HEALTH NEEDS ASSESSMENT:

A BEGINNING PROCESS FOR COMMUNITY BASED HEALTH PROMOTION PROGRAM PLANNING

by

Marsha M. Kosheluk

A Thesis

Submitted to the Faculty of Graduate Studies

in Partial Fulfillment of the Requirements for the

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- Theory 0511

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Gerontology 0351
History
- General 0578
- Ancient 0579
- Medieval 0581
- Modern 0582
- Black 0328
- African 0331
- Asia, Australia and Oceania 0332
- Canadian 0334
- European 0335
- Latin American 0336
- Middle Eastern 0333
- United States 0337

History of Science 0585
Law 0398
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- General 0306
- Anatomy 0287
- Biostatistics 0308
- Botany 0309
- Cell 0379
- Ecology 0329
- Entomology 0353
- Genetics 0369
- Limnology 0793
- Microbiology 0410
- Molecular 0307
- Neuroscience 0317
- Oceanography 0416
- Physiology 0433
- Radiation 0821
- Veterinary Science 0778
- Zoology 0472

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- Human Development 0758
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- Medicine and Surgery 0564
- Mental Health 0347
- Nursing 0569
- Nutrition 0570
- Obstetrics and Gynecology 0380
- Occupational Health and Therapy 0354
- Ophthalmology 0381
- Pathology 0571
- Pharmacology 0419
- Pharmacy 0572
- Physical Therapy 0382
- Public Health 0573
- Radiology 0574
- Recreation 0575
- Speech Pathology 0460
- Toxicology 0383

Home Economics 0386

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- General 0485
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- Analytical 0486
- Biochemistry 0487
- Inorganic 0488
- Nuclear 0738
- Organic 0490
- Pharmaceutical 0491
- Physical 0494
- Polymer 0495
- Radiation 0754

Mathematics 0405
Physics
- General 0605
- Acoustics 0986
- Astronomy and Astrophysics 0606
- Atmospheric Science 0608
- Atomic 0748
- Electronics and Electricity 0607
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- Fluid and Plasma 0759
- Molecular 0609
- Nuclear 0610
- Optics 0752
- Radiation 0756
- Solid State 0611

Statistics 0463

Applied Sciences
Applied Mechanics 0346
Computer Science 0984
Engineering
- General 0537
- Aerospace 0538
- Agricultural 0539
- Automotive 0540
- Biomedical 0541
- Chemical 0542
- Civil 0543
- Electronics and Electrical 0544
- Heat and Thermodynamics 0348
- Hydraulic 0545
- Industrial 0546
- Marine 0547
- Materials Science 0794
- Mechanical 0548
- Metallurgy 0743
- Mining 0551
- Nuclear 0552
- Packaging 0549
- Petroleum 0765
- Sanitary and Municipal 0554
- System Science 0790

Geotechnology 0428
Operations Research 0796
Plastics Technology 0795
Textile Technology 0994

PSYCHOLOGY
General 0621
Behavioral 0384
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Experimental 0623
Industrial 0624
Personality 0625
Physiological 0989
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Psychometrics 0632
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ABSTRACT

The residents of Gimli and its municipality, through a systematic random sample (n-129), were surveyed to determine their health needs. The determination of health needs followed a framework (Nurturing Health, 1987-1991) which highlights the relationship of health to the social and physical environments, individual responses, and productivity and health. This study focused on community involvement and the concern of promoting health through, initially, the first steps of program planning; a needs assessment of the health of the community. The self administered questionnaire, which was validated and piloted, elicited information on health needs.

Responses were received from 76.3% of the sample. More than 90% of males and 86.0% of females reported their health as excellent or fair and more than 60% of males and females agreed that health is the most important consideration in their lives. Males did more in the past year to improve health while more females would like to make improvements in their health. Overall, respondents could identify more than one reason for not making improvements in health. Respondents identified several important and extremely important topics the government should be dealing with and they also identified the need for more information on dealing with home and work life. One hundred and six (80..91%) respondents had more than ten friends and 75.77% of the respondents spend half and more time with others. Thirty-five respondents identified themselves or a significant other as having had an accident. Most accidents occurred at home and in motor vehicles and snowmobiles. Of the respondents, 15.0% identified being at risk of accidents and injuries outside of work and

