although fitness programs were not as popular with the older age group, there were no significant differences seen among the age groups as to their anticipated participation in exercise programs on the worksite. This could indicate that although older workers are more interested in *other* programs (besides fitness), they may still participate in fitness programs on the worksite, or it could imply that although younger workers have

DISCUSSION

more interest in fitness, many of them would rather participate in this outside of work and therefore did not indicate on the survey that they would participate in a worksite program.

The recommendations for increasing participation among older employees made by Heirich and associates (1989) would likely be applicable with this group as well. These included: (1) making one-to-one contact with each employee to review their health risks and current lifestyle behaviors, and to indicate what worksite programs may be of benefit to them, (2) providing simple, fun activities that can be done on the employee's own time (eg. a walking course set up through the parks which could be done at lunch time), and (3) providing contests for teams (to take the pressure off each individual).

These suggestions are not only applicable to older workers, but could be used to encourage participation of any sub-group of employees who are inhibited about participating. Shephard (1988) suggested that with exercise programs, if older employees feel uncomfortable about participating with the younger employees or with members of the opposite sex, a few classes should be offered which are segregated (eg. "50+", or separate classes for males and females, etc.). These classes could then be personalized to the needs of those particular groups. He also recommended personal exercise prescription with older employees, to give them direction in the fitness activities which would best meet their needs.

2. Sex

The data showed no significant differences between males and females in their anticipated use of health promotion programs/seminars and exercise programs. Contrary to the studies which have found higher male participation in fitness-oriented programs

DISCUSSION

(Blozis et al, 1989; Tetting, 1989), males did not rate most fitness activities higher on their list of preferred programs than females did. The only exception to this was a greater interest in sport and recreation programs by males which provided support for the research by Yoshida and colleagues (1988), which showed women to be less likely to join sport and recreation programs. There was a greater interest in group exercise by females, although the most popular fitness activity among females was an individual exercise program.

One of the barriers to women participating in sport programs may be that they are often held in the evening or on weekends, when family responsibilities may hinder their participation more than it would for males. Women may perceive that fitness classes take less time (than sport and recreation programs) and would more likely be held at lunch time or immediately after work, when it may be more convenient for them to attend. In fact, when asked what times they would prefer to attend exercise programs, women, more often than men, chose lunch time or after work. For health promotion programs and seminars women again, chose lunch time much more frequently than men.

Both males and females chose "individual exercise area" (eg. a space for exercise bikes, weights, etc.) as their most preferred type of exercise facility, although males chose this more often than females. The type of facility females most preferred was split fairly evenly between "group exercise area" and "individual exercise area", with the percentage of women choosing the group area being more than twice that of the men.

These differences were reflected in the aspects of the EHAP in which males and females stated they would prefer to volunteer to assist with. Slightly more females than males stated they would volunteer to instruct fitness classes, whereas slightly more males

DISCUSSION

than females stated they would volunteer to coach or organize sport or recreation programs.

Stress management programs appeared to be important to both sexes. Females chose stress management as their first program choice, whereas males chose it as third (following health education and personal/professional education seminars). Other research has also identified stress management to be a high interest and a high perceived need among employees (Long et al, 1986; Schenck et al, 1987), although one study (of blue collar workers) found interest in stress management to be very low (Blozis et al, 1988). McDaniel (1988) has pointed out a number of stressors that may affect working women to a greater extent than working men, (and which could also be related to the slightly higher interest in stress management programs among the females in this population). These include stresses due to lower pay, lesser job security, less control over their work, more sexual harassment, and more conflict between home and work responsibilities. She states that these stressors may be greater for older working women (50-65) who have often been termed the "sandwich generation", as they are still faced with the needs of their children (who may still be living at home), the needs of husbands who are often older and more sickly, as well as the needs of their aging parents (and perhaps their husband's parents).

For the reasons indicated, stress management programs may need to have an entirely different focus for women than for men. It cannot be assumed that women's greatest stressors come from the workplace.

Preventive back care programs were much more popular among males than females. This is presumably due to the number of blue collar workers (predominantly male) in this group, (as blue collar workers were much more likely to choose this program than white collar workers or the predominantly female pink collar workers). This is likely

DISCUSSION

a reflection of the manual work they do, causing a greater likelihood of back injuries. Although back care programs have been offered by this organization before, the high interest in them by males (especially blue collar males) indicates that there is a need to continue with these programs.

Women appeared to be much more interested in nutrition assessments and weight control programs than men were. This may be a reflection of the higher percentage of women in society in general who seek nutrition counselling and join weight control programs more often than men do (National Dairy Council, 1986; Porcello, 1985).

Although a majority of both males and females were in favor of retired employees being able to use the program, the percentage of males in favor (82%) was significantly higher than females (66%). While the results in no way indicate a reason for this difference, perhaps males perceive a greater utilization of such a program after retirement.

Although there were no significant differences seen between the sexes in terms of barriers to participating in EHAPs, lack of time to use the program was the biggest barrier perceived by all employees, with 61% of all of the employees choosing this. Other research has also indicated that lack of time is usually the most commonly cited reason for lack of participation (Shephard, 1988). Shephard suggests that for this reason, individual exercise areas are important, so that people can exercise as time permits. It should be noted that an individual exercise facility was the most preferred fitness facility by the employees in the present investigation. This suggestion could also be applied to other types of programs, in that if possible, they should be offered more than once, at different times throughout the day, and at various locations, so that employees can participate as their work shifts permit.

DISCUSSION

The most common response among both males and females, when asked about barriers to utilizing an Employee Assistance Program was "Nothing would stop me, I would use it.". In terms of reported barriers, again, lack of time was important, with more men citing this as a barrier than women. Women tended to cite "confidentiality" as their biggest concern.

To increase participation among both sexes, flextime, more flexible working schedules, and allowance for time away from work to participate may reduce the barrier of "lack of time". Providing programs at convenient times and locations as specified by the employees (eg. women's programs at lunch time or immediately after work) may also allow for greater participation. Lastly, to improve usage of programs, sensitivity to the particular needs of each sex is important (eg. providing more back care programs for males and blue collar workers, and more appropriate stress management programs for females).

DISCUSSION

3. Classification of Worker

The analysis of the data based on collar type revealed that when asked about their program preferences, none of the groups ranked fitness activities higher than seventh.

Pink collar workers chose walking and running programs as their most popular fitness choice, which was ranked much higher among this group than for white or blue collar workers. Sport and recreation programs were the highest rated fitness activity among the blue collar workers and individual exercise was the highest among the white collar workers, which corresponds with some of the literature addressing blue and white collar worker interests (Ontario Government, 1985; Ontario Government, 1981). However, most other program preferences (eg. Health Education, Stress Management, etc.) were remarkably similar in ranking among the different collar types.

Stress management appeared to be an important issue to the blue collar workers as well as the white and pink collar groups. Therefore, the assumption that stress is just a white collar issue does not hold true in this population. Another recent study of blue collar workers needs and interests showed stress management programs to be the most popular perceived program need with this group (Schenck et al, 1987).

As mentioned previously, one program which was ranked much higher by blue collar workers than white and pink collar workers was preventive back care. Of the blue collar workers, the two types of workers who rated these programs highest were the labourers and the firefighters (who ranked back care 2nd and 4th respectively). This is again, presumably due to the nature of their jobs. It also provides support for another study of blue collar workers interests, where back care was also very popular (Blozis et al, 1989).

DISCUSSION

The type of fitness facility preferred most often by *both* blue and white collar workers was an individual exercise area (weights, exercise bike, etc.). Pink collar workers most often chose group exercise area, followed closely by individual exercise area.

