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Predicting future developments in the Canadian employee fitness and healthy lifestyle field using the Delphi technique.

Kandi Joy. McElary

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PREDICTING FUTURE DEVELOPMENTS IN THE
CANADIAN EMPLOYEE FITNESS AND HEALTHY LIFESTYLE FIELD

USING THE DELPHI TECHNIQUE

by

Kandi Joy McElary

Submitted to the
Faculty of Graduate Studies and Research
through the Faculty of
Human Kinetics in Partial Fulfillment
of the requirements for the degree of
Masters of Human Kinetics at
the University of Windsor

Windsor, Ontario, Canada
1988

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ABSTRACT

This study sought to determine how experts predict the future development of the Canadian employee fitness and healthy lifestyle field by using a modified-Delphi technique. Predictions evolved around four strategies, specific to the workplace, developed at the Canadian Summit on Fitness. The first strategy pertains to legislation of fitness-promoting facilities at the workplace. Strategy two concerns incentives aimed at rewarding fitness and healthy lifestyles. The third strategy involves research and development of state of the art programs and strategy four pertains to programs developed and implemented for target markets such as small- and medium-sized establishments and male and female blue collar workers. Experts (N=41) were selected from two sources, the Employee Fitness Consultant, Fitness Canada and a private consultant who is nationally recognized for her work in the employee fitness and healthy lifestyle field. The modified-Delphi study consisted of three rounds. Round one was audio-interviews with eight experts (four from the pool of identified experts and four from outside the pool). Rounds two and three were opi-
nionnaires mailed to the remaining 30 experts. The opinion-
naires were formulated from information generated in the audio-interviews and from the review of literature. Round
two opinionnaire had 45 statements which the experts ranked
in terms of desirability and probability on a 5-point Likert
scale. A year scale for the the experts' predictions of
when an event will occur was also provided. Round three
opinionnaire was the same as round two with the addition of
the group's responses, reported as means and standard devia-
tions, from round two. Of the four strategies investigated
in the study, only strategy three was ranked significantly
(p<.05) greater than "3", the average point on the Likert
scales, for desirability and probability. Strategy three
states that a comprehensive program of research and develop-
ment should be initiated to identify state of the art
employee fitness and healthy lifestyle programs, as well as,
the development of appropriate models and to test market the
models in target establishments.
DEDICATION

To my parents, Bev and Laurie, whose love, encouragement, and faith supported me throughout this endeavour.
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This thesis is the end product of a memorable learning experience.

I wish to express my sincerest appreciation and gratitude to my advisor, Dr. Richard Moriarty, for his generous time, guidance, never-ending patience, and friendship.

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Participation of the Canadian experts on employee fitness and healthy lifestyles was crucial and necessary for this study. I appreciate the interest and commitment from these individuals.

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Chapter I

INTRODUCTION

1.1 Purpose

The purpose of this study was to provide expert predictions for the future of the employee fitness and healthy lifestyle field. A modified-Delphi survey was conducted to evaluate, complement, and build upon strategies which were developed at the Canadian Summit on fitness, held in Ottawa, June 1986.

The Summit included one hundred and eighty-eight (188) delegates representing the major levels of government, national associations, and individuals associated with the fields of health care, fitness, recreation, education, private fitness industry, business, and the media (Fitness . . . the Future, 1986).

For a twelve period before the delegates convened, the Summit President worked with the Minister of Fitness Canada, and a Steering Committee in order to prepare a working document for the Summit. The Steering Committee members travelled across Canada to meet fitness leaders and to solicit information from those representing many different areas of
expertise in the fitness and healthy lifestyle field. A questionnaire was also distributed to 3,600 national Chamber of Commerce association members and other key individuals to gain background information for the Summit.

The objectives of the summit conference were:

1. To recommend an agenda for fitness in Canada concerning:
   a. the vision of fitness in Canadian society;
   b. a mission statement for the field;
   c. strategies for implementing the mission statement;
   d. directions for implementation; and
   e. structural options for fitness Canada's role.

2. To publish a summary document of the deliberations and resolutions from the conference, which would inspire and help the reader take action. (The document is intended to be used as a major agenda and a working document for change.)

   (Fitness . . . The Future, 1986: 6)

From the Summit came the following "vision" for the future of fitness in Canada:

The vision of fitness by the year 2000 depicts a society that values well-being as fundamental and an integral part of day-to-day life. Canadian social structures, the family, the schools, the workplace, the health care system, will all enthusiastically embrace and reward daily physical activity and behaviours which contribute significantly to health and well-being. Regular physical activity and optimal well-being will be ingrained as important and widely accepted values in Canadian society. (Fitness . . . the Future, 1986: 4)
The mission statement developed for the employee fitness field is:

To encourage and provide support for physical activity and lifestyle promotion in the workplace for all levels of workers. (Fitness • • • the Future, 1986: 38)

Several strategies for implementing the mission statement were devised by Conference delegates. The strategies provide a framework for changes to occur in order to facilitate the fitness movement in Canada to meet its goal—the vision. Four strategies, pertaining specifically to employee fitness and healthy lifestyle field, provided a basis for this study.

1. Legislation be enacted to encourage lifestyle and fitness-promoting facilities in the workplace. (Legislation)

2. A program of incentives be developed and implemented for employers and employees aimed at rewarding fitness and healthy lifestyles. (Incentives)

3. A comprehensive program of research and development be initiated to identify and evaluate the state of the art of employee fitness and lifestyle programs, to develop appropriate models and test market these models in target establishments. (Research and Development)

4. A comprehensive program be developed and implemented to promote fitness and healthy lifestyles in the workplace with special emphasis on small- and medium-sized establishments, and male and female blue-collar workers. (Target Markets)

(Fitness • • • the Future, 1986: 12)
1.2 Research Questions

A total of four research questions were developed for this study. The first two questions involve the four strategies developed at the Summit and the second two research questions pertain to the Delphi technique.

1. Do the experts predict implementation of the strategies developed at the Summit?

H01 The experts will predict implementation of strategy one (legislation) developed at the Summit.

H1 The experts will not predict implementation of strategy one (legislation) developed at the Summit.

H02 The experts will predict implementation of strategy two (incentives) developed at the Summit.

H2 The experts will not predict implementation of strategy two (incentives) developed at the Summit.

H03 The experts will predict implementation of strategy three (research and development) developed at the Summit.

H3 The experts will not predict implementation of strategy three (research and development) developed at the Summit.

H04 The experts will predict implementation of strategy four (target markets) developed at the Summit.

H4 The experts will not predict implementation of strategy four (target markets) developed at the Summit.

Predicted implementation is measured on both the desirability and probability scales. Both scales must be ranked significantly greater than "3", the neutral point.
2. Do the experts predict implementation of the strategies will occur before the year 2000?

H05 The experts predict implementation of the strategies will occur before the year 2000.

H5 The experts predict implementation of the strategies will not occur before the year 2000.

Predicted implementation is measured by the group mean. It must be seven or less on the year scale.

The methodology utilized in assessing experts' predictions and to foster consensus was a modification of the Delphi technique. Opinionnaires were employed to inform the experts of the group's responses. Objectives of the Delphi technique are to forecast and to bring a group of experts to consensus.

3. Will the experts' responses show a higher degree of consensus in the third round than in the second round?

H06 The experts' responses will not indicate a higher degree of consensus in the third round than in the second round.

H6 The experts' responses will indicate a higher degree of consensus in the third round than in the second round.

This study utilized two independent scales, desirability and probability scales. According to Murray and Jarman (1987) and Nault (1978), problems will occur in the implementation of strategies where there are any
divergences between what the experts predict is desirable and what they predict is probable.

4. Will there be a divergence between what the experts predict is desirable and what the experts predict is probable in the majority of of statements?

H07 There will be no significant divergence between what the experts predict is desirable and what they predict is probable for the majority of statements.

H7 There will be a significant divergence between what the experts predict is desirable and what they predict is probable for the majority of statements.

1.3 Justification

A modified-Delphi technique was employed to investigate the anticipated future for the employee fitness and healthy lifestyle field in Canada. Delphi studies are employed when there is a lack of theoretical knowledge from which to draw from (Boucher, 1980; Brown, 1968; Helmer, 1967). Investigation of the future can provide important benefits according to Chai (1977). Some of these are:

1. to provide information to decision-makers;
2. to broaden one's time horizons;
3. to ensure exploration of possibilities;
4. to reduce future shock; and
5. to enable the planning of courses of action.

(Chai, 1977: 518)
Informed judgements from the experts in the employee fitness and healthy lifestyle field will contribute to the development of the field in Canada. Informed experts will be better able to plan future courses of action.

1.4 Definition of Terms

1. Employee Fitness and Healthy Lifestyle Programs: Programs with a multi-dimensional preventative approach to individual health and/or wellness. Components of programs include fitness, nutrition education, stress management, and counselling.

2. Wellness: A concept that puts the onus on individuals to promote and ensure their own health; it is a multi-dimensional approach to health; connections between the mind, body, and spirit are recognized.

3. Experts: The experts consisted of individuals who work in the employee fitness and healthy lifestyle field in one of the following capacities:

   a. Academicians: Individuals who are employed by a post-secondary institution, researching and lecturing in the field of employee fitness and healthy lifestyle programs in the workplace.

   b. Practitioners: Individuals who implement and oversee employee fitness and healthy lifestyle programs in a workplace.
c. **Government:** Individuals who are employed by the provincial or federal government. His/her main responsibilities are directly related to employee fitness and healthy lifestyle programs.

d. **Consultants:** Individuals who provide consulting services in the field of employee fitness and healthy lifestyles programs.

4. **Predictions:** Forecasts of what one believes will happen in the future; to tell beforehand.

5. **Implementation:** To carry out or give effect to something; to put something in place.

6. **Legislation:** To make a policy governing action.

7. **Incentive:** A tangible motive to encourage or spur individuals to behave in a certain behaviour.

8. **Research and Development:** An investigation and inquiry into employee fitness and healthy lifestyle programs and implementing the findings from the investigation.

9. **Target Markets:** Specific groups of people or organizations, for example, small- and medium-sized establishments, and blue collar workers.

10. **Higher Degree of Consensus:** The size of the mean standard deviation of the experts' responses is smaller than the previous round opinionnaire's mean standard deviation.
11. **Divergence:** A deviation between the means of the desirability scales and the means of the probability scales at the <.05 level of significance.

12. **Majority:** More than half the statements on the opinionnaire. There are fifty-six statements in total. More than half the statements would be anything greater than twenty-six or fifty percent.

13. **Desirability:** That which is in the state of being wanted or wish.

14. **Probability:** That which can be expected. That which has likelihood of happening.

15. **Delphi Technique:** A method to gather and synthesize experts' predictions of a certain phenomenon.

1.5 **Delimitations**

1. The population consisted of individuals identified as experts from one of two sources: a private consultant in the employee fitness and healthly lifestyle field and the employee fitness consultant from Fitness Canada.

2. Round 1 of the modified-Delphi study were audio-interviews with individuals selected from four areas: academicians, consultants, government/national organizations, and practitioners.
3. Round 2 of the modified-Delphi technique was based upon knowledge gained from a review of the literature and from the audio-interviews of experts' opinions.

4. The significance levels <.01 and <.05 imposed for testing the hypotheses.

1.6 Limitations

1. The results of the study could be generalized only to the population from which the results were generated. A limitation of the Delphi technique (Boucher, 1981).

2. With a N=41, analysis of the data was limited to univariate analysis because of the smallness of the sets.

1.7 Summary

The main purpose of this Chapter is to introduce the research questions. The following information is also included in this Chapter: the purpose of the study; the hypotheses used to test the research questions; limitations, delimitations, and justification of the study; and a section to define the the terms used throughout the study.

Chapter two provides a review of the literature related to this study. The literature is divided into two main parts. The first part is a review of literature on "well-
ness" which is used synonymously with fitness and healthy lifestyles. The second part of Chapter two is a review of the literature on the Delphi technique.

Chapter three, the methodology chapter, provides information about how the study was conducted. A modification of the Delphi technique was utilized to collect experts forecasts and to bring the experts to consensus.

The results of the study are presented in Chapter four. The research questions are answered by testing the hypotheses and the results are presented in written and Table format.

Chapter five provides a discussion about the results, conclusions drawn from the results, and implications of the results. Recommendations for future research are also found in Chapter five.
Chapter II

LITERATURE REVIEW

The terms "wellness" and "fitness and healthy lifestyle" are employed synonymously in this study. The majority of the review of literature for fitness and healthy lifestyles cited in this study is based on literature on wellness. Both terms pertain to a preventative, multi-dimensional approach to healthy care. The responsibility of health care lies with the individual.

The review of literature is divided into three main sections: (1) literature related to the study of wellness, (2) Canadian Scene, and (3) methodology literature related to the Delphi technique.

The first section, a review of literature on wellness, consists of the following parts: (a) A history of how the employee wellness movement evolved; (b) what the goals of an employee wellness program are; (c) how programs are promoted; (d) staffing requirements of programs; (e) possible components of comprehensive wellness programs; and (f) evaluation methods of programs. The second section of the literature review provides an overview of employee fitness
and healthy lifestyle programs in Canada. The third section of the review of literature pertains to the methodology proposed for this study, the Delphi technique. The mechanics of the Delphi technique will be outlined along with a critique of the Delphi method and a review of three studies which employed the Delphi technique.

2.1 Wellness

2.1.1 History of Wellness

Wellness is a concept that emphasizes an individual's responsibility toward his/her personal health. The goal of the wellness concept is to make individuals aware of the health elements they can control. A preventative approach toward a healthy lifestyle is encouraged and education about the elements that will enhance healthy living is promoted. Words or phrases such as healthy lifestyles, self-care, holistic, health care, prevention, and high level wellness have a common denominator—the individual is responsible for his or her own health (Green, 1985).

To better understand how wellness has evolved, McClary et al. (1985) have viewed the history of health and reveal how a shift has occurred by defining three eras. The first, identified as the "engineering era", began in the eighteenth century when the industrial revolution began to change peo-
ple's life-styles and lingered into the early twentieth century. Relocation brought masses of people to urban centres where there were problems with epidemics, food supplies, and sewer and water systems. The next era is described as the "medical era" and lasted approximately forty years, from 1920 to about 1960. In this era, allopathic medicine was practised. Allopathic medicine is a philosophy of health care that views the physician as an interventionist. The physician attempts to counteract the effect of a disease with surgical or medical treatment that produces effects opposite to those of the disease. The last and present era is called the "post-medical era" but it might more appropriately be named the "health era". This era is characterized by different tools, actors, and interests; it demands a greater understanding of human life (McClary, et al., 1985).

2.1.2 Wellness in the Workplace

Health promotion in the workplace has been investigated by Fuchs and Richards (1985). Their literature review revealed, "a broad historical foundation of workplace promotion" (Fuchs and Richards, 1985: 3). They suggest that health promotion evolved from three basic areas—health education, employee assistance, and health screening. Activities in these areas date back to the early 1900's although the reasons why they were practised may have shifted over
the years. For example, health screening, a practice which is done to identify health problems, was practised in the early 1900's to protect employees from communicable diseases. Now health screening is more comprehensive in that it monitors employees' fitness and stress levels and helps to identify health risk factors.

The importance of workplace wellness programs and the rationale behind the implementation of programs can be examined in two ways:

1. how the companies can benefit from programs, and
2. how workplace programs can be effective in reaching the masses of people

There is a common belief that a healthy employee is a better employee.

A healthy person clearly has a better chance of being employed and is more productive than an individual plagued by disease; he is not only physically but also mentally alert and can therefore be expected to work more intelligently and efficiently. (Mach, 1973: 133).

The benefits of healthy employees to the company include: increased productivity (Wanzel, 1973); reduced absenteeism (Cox, et al., 1981); better employee morale (Dedmon, 1979); and, decreased health care costs (Shephard, 1986). All of which enhance the smooth operation of a company.

Workplace programs are considered ideal arenas to inculcate the wellness concept. Castillo-Salgado (1985) cites
three major reasons in support of the workplace as an ideal setting to promote wellness.

1. Men and women who are employed spend nearly 30% of their waking hours at work.

2. The workplace provides a well-defined population and offers accessibility to large groups of people.

3. The periodic gathering of health information on workers can be used for:
   a. the study of natural history of health diseases;
   b. the tracking of individual behaviour; and
   c. evaluation of individual programs and/or complete operating health systems. (Castillo-Salgado, 1985: 353)

It is within this context that Castillo-Salgado (1984) believes the workplace to be the most promising arena for health behaviour change. Mach (1979) offers support for health promotion in the workplace by observing that it aims to improve the health of the majority of the world's population, thus creating a new army of vigorous, more enterprising and more productive human beings. (Mach, 1979: 142)

Rentmeester (1984) sees the workplace as a promising site for the promotion of wellness. In the past, companies have implemented wellness programs without concrete evidence of the benefits for the business. Compared with the government, businesses are more willing to allocate funds into wellness programs and the preventative approach to health care (Rentmeester, 1984).
Wellness programs in the workplace setting are part of and contribute to the wellness movement. Ardell (1985) notes that of all the trends and factors significantly shaping the wellness movement, industry ranks in the top ten influences. In 1984, 850 companies in Ontario had wellness programs. By the end of 1987, 1000 companies were expected to have implemented wellness programs (Sarjeant, 1987). The fast pace and ever-expanding dimensions demand guidelines for implementation of wellness programs. Although fitness and exercise have been the in-roads for the wellness movement (Fuchs and Richards, 1985), emphasis must shift now toward a multi-dimensional approach.