45.49% of the respondents identified being exposed to substances outside of work that could endanger life. All respondents identified that disease can be caused by environmental hazards. Fifty per cent of respondents identified that they some of the time have control over environmental sources of disease. For control over lung cancer and heart disease, 41.07% of respondents identified they have some control over lung cancer and 41.73% identified they some of the time have control over heart disease. For risk of getting lung cancer and heart disease, 31.57% of respondents didn't know if they were at risk of getting lung cancer and 21.84% of respondents didn't know if they were at risk of getting heart disease. Most respondents had generally good feelings about themselves some of the time but major sources of stress identified were at home and at work. Respondents with perceived excellent and fair health were most likely to have a higher income and educational level than those who have a perception of poor health. A large number of respondents identified numerous determinants of health.

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TABLE OF CONTENTS

LIST OF TABLES

List of Figures

LIST OF APPENDICES

CHAPTER ONE

INTRODUCTION

In 1974, A New Perspective on the Health of Canadians by the Honourable Marc Lalonde introduced the Health Field Concept. The Health Field Concept consisted of four broad elements: human biology, lifestyle, environment and the health care organization. The publication initiated a new trend in health, that of promoting healthy lifestyles. It was a trend that dominated health planning for most of the next decade.

Altering people's practices - alcohol and tobacco use, eating and exercise habits - and encouraging the use of safety devices such as seatbelts became the focus of health promotion (Belloc, 1973; Belloc & Breslow, 1972; Brady, 1983; Breslow & Enstrom, 1980; Carleton & Lasater, 1983; Carmody, Matarazzo, Fey, & Connor, 1982; Lalonde, 1974).

In 1976, at the height of the lifestyles era, alternative approaches to health promotion became evident. While acknowledging the importance of lifestyles, some emphasized the influence on health of the social and physical environments, an aspect of the Lalonde document which had attracted less attention. Brown (1976) provided early signals of the revolt that was to come a few years later against the individual lifestyle approach. He highlighted the need for the individual to be in dynamic equilibrium with his internal and external environment, the family, the community and the social and physical environments. In Brown's (1976) view, an individual's health-related behaviour was profoundly influenced by social forces such as television, advertising and peer group pressure. Further, he wrote, the range of choices available to people was frequently limited by certain industrial policies, such as those of pharmaceutical and food companies.

Brown (1976) proposed that health promotion should take its place alongside health protection and health care as part of an integrative health policy. He took the view that all three: health promotion, health protection and health care, should be related to policies in other sectors, such as agriculture, employment, transportation, education, environment and housing. Brown's approach, however, failed to gain momentum. The remainder of the 70's continued to express the view that the major aim of health promotion was to alter lifestyles which, it was believed, lay at the root of most health problems such as hypertension, heart disease, stroke, accidents, suicide and homicide (Belloc, 1973; Belloc & Breslow, 1972; Brady, 1983; Breslow & Enstrom, 1980; Carleton & Lasater, 1983; Carmody et al, 1982; Knowles, 1977; Lalonde, 1974).

The 1980's brought in an era of growing suspicion and concern about the role of industrial pollutants, poverty, racism and class bias in bringing about, or at least contributing to, ill health (Nurturing Health, 1987-1991; Achieving Health for All, 1986). In 1981 Ronald Labonte and Susan Penfold questioned whether lifestyle risks were really the root cause of poor health. While acknowledging the value of health promotion programs aimed at persuading people to make lifestyle changes such as anti-smoking, nutrition promotion and venereal disease prevention campaigns, these authors argued the problems were far more fundamental. Labonte and Penfold (1981) expressed the view that ill health was a highly conditioned social phenomenon which demanded social change through collective forms of action.

No longer, they asserted, should health problems be seen as individual risk consequences requiring individual behaviour changes. Noting that personal choice often had little to do

with environmental conditions, they pointed to economic and sexual equality, occupational hazards and environmental risks as important determinants of health. Rather than remaining stuck on a health disease analysis that defines sickness as a matter of personal indiscretion, Labonte and Penfold (1981) declared, health promotion in the 80's had to begin addressing sexual inequality, occupational hazards, environmental risks and other social pathogens.

As the 80's proceeded, social context and collective action would play a major role in health promotion, providing opportunities for mutual support, self-help, education and dialogue for critical analysis (Achieving Health for All, 1986; Buck, 1985; Hancock, 1985; Robertson, 1985; Weinstein, 1985; World Health Organization (WHO), 1984).