The firefighters, a predominantly blue collar group, ranked sport/recreation programs as their number one choice overall. This may be related to the fact that firefighters are often a younger group of employees than some of the other blue collar workers would be. The firefighters were a unique group from the rest of the sample in some of their other preferences too, although this must be viewed with caution due to the small sample size of this segment of the employees ($n=16$). It is possible that this sample represents only one shift of workers, and therefore could be biased in not representing the view of the other firefighters. In light of this, the other unique preferences of this group were their much lesser interest in EAPs, CPR/First Aid, and Weight Management Programs than the other employees. It is understandable that CPR/First Aid would be of lesser interest among this group, as extensive training in CPR and First Aid is already provided as part of their basic job training. As for EAPs, the firefighters have an established program where they can get counselling to deal with the trauma they must face as part of their jobs. Therefore, perhaps they perceive a lesser need for an EAP. Weight Management was listed as their last choice overall. A reason for this may be that they are a more fit group than the majority of the other employees and therefore perceive no need for a weight control program. Another reason may be that this group were recently offered a "Heart Health" program through which any individual with a weight problem would have had an opportunity to have individual counselling with a dietitian, and therefore perhaps the need for weight management programs among this group has already been met.

DISCUSSION

Although the highest percentage of each collar type preferred to have exercise and health promotion programs at lunch time, the percentages choosing each time category differed between the groups. A higher percentage of pink collar workers preferred lunch time for both types of programs (as compared with blue and white collar workers). This reflects the higher preference for lunch time by females versus males (as the pink collar workers are predominantly female). For exercise programs, the second choice of the pink collar workers was "after work", but for health promotion programs very few pink collar workers chose to participate at this time. This inconsistency is difficult to draw conclusions from.

More blue collar workers than white or pink collar workers implied that they would attend both exercise and health programs before work. This may be due to their shorter lunch breaks (making it impossible for them to attend classes at noon), and the unlikelihood of being released during work hours to attend a program. In a study of blue collar men and women, Heirich et al (1989) found that there was little interest in staying after a long shift to attend an exercise program. They therefore had to structure classes to fit into short lunch breaks and provide activities that could be done individually before work or on breaks.

Work location may be another inhibiting factor for blue collar workers in this population to attend programs. In this organization, work locations are widely spread across the City in fourteen major areas. Approximate numbers of permanent staff in each location are as follows:

DISCUSSION

<u>Location:</u>	<u># :</u>
City Hall	148
Fire Halls (3 locations)	91
Garage/Public Works (2 locations)	75
Treatment Plants (2 locations)	52
Transit	47
Recreation/Culture Centre	46
Parks (2 locations)	46
Electric, Light and Power	45
RCMP	22

Note: There are also many employees from the above locations that are itinerant, or working outside most of the work day in various other locations throughout the City.

This may be a contributing factor to the lower preference for programs at lunch time among blue collar (as opposed to white and pink collar) workers.

There were no significant differences amongst collar types in anticipated usage of health promotion programs, exercise programs and EAPs. This is encouraging in light of the research which indicates lower blue collar participation in worksite programs (Ontario Government, 1981; Roman and Blum, 1988). Of course, *anticipated* usage does not imply participation, but it does indicate that in this population there is at least interest among blue collar workers in these types of programs.

DISCUSSION

There was a significant ($p = 0.01$) difference however, amongst the collar types in perceived barriers to using community services for assistance. Pink collar workers perceived fewer barriers than the other groups, whereas blue collar workers perceived more barriers. The most common barrier cited by blue collar workers was procrastination about going for help. There was no apparent difference between collar types in choosing "cost" as a barrier to using these services. Cost was listed as the third choice for all groups and therefore was no more of a barrier to blue collar workers than the others.

Most employees preferred the EAP referral person to be offsite, although the percentages of employees in each collar type who preferred this were significantly different. More pink collar workers and white collar workers were in favor of the referral person being offsite than blue collar workers were. In regard to pink collar workers (predominantly female), this preference could reflect the greater concern women showed for confidentiality of the program. Access to an offsite EAP referral person would likely be perceived as being more confidential.

The location of the referral person may not have been as important to blue collar workers due to their varied work locations. Also, many of these workers do not have a particular work location, but are in different locations every day.

A high percentage of all worker types were in favor of family members utilizing programs. Therefore, where financially feasible, this may be an important influence to increasing participation in programs. Having the support and involvement of significant others has been shown to increase participation in health promotion programs (Chang and Boyle, 1989; Lovato and Green, 1990). Family involvement was shown to be more important among blue collar workers in the present study than among the other two groups. Also more important to blue collar workers was allowing retired employees to

DISCUSSION

participate in programs, although again, a high percentage of all employees were in favor of this.

In summarizing program *preferences* based on collar type, those reported by blue collar workers were not exceptionally different from those of the white and pink collar workers. As mentioned previously, there was also no significant difference in anticipated usage of exercise and health promotion programs, and interest in these programs was high among all groups. Therefore, conceivably if an EHAP were developed which provided programs at convenient times and locations for all workers participation rates could be high.

Although there was no significant difference between collar types as to their comfort in exercising with their fellow workers, 23% of the employees in general stated they would not be comfortable with this. Therefore, perhaps some employees from each collar type thought they would be inhibited by exercising with other workers. (eg. A secretary may be uncomfortable about exercising with her/his supervisor). Chang and Boyle (1989) suggested that providing a few separate programs for different worker types may promote more participation. These could also be provided in different locations to make them more convenient and accessible to everyone. For example, with this organization, if it was decided to provide fitness programs, and enough instructors were available, programs could be run at consecutive times at City Hall, in one of the treatment plants, and in the recreation centre. On alternate days they could be run in three other locations.

A few common themes are apparent in the literature addressing how to increase blue collar worker participation. These include involving blue collar workers in the development of the EHAPs (King et al, 1988; Metcalfe, 1987; Yenney, 1986), giving

DISCUSSION

genuine supervisory support (King et al, 1988; Yenney, 1986), and providing environmental changes conducive to health (such as safer working conditions) as well as the lifestyle programs (Blair et al, 1986; Metcalfe, 1987; Pechter, 1986).

The assumption that blue collar workers are not concerned about health promotion has been found to be false (Blair et al, 1986; Schenck et al, 1987; Weitzel, 1989). Certainly the present investigation adds support to this, as blue collar workers chose Health Education as their number one program preference and indicated a high level of anticipated participation in programs. Lack of participation by blue collar workers which has been cited in earlier research may have been due to limited access for blue collar workers to these programs, and lack of convenience for this group in terms of locations and times (Metcalfe, 1987; Pechter, 1986). These barriers were implied in the present investigation.

Programs which have been developed with these themes in mind have shown that blue collar worker participation can be equal to that of white collar workers (Blair et al, 1986; King et al, 1988).

4. Exercise Habits

It was of interest to determine whether or not, in this population, anticipated participation in EHAPs would be greater among those individuals who exercise more frequently (as determined by self-reported frequency of exercise). As indicated in Chapter Two (Literature Review), a study done by Lovato and Green (1990) showed that individuals who had previously been active were more apt to join an employee fitness program. Also, it has been hypothesized that those individuals who are involved in

DISCUSSION

exercise may tend to be more willing to participate in other positive health behaviors (Blair et al, 1985).

It appeared from the data that the possibility of an exercise program on the worksite at least makes those who exercise infrequently perceive that they would exercise more. For example, only 6% of those who reported that they currently exercise less than once per week stated that they would participate in a worksite exercise program once per week, whereas 21% of them stated they would participate in a worksite program three or more times per week. Of those who reported exercising once to three or more times per week, anticipated use of a worksite exercise program most often paralleled their current exercise habits.