2.1.2.1 Goals of Wellness Programs

Workplace wellness programs have the same major goal as the wellness concept. This goal is to shift responsibility of health from the medical care industry to individuals; away from the medical model to a rediscovery of the importance of prevention (Castillo-Salgado, 1984). Simply stated, wellness "is to help people to assume greater responsibility for their own health" (Boomer, 1987: 10).

The World Health Organization (WHO) has set a goal of health for all by the year 2000. It refers to health as a state of mental, physical, and social well-being. Four areas that should be addressed in pursuing this goal are:
"(1) the search for health needs, (2) influencing policies affecting health, (3) stimulation of awareness of health needs, and (4) facilitation of health enhancing activities" (Boomer, 1987: 10).

Occupational health promotion has existed for sometime. The goals in the past have been to reduce work related illnesses and injuries (Green, 1985). More recently, goals have shifted to the maintenance of a good health status.

... through a combination of non-specific disease oriented activities (environmental, political, educational, economic, and recreational) designed to provide a healthy condition and prevent the activation and/or emergence of any disease process in individuals and groups. (Castillo-Salgado, 1984: 350).

Some other goals which help to explain why corporations are involved in health promotion lie directly in relation to economic benefits to the company. Recognized advantages are: less absenteeism, more productivity on the job (Shepherd, 1986), a reduction in coping problems, and enhanced functional efficiency of the corporation as a whole (Castillo-Salgado: 1984). Along the same lines, Green (1985) adds reduction of corporate employee health insurance premiums and an improvement in employee morale.

Identifying the preceding benefits of wellness programs to corporations as goals may appear one-sided. Dillen (1987) emphasizes that company's Chief Executive Officers like to recognize that the benefits of wellness programs are
experienced by the employees as well as by the company. An observation by Castillo-Salgado's (1984: 354) supports Dillon.

Health practices should not be promoted primarily on the basis of more productivity or less absenteeism and turn over. These are secondary. The main concern of occupational health programs should be with human lives saved—not man-hours lost.

As a result, wellness programs should be designed to modify the work environment as well as to provide information and support systems to workers to increase their levels of well-being. An ideal program would be one that encompasses both of these dimensions (Castillo-Salgado, 1984).

2.1.2.2 Promotion of Wellness Programs

The promotional material and concepts of wellness programs should be based on research of the target market—employees. The following variables were identified by Griffin and Zeigler (1986) as being important for the development of a successful program:

1. Participants' economic status, age, health practices, and gender;
2. Proximity of work stations to the wellness centre; and,
3. Flexibility of job scheduling.
Both the promotion and acceptance by participants of employee wellness programs are crucial to successful implementation. Because, from the employer's point of view, wellness programs are long-term investment endeavors, support for such programs should be inculcated by the senior managers of an organization (Horner, 1986). But, with most long term investments, when "times are tough" there is a temptation to shift emphasis to short term needs and wellness programs suffer.

Castillo-Salgado (1984) cites four incentives to be incorporated in the promotion of health programs, they are:

1. **Education:** Individuals are provided with the knowledge and motivation to make informed decisions about their personal health status.

2. **Subsidization:** Tangible rewards are supplied to individuals in recognition of engagement in activities deemed to be healthy.

3. **Taxation:** Action taken against individuals who practice adverse health activity: sanctions would be in a financial form.

4. **Regulation:** Policies designed to compel or force individuals to partake in health enhancing activities.

Other avenues of promoting wellness programs are through both company newsletters and the unions (Dillon, 1987).
According to Dillon (1987), wellness programs accepted and utilized by union leaders have an advantage of being widely accepted by the mass of workers.

Gimmicks which entice employees to become involved include: free t-shirts for participation in fun-runs (Horner, 1986); break dancer performances as attention grabbers; duffel bags as rewards to weight-reduction participants (Sarjeant, 1987); and inter-company challenges (Dillon, 1987). However, Horner (1986) warns about the short-term affect produced by gimmick type promotions. The gimmicks may attract employees but they will not guarantee adherence to programs.

Castillo-Salgado (1984) proposes that health promotion in the workplace is based upon two fundamental premises:

1. "The focus on the worker’s health behaviour change; and,

2. the placement of responsibility for health on the worker—where it belongs." (Castillo-Salgado, 1984:354).

He suggests that employee wellness programs and workers should take the roles of facilitation and facilitator, respectively. The programs should be geared towards developing support structures and the practitioner towards "assisting" individuals in making program decisions. Horner
(1986) states the importance of advertisements of wellness programs to depict clear messages in order that unrealistic goals and expectations are not anticipated by participants.

2.1.2.3 Staffing of Wellness Programs

The individuals who promote and implement wellness programs, like the concept of wellness, should have a multi-dimensional approach with respect to program planning and offering (Griffin and Zeigler, 1986). This can be achieved in two ways. If a corporation has a well developed program its wellness staff will consist of individuals who are experts in specific but different fields—nutrition, fitness, medicine, recreation, stress management, and counselling. The combined expertise and skills possessed by these people would provide participants with a balanced program. On the other hand, if a company employs only one or two people to carry out its wellness program, interdisciplinary training of these people would be necessary. Childers (1986) cites the need for, and benefits of, health care individuals educated in both health education and developmental and preventative counselling techniques. Because the concept of wellness envelops many dimensions of individual self-care responsibility, staff should have knowledge of psychological and biomedical techniques (Childers, 1986).
Hipp (1984) states another quality wellness promotion employees should possess is an understanding of process skills. A term he gives to employees in this field is "life change professionals". Employees should:

- help people to understand the norms that are affecting their behaviour.
- confronting and dissipating negative norms.
- (and) consciously installing positive norms in key influence areas.

(Hipp, 1984: 12)

There is a need for wellness employees to clearly understand "the magnitude and the challenge involved in creating real, long term change in individual's living habits." (Hipp, 1984: 12).

The type of service required from wellness programs may dictate the location and the staff personnel. For example, an article in *The Globe and Mail* written by Sarjeant (1987) states that most corporate wellness sessions are held in-house and run by company employees. But the more intensive counselling sessions are likely to be held elsewhere. The advantages for this could be two-fold. Firstly, employees can receive treatment or counselling without it being common knowledge to his/her supervisor and/or co-workers (Sarjeant, 1987). Secondly, highly qualified professionals in specialized fields are in a position to treat an acute problem than perhaps a company employed counsellor with a general educational background in counselling.
Since the wellness concept emphasizes the responsibility of individuals for their health care, practitioners of wellness programs are sensitive to this aspect too. According to Green (1985) it is important for practitioners to understand individual differences and tailor programs to meet those needs. Each consumer should be viewed, "in relation to individual and environmental limitations and lifestyles." (Green, 1985: 13).

Individuals who work in and promote wellness programs can be role models for employees. They need to be knowledgeable and educated in the field and to practice what they preach. "Health care providers (should) ... practice high level wellness, themselves." (Green, 1985: 13).

2.1.2.4 Components of Wellness Programs

Components of a program refer to the parts or services of wellness programs. Not only will specific types of programs be discussed but also different possible perspectives taken as an approach to identify needs of a wellness program.

To begin, a "smattering" of the types of programs offered are:

- fitness, nutrition, smoking cessation, stress management, child-rearing, and caring for elderly parents, financial counselling, marital difficulties, depression, seminars on back problems, eating disorders, burn out, cancer detection, hypothermia, and retirement planning. (Sarjeant, 1987:2)
- self-responsibility, nutrition awareness, stress awareness and management, physical fitness, and environmental sensitivity (Ardell, 1985: 38)

- environmental improvement: anti-pollution and sanitary measures: education of public health matters, including life-style, nutritional habits, smoking and alcoholism; and better care for mental health. (Mach, 1979: 134)

On a more conceptual note the following authors provide components of what they believe a wellness program should encompass. Higgins (1986) suggests that an ideal wellness program will incorporate the following services:

1. **Screening referrals**: which are conducted to detect for disease or unhealthy habits.

2. **Individual counselling**: is done to relate the state of the screening test and to provide education for individual wellness programs tailored to the individual needs.

3. **Health education**: which is an overall education of the components important to and necessary for healthy life-style.

4. **Fitness Programs**: employed to encourage individuals to participate in physical activity to increase their level of fitness.

5. **Monitoring and Feedback**: to assess individuals' progress and provide continuous guidance.
Ardell (1985) considers four elements necessary to a wellness program, these are:

1. A balanced approach which includes several of the components previously mentioned.

2. A systematic approach which not only educates the participants but also gets them started and helps them through the behaviour change period.

3. An holistic approach with an emphasis on the idea of mind/body connections, personal responsibility, and a balanced life style.

4. A wellness program should have a fun and positive approach.

Fuchs and Richards (1985) state that life crises counselling programs are offered as part of employee fitness programs in the following areas:

- "family, marital, financial, and legal consultations;
- pre-retirement counselling to help with the social, economical, and mental transitions; and
- occupational stress management which includes relaxation breaks, blood pressure screening, and educational seminars." (Fuchs and Richard, 1985: 4).

From the examples of services, and perspectives of wellness programs cited above, the variety of program components is evident. A program that takes on an encompassing per-
spective of wellness and then meets the needs of the areas involved in the overall program with specific components, is a program that best exemplifies wellness in the workplace.

2.1.2.5 Evaluation

The major drive behind the implementation of wellness programs in the workplace can be attributed to economic motivation (Rentmeester, 1984; and Higgins, 1986). Quantitative and descriptive data usually provide the means to support the worth of programs. Wellness programs control employee health insurance costs, reduces absenteeism, and increases productivity and job satisfaction (Higgins, 1986). Rentmeester provides the following examples which indicate the cost benefits of wellness programs:

- New York Telephone company estimates a $2.7 billion saving in absenteeism and health care treatment costs.

- Canada Life Assurance Company found that as an employee fitness program decreased employee health care costs for industry rose 14%.

- General Motors, Control Data, Chase Manhattan Bank, Kimberly-Clark, and Sentry Insurance documented direct health care cost savings through employee wellness and fitness programs. (1984: 7)

Higgins (1986) purports two major reasons why it is important to evaluate wellness programs: (1) The survival of wellness programs depend upon evidence that they are cost-beneficial. This can be achieved only through formal evalu-
ation of programs. (2) Even in the most generously funded wellness programs, budgets provide limits, therefore allocation of funds must be done with the knowledge that resources are used to the best potential.

Four levels of evaluation are proposed by Higgins (1986). They are: preliminary evaluation; process evaluation; impact evaluation; and, outcome evaluation. Each level measures a different aspect of a wellness program and provides a systematic process of evaluation.

1. Preliminary Evaluation: The initial evaluation is necessary to see if a wellness program will be feasible for the company. It should project costs, effectiveness, and employee acceptance of a wellness program.

2. Process Evaluation: This stage begins once the program has been implemented. The quality of the program is evaluated on a week-to-week basis. This can be done by giving participants short questionnaires to identify levels of development and satisfaction.

3. Impact Evaluation: This step in the evaluation process measures behavioural change of individuals in health risk areas. The importance of change lies not only in peoples' knowledge but also in their behaviour. Pre-and post-tests are one way to measure this impact.
4. Outcome Evaluation: This evaluation is most important to the survival of programs. Elements that can be measured in the short term are: absenteeism, health care costs, and productivity, while other important benefits such as mortality rates can be measured over the long term. These outcomes must be related to positive cost (value) impact.

2.1.2.6 Summary of Workplace Wellness Programs

The review of literature on wellness programs has identified the shift of the responsibility of health away from the medical profession towards individuals. Wellness puts the responsibility on individuals to develop a preventative approach to their personal health care.

The goals of a wellness program in the workplace are to make individuals aware of the control they have over their lives (Castillo-Salgado, 1984; Green, 1985). Educational programs are offered and behaviours are monitored to identify if these goals are being achieved. Other goals tend to be corporate focused: the objectives of wellness programs are centred around gains or benefits to the company, such as reduced absenteeism. Goals for wellness programs that are sensitive to both the individuals' and the company's needs without too much of a compromise for either party are advocated by researchers and practitioners in the field (Castillo-Salgado, 1984; Dillon, 1987).
The promotion of wellness programs can be done through different avenues. Promotional activities can produce either short or long-term interest (Horner, 1986; Sarjeant, 1987); the most appropriate method of promotion is the one that meets the needs of the situation. Horner (1986) advises that promotional energies concentrate on the benefits to the individuals by identifying only realistic expectations.

Staff members involved in wellness programs provide multi-dimensional expertise to employees. Wellness programs that can afford a large number of staff may be comprised of individuals who are educated in specific areas. On the other hand, wellness programs that have limited staff members employ individuals who have a multi-disciplinary education. The literature revealed many types of programs that can be offered within the confines of a wellness program. The wellness concept promotes recognition of connections between the mind, body, and spirit; in turn, it is necessary for wellness professionals to also recognize these connections in program offerings.

The final area, evaluation, is one of importance. Through an evaluation process, a program's worth can be proven. But, more importantly, problem areas will be identified. The four step process suggested by Higgins (1986) --preliminary, process, impact, and outcome evaluations--
identifies a systematic approach for evaluation of wellness programs.

2.2 The Canadian Scene

The purpose of this section is to provide a general overview of the employee fitness/wellness field in Canada. Why this field is important to Canadian society, how the field has progressed to its present state, what is the present status, and what lies in the future will be discussed in this section.

The justification for resources to be devoted to the employee fitness field and the reason it needs attention is financial. In two areas, international competitiveness and health care costs, employee fitness will play an increasing role. The past chairman for the Canadian Chamber of Commerce, Harold Milavsky, noted that:

Canada's ability to compete internationally will become paramount as we approach the turn of the century. ... fitness programs in the workplace will be one way of containing costs and improving productivity. (Employee Fitness in Canada, 1988: 5).

Health and medical care costs in Canada impose severe strains on our economy. The Canadian system, to provide quality health and medical services to all citizens regardless of their economic status, is a model for other countries, but it does result from extremely high expenditures.
In 1985-86, the price tag for health and medical costs in Canada was estimated to be more than $38 billion, over 9% of the Gross National Product. That represents more than $1000 per Canadian spent on health and medical costs compared with $50 per capita devoted to preventative measures against illness and disease (Employee Fitness in Canada, 1986).

If members of the Canadian society could be motivated to maintain an adequate level of fitness, substantial economic gains could be realized (Shephard, 1986a). For example, in a cross-sectional study (1973) of Ontario Health Insurance Plan (OHIP) participants, it was revealed that if individuals between the ages 20-69 could reach a minimum level of average aerobic fitness, the province of Ontario would save $37 million per year. A collective savings, if each province/territory residents were to achieve average health levels, could mean a substantial savings to the Canadian economy. Research in the employee fitness field shows companies that have an employee fitness program have reduced the cost of provincial health care plans by $130 per employee per year (Employee Fitness in Canada, 1986).

The financial advantages that emanate from the implementation and practice of employee fitness/wellness programs are evident, but other aspects of Canadian society also benefit from employee fitness programs. Quality of life is
measured according to individuals' physical and mental health, and although material items are relevant, it is not affluence alone which leads to satisfaction in our lives (Employee Fitness in Canada, 1986). Therefore, employee fitness/wellness programs can be viewed from two perspectives:

1. As a convenient tactic for realizing community and national goals for health and well-being.

2. A cost-containment program with the potential to enhance worker health and productivity. (Employee Fitness in Canada, 1986: 9)

The employee fitness field in Canada, a little slow in starting, has progressed rapidly since the early 1970's. Corroll (1980) lists key events which illustrate the growth of the employee fitness field in Canada.

1. The establishment of an experimental employee fitness program in Ottawa Post Offices, early 1970's.

2. The establishment of PARTICIPaction, 1971. [PARTICIPaction is a national organization with a mandate to increase Canadians' awareness of and participation in fitness.]

3. The recommendation of the National Conference on Fitness and Health, 1972 that employer groups adopt physical recreation and fitness programs.
4. Recommendations from the 1972 conference acted as catalysts in the establishment of provincial programs such as Rehu (Manitoba), Action BC, Shape Up (Alberta), and Fitness Assessment and Counselling (Ontario) amongst other programs established in the public and private sectors.