In 1986, Achieving Health for All, was released by the Honourable Jake Epp. The document sought to move beyond the earlier emphasis on personal lifestyle change, an approach that can lead to victim blaming, and to acknowledge that individuals are not solely responsible for the status of their own health. Achieving Health for All (1986) encourages individuals to look at the wider environment and to seek to reduce as many of the inequities that exist in society. It challenged Canadians to reduce health inequities and to provide such health prerequisites as peace, shelter, food, income, a stable ecosystem, sustainable resources, social justice and equity. It noted that efforts to create social and physical environments which nurtured individual health and well-being were becoming increasingly evident in community based activities in the areas of mutual aid, self-help and political advocacy. The release of this document lent impetus to the emergence of a new socio-environmental ethic in the field of health promotion.

One of the more recent developments in health promotion planning is the emphasis on

public participation. Today there is a demand for greater sensitivity to public needs. The public, previously overlooked by planner and service providers, has begun to be conceptualized as an important element in the process (Active Health Report, 1985; Cassis & Birchmore, 1985; Griew, 1985; Kickbusch, 1981, 1986; MacNeil, 1992; Robertson, 1985; Weinstein, 1985; WHO, 1984).

At the 77th Annual Conference of the Canadian Public Health Association, six strategies for health promotion were developed. Of these six strategies, there are three which provide a central focus. The three strategies are: fostering public participation, strengthening community health services, and coordinating healthy public policy (Achieving Health for All, 1986; Green & Kreuter, 1991; Harvey, 1986; Healthy People 2000, 1992).

Strategy One involves the encouragement of public participation by helping people to assert control over the factors which affect their health (Achieving Health for All, 1986; Beyond Health Care, 1985; Cox, 1974; Hancock, 1980, 1982; MacNeil, 1992; Matarazzo, 1984). This means equipping and enabling people to act in ways that preserve or improve their health. By creating a climate in favour of public participation, one can channel the energy, skills, and creativity of community members into the combined effort to achieve health.

Strategy Two is strengthening community health services (Achieving Health for All, 1986). A health promotion and disease prevention orientation means that community health services will have to focus more on dealing with the major health challenges. These major health challenges include reducing inequities in the health of low versus high income groups, increasing the prevention effort, preventing the occurrence of injuries, illnesses, chronic

conditions and their resulting disabilities, enhancing people's capacity to cope, enhancing people's ability to manage and cope with chronic conditions, disabilities and mental health problems.

Strategy Three is coordinating healthy public policy (Achieving Health for All, 1986; Beyond Health Care, 1985; Healthy People 2000, 1992; O'Neill, 1989, 1990; Rootman, 1988; Small, 1989). The potential of public policy to influence people's everyday choices is considerable. Public policy has the power to provide people with opportunities for health, as well as to deny them such opportunities. All policies, and hence all sectors, have a bearing on health. Health promotion is an appropriate way of achieving equitable access to health. We know that self care, mutual aid and healthy environmental change are integral to health promotion and that they are more likely to occur when healthy public policies are in place. Policies that are healthy help to set the stage for health promotion because they make it easier for people to make healthy choices.

In 1981 Labonte outlined a community health promotion planning model in which communities defined their own problems and concerns. The first step towards empowerment, he maintained, is to return to the community the power of definition. In his view, community development has become the priority of health promotion, providing a process whereby individuals influence their community, their culture, their environment, and by extension, their own health.

The notion that communities should be involved in defining their own health concerns had already been embraced by the Federal government. As far back as 1980, the Health Promotion Directorate of Health and Welfare Canada had established a special funding

program contribution fund aimed at encouraging non-governmental initiatives in resource development, education and training, and assisting voluntary and community organizations to undertake health promotion activities.

The Premier's Council on Health Strategy in Ontario (1987-1991) recently released a series of reports providing a range of strategic advice on managing health care and promoting health in the context of a broad view of health.

One of the reports, Nurturing Health (1987-1991), outlines a dynamic framework on the determinants of health (Figure 1). This framework underlines the importance of prosperity to health and shows how health and prosperity are mediated through the role of the social environment. It also circumscribes the role of the conventional health care system in the population's overall health.