These results indicated that in this population, worksite exercise programs might attract not only the employees who are "already converted" to exercising, but also those who exercise infrequently. Perhaps those who exercise infrequently perceive that a worksite program would make exercising more convenient for them and therefore their frequency of exercise would increase. Alternatively, they may be overestimating the amount that they would use a worksite program.

There were no apparent differences in popularity of most fitness activities between the different groups (those who do not exercise to those who exercise three or more times per week), with the exception of sport and recreation programs. The popularity of these programs increased with increasing self-reported exercise, from being ranked 13th among those who do not exercise, to 6th among those who exercise three or more times per week.

When asked if they would be comfortable in exercising with their fellow workers, there was a significant ($p = 0.01$) difference in the answers to this question based on frequency of exercise. People's comfort in exercising at the worksite appeared to be

DISCUSSION

related to previous exposure to exercise, as a much higher percentage of those who reported exercising once or more per week stated that they would feel comfortable in worksite exercise programs (when compared with those who reported exercising less than once per week).

The results of this study do not totally support the theory that individuals involved in exercise are more willing to participate in other health promoting behaviors, in that there was no significant difference (based on frequency of exercise) in anticipated participation in health promotion programs/seminars and EAPs. However, there was a tendency for interest in smoking cessation and weight management programs to decrease among those who reported exercising more. This could indicate that there were fewer smokers among the individuals who reported exercising more, and that weight management may have been less of a problem among this group.

When asked in what capacity they would volunteer to help with EHAP activities, there was also a significant ($p = 0.01$) difference in responses (based on frequency of exercise). The highest percentage of those who stated they would not volunteer were those who reported exercising less than once per week. If volunteering to help with EHAP activities can be considered "participating in health promoting behaviors", perhaps this adds *some* support to the theory that exercisers are more willing to participate in health promoting behaviors than infrequent exercisers.

The implications of these results to program planning indicate that an exercise program on the worksite (be it a group program, individual exercise area, etc.) may encourage infrequent exercisers to participate in fitness activities. It is encouraging to find that in this population, both infrequent and frequent exercisers are attracted to EHAPs. However, since infrequent exercisers more often cited discomfort in exercising with fellow

DISCUSSION

workers, perhaps at least one exercise program could be designed and offered to the "unfit" as a way of introducing (or reintroducing) them to exercise. Also, offering the programs which this group indicated greater interest for (such as smoking cessation and weight management) may encourage higher participation in the EHAP by this group.

B. PERCEIVED HEALTH

One of the objectives of this research was to determine for this population the extent to which perception of health affected the employees' anticipated use of, and interest in EHAPs. Results of other studies have not been consistent in demonstrating the affects of perceived health status on participation. Of the studies reviewed, one showed increased participation by individuals with *lower* perceived health status (Sloan and Gruman, 1988), two showed increased participation by individuals with *higher* perceived health status (Conrad, 1987b; Weitzel, 1989), and one demonstrated that the effects of perceived health status may be dependent on sex, with increased participation being associated with higher perceived health status for men, whereas for women increased participation was related to lower perceived health status (Morgan et al, 1984).

The above investigations were studying participants versus non-participants of *actual* programs however, whereas the present investigation studied *anticipated* participation. One of the few studies which has investigated "intent" to participate in EHAPs found more "intenders" to perceive their health as fair or poor, indicating that for that population these programs appealed to more than just the "already well" group of employees (Zavela et al, 1988).

DISCUSSION

The distinction between studying actual participation versus intent to participate is an important one to make. With the former, if participants are found to perceive themselves as being healthier, it is difficult to determine whether it was the program that improved their perceived health, or whether they had higher perceived health to begin with.

For this investigation, it was of interest to determine if perceived health was related to what *attracted* employees to EHAPs. The results showed no significant differences in anticipated use of programs based on perceived health, and therefore do not support Zavela's (1988) results.

The exceptions to these results, were a significant difference seen in anticipated participation in health promotion programs based on nutritional habits, and an increased perceived benefit from EHAPs in the way of fitness by those employees with higher reported energy level after work. However, the differences seen in these variables were not supported by any of the other results, and did not show any apparent trends. It was therefore difficult to draw any meaningful conclusions from these data.

There was evidence which suggested that those individuals who perceived their health to be at risk identified more interest in weight management and smoking cessation than those who perceived themselves to be at less risk. These results were consistent with the finding that those who reported exercising more identified less interest in smoking cessation.

Those employees with poor perceived fitness levels ranked all of the fitness activities very low, with the exception of individual exercise, which they ranked fourth on their list of "preferred activities". Although this result should be viewed with caution, as the number of employees in this group was small ($n=15$) and therefore may not have been

DISCUSSION

representative of the "unfit employee population", this could indicate that those individuals who are unfit may feel uncomfortable about exercising in groups. They may tend to participate more if an individual exercise area were made available to them.

There was a tendency for interest in sport and recreation programs to increase with increased (self-reported) fitness level. This was consistent with the finding that those who reported exercising more were also more interested in sport/recreation programs. An implication of this may be that unfit employees are inhibited about participating in sports, and again, may participate more in an individual exercise program (at least until they improve their fitness level).

As would be expected, an increased interest in stress management programs was seen among those employees with higher perceived stress levels. Those who perceived their level of stress as being moderate or very high indicated stress management as their first choice for an EHAP component. The employees who perceived themselves as being under no, or very little stress were also interested in stress management, but ranked it as their fourth and fifth program choices (consecutively).

There was a tendency for interest in individual exercise programs to increase with increased levels of perceived stress. This is consistent with the results of one study that found high job stress to be associated with increased participation in exercise programs (Davis et al, 1987). Perceived stress did not appear to have any affect on employees' preferences for other fitness activities however.

In regard to nutrition, interest in nutrition assessments and counselling did not appear to change with changing perception of personal eating habits. However, as mentioned previously, those with poorer perceived eating habits expressed a greater interest in a weight management program, as well as in health education programs.

DISCUSSION

The variable "frequency of exercise" was also examined in relation to the perceived health variables, to determine if those who perceived themselves to be healthier actually exercised more than those who perceived themselves to be less healthy. It appeared that in this population, perception of health was related to current frequency of exercise. There was a significant relationship between frequency of exercise and the perceived health variables: general health ($p = 0.01$), fitness level ($p < 0.01$), and energy level ($p < 0.01$), with an increase in self-reported frequency of exercise being seen among those individuals who rated their general health as being better, those who rated their fitness levels as being higher, and those who reported a higher energy level after work.

No significant differences were seen in anticipated use of EHAPs based on perceived health however. It would appear that in this population, EHAPs appeal to all employees, regardless of perceived health status, and therefore, efforts to market these programs to the employees would not need to focus specifically on those employees with poor perceived health status. However, program planning should take into account the different interests (and possible barriers) based on perceived health, such as providing an individual exercise area for those who may be "unfit" and uncomfortable about exercising in group exercise or sport programs.

C. GENERAL DISCUSSION

It was observed that employees in general chose exercise activities low on their list of preferred programs. Other investigations have also noted that employees seem to be less enthused about fitness programming on the worksite than they once were (Blozis et al, 1988; Walker et al, 1988). Perhaps this indicates that directors of worksite EHAPs should

DISCUSSION

no longer focus on fitness activities, and instead provide more comprehensive programs, which many are doing. Without the added expense of building a fitness facility which may not be used by a large percentage of the employees, programs would certainly be less costly to a company. The Canada Fitness Survey (1982) showed that the most popular fitness activities among Canadians were walking and cycling. Rather than building a costly fitness facility on the worksite, the provision of shower facilities could encourage employees to walk or cycle to work, or enjoy these activities on their lunch break. Periodic fitness testing and counselling could also be added as an incentive to encouraging employees to initiate and maintain healthy exercise habits.