5. The 1973 Nutrition Canada National Survey indicated that "in our technologically advanced society, men and women are finding fewer opportunities for physical activity; sport and exercise facilities should be at places of work".

6. The report, "A New Perspective on the Health of Canadians" (1979), emphasized the need for positive lifestyle programs in physical activity, nutrition, alcohol, and smoking reduction/cessation as a means of improving the health status of Canadians.

7. A report (1974) on the National Health and Welfare Department Pilot Employee Program indicated that civil servants who participated in a physical activity program had improved their physical fitness and attitudes towards physical fitness activity over the non-exercise group.

8. The 1974 National Conference on Employee Fitness involved representatives—managerial, employees, medi-
cal, and health professionals—from fifty major Canadian companies, who were exposed to educational sessions by a variety of health and fitness experts.

9. The development of home fitness and exercise packages, \textit{The Fit Kit} and \textit{The Exercise Break}, stimulated physical activity participation and awareness within the Canadian population.

10. The publication of appropriate materials such as: \textit{Employee Fitness} (1977), \textit{Employee Physical Fitness Facilities} (1977), and \textit{Guidelines for Fitness Centres and Health Clubs} (1978), provided useful resources for employee fitness programs.

11. The development of a Standardized Test of Fitness (STY) which was administered in 52 Canadian companies in 1977.

12. A research study, entitled, "The Employee Fitness and Lifestyle Project, 1977-78," was conducted at Canada Life and North American Life Assurance Companies (experimental and control group respectively). Preliminary results indicated that the "exercise group" showed significant improvement in physical fitness and reduced absenteeism from work.

13. The Canada Health Survey initiated by the Department of Health and Welfare Canada (1978) provided an objective evaluation of the health status of Canadians, as
well as the factors which contributed to various levels of health. (Corroll, 1980: 37)

On a more global level, the Director of Fitness Canada, Michele Bedard (1987), identified four significant events which he labeled "milestones" of the development of fitness in Canada.

1. September 1961 - creation of Fitness and Amateur Sport;
2. September 1971 - creation of PARTICIPaction;
3. June 1986 - Canadian Summit on Fitness; and,

According to Bedard (1987) the rapid growth of the fitness field has resulted in the need for establishing the concept and for defining direction for national fitness development and the Canadian Summit on Fitness was the answer to this need. A product of the Summit was the establishment of recommendations to guide future developments of the fitness field. Six areas of emphasis were identified at the Summit as:

- Co-operation and Delivery;
- The School System;
- Public Education;
- The Workplace;
- Target Populations; and,
Quality and Access.

(fitness... the Future, 1986) For each of the six areas, the Summit delegates generated a goal, primary objectives, key components and strategies, and resolutions.

A report recently published by Fitness Canada, "Employee Fitness In Canada: A Perspective" (1986) reflects the present status of the employee fitness and healthy lifestyle field in Canada. The publication defines model employee fitness and lifestyle programs as incorporating active recreation, physical fitness, and health education programs into an attractive employee offering. Successful programs incorporate the following characteristics:

- a strong "physical activity" component available at least three times per week;
- health education program;
- active participation, emphasizing participation over excellence, allowing for individual choices and freedom of expression;
- a nearby facility;
- a commitment from senior personnel;
- promotion that targets both active and non-active employees;
- programs that are ongoing and sustained rather than short term and isolated.

(Employee Fitness in Canada, 1986)
In Canada, employee fitness programs are offered more frequently in finance and administration companies followed by manufacturing companies. The trade and commerce sector offers employee fitness programs with the least frequency (Employee Fitness in Canada, 1986). Generally, there is a direct relation between the size of a company and the existence and scope of programs: larger companies offer more extensive programs than smaller establishments. The three most popular programs that exist are: 1) group aerobic classes; 2) individuals exercise; and, 3) jogging. Onsite facilities are found in approximately half the Canadian companies that offer programs and funding is usually on a cost-sharing basis between employers and employees (Employee Fitness in Canada, 1986).

A challenge is presented in establishing the roles played by the government—federal and provincial—and the private sector in the employee fitness field. According to Employee Fitness in Canada (1986), it is important for both bodies to work in such a way as to complement each other and to be economically efficient. The government's responsibility is to approach potential companies and to promote the benefits of employee fitness programs. If a company desires help in setting up a program, the government may provide a list of reputable organizations that provide services in the employ-
The private sector's role is in the delivery of programs, including consultation, planning, implementation, and evaluation of programs (Employee Fitness in Canada, 1986).

Canadian professionals in the employee fitness field in Canada have identified skills that are necessary in order for them to be effective in their jobs. These skills include:

- communication,
- making presentations,
- program planning and evaluation,
- business management,
- understanding adult behaviour,
- exercise class leadership,
- counselling,
- testing, and
- exercise prescription."

(Employee Fitness Canada, 1986: 19)

Special training to upgrade these skills is needed on an ongoing basis.

The following companies have been cited by Fitness Canada and the Canadian Chamber of Commerce for their efforts in developing and promoting employee fitness programs: Metro-
politan Life Insurance Company, Texas Canada Limited, Shell Canada, Dome Petroleum Limited, McDonald's Restaurants-Lim-
ited, and Manufacturer's Life Insurance Company (Bean and Kerr, 1987).

A recent survey by the Canadian Chamber of Commerce (1986) found 13% of big businesses offered fitness programs, while another 11% were seriously thinking about implementing a program in the near future. LaPointe (1987) refers to these figures as the "good news"—more Canadian companies are getting involved in fitness programs. But, he also identifies "bad news" as small and blue collar businesses were not being "swept up" by the employee fitness trend.

A positive movement for the employee fitness field in Canada would be the formulation of a national body. Such an organization exists in the United States, the Association for Fitness in Business (AFB). The initiative for the formulation of an organization should come from within the employee fitness community (Employee Fitness in Canada, 1986).

The growth of the employee fitness/wellness field will depend largely upon the resources devoted to it. An article appearing in the The Globe and Mail, August, 1987, entitled, "Peterson Taps 100 Million for 'Keeping People Well'", is a positive indication that the wellness field is becoming rec-
ognized as a priority in the eyes of the "purseholders". David Peterson, Ontario's Premier, stated that:

- wellness programs and non-institutional medical care will take us into the twenty-first century. (Gooderham, 1987: A9).

2.3 The Delphi Technique

2.3.1 Introduction

Study of the future is recognized as an area for legitimate investigation (Boucher, 1980). Forecasting and investigating the future is based upon information from the past and is a "fundamental part of planning in the modern world" (Brown, 1968: 1). According to Chai (1977), study of the future can yield important benefits such as:

1. providing information for decision making;
2. broadening one's time horizons;
3. ensuring exploration of possibilities;
4. reducing future shock;
5. enabling the planning of courses of action; and
6. in a sense, expand society's control over its destiny.

(Chai, 1977: 518)

While short term forecasts may be fairly accurate, for example, what may happen next week, long-range forecasts introduce uncertainties (Brown, 1968).
The Delphi is a technique utilized to improve our vision of the future (Hentges and Hosokawa, 1980). It is a technique for forecasting. The Delphi was first used in 1953 in an experiment at the Rand Corporation. Due to the nature of the experiment, restrictions on publicizing the technique kept the Delphi a secret until 1963 (Dalkey and Helmer, 1963). Since then the technique has been used by many investigators in different situations.

Delphis are used when there are several courses of action from which to choose, when predictions can be made with a degree of certainty, and when there is an absence of an accepted body of theoretical knowledge (Boucher, 1980; Brown, 1966; and Helmer, 1967). According to Carney (1979) Delphis can establish the following: the possibility of something occurring and the time it will likely occur. The Delphi is a technique which utilizes informed intuitive judgements on the part of experts with the realization that projections of the future are largely based upon their personal expectations (Helmer, 1967). Therefore, results of the Delphi technique should not be presented as a finished product but rather as an informal forecast based from questionnaire respondents' opinions (Sackman, 1975). Findings from Delphis seldom reveal profound information; they serve the purpose better of reaffirming the direction and focus of the field (Hentges and Hosokawa, 1980).
The objectives of a Delphi were clearly enunciated by Delbecq, et al.:

1. To determine or develop a range of possible program alternatives.

2. To explore or expose underlying assumptions or information leading to different judgments.

3. To seek out information which may generate a consensus on the part of the respondent group.

4. To correlate informed judgements on a topic spanning a wide range of disciplines.

5. To educate the respondent group as to the diverse and inter-related aspects of the topic.

(Delbecq, et al., 1975: 10-11)

Although the Delphi technique has been connected to the idea of achieving expert consensus (Dalkey and Helmer, 1963), it also unveils a group response (Brown, 1968). If a consensus is not met through the group response,

. . . the Delphi technique would have served the purpose of crystallizing the reasoning process, leading to one or several positions on an issue and thus helping to clarify it. . . . (Helmer, 1966: 4).

Delphis are advantageous in that the experts are not brought together in one location to try to reach a consensus. Because they are not in contact with one another (regarding the Delphi study), their opinions are not influenced by stronger, perhaps more verbal individuals. This
particular aspect reduces the influence of certain psychological factors cited by Helmer (1966) as:

1. specious persuasion,
2. the unwillingness to abandon publicly expressed opinions, and
3. the bandwagon effect of majority opinion.

(Helmer, 1966: 1)

Before the Delphi technique is selected as a tool to forecast and/or reach a consensus on a particular topic, the following criteria should be considered:

1. Adequate time for implementation: A Delphi study can be very lengthy in time depending on the number of rounds employed. Therefore, if a quick answer or decision is sought the Delphi is not the most appropriate method to employ.

2. An adequate level of participants' skill in written communication: The participants' written responses form the basis for subsequent questionnaires.

3. High participation motivation: The success of a Delphi depends on participants' response in all questionnaire rounds (Delbecq, et al., 1975 and Hentges and Hosokawa, 1980).

Experts are used to make up the panel of individuals in a Delphi because they have at their disposal the experience and background needed to make educated predictions. The
experts have a cultivated sensitivity to the topic area which provides for intuitive insight (Brown, 1968). Expert selection produces some problems because the defining and measuring of experts' qualifications can be difficult (Helmer, 1967). Delbecq, et al. (1975) suggest identification of a target group whose members possess relevant information and experience. Next, nominations of well-known and respected members should be solicited from individuals within the target group. Respondents should be people who:

1. feel personally involved in the problem or concern,
2. have pertinent information to share,
3. are motivated to include the Delphi in their schedule of competing tasks, and
4. feel that the aggregation of judgement of a respondent panel will include information that they too value and to which they would not otherwise have access.

(Delbecq, et al., 1975: 87)

Panel members should be contacted, if not in person, by telephone to introduce them to the Delphi study and to determine their interest in participating. They should be told the following information:

1. the objectives of the Delphi study,
2. the nature of the respondent panel,
3. the obligations of the participants,
4. the length of time the Delphi process will take, and
5. the information that will be shared among the participants. 

(Delbecq, et al., 1975: 88) 

If the participants of a Delphi study are a homogeneous group, few new ideas will be generated once the number of the group reaches thirty, well-chosen, experts according to Delbecq, et al. (1975).

2.3.2 The Mechanics of the Delphi Technique

Variation of the mechanics of the Delphi provide flexibility for researchers to tailor the technique to the particular study. The first variation is whether or not the panel members and their responses remain anonymous to either the other members or to both the other members and the administrator of the Delphi study. Secondly, the choice of open-ended, structured, or both types of questions are used is another variation to consider. The third variation is the number of iterations or rounds employed. Lastly, the decision rules used to aggregate the judgements may also vary from one Delphi to another.

Cover letters should accompany each round presented to the respondents. The letters should be attractive and encourage participants to commit him/herself to the study (Hentges and Hosokawa, 1980). Other items to be included in cover letters are participation acknowledgement and a thank
you, an explanation of why the individual's response is needed, clear and concise instructions for completing the questionnaire, an explanation of how the results will be used, and finally a deadline date to return the questionnaire (Delbecq, et al., 1975). As well, a self-addressed stamped envelope should be enclosed with each questionnaire.

The first round is generally an open-ended question which should allow participants to write responses to a broad problem issue (Delbecq, et al., 1975). Hentges and Hosokawa (1980) agree the first round should address an issue broadly, yet they warn that a focusing element must be present in order to encourage commitment from participants to the Delphi process.

The responses from round one should be categorized or collated in such manner that repeated answers, perhaps stated differently, can be identified as the same idea. The label attached to each category should encompass all the points embodied within the category (Delbecq, et al., 1975). The basis for round two is devised from the solicited professional judgements collated from round one (Boucher, 1980). Information requested in round two can be any of the following questions in regards to a statement, usually ranked on a Likert scale:

2. The probability that an event will occur (Boucher, 1980; Hedley, 1977).

3. The feasibility of an event occurring (Helmer, 1966).

4. The priority rankings of events (Wever, 1982).

5. The importance of the event (Helmer, 1966).


7. The participants' self-rating of their competency in the particular judgement.

8. The time of an event's occurrence (Murray and Jarman, 1987; Boucher, 1980; Hedley, 1977).

Analysis of each round involves finding one of the following: the mean, median, or mode and the standard deviation, range, or interquartile range (the middle 50 percent of the responses). The third and possibly final questionnaire reports the statistics analyzed from the second round and often the particular participant's previous response. This allows the experts to review and compare his/her judgements with other experts on the panel. During the third round, respondents are given the opportunity to reconsider their initial response (Boucher, 1980; Delbecq, et al., 1975). If an expert is outside the indicated range and he/she wishes to remain in that position, the participant is asked to pro-
vide a written justification why he/she does not want to converge. By doing this individuals without a strong conviction will move towards the mean, median, mode (Helmer, 1967). A convergence of opinions has been observed in the majority of cases that use the Delphi technique (Helmer, 1966).

A final report should be mailed to the participants summarizing the goals and the results. As well, an explanation of how the results have been, or will be, used should be provided along with possible guidelines for future research and planning. The final report provides a closure to the panels' participation in the study (Delbecq, et al., 1975; Hentges and Hosokawa, 1980).

2.3.3 Critique of the Delphi

According to Carney (1979) Delphis produced better results when they were used strictly for forecasting in the technological field. Sub-varieties such as the hybrid- or modified-Delphi were introduced as a result of the critique of the original Delphi. Three major criticisms of the Delphi are:

1. The "shopping list" common to Delphis.
2. The selection of experts process.
3. The necessity for experts to participate in all rounds. (Carney, 1979)
The "shopping list" which is usually a series of short questions introduces a weakness to the Delphi technique. Carney (1979) believes that the questions lack in-depth, background information which do not allow for experts to base their opinions on a common framework. The questions have seldom been pre-tested in order to see if they are reliable, uniform, valid, and clear.

The second criticism concerns the method used for expert selection, often resembling a "press gang" situation. Friends and acquaintances of the Delphi administrator are often asked to participate in the study. Sackman (1975) also believes this to be a major pitfall in the Delphi technique and suggests that detailed personal profiles would permit a better evaluation of who are the experts.

The final criticism offered by Carney (1979) and Sackman (1975) is that often the list of experts participating in the Delphi gets smaller with each round. The participants who stick with the study through all of the rounds may be different from those who do not. Therefore, the final results may reflect or be biased by the "hard core" group's responses (Sackman, 1975).

Sackman (1975) believes that the Delphi technique may be more effective if the goal was not to achieve a consensus. He suggests instead the following: quantitative and quali-
tative feedback to be included in the study, personal confrontations where possible, cultivated development of adversary positions as opposed to consensus, and controlled variations in the type and level of anonymity. Carney (1979) feels that by having opposing groups within a panel, the motivation to stay involved is heightened because individuals will want to protect their interests from those opposing their viewpoints.

2.3.4 The Methodology of Three Studies

The final section will be devoted to a review of three Delphi studies. The first study investigates what the state of the Canadian Amateur Hockey Association likely will be by the year 2000. The second study was conducted to identify future directions and items of high priority for the Canadian Intramural Recreation Association (CIRA). The third study identifies future trends of adult fitness. The techniques used to conduct the studies rather than results of the studies will be emphasized in this review.

2.3.4.1 Canadian Amateur Hockey by the Year 2000

The first study was conducted by Nault (1978). The purpose of the study was to identify long-range problems and objectives of Canadian amateur hockey. A panel of 21 experts in the Canadian Amateur Hockey field completed three
rounds of a modified-Delphi study. Experts were asked in the first round an open-ended question pertaining to issues they perceived to be of importance to Canadian amateur hockey over the next 25 years. Responses to this first round generated 91 issues which were categorized by the researcher into seven main areas. Questionnaire number two, elicited experts' opinions as to the probability, desirability, and impact of each of the issues. Desirability reflected how much they wanted something to happen, probability reflected the likelihood of something happening, and impact reflected their opinion of the effect of the intensity of the particular issue. Each scale—desirability, probability, and impact—was to be considered entirely independent of the other two. Round three was identical to round two except it included the percentage results from number two for each statement. Each participant was asked to reconsider his/her previous assessments in light of the group responses. An analysis of the data was designed to identify priority goals and problems. This was done by looking at projections in terms of the desirability rating and at divergences between probability and desirability rating and impact rating. The objective of the study was to identify first what the priority issues were and secondly areas which suggested problems because they were ranked as highly desirable yet not as
highly probable. The impact ratings were used to identify areas of relative importance to priority goals and problem areas.