Nurturing Health (1987-1991) highlights what we have known for some time: that a range of broadly defined factors in the social and physical environments have important consequences for health and disease. These determinants of health include such things as early care and nurturing in childhood, social support, degree of control and empowerment in the workplace, employment and occupational status, sense of accomplishment and opportunity, and overall economic performance. Besides their links to health and disease, these factors are linked to the yardstick of mortality (Sullivan, 1991).

Social environment and social position have important connections to biological and behavioural response, as well as to subsequent health outcomes (Sullivan, 1991). Not only can people who are prosperous afford more goods and services, but they feel better about being in a higher position in the social hierarchy. The sense of well-being that comes from

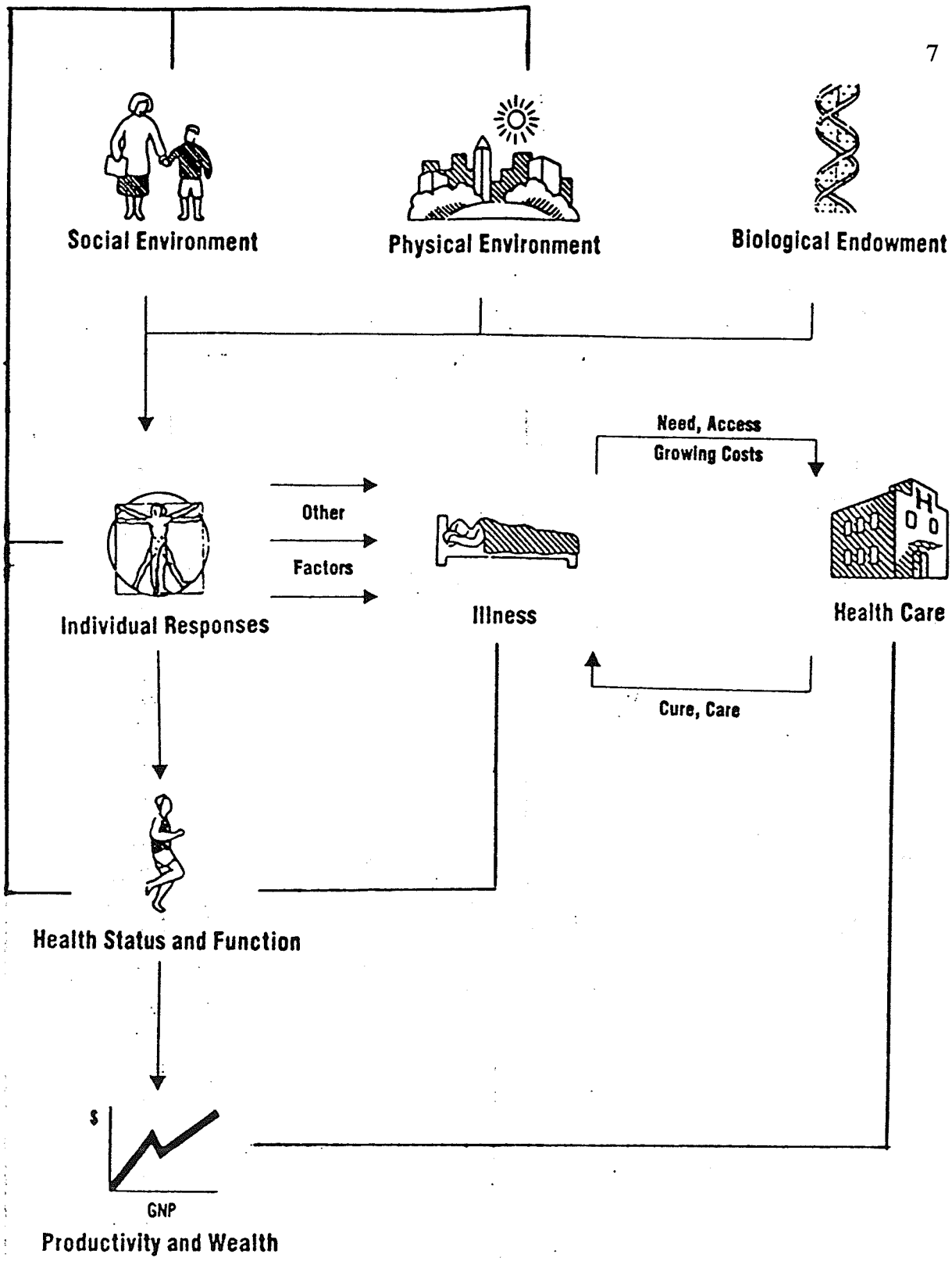

Figure 1: Population Health: Determinants

(Adapted from Nurturing Health 1987-1991)

having a good position in the social hierarchy is at times linked to increased resilience to disease. Quite apart from the lifestyle correlates of being poor and without opportunity, additional factors seem to be at work that link social position with higher resistance to disease.