When asked to indicate their preference for EHAP activities, the top four items chosen by the total group (Stress Management Programs, Health Education Seminars, Personal/Professional Education, and Financial Management/Budgeting) were also the first four listed on the questionnaire (although they were listed in a different order than the employees chose them). This could indicate that the order the activities were listed in on the questionnaire was related to the order in which the employees chose them. However, when the preferences were evaluated according to the various sub-groups of employees, the order these activities were chosen in did vary somewhat more.

The profile of the employees in this investigation suggest that the recommendations made by others for increasing participation in Employee Health and Assistance Programs would also be applicable to the employees in this investigation. Firstly, the various segments of employees within the organization should be involved in the planning and implementation of these programs, and the programs should be tailored to the needs of these groups (Feldman, 1989; King et al, 1988; Lovato and Green, 1990; Schenck et al, 1987). Programs should also be tailored to specific worksites (Schenck et al, 1987), and

DISCUSSION

should be accessible and convenient to all workers if possible (Feldman, 1989; Lovato and Green, 1990). Changes to the work environment that are conducive to good health are as important as providing health lifestyle programs (Feldman, 1989; Lovato and Green, 1990; Schenck et al, 1987; Yenney, 1986). As well as environmental changes involving work safety, other changes which are consistent with the programs that are being promoted (such as a no smoking policy to encourage smoking cessation and shower facilities to encourage fitness) are also important (Wilbur, 1983). After an employee has completed a program (eg. smoking cessation, weight management, etc.), periodic follow up by phone or mail to reinforce health behavior changes has been shown to encourage maintenance of these behaviors (Wilbur, 1983). The management principle of giving employees feedback on their work performance (which has been shown to increase performance) has been likened to providing incentives to employees to encourage their participation in worksite health programs. Rewards, in the form of verbal encouragement, prizes, etc., are thought to be important incentives for encouraging employees to continue participating in programs. This principle is especially important at the beginning of programs when the internal rewards of improved fitness, weight loss, smoking cessation, etc., have not yet been reached, and the employee may perceive more barriers (eg. cost, fatigue, time, failure to see immediate results) than benefits to participation (Shephard, 1988; Wilbur, 1983).

Some established programs have achieved participation rates well above the average 15-20%, such as the Canada Life Assurance Company program, which reported that 46.5% of the employees were participating after 18 months (Shephard, 1988), and the Tennaco program which reported a 75% participation rate (Baun and Bernacki, 1988). Features of these programs which the developers suggest may contribute to the high

DISCUSSION

participation include an enthusiastic management, periodic follow up with participants, and establishing a healthy, fun image of the programs through marketing (Baun and Bernacki, 1988; Shephard, 1988).

Pfeiffer (1987) has suggested that contemporary principles used in management of the organization as a whole could be effectively used in managing employee health programs. He has suggested an integrated approach to worksite health promotion including individual health, work-team health and organizational health. Most employee health programs presently consist of only the individual health component, which includes lifestyle programs, occupational and environmental safety, and treatment programs (eg. an EAP). The work-team health component involves having departments or "teams" of employees who already work together on other (work related) tasks, focus on issues which affect their health and implementations which could improve the situation. The concept is that any factor which affects how the team works together (such as an absent employee, or one who has an alcohol problem, etc.) is an issue for the whole team, and not just for that individual employee. Work-team health thrives on problem solving, decision making and peer support. The organizational health component of this approach involves interventions which contribute to the health of the whole organization. These, of course, would include the interventions from the individual and work-team components, but would also include programs and policies which affect the organization as a whole, such as benefits, retirement planning programs, providing bike racks outside all work locations to encourage personal fitness, etc. Pfeiffer sees this approach as having a broader focus than the typical worksite health programs, and by being integrated into the organization's management principles, becoming more of a coordinated effort between the different departments.

DISCUSSION

The results of this investigation indicate that the understanding of employees' perceptions of EHAPs involves many complex interactions between collar type, sex, age and other demographic variables. In this investigation, looking at the combined effects of two separate demographic variables (eg. blue collar men versus blue collar women) was not possible due to the numbers of employees in the sample, which would have caused cell sizes to be too sparse. However, since it appears that there are relationships between these demographic variables, future research designed to study these combined effects would no doubt add significantly to understanding the differences between these sub-groups of employees in regard to their preferences and perceptions of EHAPs.

CHAPTER SIX

SUMMARY AND CONCLUSIONS

A. SUMMARY

Promoting and maintaining participation in worksite health programs is essential to their effectiveness in improving employee health and reducing costs associated with ill health. As participation rates vary among different sub-groups of any employee population, it is important to concentrate health promotion efforts on those groups with high need but who participate less. Past research has indicated that participation is often lower amongst blue collar workers and older employees. Participation based on sex has been reported to be dependent on the type of program being offered. Research has shown that individuals who have exercised in the past are more likely to join employee health programs. Perceived health may also have an effect on participation, although the results of studies which have investigated this have not been consistent.

In order to provide programs to meet the needs of those employee groups who participate less (and may be in greater need of a program), it is necessary to understand their specific needs and interests, including the actual or perceived barriers which may impede them from using these programs.

Therefore, the objective of this research was to explore the preferences and perceived benefits and barriers reported by a large employee group regarding EHAPs, and to discuss the implications of these to program development. Compared with other work populations on which research regarding employee health programs has been conducted, this population was unique in being a non-profit organization, made up of a wide variation

Summary and Conclusions

of employee sub-groups (eg. blue, white and pink collar employees; various age groups, etc.), working in many locations, and belonging to three different unions.

The hypotheses being tested were as follows:

Hypothesis 1: Associations exist between specific demographic characteristics (age, sex, classification of worker and exercise habits) and employee preferences and perceptions (barriers and benefits) of EHAPs in this population.

Hypothesis 2: Associations exist between perceived health status and perceived use of, and interest in, EHAPs in this population.

The data used in this analysis were extracted from a survey conducted as part of a needs assessment for a municipal government organization to determine the needs and interests of their employees for an EHAP. Seventy two percent of the permanent employees of the City completed the Needs/Interest Questionnaire.

There were three sets of variables derived from the questionnaire, which were analyzed:

- (1) Employees' preferences and perceptions (barriers and benefits) of Health Promotion and Employee Assistance Programs,
- (2) Demographics, and
- (3) Perceived Health Status.

For two of these variables, the respondents were asked to rank their choices, and the overall ranking of preferences for each sub-group of employees is reported.

The Chi-square test of independence was performed on the remaining variables to determine:

Summary and Conclusions

- (1) whether the distribution of responses to each survey question (preference, barrier or benefit) was independent of the demographic variables (age, sex, classification of employee and exercise habits), and
- (2) whether the distribution of responses to questions dealing with anticipated use of, and interest in EHAPs were independent of the perceived health status variables (perceived general health, fitness, stress, energy and diet).

B. CONCLUSIONS

This investigation provided support for both of the hypotheses being tested. In regard to the first hypothesis, the major results are summarized below:

1. There were no significant differences seen in anticipated participation in health promotion, exercise or employee assistance programs based on any of the demographic variables, with the exception of current frequency of exercise. Those who reported exercising infrequently anticipated increasing their frequency of exercise if a worksite exercise program were available, whereas the anticipated use of a worksite exercise program by frequent exercisers paralleled their current reported frequency of exercise more closely.
2. There were significant differences seen based on age, sex, and collar type, as to preference for type of fitness facility, with an individual exercise area being most preferred by younger workers, males, and both blue and white collar workers. Older workers more often stated that they would not use worksite fitness facilities. There was also a tendency for interest in fitness activities to decrease with age.