2.3.4.2 Future Directions of The Canadian Intramural Recreation Association

The second study, by Wever (1982), was conducted to identify the future directions of the Canadian Intramural Recreation Association. Four specific areas were investigated: (1) organizational structure; (2) goals and objectives; (3) financing and funding; and, (4) services. The Delphi technique was utilized to collect opinions and to develop consensus among the experts. The participants in the study were established through the following procedure. The founder and Past President of CIRA, identified an initial group of ten experts representing the three educational levels—primary, secondary, and post-secondary—and from different regions in Canada. These ten experts were asked to identify an additional ten experts each, five from within their region and five from outside their region. Forty-one (41) experts in total were identified through this process. Experts were sent a letter to verify their expertise and to solicit their commitment to participate in the study.

Three rounds were mailed to the forty-one experts. The experts were asked, in round one, to respond to the four
general areas that CIRA was concerned with in regards to future plans. Concerns for each of the areas and possible future directions were solicited. A response rate of 75% was achieved from round one and one hundred and eighty-one statements were generated.

Round two was mailed to all the participants. Experts were asked to rank each statement on a five point Likert scale of priority, ranging from no priority (CIRA should not be associated with it at all) to highest priority (very important, requires immediate action). An 93% response rate was achieved for round two. The frequency of responses and the modes (the most frequent responses) were calculated. If a bi-modal or tri-modal situation existed, the mean was calculated and the response closest to the mean was chosen.

Round three was mailed to all participants. The group results from round two and the individuals' responses were identified. The experts were asked to re-rank the statements in light of the groups' responses. If, after re-ranking, an expert remained different from the groups most frequent answer, then the expert was asked to provide a reason for his/her minority opinion. A 94% response rate was obtained for round three. Statements within each area were ranked according to their priority and degree of consensus. The responses from round three did not change any of the
modes recorded in round two, but there was a greater frequency attached to each mode which indicated a movement towards consensus.

2.3.4.3 Predicting Future Trends in Adult Fitness

The final study was conducted by Murray and Jarman (1987). A panel of 50 experts was established through a consulting process with five professors. Selection was on the basis of whom the professors deemed most expert in adult fitness according to reputation and scholarly publications. The experts were also members of the American College of Sports Medicine. Lists were compared to see which names appeared most frequently. Questionnaire number one was open-ended. Respondents were asked to list five or more events, trends, or developments in adult fitness they thought would happen as well as five or more events they would like to see happen in the next 25 years. One hundred items in total were generated from a response rate of 88%. The 100 items were divided into seven categories: 1) fitness in sport and recreation; 2) fitness and wellness; 3) fitness in industry; 4) fitness in business; 5) research in fitness; 6) fitness in education; and, 7) fitness in equipment and facilities. The second questionnaire asked participants to rank each item according to their opinion of its desirability, probability, and the time-frame in which they
believed it would occur if the event were probable (before 1990, between 1990-2000, or after 2000). Probability and desirability were measured on a 5-point Likert scale. The second round elicited an 80% response rate. The results were tabulated to produce a group mean and standard deviation and to determine events of high probability and desirability. The third questionnaire listed events of high probability and desirability in their original form with the group mean, standard deviation, and projection of expected dates. Respondents were also sent their own answers from round two to see how they compared with the group's answers. The participants were invited to make any changes to their responses. Round three's response rate was 80%. A t-test was computed for each of the 100 items. Group responses were computed using the mean and percentages in each time period. Data analysis were conducted on those items that were significantly higher (p<.01) than 3 on the Likert scale. In total sixty-four items qualified.
Chapter III

METHODOLOGY

The purpose of this Chapter is to outline the method and steps which were utilized in this study. Collection of opinions and information was done using a modification of the Delphi technique. Opinions of Canadian experts in the employee fitness and healthy lifestyle field were solicited through this technique to provide more information about the strategies developed at the Summit and to provide expert predictions of the future developments of the employee fitness and healthy lifestyle field in Canada.

3.1 Expert Selection

The list of experts on employee fitness and healthy lifestyles was derived from a combination of two sources. The employee fitness consultant for Fitness and Amateur Sport, provided a list of individuals he considered to be experts in the field. The second source of expert's names was provided by a private consultant who is responsible for the training of fitness certification experts in Canada. Some of the experts' names appeared on both lists. The total number of names was forty-one (41).
3.2 Modified-Delphi

The first round of the modified-Delphi study involved audio-interviews with a total of eight individuals—four from the pool of experts (N=41) and four from outside the pool of experts. The individuals who were interviewed are employed in the employee fitness and healthy lifestyle field in the following capacities (two from each area): practitioners, consultants, government or national organizations, and academicians. The interviews, conducted by the researcher, began with broad questions. The individuals were asked:

1. What is the present state of the employee fitness/wellness field in Canada?

2. What would you perceive as an "ideal state" for the employee fitness/wellness field to be by the year 2000?

3. What changes should occur in order to facilitate the present state to become what you have indicated should be an "ideal state"?

Following the responses to these broad questions, the interviewer identified the four strategies for change to occur proposed at the Fitness Summit.

1. Legislation be enacted to encourage lifestyle and fitness-promoting facilities in the workplace. (Legislation).
2. A program of incentives be developed and implemented for employers and employees aimed at rewarding fitness and healthy lifestyles. (Incentives).

3. A comprehensive program of research and development be initiated to identify and evaluate the state of the art of employee fitness and lifestyle programs, to develop appropriate models and test market these models in target establishments. (Research and Development)

4. A comprehensive program be developed and implemented to promote fitness and healthy lifestyles in the workplace with special emphasis on small- and medium-sized establishments, and male and female blue-collar workers. (Target Markets).

(Fitness . . . the Future, 1986: 12)

After each method had been outlined to an expert, he/she was asked to respond to the statement on the following terms:
• Do you agree with the statement? If not why? If so continue . . .
• Why should it be done?
• When should it be done?
• By whom should it be done?
• How should it be done?

The information gained from the audio-interviews along with information gained from a thorough review of the literature was employed to formulate the second round of the modified-Delphi study.
Round two opinionnaire was mailed to the remaining thirty-seven experts. (The four individuals interviewed from the pool of experts were not included in Rounds 2 and 3 because their inclusion could distort the results.) Information regarding the significance of the study and the process implemented to conduct the study was included in this mailing. Statements were provided and the experts were asked to respond to the statements in the following manner. They were asked to rank the statements (events) on a 5-point Likert scale according to the desirability and probability of the statement. The year they predicted the event, if probable, would occur was also provided for on a scale. The desirability and probability scales had a "0" for respondents to use if they had "no answer" for a particular scale. (The "0"'s were not used in the calculation of the means.) The year scale had an "N/A" response. The "N/A" was supplied in the event an expert ranked a statement as "not probable"--"1" on the probability scale, then the year it would occur was not applicable (see Figure 1).

The results from Round 2 were computed by determining the mean and standard deviation of the three scales: desirability, probability, and year of occurrence. The mean indicated the average of the responses. In general, the mean "is a good representative of the level of a group's characteris-
**Figure 1:** Example of a Round 2 Statement and Response Options

**Statement:** The formation of a "Canadian Employee Fitness Association."

**Desirability**

- Very High
- High
- Average
- Low
- Very Low

**Probability**

- Very High
- High
- Average
- Low
- Very Low

**Year (if probable it will occur):**

- 88
- 90
- 92
- 94
- 96
- 98
- 2000

...tics or performance" (Kerlinger, 1986: 71). The standard deviation was used to provide a measure around the mean in an attempt to bring the experts towards a consensus (see Figure 2).

Round 3 was mailed to all 37 experts. The opinionnaire was similar to Round 2; the statements remained the same, but the scales showed the group responses, the mean and the standard deviation (see Figure 2).
Figure 2: Example of a Round 3 Statement and Response Options

Statement: The formation of a "Canadian Employee Fitness Association."

Desirability

<table>
<thead>
<tr>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>Average</td>
<td>Low</td>
<td>Very High</td>
<td>Low</td>
<td></td>
</tr>
</tbody>
</table>

Probability

<table>
<thead>
<tr>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>Average</td>
<td>Low</td>
<td>Very High</td>
<td>Low</td>
<td></td>
</tr>
</tbody>
</table>

Year (if probable) it will occur:

88 90 92 94 96 98 2000

The experts were asked to re-rank the opinionnaire in light of the new information—the mean and standard deviation. If after re-ranking, an individual was outside the standard deviation, he/she was asked to give the reason behind his/her opinion to encourage qualitative feedback from those who did not agree with the group's response.

The results of Round 3 were analyzed to provide the following information:
1. Did the experts predict implementation of four of the strategies developed at the Summit? This was established by the means of the statements specific to the four strategies. The neutral point on the desirability and probability scales was 3. If the mean of the respondents was significantly greater (at a < .05 level) on both the desirability and probability scales, then this indicated the experts predicted implementation of the strategies. The hypotheses to test this research question were:
H01 The experts will predict implementation of strategy one (legislation) developed at the Summit.

H02 The experts will predict implementation of strategy two (incentives) developed at the Summit.

H03 The experts will predict implementation of strategy three (research and development) developed at the Summit.

H04 The experts will predict implementation of strategy four (target markets) developed at the Summit.

H05 The experts predict implementation of the strategies will occur before the year 2000.

H06 The experts predict implementation of the strategies will not occur before the year 2000.

2. Did the experts predict the strategies would occur by the year 2000? If the mean for the year was seven or less then this indicated that the experts predicted the strategies would be in place before the year 2000. The following hypothesis was developed to test this research question:

H07 The experts predict implementation of the strategies will occur before the year 2000.

H08 The experts predict implementation of the strategies will not occur before the year 2000.
3. Did the experts' responses show a higher degree of consensus on the third round than on the second round. The standard deviation indicates variance of responses from the mean in the same units as the mean. T-tests were used to determine if the standard deviations from round 3 indicated a higher degree of consensus than the standard deviations from round 2, at the <.05 level of confidence. The following hypothesis was developed to test this research question:

H06 The experts' responses will not indicate a higher degree of consensus in the third round than in the second round.

H6 The experts' responses will indicate a higher degree of consensus in the third round than in the second round.

4. Were there divergences between what the experts predicted was desirable and what they predicted was probable? Paired t-tests of the means of the desirability and probability scales from round 3 were computed at the <.05 and <.01 levels of significance. The following hypothesis was developed to test this research question:

H07 There will be no significant divergence between what the experts predict is desirable and what they predict is probable for the majority of statements.

H7 There will be a significant divergence between what the experts predict is desirable and what they predict is probable for the majority of statements.
5. Qualitative feedback was provided from individuals who ranked a statement outside the group's standard deviation.

Participation by the experts was crucial to the results of the study. Therefore the following steps were implemented to encourage the experts to participate. A letter was mailed to the experts inviting them to participate in the study. This letter identified the proposed dates of the mailing of rounds two and three as well as the estimated length of time for completing each round. Non-respondents to rounds two and three were contacted by telephone three weeks after the opinionnaires had been mailed out to encourage the individuals to respond.
Chapter IV

RESULTS

This chapter provides the results to the modified-Delphi study. A total of forty-five experts on employee fitness and healthy lifestyles were contacted for this study. Introductory letters were mailed out to the experts to inform them of this study and to encourage their participation (Appendix A). Round 1 of the modified-Delphi study involved audio-interviews with eight experts: four from a pool of forty-one experts and four from outside the pool of experts. Two experts from each of the following categories were interviewed: academicians, practitioners, consultants, and an employee of the government or a national organization. The audio-interviews were recorded and followed a set format (Appendix B).

Responses were computed to form round two of the modified-Delphi into an opinionnaire. The second mailing to the experts included a cover letter (Appendix C) and the opinionnaire with its instructions (Appendix D).

A sixty-two percent response rate was received from round two. Using the SPSSX statistical package, responses from
round number two were computed. Means and standard deviations were computed for each scale and this information was sent out to the thirty-seven experts as the third and final round of the study. This mail out consisted of a cover letter—one specific to the experts who responded in round two (Appendix E) and another specific to the experts who did not respond in round two (Appendix F)—and the third round opinionnaire (Appendix G). Twenty-five or sixty-eight percent of the experts responded to round three.

In total, thirty-two of the thirty-seven experts responded to at least one of the rounds of the opinionnaires. Therefore, a combined eighty-six percent of the experts had input into rounds two and/or three of the study.

Both the audio-interview and the opinionnaire were pilot-tested. The audio-interview was conducted with the Director of Human Resources at a local company which is provincially recognized for its employee fitness program (A Decision Makers Guide to Employee Fitness at the Workplace, 1984). The opinionnaire was pilot-tested by twelve graduate students from the Human Kinetics Faculty, University of Windsor. Seventy-five percent of the opinionnaires were completed and returned.
4.1 Research Question One: Strategy Implementation

The first research question for this study was, "Do the experts predict implementation of the strategies developed at the Summit?"

To identify if the experts' predicted implementation of the strategies developed at the Summit, t-tests were employed. The t-tests were computed for each scale using "3" as the neutral measure or average point on the scales with which to compare the group means. Group means must be greater than three at the <.05 level of significance on both the desirability and probability scales, in order to indicate that the experts predict implementation of a strategy. Certainty of an event to occur is increased if the experts not only predict an event is desirable, but that they predict the event is also probable.

Strategies three and four were separated into two and and three statements, respectively, on the opinionnaire. The group means must be greater than three on both the desirability and probability scales for each of the statements pertaining to the strategy. If these criteria are met, then the experts predict implementation of the particular strategy.
4.1.1 Strategy One: Legislation

Legislation be enacted to encourage lifestyle and fitness-promoting facilities in the workplace. (Legislation) (Fitness • • • the Future, 1986: 12)

The mean response of the experts on the desirability scale for strategy one was 4.00, which is greater than three at the .05 level of significance. The mean response for the probability scale was 2.04 which is not greater than three (Table 1).

<p>| Table 1: Strategy 1: Legislation |</p>
<table>
<thead>
<tr>
<th>Scale</th>
<th>n</th>
<th>Mean</th>
<th>T Value</th>
<th>Probability</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Des.</td>
<td>25</td>
<td>4.00</td>
<td>5.77</td>
<td>0.000</td>
<td>*</td>
</tr>
<tr>
<td>Pro.</td>
<td>25</td>
<td>2.04</td>
<td>-5.71</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

* Significantly greater at the .05 level.

The results of the t-test indicated that the first null hypothesis stated as:

H0: The experts will predict implementation of strategy on (legislation) developed at the Summit;

was rejected and the corresponding alternative hypothesis was accepted.
4.1.2 Strategy Two: Incentives

A program of incentives be developed and implemented for employers and employee aimed at rewarding fitness and healthy lifestyles. (Incentives). (Fitness . . . the Future, 1986: 12)

The mean response of the experts in regards to the desirability of strategy two was 4.24 which is significantly greater than three at the .05 level. The mean response for the probability scale was 2.88 which is not greater than three (Table 2).

<table>
<thead>
<tr>
<th>Table 2: Strategy 2: Incentives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Des.</td>
</tr>
<tr>
<td>Pro.</td>
</tr>
</tbody>
</table>

*Significantly greater at the <.05 level.

The results of the t-tests indicated that the second null hypothesis stated as:

$$H_{02} \text{ The experts will not predict implementation }$$

$$\% \text{ of strategy two (incentives) developed at the Summit}$$

was rejected and the corresponding alternative hypothesis was accepted.
4.1.3 **Strategic Three: Research and Development**

A comprehensive program of research and development be initiated to identify state of the art programs of employee fitness and lifestyle programs, and to develop appropriate models and test market these models in target establishments. (Research and Development) (Fitness * • • • the Future, 1986: 12)

This strategy was divided into the following two statements on the opinionnaire: a) research and development initiated to identify state of the art programs; and, b) the development of appropriate models and test market the models in target establishments. Both statements pertaining to strategy three were ranked as desirable and probable. The means for part one were 4.43 and 3.72 for desirability and probability respectively. Both the means are greater than three at the .05 level of significance. The means for part two were 4.16 and 3.52 for desirability and probability respectively, both are greater than three at the .05 level of significance (Table 3).