Those who believe health status should be addressed through the determinants of health have increasingly considered these determinants to be social in nature (Sullivan, 1991). The framework outlined in Nurturing Health views individual choice from an eco-systemic perspective, and portrays individual behavioural and biological response as being more socially derived than individually decided.

Wilkinson (1986) indicated that a behaviour (illness) that is predominant in one social class but not in another is not randomly distributed. The ideological foundation of the social perspective in health is relevant not only in diagnosis, but most critically in treatment.

Reflecting public opinion 25 years ago Rene Dubos (1959) identified the thoughtful wishes of an American scientist: ...the five most wanted cures are...a drug to cure cancer, a drug to maintain emotional equilibrium, a penny-a-day birth control pill, a virus killer to kill viruses as antibiotics kill bacteria, and a youth pill to delay man's aging process and prevent such degenerative diseases as arthritis. One observer characterized this faith in the rational promise of science and technology as the American ideology. In Dubos' (1959) view, the approach was unfortunate and dangerous for the future, although common among lay people and scientists of the day. He objected to it on two counts. He argued, firstly, that hope for this bio-tech fantasy was vested in an alienated view of an expert, and was paternalistic in the sense that those speaking on behalf of health would be responsible for inventing and

marketing the most wanted products. Secondly, he rejected the notion of a formula for health that excluded the elements of concerted social action and personal discipline, since these had played a fundamental part in the history of public health reform.

Health has been left to the ideological nature of the faith in science perspective. Given our accumulating knowledge of the biological links between social and income differences and people's health, the invention of a pill to equalize differences in health status is not totally implausible. The objection is that the pill would equalize health status without doing anything to correct social inequality or otherwise improve the quality of life.

Health Promotion and Community Organization

The idea that the community plays an active role in developing health promotion programs requires a partnership approach to program planning (Harvey, 1986). Planning is really a decision making process to determine what action should be taken to reach chosen objectives. If people are partners in the decision making process, they must be involved at the beginning of the planning and play important roles in designing, implementing and evaluating programs (Cox, 1974; Dever, 1980; Fortin, O'Neill, Groleau, Lemieux, Cardinal, Racine, 1992; Guldemond, 1977; Harvey, 1986; Hudson, 1988; Kaufman & English, 1979; Kramer & Specht, 1983; MacStravic, 1978; Matarazzo, 1984; Ross & Mico, 1980; Wharf, 1979).

Health promotion cannot attempt to refashion the society by imposing values of those originating the program (Buck, 1985; Carlson, 1985; Fitzpatrick, 1985; Hancock, 1985, 1989; Lageren, 1985). Decisions must be reached in collaboration with informed consumers who should have a major voice in decisions of how and what to change. The rationale has been

that through learning by doing, in skill development and in learning responsible actions through involvement with others, people in the community can be guided to launch at attack on a host of health problems. Program emphasis on learning experiences can lead to greater individual and group effectiveness in decision making in health related behaviours. Health promotion becomes a process of public participation in community organization (Achieving Health for All, 1986; Antonovsky, 1979; Ashton, Grey, Barnard, 1986; Hancock & Duhl, 1986; Kickbusch, 1986; Ottawa Charter, 1986; Vertio, 1986). The heart of the process becomes the attempt of communities to increase their ownership and control of their own endeavours and destinies (Ashton et al, 1986; Brager, 1973; Cox, 1974; Fessler, 1976; Hancock & Duhl, 1986; Matarazzo, 1984; Vertio, 1986).