Summary and Conclusions

3. There were significant differences in preferred volunteer capacity based on age, sex, collar type, and frequency of exercise. Interest in helping with fitness activities (exercise programs, sports, etc.) decreased with age and interest in helping with a peer support program increased with age. Slightly more males, as well as more blue collar workers, indicated they would participate in, and volunteer to coach or organize sport/recreation programs. Interest in these programs also increased as frequency of self-reported exercise increased. Interest in helping with peer support program was highest for white collar workers and lowest for blue collar workers. Males, as well as blue collar workers were much more interested in preventive back care programs than females, white collar and pink collar workers. Weight management and nutrition assessments were more popular with females.
4. There was a significant difference between males and females in preferred time for health promotion programs/seminars and exercise programs. Women, more often than men, would prefer to exercise at lunch time or after work, and a higher percentage of women than men chose "lunch time" to attend health promotion programs and seminars. There were significant differences based on collar type in preferred times for health promotion and exercise programs, with a higher percentage of pink collar workers preferring lunch time for both types of programs. More blue collar workers than white or pink collar workers would attend health promotion and exercise programs before work.
5. Males and blue collar workers (especially firefighters), were much more in favor of retired employees utilizing an EHAP than females, white and pink collar workers were.

Summary and Conclusions

6. There was a significant relationship between sex and barriers to utilizing EAPs. Although most employees reported no barriers to utilizing an EAP, there was a significant relationship between sex and these barriers, with more males reporting lack of time as a barrier, and more females reporting confidentiality as a barrier.
7. There was a significant difference based on collar type as to whether or not the EAP referral person should be located onsite or offsite. The percentage of blue collar workers choosing both of these categories were fairly equal, whereas more pink and white collar workers were in favor of the referral person being offsite.
8. There was a significant difference based on collar type as to family involvement in EHAPs, with blue collar workers being much more in favor of having family members take part in these programs.
9. There was a significant difference based on collar type as to perceived barriers to using community services for assistance. Pink collar workers perceived the fewest barriers of the three groups, whereas blue collar workers perceived the most barriers.
10. There was a significant difference based on exercise habits in regard to comfort in exercising with fellow workers. Those who reported exercising more frequently were more apt to state they would feel comfortable in exercising with fellow workers.

Summary and Conclusions

With regard to the second hypothesis, the major results which were revealed are summarized below:

1. There were no significant differences in anticipated use of health promotion, exercise and employee assistance programs based on perceived health status.
2. There were significant relationships found between self-reported frequency of exercise and the perceived health variables: general health, fitness level, and energy level. Those with a higher perception of health according to these variables reported a greater frequency of exercise.

C. LIMITATIONS

While this study only assessed perceived needs and interest, and anticipated participation in EHAPs, there is evidence that these link to actual participation. It is recognized that generalization of these results to other municipal government organizations is limited, due to the variations between establishments, and the focus of this investigation on only one organization. Therefore, these recommendations pertain specifically to promoting participation in worksite health programs at this organization. However, they may also be useful to organizations of similar size and demographic profile.

Summary and Conclusions

D. RECOMMENDATIONS

Within the limitations of this investigations, the following recommendations for promoting higher participation in worksite health programs appear justified:

1. General:

- Building an exercise facility would not be a logical first step for this organization in their implementation of an EHAP as in general, the employees' preferences were higher for other program components than for the fitness-related activities. However, if *personal* fitness is to be promoted, providing shower facilities at various work locations may encourage more employees to walk or cycle to work and on their lunch breaks.
- If exercise programs are offered, segregated classes (according to fitness level, age, etc.) may be of benefit in increasing participation of employees who are uncomfortable about exercising with other workers (due to poor condition, etc.)
- Stress management programs were of highest interest to the total employee group, and therefore would be recommended. However, these programs should be focused on the particular needs of the groups to whom they are offered. As indicated, females may have very different stress management requirements than males.
- An EAP should be provided, as there was a high degree of support for this type of program by the employees in general. An EAP may be of greatest benefit in steering blue collar workers toward appropriate sources of help in the community, as they perceived the greatest barriers to using community

Summary and Conclusions

services. To promote more female utilization of this type of program, precautions should be taken to assure confidentiality (eg. hiring a referral person who respects confidentiality). also, the referral person's office should be a site separate from any of the employee's work locations, as most employees were in favor of this. An alternative to this would be to have the EAP referral agent located in the EHAP headquarters and therefore other employees would not necessarily know if an employee was coming to see the EAP agent or merely dropping by to pick up information on another program, etc. To increase male usage of an EAP, allowing time away from work to visit the EAP office would be important, as males stated "lack of time to use the program" as their highest perceived barrier.

2. To Promote Participation Among Older Employees:

- If fitness facilities are to be provided, an individual exercise area (eg. weights, exercise bikes, or simply a walking course through the parks) which could be utilized on their own time and at their own pace would likely increase the participation of older workers, as this was their highest preference.
- Offer health screening and weight control programs.

3. To Promote Participation by Males:

- Provide an individual exercise area which could be utilized on their own time.
- Provide sport and recreation programs.
- Provide preventive back programs.

Summary and Conclusions

4. To Promote Participation by Females:
 - If group or organized fitness programs are to be offered, they should be held at lunch time or immediately after work. The majority of women preferred these times, as well as a fair number of the other employees.
 - Provide weight management programs and nutrition assessments.
5. To Promote Participation by Blue Collar Workers:
 - Again, an individual exercise area was most preferred by this group. If weights and other exercise equipment are provided, they should be in various, convenient locations in order to be utilized by these workers. A weight room in City Hall would not likely be highly utilized by firefighters, treatment plant labourers, etc. Therefore, until funds are available to provide these facilities in the various locations, they should not be provided. If a facility were built in City Hall, the EHAP in general may get a "white collar image" which may hinder the blue collar worker participation in other programs.
 - Provide preventive back care programs.
 - Allow family members to participate whenever possible.
6. To Promote Participation by Infrequent Exercisers:
 - The survey indicated that provision of some type of exercise program at the worksite may increase participation by infrequent exercisers. This could be provided inexpensively by organizing walking or running clubs at lunch breaks, or again, providing some equipment which could be utilized by the employees at their own pace and on their own time.

Summary and Conclusions

7. Recommendations for Future Research:

- Dependent on the application of these recommendations to the development and implementation of a worksite health program in this organization, future research could evaluate the extent to which stated needs and interests predict participation. This study could test whether or not the structuring of programs according to identified needs will result in participation beyond the norm of 15-20%.
- This employee group would provide a suitable population for further testing of the Davis model of participation in worksite health programs (1984), or the expanded Davis model, which included organizational factors (Sloan and Gruman, 1988).
- To expand on the present investigation, a further study could look at the interactions between the various demographic and perceived health variables as to their effects on employees' perceptions of EHAPs. This would require a larger employee group, to assure that when one variable (eg. blue collar workers) is further broken down (eg. to male blue collar workers versus females blue collar workers), the frequencies in each cell remain large enough to perform statistical analysis on.
- Further research investigating the barriers perceived by blue collar workers toward participating in EHAPs would be recommended. Recent studies have indicated that blue collar workers are interested in health promotion, and have shown that participation by blue collar workers can match that of their white collar counterparts if these programs are developed with the blue collar employees' needs in mind. However, since most programs still

Summary and Conclusions

report lower blue collar worker participation, it is important to better understand the barriers that are impeding their participation in these programs.