The results of the t-tests indicated that the third null hypothesis stated as:

**H03** The experts will predict implementation of strategy three (research and development) developed at the Summit;

was rejected. Therefore, the decision "Fail to Reject" was made for the third null hypothesis.
Table 3: Strategy 3: Research and Development

<table>
<thead>
<tr>
<th>Scale</th>
<th>n</th>
<th>Mean</th>
<th>T Value</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (state of the art programs)</td>
<td>Des.</td>
<td>25</td>
<td>4.46</td>
<td>7.96</td>
</tr>
<tr>
<td></td>
<td>Pro.</td>
<td>25</td>
<td>3.72</td>
<td>3.52</td>
</tr>
<tr>
<td>B (model programs)</td>
<td>Des.</td>
<td>25</td>
<td>4.16</td>
<td>4.75</td>
</tr>
<tr>
<td></td>
<td>Pro.</td>
<td>25</td>
<td>3.52</td>
<td>2.70</td>
</tr>
</tbody>
</table>

*Significantly greater at the <.05 level.

4.1.4 Strategy Four: Target Markets

A comprehensive program be developed and implemented to promote fitness and healthy lifestyles in the workplace with special emphasis on small- and medium-sized establishments and male and female blue collar workers. (Target Markets) (Fitness... the Future, 1986: 12)

The statements pertaining to this strategy were divided into three parts to allow the experts to separately rank small-sized establishments, medium-sized establishments, and blue collar workers. The means for desirability for each of the three categories were as follows: small-sized establishments-4.56, medium-sized establishments-4.56, and blue collar workers-4.52 which are all significantly greater than 3 at the .05 level of significance. The means for the probability scales for the three categories were the following: small sized establishments-3.12, medium-sized
establishments-3.36, and blue collar workers-3.24. The medium-sized establishment is the only category that ranks significantly greater than three at the .05 level of significance (Table 4).

<table>
<thead>
<tr>
<th></th>
<th>Scale</th>
<th>n</th>
<th>Mean</th>
<th>T Value</th>
<th>Probability</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (small-sized establishments)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Des*</td>
<td>25</td>
<td>4.56</td>
<td>11.99</td>
<td>0.000*</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Pro*</td>
<td>25</td>
<td>3.12</td>
<td>0.77</td>
<td>0.450</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B (medium-sized establishments)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Des*</td>
<td>25</td>
<td>4.56</td>
<td>13.36</td>
<td>0.000</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Pro*</td>
<td>25</td>
<td>3.36</td>
<td>2.38</td>
<td>0.026</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C (blue-collar workers)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Des*</td>
<td>25</td>
<td>4.52</td>
<td>11.64</td>
<td>0.000</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Pro*</td>
<td>25</td>
<td>3.24</td>
<td>1.44</td>
<td>0.161</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significantly greater at the <.05 level.

The results of the t-tests indicated that the fourth null hypothesis stated as:

H04 The experts will predict implementation of strategy four (target markets) developed at the Summit;

was rejected and the corresponding alternative hypothesis was accepted.

A summary of the desirability mean scores and the probability mean scores are shown in Tables 5 and 6 respectively.
Table 5: Summary of Desirability Mean Scores

<table>
<thead>
<tr>
<th>Strategy</th>
<th>n</th>
<th>Mean</th>
<th>T Value</th>
<th>Probability</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25</td>
<td>4.00</td>
<td>3.77</td>
<td>0.000</td>
<td>*</td>
</tr>
<tr>
<td>2</td>
<td>25</td>
<td>4.24</td>
<td>6.39</td>
<td>0.000</td>
<td>*</td>
</tr>
<tr>
<td>3 A</td>
<td>25</td>
<td>4.48</td>
<td>7.96</td>
<td>0.000</td>
<td>*</td>
</tr>
<tr>
<td>3 B</td>
<td>25</td>
<td>4.16</td>
<td>4.65</td>
<td>0.000</td>
<td>*</td>
</tr>
<tr>
<td>4 A</td>
<td>25</td>
<td>4.56</td>
<td>11.99</td>
<td>0.000</td>
<td>*</td>
</tr>
<tr>
<td>4 B</td>
<td>25</td>
<td>4.56</td>
<td>13.38</td>
<td>0.000</td>
<td>*</td>
</tr>
<tr>
<td>4 C</td>
<td>25</td>
<td>4.52</td>
<td>11.64</td>
<td>0.000</td>
<td>*</td>
</tr>
</tbody>
</table>

*Significantly greater at the <.01 level.

Table 6: Summary of Probability Mean Scores

<table>
<thead>
<tr>
<th>Strategy</th>
<th>n</th>
<th>Mean</th>
<th>T Value</th>
<th>Probability</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25</td>
<td>2.04</td>
<td>3.07</td>
<td>0.030</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>25</td>
<td>2.88</td>
<td>-0.59</td>
<td>0.550</td>
<td></td>
</tr>
<tr>
<td>3 A</td>
<td>25</td>
<td>3.78</td>
<td>3.52</td>
<td>0.002</td>
<td>*</td>
</tr>
<tr>
<td>3 B</td>
<td>25</td>
<td>3.52</td>
<td>2.70</td>
<td>0.012</td>
<td>*</td>
</tr>
<tr>
<td>4 A</td>
<td>25</td>
<td>3.12</td>
<td>0.77</td>
<td>1.450</td>
<td></td>
</tr>
<tr>
<td>4 B</td>
<td>25</td>
<td>3.36</td>
<td>2.38</td>
<td>0.026</td>
<td>*</td>
</tr>
<tr>
<td>4 C</td>
<td>25</td>
<td>3.24</td>
<td>1.44</td>
<td>0.161</td>
<td></td>
</tr>
</tbody>
</table>

*Significantly greater at the <.05 level.

4.2 Research Question Two: Year Predictions

The second research question was, "Do the experts predict implementation of the strategies will occur before the year 2000?". The experts' responses to the year scales for the four strategies indicate they predict implementation of the strategies to occur before the year 2000 (Table 7).
Table 7: Summary of Year Mean Scores

<table>
<thead>
<tr>
<th>Strategy</th>
<th>n</th>
<th>Mean</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25</td>
<td>5.96</td>
<td>1998</td>
</tr>
<tr>
<td>2</td>
<td>25</td>
<td>3.64</td>
<td>1993</td>
</tr>
<tr>
<td>3 A</td>
<td>25</td>
<td>2.52</td>
<td>1991</td>
</tr>
<tr>
<td>3 B</td>
<td>25</td>
<td>2.87</td>
<td>1992</td>
</tr>
<tr>
<td>4 A</td>
<td>25</td>
<td>3.92</td>
<td>1994</td>
</tr>
<tr>
<td>4 B</td>
<td>25</td>
<td>3.32</td>
<td>1993</td>
</tr>
<tr>
<td>4 C</td>
<td>25</td>
<td>3.96</td>
<td>1994</td>
</tr>
</tbody>
</table>

The fifth null hypothesis stated as:

$H_0:5$ The experts predict implementation of the strategies will occur before the year 2000;

was not rejected. Therefore, the decision, "Fail to Reject" was made for the fifth null hypothesis.

4.3 Research Question Three: Degree of Consensus

The third research question was, "Will the experts show a higher degree of consensus in the third round than in the second round?". Degree of consensus was measured by the average of the standard deviations for each scale in rounds two and three.

The opinionnaire consisted of a total of 168 scales—56 in each of the desirability, probability, and year scales. The mean of the standard deviations for both rounds two and
three were 1.6190 and 1.1244, respectively. A paired t-test was computed. The standard deviation mean for round three was significantly less at the .01 level of confidence than the standard deviation mean for round two (Table 8).

<table>
<thead>
<tr>
<th>Table 8: Rate of Consensus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paired T-test Standard Deviation Means Rounds 2 and 3</td>
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<tr>
<td>Round n</td>
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<tr>
<td>SD2</td>
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<tr>
<td>SD3</td>
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<tr>
<td>SD2&gt;SD3 at the &lt;.01 confidence level.</td>
</tr>
</tbody>
</table>

The results of the paired t-test indicated that the sixth null hypothesis stated as:

H06 The experts responses will not indicate a higher degree of consensus in the third round than in the second round;

was rejected and the corresponding alternative hypothesis was accepted.
4.4 Research Question Four: Desirability and Probability Divergences

The fourth research question was, "Will there be divergences between what the experts predict is desirable and what the experts predict is probable?". Paired t-tests were computed between the round three means of the desirability and probability scales for the fifty-six statements. Forty-nine statements or 87 percent showed a significant difference between what the experts ranked for the desirability scales and what they ranked for the probability scales at the .05 level of confidence (30 percent of the 87 percent were significantly different at the .01 level of confidence). Seven statements or thirteen of the statements showed no significant differences between the experts rankings of the desirability and probability scales. The seven statements with no significant difference between the desirability and probability scales are: 2, 4, 5 b., 9, 23, 31, and 40.

The results of the paired t-tests for the 56 statements indicate that the seventh null hypothesis stated as:

H07 There will be no significant divergence between what the experts predict is desirable and what they predict is probable for the majority of statements;

was rejected and the corresponding alternative hypothesis was accepted.
A summary of the hypotheses testing can be found in Table 9.

The opinionnaire addresses the four specific strategies developed at the Summit. Statements generated from the audio-interviews regarding the strategies in terms of why, who, when, and where are also included on the opinionnaire. These statements provide a broader perspective for each strategy. Other statements on the opinionnaire were issues brought up in the interviews and in the review of literature.

In the third round of the modified-Delphi study, the experts were asked to re-rank the statements in light of the information provided from round two—the group means and standard deviations for each scale. If an expert's response in the third round was outside the group standard deviation, he/she was asked to state the reason why he/she responded in such a manner.

The following list provides information generated from Round 3 of the opinionnaire:

- 45 statements divided into five main areas:
  - legislation
  - incentives
  - research and development
  - target markets
  - other issues
Table 2: Summary of Hypotheses and Decisions

The first four hypotheses and decisions correspond to the first research question.  
1) Do the experts predict implementation of the strategies developed at the Summit?

H01 The experts will predict implementation of strategy one (legislation) developed at the Summit.  
\[ \text{REJECTED} \]

H1 The experts will not predict implementation of strategy one (legislation) at the Summit.  
\[ \text{ACCEPTED} \]

H02 The experts will predict implementation of strategy two (incentives) developed at the Summit.  
\[ \text{REJECTED} \]

H2 The experts will not predict implementation of strategy two (incentives) developed at the Summit.  
\[ \text{ACCEPTED} \]

H03 The experts will predict implementation of strategy three (research and development) developed at the Summit.  
\[ \text{FAIL TO REJECT} \]

H04 The experts will predict implementation of strategy four (target markets) developed at the Summit.  
\[ \text{REJECTED} \]

H4 The experts will not predict implementation of strategy four (target markets) developed at the Summit.  
\[ \text{ACCEPTED} \]

The next hypothesis and decision corresponds to the second research question.  
2) Do the experts predict implementation of the strategies will occur before the year 2000?

H05 The experts predict implementation of the strategies will occur before before the year 2000.  
\[ \text{FAIL TO REJECT} \]

The next hypothesis and decision corresponds
to the third research question.
3) Will the experts' responses show a higher degree of consensus in the third round than in the second round?

H06 The experts' responses will not indicate REJECTED a higher degree of consensus in the third round than in the second round.

H6 The experts' responses will indicate a ACCEPTED higher degree of consensus in the third round than in the second round.

The seventh hypothesis corresponds to the fourth research question.
4) Will there be a divergence between what the experts predict is desirable and what the experts predict is probable in the majority of statements?

H07 There will be no significant divergence REJECTED between what the experts predict is desirable and what they predict is probable for the majority of statements.

H7 There will be a significant divergence ACCEPTED between what the experts predict is desirable and what they predict is probable for the majority of statements.

- the experts' group mean and standard deviation for the desirability, probability, and year scales for each statement;
- the interpretation of the group mean for the year scale;
- the probability level of the paired t-test computed between the the desirability and probability scales for each statement;
the level of confidence to indicate if the desirability and probability scales are significantly different; and, the experts' qualitative feedback.
Opinionnaire Results
Legend for table:

Scales:

Desirability

0-----1-----2-----3-----4-----5
No Not Desirable Very
Answer Desirable Desirable

Probability

0-----1-----2-----3-----4-----5
No Not Probable Very
Answer Probable Probable

Year
1 2 3 4 5 6 7 8 9

SD = Standard Deviation
QF = Qualitative Feedback
PL = Probability Level (Paired t-tests between desirability and probability scales)
* <=.05 level of confidence
** <=.01 level of confidence

LEGISLATION

1. Legislation will be enacted by the Federal government to encourage the implementation of facilities at the workplace for fitness and lifestyle programs.

Desirability: Mean 4.00 SD .666
Probability: Mean 2.04 SD .341
Year: Mean 5.96 SD 2.110 Year 1993
PL: .000 **
QF: -don't like government involvement

2. Practitioners of employee fitness and healthy lifestyle programs will consider utilizing existing facilities and the environment before considering building new on-site facilities.

Desirability: Mean 3.36 SD 1.075
Probability: Mean 3.52 SD .915
Year: Mean 2.60 SD 2.566 Year 1991
PL: .304
QF: -small target markets
- offsite management more economical
3. Unions will play a greater role in implementing the employee fitness and healthy lifestyle programs.

Desirability: Mean 3.80  SD 1.90
Probability: Mean 3.52  SD .909
Year: Mean 2.00  SD 2.179  Year 1993
PL: .017 ✱

QF: -desirable if not used as a bargaining position

4. Decisions regarding the implementation of an employee fitness and healthy lifestyle program will be made by C.E.O.'s (Chief Executive Officers).

Desirability: Mean 4.04  SD .935
Probability: Mean 3.64  SD .757
Year: Mean 2.16  SD 1.675  Year 1990
PL: .076

QF: -not realistic
- -desirable if employee and line management involved
- general initial decision from employee response

5. Decisions regarding the implementation of an fitness and healthy lifestyle program will be made by:

a) the employees

Desirability: Mean 4.08  SD .704
Probability: Mean 2.56  SD .970
Year: Mean 3.24  SD 1.985  Year 1992
PL: .000 ✱✱

QF: -it happening now

b) the union

Desirability: Mean 2.96  SD 1.172
Probability: Mean 2.68  SD .863
Year: Mean 4.04  SD 1.974  Year 1994
PL: .337

c) both the employees and the union

Desirability: Mean 4.08  SD .954
Probability: Mean 3.36  SD .569
Year: Mean 3.52  SD 1.947  Year 1993
PL: .002 **
QF: -union input only if required
    -and management

6. Legislation will be enacted by provincial government to encourage employees to participate in the employee fitness and healthy lifestyle programs.

Desirability: Mean 3.66 SD 1.030
Probability: Mean 1.88 SD .927
Year: Mean 5.24 SD 2.350 Year 1996
PL: .000 **
QF: -happened already, Wintario funds for employee fitness facility
    -desirable for straightforward health reasons
    -present Alberta government "suggestion"

INCENTIVES

7. A program of incentives will be developed and implemented for employers and employees aimed at rewarding fitness and healthy lifestyles.

Desirability: Mean 4.24 SD .970
Probability: Mean 2.88 SD 1.013
Year: Mean 3.64 SD 1.254 Year 1993
PL: .000 **
QF: -in place, CCC Award
    -in one form or another is already being done
    -personal profound decision

8. Incentives will be provided for the employer by the federal government in the form of tax breaks or tax write-offs.

Desirability: Mean 4.40 SD .616
Probability: Mean 2.24 SD .663
Year: Mean 5.52 SD 1.531 Year 1997
PL: .000 **

9. Incentives will be provided for the employer by the provincial government in the form of recognition (i.e. an awards banquet and plaque).

Desirability: Mean 4.00 SD 1.55
Probability: Mean 3.72 SD .678
Year: Mean 2.28 SD 1.339 Year 1992
PL: .200
QF: -no long run benefit
10. Incentives will be provided for the employee who practices a healthy lifestyle by the employer in any of the following ways: monetary reward, recognition, and time off work.

Desirability: Mean 3.96 SD .978
Probability: Mean 2.44 SD .870
Year: Mean 3.92 SD 1.498 Year 1994
PL: .000 **
QF: -does not promote intrinsic motivation
-participation may drop out with the removal of extrinsic reward

11. Incentives will be provided for the employee by the Federal government, in the form of a tax write-off for fees to join and participate in a fitness and healthy lifestyle program.

Desirability: Mean 3.84 SD .746
Probability: Mean 1.52 SD .596
Year: Mean 7.00 SD 2.217 Year 2000
PL: .000 **
QF: -the idea is too appealing to wait until 2000

12. Incentives will be provided in the form of a "bonus" to participating employees rather, not as a punishment to non-participants.

Desirability: Mean 4.26 SD .792
Probability: Mean 2.40 SD .913
Year: Mean 4.52 SD 2.023 Year 1995
PL: .000 **

13. Communities and/or municipal governments will provide incentives to local companies for their efforts in implementing employee fitness and healthy lifestyle programs.

Desirability: Mean 3.88 SD .927
Probability: Mean 1.88 SD .645
Year: Mean 6.56 SD 1.635 Year 1999
PL: .000 **
QF: -keep out government at all levels

14. Incentives will increase the number of employees participating in fitness and healthy lifestyle programs.

Desirability: Mean 3.84 SD .598
Probability: Mean 3.36 SD .560
15. Incentives provided for employees who participate in employee fitness and healthy lifestyle programs will contribute to the healthy lifestyle movement in Canada.

| Desirability | Mean 4.00 | SD 0.816 |
| Probability  | Mean 3.48 | SD 0.653 |
| Year         | Mean 4.36 | SD 1.287 |

QP: -only short term benefits -incentives always increase participation

QP: -we cannot rely on extrinsic incentives to do this

16. Research and development will be implemented to identify state of the art employee fitness and lifestyle programs.

| Desirability | Mean 4.48 | SD 0.963 |
| Probability  | Mean 3.72 | SD 1.021 |
| Year         | Mean 2.52 | SD 1.159 |

QP: -money should not be spent on what is already known

17. Research and development will be implemented to develop appropriate models and to test market these models in target establishments.

| Desirability | Mean 4.16 | SD 1.248 |
| Probability  | Mean 3.52 | SD 0.963 |
| Year         | Mean 2.84 | SD 1.700 |

QP: -000 **

18. The research and development will be done under the leadership of the Federal government by a task force consisting of multi-disciplined professional, i.e., physicians, fitness leaders, recreationists, ergonomists, health professional, wellness experts, union leaders.

| Desirability | Mean 4.04 | SD 1.136 |
| Probability  | Mean 3.20 | SD 0.816 |
| Year         | Mean 3.04 | SD 1.620 |

QP: -000 **
QF: don't like government involvement
these federal agencies are in place,
still not much has improved

19. The research will include both control and experimental groups.

Desirability: Mean 4.60  SD 1.913
Probability: Mean 3.06  SD 1.077
Year: Mean 3.40  SD 1.683  Year 1993
PL:  .000 **
QF: not always the approach utilized by the Federal government.

20. The research will be carried out with combined financial resources from the Canadian Fitness and Lifestyle Research Institute and corporate funds.

Desirability: Mean 3.66  SD 1.600
Probability: Mean 2.66  SD 1.190
Year: Mean 4.28  SD 2.208  Year 1995
PL:  .000 **

QF: desirable, especially if the Quebec government involved.

21. The research will be done in all different geographical regions in Canada. i.e. Atlantic, Quebec, Ontario, and Western provinces and Territories.

Desirability: Mean 4.20  SD 1.443
Probability: Mean 2.76  SD 1.052
Year: Mean 4.40  SD 1.915  Year 1995
PL:  .000 **

QF: desirable, especially if the Quebec government involved.

22. The research will be done in different types of industries. i.e. service and manual labour labour companies.

Desirability: Mean 4.48  SD 1.262
Probability: Mean 3.20  SD 1.155
Year: Mean 4.04  SD 1.859  Year 1994
PL:  .000 **

23. The research will be done in both rural and urban settings.

Desirability: Mean 4.36  SD 1.287
Probability: Mean 2.60  SD 1.080
Year: Mean 4.52  SD 1.782  Year 1995
PL: .000 **
QF: research should be started A.S.A.P.

24. Models will be developed which will provide measurable results.

Desirability: Mean 4.48 SD 1.046
Probability: Mean 2.80 SD 1.080
Year: Mean 4.52 SD 1.782 Year 1995
PL: .000 **

25. Longitudinal research will be conducted.

Desirability: Mean 4.44 SD .374
Probability: Mean 2.72 SD .543
Year: Mean 4.52 SD 1.806 Year 1995
PL: .000 **
QF: no indication of such a trend in Canada, yet
    it's important

26. The research will provide results to help justify employee fitness and lifestyle programs.

Desirability: Mean 4.64 SD .970
Probability: Mean 3.36 SD 1.714
Year: Mean 4.00 SD 1.607 Year 1994
PL: .001 **
QF: this information exists… why spend more money, knowledge for knowledge sake?
    not unless better experimental design is used
    justify in what sense? money, spirits, etc.

TARGET MARKETS

27. A comprehensive program will be developed and implemented to promote fitness and healthy lifestyles in the workplace with special emphasis on:

a) small-sized establishments

Desirability: Mean 4.56 SD .651
Probability: Mean 3.12 SD .741
Year: Mean 3.92 SD 1.605 Year 1994
PL: .000 **
QF: in British Columbia especially

b) medium-sized establishments
Desirability: Mean 4.56 SD .651
Probability: Mean 3.36 SD .757
Year: Mean 3.32 SD 1.547 Year 1993
PL:.000 **

c) large-sized establishments

Desirability: Mean 4.36 SD .700
Probability: Mean 3.80 SD 1.000
Year: Mean 2.29 SD 1.552 Year 1992
PL:.016 *

QF: emphasis is (on paper) towards blue collar workers and small businesses
already saturated

d) blue collar workers

Desirability: Mean 4.52 SD .633
Probability: Mean 3.24 SD .831
Year: Mean 3.96 SD 1.513 Year 1994
PL:.000 **

e) pink collar workers

Desirability: Mean 4.36 SD 1.114
Probability: Mean 3.12 SD 1.054
Year: Mean 3.84 SD 1.586 Year 1994
PL:.000 **

OTHER_ ISSUES

28. The federal government will create the awareness and promotional packages used to attract companies to implement employee fitness and healthy lifestyle programs.

Desirability: Mean 4.16 SD 1.106
Probability: Mean 3.72 SD .792
Year: Mean 2.12 SD .833 Year 1990
PL:.149

QF: keep government out at all levels	hey attempt to do this now but on a limited basis; poor marketing
hasn't worked well yet

29. The "how to" assistance for implementing employee fitness and healthy lifestyle programs will come from the public and private sectors, i.e. consultants, YMCA's, private clubs, universities, and hospitals.
Desirability: Mean 4.48  SD .323
Probability: Mean 3.56  SD 1.193
Year: Mean 2.28  SD 1.793  Year 1991
PL: .000 **
QF: only desirable if these consultants are professionals
- they may design such programs, but it will be used to market their "product" not the "concept", employers will be making a decision therefore on a set product/program and its suitability to their company
-the government has to sell the concept first

30. Employee fitness and healthy lifestyle programs will be co-ordinated to utilize the company's health, recreation, fitness, medical, and counselling personnel.

Desirability: Mean 4.84  SD .374
Probability: Mean 3.32  SD .988
Year: Mean 2.92  SD 1.730  Year 1992
PL: .000 **
QF: slow evolution
-being done in some companies now

31. Companies will start with small, manageable fitness and healthy lifestyle programs and will be co-ordinated by the occupational nurse from the health department.

Desirability: Mean 2.68  SD 1.249
Probability: Mean 2.40  SD .810
Year: Mean 3.48  SD 2.400  Year 1995
PL: .283
QF: nurses know nothing on health, 50%+ smoke
-these individuals do not necessarily possess the requisite skills to promote and develop such programs
-being done in some companies now
-desirable in small ones with limited resources if nurse gets extra specific training in fitness and health promotion

32. Because fitness is perceived as a positive approach to lifestyle change, companies will emphasize fitness to attract employees to their fitness and healthy lifestyle programs.
Desirability: Mean 3.92 SD .909
Probability: Mean 3.12 SD .633
Year: Mean 2.40 SD 1.555 Year 1991
PL: .001 **

QF: -fitness provides a limited focus and approach, other options such as nutritional counselling relaxation training, etc., should be offered

33. All Canadian companies will have at least an awareness of the benefits of employee fitness and healthy lifestyle programs.

Desirability: Mean 4.80 SD .408
Probability: Mean 2.76 SD 1.052
Year: Mean 4.48 SD 1.328 Year 1995
PL: .000 **

34. All Canadian companies will offer some type of employee fitness and healthy lifestyle programs:

a) small-sized establishments

Desirability: Mean 7.60 SD .645
Probability: Mean 1.44 SD .651
Year: Mean 7.72 SD 1.458 Year +2000
PL: .000 **

b) medium-sized establishments

Desirability: Mean 4.52 SD .714
Probability: Mean 2.04 SD .790
Year: Mean 7.05 SD 1.312 Year 2000
PL: .000 **

c) large-sized establishments

Desirability: Mean 4.64 SD .638
Probability: Mean 2.60 SD .913
Year: Mean 6.24 SD 1.535 Year 1995
PL: .000 **

35. In house counsellors and ergonomists and medical, fitness, and health professionals will work together as an integrated team to provide a fitness and healthy lifestyle program.

Desirability: Mean 4.68 SD .852
Probability: Mean 2.52 SD .653
These professionals will be considered on the same management level as other benefit staff members within a company.

Desirability: Mean 4.32 SD 0.898
Probability: Mean 2.52 SD 0.770
Year: Mean 5.20 SD 1.780 Year 1996
PL: 0.000 **
QF: "dreams"
-will eventually

Research will be conducted to identify the components of wellness programs (nutritional counselling, fitness, smoking cessation, substance abuse, etc.) that most affect positive behaviour changes.

Desirability: Mean 4.32 SD 0.652
Probability: Mean 3.20 SD 0.666
Year: Mean 3.88 SD 1.201 Year 1994
PL: 0.000 **
QF: "need about 10,000 participant studies to do this"

There will be education programs offered at the post secondary level which will provide a broader education to prospective employee fitness and healthy lifestyle program staff members (i.e., public relations, leadership, fitness appraisal and presentation skills; and knowledge of ergonomics, health, recreation, and behaviour modification.

Desirability: Mean 4.72 SD 0.456
Probability: Mean 3.24 SD 0.831
Year: Mean 3.44 SD 1.227 Year 1993
PL: 0.000 **
QF: "George Brown College has a program"

Chief executive officers will be educated toward the benefits of fitness and healthy lifestyle programs by the government, boards of trade and the Canadian Chamber of Commerce.

Desirability: Mean 4.28 SD 0.723
Probability: Mean 3.88 SD 0.927
Year: Mean 2.24  SD 1.363  Year 1990
PL: \*000 **
QF: -it's happening now

40. Companies will use their employee fitness and healthy lifestyle programs as a tool to recruit prospective employees to their particular company.

Desirability: Mean 4.24  SD 0.723
Probability: Mean 3.88  SD 0.927
Year: Mean 2.24  SD 1.373  Year 1990
PL: \*059

41. A national organization will be established for employee fitness and healthy lifestyle practitioners.

Desirability: Mean 4.44  SD 0.961
Probability: Mean 3.52  SD 0.918
Year: Mean 2.76  SD 1.508  Year 1992
PL: \*001 **
QF: -I'm afraid!
-they are looking into it
-please may it be Canadian!

42. Employee fitness and healthy lifestyle programs will encourage employees to participate in healthy practices:

a) at the workplace

Desirability: Mean 4.60  SD 0.957
Probability: Mean 4.08  SD 0.640
Year: Mean 1.96  SD 0.841  Year 1990
PL: \*020 *

b) at home

Desirability: Mean 4.64  SD 0.700
Probability: Mean 3.56  SD 0.712
Year: Mean 2.16  SD 0.987  Year 1990
PL: \*000 **

c) in the community

Desirability: Mean 4.64  SD 0.569
Probability: Mean 3.32  SD 0.852
Year: Mean 2.32  SD 0.988  Year 1991
PL: \*000 **
d) both at home and in the community

<table>
<thead>
<tr>
<th></th>
<th>Desirability:</th>
<th>Probability:</th>
<th>Year:</th>
<th>PL:</th>
</tr>
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<tr>
<td></td>
<td>Mean 4.48</td>
<td>Mean 3.48</td>
<td>Mean 2.28</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>SD .714</td>
<td>SD .823</td>
<td>SD .936</td>
<td>*1991</td>
</tr>
</tbody>
</table>

43. Employee fitness and healthy lifestyle programs will be viewed and implemented based upon how the programs fit into the "total fitness" perspective in Canada.

<table>
<thead>
<tr>
<th></th>
<th>Desirability:</th>
<th>Probability:</th>
<th>Year:</th>
<th>PL:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean 3.44</td>
<td>Mean 2.72</td>
<td>Mean 4.00</td>
<td>.002</td>
</tr>
<tr>
<td></td>
<td>SD .961</td>
<td>SD .737</td>
<td>SD 1.607</td>
<td>*1994</td>
</tr>
</tbody>
</table>

QF: what is the total fitness perspective in Canada?
- whatever is the best mix
- private entrepreneurship voids any control

44. Healthy lifestyles developed through employee fitness programs will be retained into post retirement years.

<table>
<thead>
<tr>
<th></th>
<th>Desirability:</th>
<th>Probability:</th>
<th>Year:</th>
<th>PL:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean 4.76</td>
<td>Mean 3.55</td>
<td>Mean 3.80</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>SD .323</td>
<td>SD .533</td>
<td>SD 1.607</td>
<td>*1994</td>
</tr>
</tbody>
</table>

QF: already effective
- its happening now with many individuals

45. Employee fitness and healthy lifestyle programs will be marketed to and available for retired employees.

<table>
<thead>
<tr>
<th></th>
<th>Desirability:</th>
<th>Probability:</th>
<th>Year:</th>
<th>PL:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean 4.60</td>
<td>Mean 3.35</td>
<td>Mean 3.40</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>SD .577</td>
<td>SD .757</td>
<td>SD 1.414</td>
<td>*1993</td>
</tr>
</tbody>
</table>

QF: available at Shell Canada.
- it is a company benefit present in some companies
Chapter V
DISCUSSION

5.1 Results, Conclusions, and Implications

The purpose of this study was to provide expert predictions of the Canadian employee fitness and healthy lifestyle field. The Canadian Summit on Fitness was held in June 1986. Strategies were developed for the fitness field in Canada to reach a stated goal by the year 2000. Four of the strategies developed at the Summit which pertain specifically to employee fitness and healthy lifestyles were investigated in the study.

5.1.1 Research Question One: Strategy Implementation

The first research question in this study was, "Do the experts predict implementation of the strategies developed at the Summit?". The four strategies developed at the Summit were:

1. Legislation be enacted to encourage lifestyle and fitness-promoting facilities in the workplace. (Legislation)

2. A program of incentives be developed and implemented for employers and employees aimed at rewarding fitness and healthy lifestyles. (Incentives)
3. A comprehensive program of research and development be initiated to identify and evaluate the state of the art of employee fitness and lifestyle programs, to develop appropriate models and test market these models in target establishments. (Research and Development)

4. A comprehensive program be developed and implemented to promote fitness and healthy lifestyles in the workplace with special emphasis on small- and medium-sized establishments, and male and female blue-collar workers. (Target Markets)

(Fitness . . . the Future, 1986: 12)

5.1.1.1 Strategy One: Legislation

Strategy one concerning legislation was considered by the experts to be desirable but not probable. The next statement on the opinionnaire suggests utilization of existing facilities before considering new facilities. The desirability group mean was slightly less than the previous statement regarding the implementation of facilities onsite, but the probability group mean was higher. Based on the responses to the two statements regarding facilities, the experts predict it is desirable to have fitness and healthy lifestyle program facilities onsite but it is more probable that existing facilities will be used before building new ones. One of the characteristics of a successful program cited in Employee Fitness in Canada (1936) is a nearby facility. Griffin and Zeigler (1986) also cite the
proximity of the wellness centre to the work stations as being important to a successful program.

The next statements on the opinionnaire pertain to which person or group of people has the most influence over employee fitness and healthy lifestyle programs at the workplace. Chief Executive Officers, employees, and a combination of employees and the union all ranked high on the desirability scale. Unions ranked high on desirability for playing a greater role in the implementation of programs but low on the desirability scale for being the "decision-maker" for programs. One qualitative feedback response suggested union involvement was desirable but only if the union would not use programs as a bargaining position.

Commitment from senior personnel is important to the success of programs (Employee Fitness in Canada, 1986; Horner, 1986). Programs are long term investments, therefore senior management should be involved in decisions regarding the program at all levels of planning. Dillon cites the importance of unions to not only accept programs but for union leaders to become actively involved in programs.

Employee participation in program decision-making was ranked high on the desirability scale but ranked low on the probability scale. Higgins (1986) believes employee input is essential for the "process" stage of evaluation. The
process stage of evaluation provides an opportunity for employees to have input into program development. He suggests employees should be given short questionnaires on a week-to-week basis to identify levels of development and satisfaction.