REFERENCES

- Allison, K. & Coburn, D. (1985). Explaining low levels of exercise amongst blue collar workers. CAHPER Journal, 51(7), 34-37.
- Barker, F.H. (1987). In pursuit of a healthier workforce. The Journal of Business Strategy, 8(Fall), 17-21.
- Baun, W.B. & Bernacki, E.J., (1988). Who are the corporate exercisers and what motivates them? In R.K. Dishman (Ed.), Exercise adherence. Its impact on public health. Champaign, Illinois: Human Kinetics Books.
- Blair, S.N., Piserchia, P.V., Wilbur, C.S. & Crowder, J.H. (1986). A public health intervention model for work-site health promotion. Impact on exercise and fitness in a health promotion plan after 24 months. JAMA, 255(7), 921-926.
- Blair, S.N., Jacobs, D.R. & Powell, K.E. (1985). Relationships between exercise and physical activity and other health behaviors. Public Health Reports, 100(2), 172-180.
- Blozis, K.L., Chen, M.S. & Cooper, M.C. (1989). What blue collar workers want in health promotion programs. Health Values, 12(2), 24-28.
- Canada Fitness Survey. (1982). Canada's fitness - Preliminary findings of the 1981 survey. Ottawa, ONT: Fitness and Amateur Sport.
- Canada Health Survey. (1981). The health of Canadians: A report of the Canada health survey. Ottawa, ONT: Health and Welfare Canada.
- Canadian Chamber of Commerce and Fitness Canada. (1987). Fitness and health promotion by Canadian business. Ottawa, ONT: Government of Canada.
- Chang, O.H. & Boyle, C. (1989). Fitness programs: Hefty expense or wise investment? Management Accounting, January, 45-50.
- Chen, M.S. (1988). Wellness in the workplace: Beyond the point of no return. Health Values, 12(1), 16-22.
- Conrad, P. (1987a). Wellness in the workplace. Potentials and pitfalls of worksite health promotion. Milbank Quarterly, 65(2), 255-275.
- Conrad, P. (1987b). Who comes to worksite wellness programs? A preliminary review. J.Occup.Med., 29(4), 317-320.
- Conrad, P. (1988a). Health and fitness at work: A participant's perspective. Soc.Sci.Med., 26(5), 545-550.

REFERENCES

- Conrad, P. (1988b). Worksite health promotion. The social context. Soc.Sci.Med., 26(5), 485-489.
- Cooper, G. & Smith, M. (1985). Job stress and blue collar work. Toronto: John Wiley and Sons.
- Davis, K.E., Jackson, K.L., Kronenfeld, J.J. & Blair, S.N. (1984). Intent to participate in worksite health promotion activities: A model of risk factors and psychosocial variables. Health Ed.Q. 11(4), 361-377.
- Davis, K.E., Jackson, K.L., Kronenfeld, J.J. & Blair, S.N. (1987). Determinants of participation in worksite health promotion activities. Health Educ.Q., 14(2), 195-205.
- Dishman, R.K. (Ed.). (1988). Exercise adherence. Its impact on public health. Champaign, Illinois: Human Kinetics Books.
- Dishman, R.K., Sallis, J.F. & Orenstein, D.R. (1985). The determinants of physical activity and exercise. Public Health Reports, 100, 158-171.
- Feldman, R. (1988). Worksite health promotion, labour unions and social support. Health Values, 12(1), 30-35.
- Freedman, S.M. & Bisesi, M. (1988). Women and workplace stress. Health Values, 12(1), 30-35.
- Godin, G., Beamish, R., Wipperfurth, K., Shephard, R.J. & Colantonio, A. (1988). Who intends to participate in health promotion programs after retirement? Can. J. Pub. Health, 79(4), 260-263.
- Harris, M.M. & Fennell, M.L. (1988). Perceptions of an employee assistance program and an employee's willingness to participate. J.of Apl.Beh.Science, 24(4), 423-438.
- Hawthorne, D. (1990). Health beliefs and health behaviors. Unpublished manuscript, University of British Columbia, Department of Health Care and Epidemiology, Vancouver, B.C.
- Health and Welfare Canada. (1988). Canada's health promotion survey: Technical report. I. Rootman, R. Warren, T. Stephens, & L. Peters. (Eds.), Ottawa, ONT: Minister of Supply and Services Canada.
- Heirich, M.A., Konopka, B., Erfurt, J.C. & Foote, A. (1989). Encouraging physical fitness among older employees. Fitness in Business, 3(5), 175-180.
- Hellan, R. (1986). An EAP update: A perspective for the 80's. Personnel Journal, June, 51-54.

REFERENCES

- Hill, R., Glassford, G., Burgess, A. & Rudnicki, J. (1988). Employee fitness and lifestyle programs. Part One: Introduction, rationale, benefits. CAHPER, Jan/Feb, 10-14.
- Hyman, R. & Price, R. (Eds.). (1983). The new working class: White-collar workers and their organizations. London: The MacMillan Press Ltd.
- King, A.C., Carl, F., Birkel, L. & Hasket, W.L. (1988). Increasing exercise among blue collar employees: The tailoring of worksite programs to meet specific needs. Preventive Medicine, 17(3), 357-365.
- Klarreich, S. (1989, October). Employee's EAP-out a living. Small Business Magazine, p8.
- Kronenfeld, J.J., Jackson, K.L., Davis, K.E. & Blair, S.N. (1988). Changing health practices: The experience from a worksite health promotion project. Soc.Sci.Med., 26(5), 515-523.
- Lalonde, M. (1974). A new perspective on the health of Canadians. Ottawa, ONT: Health and Welfare Canada.
- Lewis, C.D. & Lewis, M.A. (1979). The potential impact of sexual equality on health. New Engl.J. of Med., 297(16), 863-869.
- Long, B.C., Schutz, R.W., Kendall, P.R. & Hunt, C.G. (1986). Employee health service for teaching and nonteaching staff: A needs assessment. Evaluation and Program Planning, 9, 355-366.
- Lovato, C.Y. & Green, L.W. (1990). Maintaining employee participation in workplace health promotion programs. H.Educ.Q., 17(1), 73-88.
- McDaniel, S.A. (1988). Challenges to health promotion among older working women. Can.J.Pub.Health, 79(1), S29-S32.
- Metcalf, L. (1987). The plant worker: Singing the health and fitness blues. Fitness in Business, 1(June), 230,233-234.
- Minter, J. (1986). Successful EAPs avoid design pitfalls. EAP Digest, Nov/Dec(21), 77-79.
- Morgan, P.P., Shephard, R., Finucane, L., Schimmelfing, L. & Jazmaji, V. (1984). Health beliefs and exercise habits in an employee fitness programme. Can.J.Appl.Spt.Sci., 9(2), 87-93.
- National Dairy Council. (1986). Nutrition and women's health concerns. Dairy Council Digest, 57(1).
- Ontario Government. (1981). Blue collar workers and physical activity. Toronto, ONT: Fitness Ontario, Sports and Fitness Branch, Ministry of Culture and Recreation, 77 Bloor St. West, 8th Floor.