5.1.1.2 Strategy Two: Incentives

The second strategy concerns a program of incentives to be developed and implemented for employee and employers aimed at rewarding fitness and healthy lifestyles. Experts ranked this strategy as desirable but not as probable. Statement eight suggests the federal government will provide the incentive to the employer in the form of a tax-break. This was viewed by the experts as desirable but not as probable. Statement nine suggests the provincial governments provide the incentive in terms of recognition, a plaque and/or awards ceremony. Experts ranked both the desirable and probable scales high and estimate this will happen between the years 1988 and 1993. Statement ten suggests incentives to be provided by the employer for the employee in any of the following forms: monetary reward, recognition, or time off work. Again, the statement was considered desirable but not very probable. Statement eleven suggests the federal government will provide a tax-break on fees for individuals who join and participate in a fitness and healthy lifestyle
program. This statement was ranked desirable but not probable. Incentives provided to employees in the form of a bonus, but in such a manner that the incentives would not appear as a punishment to non-participants was the essence of statement twelve. Again, desirability ranked high and probability low.

The next three statements concerning incentives received scores indicating both desirability and probability. Statement thirteen suggests communities or municipal governments give incentives to local companies for their efforts in implementing fitness and healthy lifestyle programs. Experts believed this will occur between the years 1996 and 2002. Statement fourteen suggests that incentives will increase the number of participants in fitness and healthy lifestyle programs. Horner (1986) and qualitative feedback comments from this study, warn about the short term effect incentives have on participation. Intrinsically motivated participation lasts longer than extrinsically motivated participation.

Castillo-Salgado (1984) suggests four incentives to be incorporated into the promotion of health programs. These are: education of program benefits; subsidization for participants in the form of tangible rewards; taxation against non-participants; and, regulation, policies designed to com-
pel individuals to participate. The results of the incentive statements form this study indicated some support for subsidization, but not for taxation or regulation.

The incentive program that appears most probable from the choices provided in the opinionnaire is a program in which provincial governments provide incentives to employers in the form of recognition, a plaque and/or awards banquet.

5.1.1.3 Strategy Three: Research and Development

Statements sixteen to twenty-six on the opinionnaire pertain to research and development. Strategy three regarding research and development implemented to identify state of the art programs and to develop appropriate models and test market the models in target establishments, ranked both desirable and probable. Statement eighteen suggests the federal government will take leadership in organizing a task force of multi-disciplined professionals to conduct the research. This statement ranked both desirable and probable. Research utilizing experimental and control groups was ranked highly desirable and probable and will occur, according to the experts estimates, between the years 1989 and 1985. Statement twenty suggested the research will be funded by the Canadian Fitness and Lifestyle Research Institute and corporate funds. The experts agreed this is desirable but not as probable. The following statements ranked high on the desirability scale but low on the probability scale:
- research conducted in different geographical regions in Canada;
- research done in both rural and urban settings;
- research to provide model programs which will produce measurable results; and,
- longitudinal research.

The following statements were also ranked desirable, but they were ranked higher on the probability scale than the previous group of statements:
- research done in different types of industry; and,
- research which will provide results to help justify programs.

The statements concerning research were all ranked desirable. The experts also estimated the research to take place between 1992 and 1995. The most probable kind of research the experts predict will occur is research that involves different types of industries. Promotion of programs should be based on research of the target markets (Griffin and Zeigler, 1986).

5.1.1.4 Strategy Four: Target Markets

Strategy four involves programs to be developed and implemented to promote fitness and healthy lifestyle programs in the workplace with special emphasis on small- and medium-sized establishments and blue collar workers. The
experts felt that programs with special emphasis on these areas was desirable. Medium-sized establishments ranked highest on the probability scale. The experts believe these programs will be in place between 1993 and 1994. Large-sized establishments ranked lower on the desirability scale than the other options but higher on the probability scale.

Employee fitness and healthy lifestyle programs are offered more frequently in finance and administrative companies, followed by manufacturing, trade, and commerce. Large companies offer the most extensive programs in Canada (Employee Fitness in Canada, 1986). Therefore, the desire for programs to be developed for smaller companies and non-white collar workers is anticipated.

5.1.1.5 Summary of the Four Strategies

Of the four strategies tested in this study, strategy three was ranked both desirable and probable by the experts. Strategy three, pertaining to research and development may shed light on the other strategies developed at the Summit—legislation, incentives, and special emphasis on target markets. Once the research and development proposed in strategy three has been completed, implementation of the other strategies may be expedited.
5.1.2 Research Question Two: Year Predictions

The second research question was, "Do the experts predict implementation of the strategies will occur before the year 2000?" The experts responses to the year scales indicated the strategies will take place before the year 2000 in the following order:

- **Strategy 3**: Research and development of state of the art programs and the development of appropriate model programs.  
  
  1988-1995

- **Strategy 4**: Programs developed with special emphasis on small- and medium-sized establishments and blue collar workers.  
  
  1990-1997

- **Strategy 2**: Incentives to be awarded to employees and employers rewarding fitness and healthy lifestyle programs.  
  
  1991-1996

- **Strategy 1**: Legislation to be enacted to encourage healthy lifestyles and fitness-promoting facilities at the workplace.  
  
  1994-2002

The results for this research question appear to be contradictory to the results of the first research question. In response to question one, "Do the experts predict implementation of the four strategies developed at the Summit?", the experts predicted implementation to be both desirable and probable for strategy three only. The results for research question two, "Do the experts predict implementation of the the strategies to occur before the year 2000?", 
indicate the experts predicted implementation of all four strategies to occur before the year 2000. The contradiction is as follows: although the experts did not rank the desirability and probability scales of strategy one, two, and four as significantly greater than "3", the chosen neutral point on the Likert scales, they predicted the strategies will occur before the year 2000.

An explanation for this contradiction could be that the experts' group means for the strategies one, two, and four ranged from 2.04 to 3.36 on the probability scales. These responses are above one, which represents "not probable" on the Likert scale.

Therefore, although the experts' responses do not indicate strategies one, two, and four as significantly greater than three on the probability scale, (which represents "probable") the experts do rank the strategies above "not probable".

The four strategies investigated in this study provide a framework for changes to occur. The results of question two provide a forecast of when the experts predict the strategies will occur. Implementation of the strategies will contribute to the fitness movement goal in Canada—the vision.

The vision of fitness by the year 2000 depicts a society that values well-being as fundamental and an integral part of day-to-day life. Canadian
social structures, the family, the schools, the workplace, the health care system, will all enthusiastically embrace and reward daily physical activity and behaviours which contribute significantly to health and well-being. Regular physical activity and optimal well-being will be ingrained as important and widely accepted values in Canadian society. (Fitness... the Future, 1936: 4)

5.1.3 Research Question Three: Degree of Consensus

The third research question was, "Will the experts show a higher degree of consensus in the third round than in the second round?" The hypothesis stating there would be a higher degree of agreement in round three than in round two was accepted; the experts showed consensus in round three, an objective of Delphi studies (Delbecq, et al., 1975; Brown, 1968; and Dalkey and Helmer, 1963).

5.1.4 Research Question Four: Desirability and Probability Divergences

The fourth research question was, "Will there be a divergence between what experts believe is desirable and what they believe is probable?" Eighty-seven percent of the statements on the opinionnaire showed a divergence between what the experts thought was desirable and what they thought was probable. This information is relevant because divergences between desirable and probable scores indicate problem areas (Murray and Jarman, 1967; Nault, 1978).
Seven or thirteen percent of the statements were scored by the experts indicating no significant difference between the desirability and probability means. This implies the experts predicted seven statements were at the same desirability and probability levels. These levels of desirability and probability could fall anywhere on the Likert scale. The statements and the corresponding results listed below are 2., 4., 5b., 9., 28., 31., and 40 from the opinionnaire:

2. Practitioners of employee fitness and healthy lifestyle programs will consider utilizing existing facilities and the environment before considering building new on-site facilities.

Desirability: Mean 3.36 SD 1.075
Probability: Mean 3.52 SD .918
Year: Mean 2.60 SD 2.566 Year 1991

Statement two provided a more suitable solution to strategy one which implied all companies must have a healthy lifestyle and fitness-promoting facility in the workplace.

4. Decisions regarding the implementation of an employee fitness and healthy lifestyle program will be made by C.E.O.'s (Chief Executive Officers).

Desirability: Mean 4.04 SD .935
Probability: Mean 3.64 SD .757
Year: Mean 2.16 SD 1.675 Year 1990

Statement four supported the trend stated in the literature that successful employee fitness/wellness programs should be supported by senior management (Employee Fitness in Canada, 1987 and Horner, 1986).
5. Decisions regarding the implementation of an fitness and healthy lifestyle program will be made by:

b) the union

Desirability: Mean 2.96  SD 1.172  
Probability: Mean 2.68  SD 1.988  
Year: Mean 4.04  SD 1.974  Year 1994

The experts responses to statement 5b. were both below three on the desirability and probability scales. A combination of employees and the union ranked higher on both scales. The experts may fear union involvement could result in programs being used as a bargaining position.

9. Incentives will be provided for the employer by the Provincial government in the form of recognition (i.e. an awards banquet and plaque).

Desirability: Mean 4.00  SD 1.155 
Probability: Mean 3.72  SD 0.678  
Year: Mean 2.28  SD 1.339  Year 1992

The responses to statement nine indicated the experts were in favour of incentives being provided by the Provincial governments to the employer. Of all the options available in the "incentives" section on the opinionnaire, statement nine was most desirable and probable. The experts predicted this type of incentive program to be in-place in 1992.
28. The federal government will create the awareness and promotional packages used to attract companies to implement employee fitness and healthy lifestyle programs.

Desirability: Mean 4.16  SD 1.106
Probability: Mean 3.72  SD .792
Year: Mean 2.12  SD .833  Year 1990

Statement twenty-eight was ranked above the neutral desirability and probability points. This statement is supported in Employee Fitness in Canada 1986. The governments responsibility to approach potential companies and to promote the benefits of employee fitness and healthy lifestyle programs.

31. Companies will start with small, manageable fitness and healthy lifestyle programs and will be coordinated by the occupational nurse from the health department.

Desirability: Mean 2.68  SD 1.249
Probability: Mean 2.40  SD .816
Year: Mean 3.48  SD 2.400  Year 1995

An explanation for the experts rankings being low for this statement could possibly be explained because of the backgrounds of the majority of the experts in the group. The experts in the group probably have been educated in the areas of physical education, human kinetics, kinesiology, and recreation versus nursing.
40. Companies will use their employee fitness and healthy lifestyle programs as a tool to recruit prospective employees to their particular company.

Desirability: Mean 4.24 SD .723
Probability: Mean 3.88 SD .927
Year: Mean 2.24 SD 1.373 Year 1990

The final statement that has no significant difference between the means of the desirability and probability scales ranks above the neutral score on the scales, three. The oil companies in Alberta are currently using their employee fitness and healthy lifestyle programs as part of a package to recruit employee (Gordon: 1988)

5.1.5 Other Issues

Other issues were investigated in the opinionnaire. The experts agreed that it is the government's responsibility to create an awareness for the need of employee fitness and healthy lifestyle programs. The implementation of programs will come from the public and private sectors. It is important for both of these bodies to complement each other and to work as a team with defined roles (Employee Fitness in Canada, 1986).

Statements 30, 31, 35, 36, and 38 are concerned with the staffing of employee fitness and healthy lifestyle programs. A multi-disciplinary staff for programs is desirable and probable (Griffin and Zeigler, 1986). The statement con-
cerning individuals working together as an integrated team was also ranked desirable but less probable. The next statement is concerned with, at what level of management in a company's hierarchy, the employee fitness and healthy lifestyle program staff should be. The statement that employee fitness and healthy lifestyle program staff will be on the same management level as other benefit staff, was ranked highly desirable but low on the probability scale. Another statement about staffing suggests employee fitness and healthy lifestyle programs should originate from the company's health departments and be coordinated by the occupational nurse. This statement ranked low on both the desirability and probability scales. The final statement about staffing is in regards to the education of potential employee fitness and healthy lifestyle program staff. The statement suggested education programs will be offered at post-secondary institutions to provide a broader education to prospective staff members. The experts ranked this statement as desirable and probable and that in their opinion it will occur in between the years 1990 and 1995. A qualitative feedback comment suggests there is presently a program offered at George Brown College in Toronto. The Faculty of Human Kinetics, University of Windsor, has recently formulated a cluster within the faculty called,
Sport Administration and Lifestyle Management. Childers (1986), Hipp (1984), and "Employee Fitness in Canada" (1986) support the need for staff members to receive a multi-disciplined education.

Statement 32 suggests fitness being used as the positive approach to lifestyle changes and should be used to attract employees to programs. Fuchs and Richard (1985) agree that fitness and exercise have been the "in-roads" to programs, and that emphasis must shift toward a multi-dimensional approach.

The statement, "All Canadian companies will offer some type of employee fitness and healthy lifestyle program", was followed by the opportunity to separately rank small-, medium-, and large-sized establishments separately. While each option was ranked desirable, the probability scales were all ranked low with small companies being ranked the lowest, then medium, then large. A recent survey conducted by the Canadian Chamber of Commerce (1986) found 13% of big businesses were presently offering programs. The percentages for small- and medium-sized establishments were lower.

The statement, "A national organization will be established for employee fitness and lifestyle practitioners" received high ranking on both the desirability and probability scale. The experts estimated this would occur between
the years 1989 and 1995. A positive movement for the employee fitness and healthy lifestyle field in Canada would be the formulation of a national governing body (Employee Fitness in Canada, 1986).

The "carry-over" effect of employee fitness and healthy lifestyle programs was identified in statements 42 through 45. The statements refer to participation in employee fitness and healthy lifestyle programs will contribute to fitness and healthy lifestyle practices at home, in the community, and during retirement years. Each statement was ranked high on both the desirability and probability scales. The experts believe that employee fitness and healthy lifestyle programs will contribute to the healthy lifestyle movement in Canada. Ardell (1985), Castillo-Salgado (1985) and Mach (1979) cite the workplace as an ideal arena for promoting programs which will reach "masses" of people.

5.2 Recommendation for Future Research

The potential for future research in the employee fitness and healthy lifestyle field in Canada is unlimited. Strategy two (research and development) and statements sixteen to twenty-six on the opinionnaire provide avenues in which the experts predicted research will be implemented in the future. The avenues which ranked high on desirability are research conducted:
• to identify state of the art programs;
• to develop appropriate models and to test market these models in target establishments—small- and medium sized establishments and blue collar workers;
• by a taskforce coordinated by the Federal government with a team of multi-disciplined professionals;
• with both experimental and control groups;
• in different geological regions in Canada, i.e., Atlantic, Quebec, Ontario, the Western provinces, and the territories;
• in different types of industry;
• in rural and urban settings;
• to test models which will provide measurable results;
• in longitudinal studies; and,
• to provide results to help justify employee fitness and healthy lifestyle programs.

Another area that warrants research in the employee fitness and healthy lifestyle field is behaviour modification (Castillo-Salgado, 1984 and Hipp, 1984). Offering programs which educate individuals about the benefits of healthy lifestyles is often not enough. Creating behaviour modification in individuals is more challenging for employee fitness and healthy lifestyle programs. Change agent research in this area would shed some light on what is needed in a program to
encourage "long term change in individuals living habits" (Hipp, 1984: 12).

This study was based on one of "six areas of emphasis" for fitness and healthy lifestyle development in Canada: the workplace. The other five areas are: co-operation and delivery; the school system; public education; target populations, i.e., the elderly; and, quality and access. Mission statements and strategies for implementation were also developed for each of these areas at the Canadian Summit on Fitness. Research to identify if the other areas are on target for strategy implementation would be valuable information for FitnessCanada. This information could identify if the "vision" will be obtainable:

The vision of fitness by the year 2000 depicts a society that values well-being as fundamental and an integral part of day-to-day life. Canadian social structures, the family, the schools, the workplace, the health care system, will all enthusiastically embrace and reward daily physical activity and behaviours which contribute significantly to health and well-being. Regular physical activity and optimal well-being will be ingrained as important and widely accepted values in Canadian society. (Fitness...the Future, 1986: 4)
Appendix A

INTRODUCTORY LETTER

Kandi McElary
Faculty of Human Kinetics
University of Windsor
WINDSOR, Ontario
N9B 3P4
(519)253-4232, Ext. 2456
(519)255-7715 Home

February 17, 1998

Dear Robert:

Congratulations! You have been identified as one of forty-two experts in the Canadian employee fitness/wellness field. Your name was generated from at least one of the following three sources: (1) you were a delegate at the Canadian Summit on Fitness; (2) Dorothy Strachan, Strachan Associates, and/or (3) Paul Youldon, Employee Fitness Consultant, Fitness Canada.

I am conducting a research study entitled, The Future Directions of the Canadian Employee Fitness/Wellness Field. The study is a partial requirement for a Master's Degree in Human Kinetics at the University of Windsor. Dick Moriarty is my advisor in this endeavour.

The purpose of this study is to determine the development of the Canadian employee fitness/wellness field between now and the year 2000. The study will be conducted through a research method called the Delphi. The Delphi is a technique which utilizes informed intuitive judgements on the part of experts with the realization that projections of the future are based largely on the expert's personal expectations.

The study will include a total of three rounds of questions to the experts. The first round has been completed through audio-interviews with eight individuals--two academicians, two practitioners, two consultants, two government employees, and a member of a national organization. The second and third rounds involve the entire panel of experts and are in the form of a questionnaire. Rounds two and three will be mailed to you in late February and March respectively. I expect each round to take approximately half an hour to complete.
Your participation is crucial to the success and accuracy of the results of this study. A summary of the final results, conclusions, and recommendations will be forwarded to you immediately upon completion of the study.

I hope you'll devote the time,
To partake in this study of mine.
I am grateful for your expertise,
With your help, I'll graduate with ease!

Needless to say, your expertise and time will not only be appreciated by yours truly, but hopefully will contribute to a better understanding of the future of our field.

If you have any questions about the study, please contact me at your earliest convenience, (519)253-4232, Ext. 2056. Thank you in advance for your cooperation.

Sincerely yours,

Kansi McElary

Kandi McElary
Appendix B

GENERAL QUESTIONS: AUDIO-INTERVIEW FORMAT

1. What is the present state of the employee/fitness/wellness field in Canada? How would you assess it?

2. What would you perceive as an "ideal state" for the employee fitness/wellness field to be by the year 2000?

3. What changes should occur in order to facilitate the present state to become what you have indicated should be an "ideal state"?

FOUR STRATEGIES FOR CHANGE:

1. Legislation to be enacted to encourage lifestyle and fitness-promoting facilities in the workplace.

2. A program of incentives be developed and implemented for employers and employees aimed at rewarding fitness and healthy lifestyles.

3. A comprehensive program of research and development be initiated to identify and evaluate the "state-of-the-art" of employee fitness and lifestyle programs, to develop appropriate models and test market these models in target establishments.

4. A comprehensive program to be developed and implemented to promote fitness and healthy lifestyles in the workplace with special emphasis on small- and medium-sized establishments, and male and female blue-collar workers.

PLEASE ANSWER THE FOLLOWING QUESTIONS FOR EACH OF THE STRATEGIES.

1. Do you agree with the strategy? If not, why? If so . . . continue.

2. Why should it be done?

3. By WHOM should it be done?

4. WHEN should it be done?

5. HOW should it be done?

HAVE YOU ANY OTHER COMMENTS?
Appendix C

COVER LETTER ROUND 2

Kandi McElary
Faculty of Human Kinetics
University of Windsor
WINDSOR, Ontario
N9B 3P4
(519)253-4232, Ext. 2456
(519)255-7715 Home

May 19, 1988

Dear

Please find enclosed the questionnaire representing the first written "Round" of my Delphi study entitled, "The Future Directions of the Canadian Employee Fitness/Wellness Field".

The statements in the questionnaire reflect information generated from the audio-interviews I conducted with your colleagues as well as information I obtained from a review of the literature. Your individual responses will be held in strict confidence. The code number on the questionnaire is only for the purpose to follow up on non-respondents. Individual responses will not be reported in any form; it is the group's response that is important to this study.

Please take the time to complete the questionnaire and return it to me hopefully, within the next couple of days. Enclosed you will find a self-addressed envelope. Once I receive everyone's response, I will send out the final "Round" with the group's responses recorded on the questionnaire. You will be asked to re-rank the questionnaire in light of the other experts' opinions.

If you have any questions or concerns regarding the study, please contact me at your earliest convenience.

Thank you in advance for your cooperation and prompt attention to this matter.

Sincerely yours,

Kandi McElary
Appendix D

OPINIONNAIRE_ROUND_2

INSTRUCTIONS

There are a total of 45 statements in this questionnaire. Please answer all statements as best as you can by ranking each one according to three scales: 1) desirability, 2) probability, and 3) year (if probable) the event in the statement will occur. Mark your answers on each scale by putting an "X" on the number or year that best represents your answer. If you believe an event will occur beyond the year 2000 please put your "X" on the scale to the right of the year 2000. If on scale two you have indicated a statement as "Not Probable" by ranking it "1" then scale three would be Not Applicable, - "N/A"

Example Statement:

A thesis entitled, "Future Developments of The Canadian Employee Fitness" Wellness Field", will provide valid information regarding the future development of the field.

![Scale Diagram]

Thank you again for your time!
1. Legislation will be enacted by the Federal government to encourage the implementation of facilities at the workplace for fitness and lifestyle programs.

2. Practitioners of employee fitness and healthy lifestyle programs will consider utilizing existing facilities and the environment before considering building new on-site facilities.

3. Unions will play a greater role in implementing the employee fitness and healthy lifestyle programs.

4. Decisions regarding the implementation of an employee fitness and healthy lifestyle program will be made by company C.E.O.’s (Chief Executive Officers).

5. Decisions regarding the implementation of an employee fitness and healthy lifestyle program will be made by:
   (a) the employees
   (b) the union
   (c) both the employees and the union

6. Legislation will be enacted by provincial governments to encourage employees to participate in employee fitness and healthy lifestyle programs.

7. A program of incentives will be developed and implemented for employers and employees aimed at rewarding fitness and healthy lifestyles.
8. Incentives will be provided for the employer by the Federal government in the form of tax breaks or tax write-offs.

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9. Incentive will be provided for the employer by the Provincial government in the form of recognition (i.e. an awards banquet and plaque).

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10. Incentives will be provided for the employee who practises a healthy lifestyle by the employer in any of the following ways: monetary reward, recognition and time off work.

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11. Incentives will be provided for the employee, by the Federal government, in the form of a tax write-off for fees to join and participate in a fitness and healthy lifestyle program.

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12. Incentives will be provided in the form of a “bonus” to participating employees rather, not as a punishment to non-participants.

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13. Communities and/or municipal governments will provide incentives to local companies for their efforts in implementing employee fitness and healthy lifestyle programs.

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14. Incentives will increase the number of employees participating in fitness and healthy lifestyle programs.

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15. Incentives provided for employees who participate in employee fitness and healthy lifestyle programs will contribute to the healthy lifestyle movement in Canada.

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16. Research and development will be implemented to identify state-of-the-art employee fitness and lifestyle programs.

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17. Research and development will be implemented to develop appropriate models and to testmarket these models in target establishments.

18. The research and development will be done under the leadership of the Federal government by a task force consisting of multi-disciplined professionals, i.e. physicians, fitness leaders, recreationists, ergonomists, health professionals, wellness experts and union leaders.

19. The research will include both control and experimental groups.

20. The research will be carried out with combined financial resources from the Canadian Fitness and Lifestyle Research Institute and corporate funds.

21. The research will be done in all different geographical regions in Canada, i.e. Atlantic, Quebec, Ontario and Western provinces and Territories.

22. The research will be done in different types of industries, i.e. service and manual labour companies.

23. The research will be done in both rural and urban settings.

24. Models will be developed which will provide measurable results.

25. Longitudinal research will be conducted.
26. The research will provide results to help justify employee fitness and lifestyle programs.

27. A comprehensive program will be developed and implemented to promote fitness and healthy lifestyles in the workplace with special emphasis on:

(a) small-sized establishments

(b) medium-sized establishments

(c) large-sized establishments

(d) blue collar workers

(e) pink collar workers

28. The Federal government will create the awareness and promotional packages used to attract companies to implement employee fitness and healthy lifestyle programs.

29. The "how to" assistance for implementing employee fitness and healthy lifestyle programs will come from the public and private sectors, i.e. consultants, YMCA's, private clubs, universities and hospitals.

30. Employee fitness and healthy lifestyle programs will be co-ordinated to utilize the company's health, recreation, fitness, medical and counselling personnel.
31. Companies will start with small, manageable fitness and healthy lifestyle programs and will be co-ordinated by the occupational nurse from the health department.

32. Because fitness is perceived as a positive approach to lifestyle change, companies will emphasize fitness to attract employees to their fitness and healthy lifestyle programs.

33. All Canadian companies will have at least an awareness of the benefits of employee fitness and healthy lifestyle programs.

34. All Canadian companies will offer some type of employee fitness and healthy lifestyle program:
   (a) small-sized establishments

35. In house counsellors and ergonomists and medical, fitness and health professionals will work together as an integrated team to provide a fitness and healthy lifestyle program.

36. These professionals will be considered on the same management level as other benefit staff members within a company.

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45. Employee fitness and healthy lifestyle programs will be marketed to and available for retired employees.
Appendix E

COVER LETTER TO RESPONDENTS

Kandi McElary
Faculty of Human Kinetics
University of Windsor
WINDSOR, Ontario
N9B 3P4
(519) 253-4232, Ext. 3363
(519) 971-9136 Home

June 28, 1998

Dear Carolyn:

I'd like to take this opportunity to sincerely thank you for participating in the first part of my study entitled, "The Future Directions of the Canadian Employee Fitness/Wellness Field". You contributed to a "response rate" of sixty-two percent.

The final phase of my study is enclosed. It is a duplicate of the first questionnaire with the addition of the responses from the participating experts. The responses are reported by using the mean and standard deviation.

The code number on the questionnaire is only for the purpose to follow up on non-respondents. Individual responses will not be reported in any form; it is the group's response that is important to this study.

I hope you take the time to complete the questionnaire and return it to me, hopefully within the next couple of days. Enclosed you will find a self-addressed envelope. I will mail you a summary of the final results.

If you have any questions or concerns regarding the study, please contact me at your earliest convenience.

Thank you in advance for your cooperation and prompt attention to this matter.

Sincerely yours,

Kandi McElary
Appendix P

COVER LETTER TO NON-RESPONDENTS

Kandi McLarney
Faculty of Human Kinetics
University of Windsor
Windsor, Ontario
N9B 3P4
(519) 253-4234 Ext. 3063
(519) 277-9136 Home

June 25, 1985

Dear Hans:

Summer is here and everyone is extremely busy. Although you did not have an opportunity to complete and return the first questionnaire entitled, "The Future Direction of the Canadian Employee Fitness/Wellness Field", I would greatly appreciate your input on the final questionnaire.

The final phase of my study is enclosed. It is a duplicate of the first questionnaire with the addition of the responses from the participating experts. The responses are reported by using the mean and standard deviation.

The code number on the questionnaire is only for the purpose to follow up on non-respondents. Individual responses will not be reported in any form; it is the group's response that is important to this study.

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Thank you in advance for your cooperation and prompt attention to this matter.

Sincerely yours,

Kandi McLarney
Appendix G

OPINIONNAIRE_3

INSTRUCTIONS

The group's responses from questionnaire 1 are shown on this questionnaire. The mean is indicated by ▼ and the standard deviation is shown by the heavy line on the scale.

Please answer all statements as best you can by re-ranking each one according to three scales: 1) desirability, 2) probability, and 3) year (if probable). Mark your answers on each scale by putting an "X" on the number or year that best represents your answer.

If, when re-ranking, your answer lies outside the standard deviation (heavy line), please briefly write below the particular scale your reason why you have given that particular rank. (If more space is required, use the back of the page.)

Example Statement:

A thesis entitled, "Future Developments of The Canadian Employee Fitness/Wellness Field", will provide valid information regarding the future development of the field.

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Year (if probable) - enthusiastic input for appeal


Thank you for participating in the FINAL part of my study!
1. Legislation will be enacted by the Federal government to encourage the implementation of facilities at the workplace for fitness and lifestyle programs.

2. Practitioners of employee fitness and healthy lifestyle programs will consider utilizing existing facilities and the environment before considering building new on-site facilities.

3. Unions will play a greater role in implementing the employee fitness and healthy lifestyle programs.

4. Decisions regarding the implementation of an employee fitness and healthy lifestyle program will be made by company C.E.O.'s (Chief Executive Officers).

5. Decisions regarding the implementation of an employee fitness and healthy lifestyle program will be made by:
   (a) the employees
   (b) the union
   (c) both the employees and the union

6. Legislation will be enacted by provincial governments to encourage employees to participate in employee fitness and healthy lifestyle programs.

7. A program of incentives will be developed and implemented for employers and employees aimed at rewarding fitness and healthy lifestyles.
8. Incentives will be provided for the employer by the Federal government in the form of tax breaks or tax write-offs.

9. Incentive will be provided for the employer by the Provincial government in the form of recognition (i.e. an awards banquet and plaque).

10. Incentives will be provided for the employee who practises a healthy lifestyle by the employer in any of the following ways: monetary reward, recognition and time off work.

11. Incentives will be provided for the employee, by the Federal government, in the form of a tax write-off for fees to join and participate in a fitness and healthy lifestyle program.

12. Incentives will be provided in the form of a "bonus" to participating employees rather, not as a punishment to non-participants.

13. Communities and/or municipal governments will provide incentives to local companies for their efforts in implementing employee fitness and healthy lifestyle programs.

14. Incentives will increase the number of employees participating in fitness and healthy lifestyle programs.

15. Incentives provided for employees who participate in employee fitness and healthy lifestyle programs will contribute to the healthy lifestyle movement in Canada.

16. Research and development will be implemented to identify state-of-the-art employee fitness and lifestyle programs.
17. Research and development will be implemented to develop appropriate models and to testmarket these models in target establishments.

18. The research and development will be done under the leadership of the Federal government by a task force consisting of multi-disciplined professionals, i.e. physicians, fitness leaders, recreationists, ergonomists, health professionals, wellness experts and union leaders.

19. The research will include both control and experimental groups.

20. The research will be carried out with combined financial resources from the Canadian Fitness and Lifestyle Research Institute and corporate funds.

21. The research will be done in all different geographical regions in Canada, i.e. Atlantic, Quebec, Ontario and Western provinces and Territories.

22. The research will be done in different types of industries, i.e. service and manual labour companies.

23. The research will be done in both rural and urban settings.

24. Models will be developed which will provide measurable results.

25. Longitudinal research will be conducted.
26. The research will provide results to help justify employee fitness and lifestyle programs.

27. A comprehensive program will be developed and implemented to promote fitness and healthy lifestyles in the workplace with special emphasis on:
   (a) small-sized establishments
   (b) medium-sized establishments
   (c) large-sized establishments
   (d) blue collar workers
   (e) pink collar workers

28. The Federal government will create the awareness and promotional packages used to attract companies to implement employee fitness and healthy lifestyle programs.

29. The "how to" assistance for implementing employee fitness and healthy lifestyle programs will come from the public and private sectors, i.e. consultants, YMCA's, private clubs, universities and hospitals.

30. Employee fitness and healthy lifestyle programs will be co-ordinated to utilize the company's health, recreation, fitness, medical and counselling personnel.
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### Year (if probable) |
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31. **Companies will start with small, manageable fitness and healthy lifestyle programs and will be co-ordinated by the occupational nurse from the health department.**

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32. **Because fitness is perceived as a positive approach to lifestyle change, companies will emphasize fitness to attract employees to their fitness and healthy lifestyle programs.**

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33. **All Canadian companies will have at least an awareness of the benefits of employee fitness and healthy lifestyle programs.**

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34. **All Canadian companies will offer some type of employee fitness and healthy lifestyle program:**
- (a) small-sized establishments

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- (b) medium-sized establishments

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- (c) large-sized establishments

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- 141 -
VITA AUCTORIS

Name: Kandi Joy McElary
Date of Birth: December 16, 1960
Birthplace: London, Ontario

Education:
1981- Bachelor of Arts, Recreation Honours,
1986 Co-operative Education,
UNIVERSITY OF WATERLOO.
1986- Masters of Human Kinetics
1988 UNIVERSITY OF WINDSOR.

Professional Experience:
1986- Administrative Assistant,
1988 Campus Recreation,
University of Windsor.
1988 Project Co-ordinator,
Bulimia Anorexia Nervosa Association (BANA),
Windsor, Ontario.

Publications:
of Student Administrators in Campus Recreation."
(Accepted for publication by NIRSA, scheduled
for Fall publication.)

1988 Salter, M.A. and K.J. McElary, "Olympism in
Canada: The Story of the Royal Bank
Junior Olympics and the Olympic Academy of
Canada." presented (by Dr. Salter) at
the International Committee for History of Sport
and Physical Education Conference, June 13-19,

Presentations:
Directors' Annual Conference,
Ontario Intramural Recreation Association, O.I.R.A.,
Geneva Park, Orillia, Ontario.

1988 "Wellness and Campus Recreation: What's the
Connection?"

1987 "Student Administrators in Campus Recreation."
(co-presentation with J.W. Weese)

1986 "The Tuxedo Approach to Conference Planning."

1985 "Student Leadership Development: From the
students point of view!"

Award: 1986 Mike Moser Memorial Award
An award given in recognition of academic
excellence and high extra-curricular involvement.