REFERENCES

- Ontario Government. (1985). Work site labour fitness. A guide for employee fitness programs. Ontario: ARA Consultants.
- Orlandi, M.A. (1986). The diffusion and adoption of worksite health promotion innovations: An analysis of the barriers. Preventive Medicine, 15(5), 522-536.
- Patton, R.W., Corry, J.M., Gettman, L.R. & Graf, J.S. (1986). Implementing health/fitness programs. Champaign, IL: Human Kinetics Publishers Inc.
- Pechter, K. (1986). Corporate fitness and blue collar fears. Across the Board, Oct, 15-21.
- Pender, N. (1987). Health promotion in nursing practice. (2nd Ed.). Norwalk, CT: Appleton and Lange.
- Pfeiffer, G.J. (1987). Corporate health can improve if firms take an organizational approach. Occ.H&S, Oct, 96-97,99.
- Porcello, L.A. (1985). Characteristics of professional weight control programs. In J. Hirsch & T.B. Van Haltie (Eds.), Recent advances in obesity research: IV. London: Jon Libbey and Co. Ltd.
- Roman, P.M. & Blum, T.C. (1988). Formal intervention in employee health: Comparisons of the nature and structure of employee assistance programs and health promotion programs. Soc.Sci.Med., 26(5), 503-514.
- Schenck, A.P., Thomas, R.P., Hochbaum, G.M. & Beliczky, L.S. (1987). A labor and industry focus on education using baseline survey data in program design. Health Educ. Research, 2(1), 33-44.
- Shain, M., et al, (1986). Healthier workers; Health promotion and employee assistance programs. Toronto: D.C. Health and Co.
- Shephard, R.J. (1988). Exercise adherence in corporate settings: Personal traits and program barriers. In R.K. Dishman (Ed.), Exercise adherence. Its impact on public health (pp305-319). Champaign, Illinois: Human Kinetics Books.
- Simon Fraser University Computing Services. (1988). Guide to design and analysis of questionnaires. Burnaby, B.C.
- Sloan, R.P. & Gruman, J.C. (1988). Participation in workplace health promotion programs: The contribution of health and organizational factors. Health Ed.Q., 15(3), 269-288.
- Smith, B.R. (1990). Workplace stretching programs reduce costly accidents, injuries. Occ. Health & Safety, March, 24-25.
- Spilman, M.A. (1988). Gender differences in worksite health promotion activities. Soc.Sci.Med., 26(5), 525-535.

REFERENCES

- Surgeon General. (1979). Healthy people. The Surgeon General's report on health promotion and disease prevention. (DHEW Publication No. (PHS) 79-55071). Washington, D.C.: U.S. Government Printing Office.
- Tetting, D.W. (1989). Perceived benefits among regular exercisers at a health and fitness center. Fitness in Business, 3(5), 183-189.
- Walker, S.N., Sechrist, K.R. & Pender, N.J. (1987). The health-promoting lifestyle profile: Development and psychometric characteristics. Nurs.Res., 36(2), 76-81..
- Walker, S.N., Volken, K., Sechrist, K.R. & Pender, N.J. (1988). Health-promoting lifestyles of older adults: Comparisons with young and middle-aged adults, correlates and patterns. Adv.Nurs.Sci., 11(1), 76-90.
- Walsh, D.C. (1982). Employee assistance programs. Milbank Meml. Fund Q./Health Soc., 60(3), 492-517.
- Warner, K.E. (1987). Selling health promotion to corporate America: Uses and abuses of the economic argument. Health Educ.Q., 14(1), 39-55.
- Weitzel, M.H. (1989). A test of the health promotion model with blue collar workers. Nursing Research, 38(2), 99-104.
- Wilbur, C.S. (1983). The Johnson & Johnson program. Preventive Medicine, 12, 672-681.
- World Health Organization. (1984). Health promotion: a discussion document on the concept and principles. Copenhagen: W.H.O. Regional Office for Europe.
- Yenney, S. (1986). Safeway Bakery. Success story of one division. Corporate Commentary, 2(2), 37-41.
- Yoshida, K.K., Allison, K.R. & Osborn, R.W. (1988). Social factors influencing perceived barriers to physical exercise among women. Can.J.Pub.Health, 79(2), 104-108.
- Zavela, K.J., Davis, L.G., Cottrell, R.R. & Smith, W.E. (1988). Do only the healthy intend to participate in worksite health promotion? Health Educ.Q., 15(3), 259-267.

APPENDIX I
NEEDS/INTEREST SURVEY

NB: Please return to Personnel
c/o Deb Jones, on or before
May 31, 1989

EMPLOYEE WELLNESS PROGRAM
NEEDS AND INTEREST SURVEY

Wellness programs are designed to assist employees in prevention and/or treatment of health-related or personal problems, and to promote healthy lifestyles. They are usually run by employees for employees, and can include anything from health promotion/preventive programs (such as health seminars or fitness programs) to treatment programs (such as an Employee Assistance Program or EAP). An EAP is a counselling and referral service through which employees can seek confidential, professional help with problems such as financial difficulties, drug dependence, etc.

PART I NEEDS/INTERESTS

NB: For each of the following questions, please place the number or letter of your answer in the box provided.

1. Please rank the following in terms of ways you most enjoy learning: (By placing the numbers 1-5 in the boxes provided, with 1 being the highest)

Seminars/Lectures ☐

Books/Pamphlets/Posters ☐

Films/Videos ☐

Activities (Hands-on Experiences) ☐

Other (Please Specify: _____

_____ ☐

2. An Employee Wellness Program may include some of the following services/activities. Please pick the seven activities/services which would most interest you, and rank them from 1-7 (by placing the letter corresponding to the service/activity you are most interested in, in box #1, etc.), in the boxes provided.

- a. Health Education Seminars/Programs (eg. Heart Health, Cancer Prevention, Aging, etc)
- b. Seminars/Programs on Financial Management/Budgeting
- c. Stress Management Programs
- d. Personal/Professional Education Seminars (eg. Coping with Change, Retirement Planning, etc)
- e. Weight Control Programs
- f. Stop Smoking Programs
- g. Preventive Back Care Programs
- h. Health Screening Assessments (ie. Blood pressure screening, blood cholesterol screening, etc)
- i. CPR/First Aid
- j. Nutrition Assessments/Counselling
- k. Fitness Assessments/Counselling
- l. Individual Exercise Programs (ie. having a personalized exercise program prescribed for you)
- m. Group Exercise Programs (ie. aerobics)
- n. Walking/running programs
- o. Sport/Recreation Programs
- p. Weight Training
- q. Cut-rates at a local fitness facility
- r. Confidential counselling/referral re: personal problems (ie. marital, family, etc), financial problems, alcohol/drug dependence, mental health problems, etc.
- s. Other (Please specify: _____

_____)

The seven services/activities listed above that I am most interested in are:

- 1. ☐
- 2. ☐
- 3. ☐
- 4. ☐
- 5. ☐
- 6. ☐
- 7. ☐

3. Which of the following would concern you most about a Wellness Program in the Workplace?

- a. Lack of time to participate
- b. Lack of confidentiality
- c. Lack of privacy
- d. Too much competition among fellow employees
- e. Other (Please explain: _____)

☐

4. Describe the percentage of your work day spent in the following locations:

Percentage of Day

Office

Car/Vehicle

Parks

Garage

Recreation Facility
(ie. Arena Swimming Pool)

Fire Station

Treatment Plants

Outside Labouring

Other (Please specify)

5. If an Employee Wellness Program were made available to City employees (ie. before or after work, during lunch breaks, etc), how often could you see yourself participating

- in health promotion programs/seminars? (see examples of programs and seminars in question 2)

- a. Less than once/month
- b. Once/month
- c. Twice/month
- d. Three or more times/month
- e. Not at all.

☐

- in an exercise program?

- a. Once/week
- b. Twice/week
- c. Three or more times/week

☐

Comments: _____

6. Of the following, when would you prefer to participate in:
- programs/seminars? ☐
 - exercise programs? ☐
 - a. Before work
 - b. Lunch break
 - c. After work
 - d. Evenings/weekends
 - e. Not at all
 - f. Other (Please specify: _____)
7. If you were asked to voluntarily pay for the components of the Employee Wellness Program that you participated in, how much (from the choices below) would you be willing to pay per month for
- exercise programs/activities? ☐
 - health promotion programs/seminars? ☐
 - a. \$10 or less
 - b. \$10 - \$20
 - c. \$20 - \$30
 - d. I would not be willing to pay
 - e. Don't know
8. How frequently are you involved in regular physical activity at the present time?
- a. I do not exercise to speak of
 - b. Less than once/week
 - c. Once/week ☐
 - d. Twice/week
 - e. Three or more times/week
9. Would you feel comfortable participating in an exercise program with all your fellow workers?
- a. Yes
 - b. No ☐
 - c. Maybe
10. If onsite or nearby fitness facilities were available for your use, what do you think you would use the most?
- a. Showers/change area
 - b. Group exercise area
 - c. Individual exercise area (ie. weight room, exercise bike) ☐
 - d. Jogging or running area
 - e. Other (Please specify) _____
 - f. Would not use

11. Had you ever heard of an Employee Assistance Program (EAP) before reading this questionnaire? (Please refer to paragraph 1 on page 1 for an explanation of EAP's).
- a. Yes ☐
- b. No ☐
12. EAP's can be classified into three categories. Which of the following would you consider to be most effective for this organization?
- a. Assessment/Referral Model - employee contacts EAP contact person, who assesses employee's problem and refers him to appropriate professional for help (EAP person does no counselling)
- b. Short-term Counselling Model - EAP contact person assesses employee's problem and provides a limited number of hours of counselling. If problem is not solved, employee is referred on to another professional ☐
- c. Health Promotion Model - EAP (either of above models) is offered to employees along with preventive wellness programs (ie. money management, stress management, and other programs such as those listed in question 1)
13. What type of problems do you think employees would use this type of service for?
- a. Financial Concerns ☐
- b. Legal Concerns
- c. Mental Health Problems (ie. depression, stress)
- d. Personal Problems (ie. marital, family)
- e. Alcohol/Drug Dependence
- f. Other (Please specify) _____
- g. All of the above
14. What percentage of employees do you think would benefit from these services?
- a. 1 - 5%
- b. 6 - 10%
- c. 11 - 15% ☐
- d. 16 - 20%
- e. over 20%
- f. none
15. The Employee Assistance Program contact person may be located within the organization or at some outside location. Would you be more willing to contact this person if he/she were:
- a. Onsite? ☐
- b. Offsite?

16. If you had personal problems and no EAP was available, what would stop you from getting help from other available sources in the City? (ie. psychologist, nutritionist, financial counsellor, etc)
- a. Unable to afford it
 - b. Would not know where to get help ☐
 - c. Would put it off
 - d. Would feel scared about going
 - e. Other (Please specify: _____)
 - f. Nothing would stop me; I would use these sources
17. What would stop you from using the EAP?
- a. Fear that it might affect my performance appraisal
 - b. Fear that my fellow workers might find out that I went ☐
 - c. Lack of time
 - d. I would feel scared/intimidated about going
 - e. Other (Please specify: _____)
 - f. Nothing would stop me; I would use the EAP
18. If you ever needed help, could you see yourself using an EAP, provided you were assured confidentiality?
- a. Yes ☐
 - b. No
 - c. Don't know
19. Do you feel that family members should be able to participate in an Employee Wellness Program?
- a. Yes, in all programs
 - b. Yes, in all programs if there is still room after the employees have signed up ☐
 - c. Yes, but only in the EAP
 - d. No
 - e. Other (Please specify: _____)
20. Should retired employees be able to use the program?
- a. Yes ☐
 - b. No
21. If you were to act as a volunteer for an Employee Wellness Program, in what capacity would this be?
- a. Peer Supporter (employee specially trained in communication skills who supports fellow workers by listening and perhaps referring them to the EAP) ☐
 - b. Fitness instructor
 - c. Coach/Organizer of sports/recreation programs
 - d. Instructor of health promotion seminars (If so, what type?)
- _____
- e. Other (Please specify: _____)
 - f. I would not volunteer
22. Do you think an Employee Wellness Program is a good idea and should be implemented?

- a. Yes
- b. No
- c. Don't know

☐

23. How do you perceive an Employee Wellness Program being of most benefit to you?

- a. Prevention of stress-related or lifestyle-related diseases/conditions
- b. Improve my ability to cope with everyday situations
- c. Educate me about healthy lifestyles
- d. Improve my fitness level
- e. Other (Please specify: _____)

☐

f. I do not think I would benefit from a program.

24. Further comments? _____

PART II WELLNESS SELF-ASSESSMENT

1. Rate your current level of general health

- a. Poor
- b. Fair
- c. Average
- d. Good
- e. Excellent

☐

2. Rate your current fitness level compared to others your age and sex:

- a. Not very fit
- b. Less than average
- c. Average
- d. A bit better than average
- e. Much better than average

☐

3. Rate your current level of (physical) flexibility?

- a. Poor
- b. Fair
- c. Average
- d. Good
- e. Excellent

☐

4. What is your energy level after work?

- a. Poor (no energy)
- b. Fair (a bit tired)
- c. Average
- d. Good
- e. Excellent

☐

5. How would you rate your current level of stress?

- a. I am under a great deal of stress
- b. I am under a moderate amount of stress
- c. I am under very little stress
- d. I am under no stress

☐

6. Please rate your current eating habits?

- a. Poor
- b. Fair
- c. Average
- d. Good
- e. Excellent

☐

PART III HEALTH KNOWLEDGE/BELIEFS

1. Although exercise is a good thing, it cannot be of much help in reducing weight.

- a. True
- b. False
- c. Don't know

☐

2. Being overweight can be a contributing factor to such problems as heart disease, diabetes, and hypertension.

- a. True
- b. False
- c. Don't know

☐

3. Most people gain weight when they stop smoking, so it is better to go on smoking than to get fat.

- a. True
- b. False
- c. Don't know

☐

4. The best way to avoid low back pain is to:

- a. Manage Stress
- b. Use proper body mechanics
- c. Avoid Obesity
- d. Exercise regularly
- e. All of the above
- f. None of the above

☐

5. Do you believe that smoking is harmful?

- a. Yes
- b. No
- c. Don't know

☐

6. Your blood cholesterol level can be influenced by the type of fat in your diet.
- a. True
 - b. False
 - c. Don't know
- ☐

Employee Information

1. Employee Type: (Please put the letter of the category which best describes you in the box provided)
- a. Director/Manager
 - b. Office Worker/Office Supervisor/Programmer
 - c. Facility Supervisor/Caretaker/Operator
 - d. Enforcement/Inspection
 - e. Clerical Worker/Receptionist/Steno
 - f. Firefighter
 - g. Labourer
 - h. Equipment/Bus Operator
 - i. Maintenance/Repair Worker
 - j. Other (Explain if you wish: _____)
- ☐
2. Age
- a. 16 -35
 - b. 36 - 50
 - c. over 50
- ☐
3. Name of Department: (Managers/Directors may omit if desired)
- a. Building Inspections
 - b. City Clerks
 - c. E. L. & P.
 - d. Economic Development
 - e. Fire
 - f. Personnel
 - g. Engineering
 - h. Public Works
 - i. RCMP
 - j. Transit
 - k. Computers
 - l. Land & Tax
 - m. Treasury Services
 - n. Parks
 - o. Recreation/Culture
 - p. Social Planning
- ☐
4. Sex:
- a. Male
 - b. Female
- ☐

Thank you for completing this questionnaire. If you have any questions, please contact Deb Jones at 342-8148 (Personnel Department).

APPENDIX II
WEIGHTING OF SURVEY QUESTIONS

A. PREFERENCE FOR PROGRAM CONTENT:

There were 19 EHAP activities listed in survey question #2, of which the employees were asked to pick the seven activities they were most interested in and rank them from highest to lowest in the boxes provided. In order to determine overall employee preference for these activities, the choices were weighted as follows:

<u>Box #:</u>	<u>Weighting:</u>
1	7 points
2	6 points
3	5 points
4	4 points
5	3 points
6	2 points
7	1 point

B. PREFERENCE FOR METHOD OF INSTRUCTION:

In survey question #2, employees were asked to place the numbers one to five in the boxes provided (with one being the highest), to indicate their most preferred method of instruction. In analyzing this question, the numbers were simply added to determine which method was most popular, (with the lowest number indicating highest popularity).