Health promotion is concerned with people and their health behaviour. It is a process through which people increase their understanding or change their ways of thinking or actions as a result of exposure to new experiences (Achieving Health for All, 1986; Vojtecky, 1984; Winder, 1985). Health promotion should enable people to increase control over, and to improve, their Health (Achieving Health for All, 1986; Kickbusch, 1981). The term health promotion " ...represents a mediating strategy between people and their environments, synthesizing personal choice and social responsibility in health to create a healthier future .... " (World Health Organization (WHO), 1984 p. 2). This definition of health promotion is that espoused by the WHO (1984). In its literature the WHO (1984) describes health promotion as follows:

"...health promotion is the process of enabling people to increase control over, and to improve, their health...." (p.3). This perspective is derived from a conception of health as the

extent to which an individual or group is able, on the one hand, to realize aspirations, and satisfy needs; and on the other hand, to change or cope with the environment. Health is therefore seen as a "resource for everyday living, not the objective of living; it is a positive concept emphasizing social and personal resources as well as physical capacities..." (Achieving Health for All, 1986, p. 3).

Health promotion strategies should include public participation in community organization. Strengthening community action is identified as an important commitment. Health promotion works through concrete and effective public participation in setting priorities, making decisions, planning strategies, and implementing them to achieve better health (Achieving Health for All, 1986; Antonovsky, 1979; Ashton et al, 1986; Buck, 1985; Fitzpatrick, 1985; Green & Kreuter, 1991; Hancock, 1985; Hancock & Duhl, 1986; Health and Welfare Canada, 1985; Kickbusch, 1981; Robertson, 1985; Vertio, 1986; Weinstein, 1985). At the heart of the process is the empowerment of communities, their ownership and control of their own endeavours and destinies. Community development draws on existing human and material resources in the community to enhance self help and social support, and to develop flexible systems for strengthening public participation and direction of health matters (Active Health Report, 1985; WHO, 1984).

Antonovsky (1979) indicates that people who perceive that resources (their own or those of others) are at their disposal to meet their need for change, are more likely to succeed. Health promotion programs must allow participants to get involved in decision making. Antonovsky (1979) states that it is crucial that people approve of the tasks set before them; that they have considerable performance responsibility, and that what they do or not do has an

effect on the outcome. Repeated participation provides the basis for a person's feeling that the behavioural change is worthy of investing energy in, is worthy of commitment, and is a welcome challenge.

The Hastings Report (1972), a study of community health centres in Canada included in its recommendations: the need for people-centred organizations responsible to the priorities set by the community and governed by a representative board in which professional and/or technical representation would be limited. This recommendation stems from an identified concern, which is ongoing, that mechanisms are needed to make programs more appropriate to the needs of the communities rather than to the needs of professionals.

Public participation in community organization is a process of developing relationships among individuals and groups that will enable them to plan and act together to bring about improvement in some phases of community life (Dever, 1980; Guldemond, 1977; Israel, 1982; Matarazzo, 1984; Ross & Mico, 1980; Wharf, 1979). Ross and Mico (1980) indicate that public participation in community organization for health is a process or method in which the combined efforts of individuals, groups and organizations are designed to generate, mobilize, coordinate, utilize and/or redistribute resources to meet unsolved or emergent health needs and problems.

The current trend in communities is toward a greater attention to population groups in communities rather than on individuals in clinics. Brager (1973), Cox (1974), Dever (1980), Fessler (1976), Ross and Mico (1980), Rothman (1968), and Wharf (1979) deemed community health planning as the development and implementation of an operational plan to achieve community objectives. A key factor in this statement is basic to effective public

participation in community organizations.

The community identifies its needs and is assisted to organize, plan and implement a program to meet those needs. The importance of some form of community identification of needs is emphasized in the work of Blum (1974), Dever (1980), Dignan and Carr (1981), Green & Kreuter (1991), and Paul (1955). The primary goal of public participation in community organization is the identification of people's needs and the provision of means to meet these needs (Brager, 1973; Dever, 1980; Fessler, 1976; Ross, 1967; Ross & Mico, 1980; Wharf, 1979).

Public participation is characteristic of community life. When the ordinary citizens of a community get together, the final outcome is one thing that has an easier chance of widespread community acceptance (Ashton et al, 1986; Brager, 1973; Cox, 1974; Dever, 1980; Fessler, 1976; Guldemond, 1977; Hancock & Duhl, 1986; Kramer & Specht, 1983; Matarazzo, 1984; Ross & Mico, 1980; Rothman, 1968; Steiner, 1925; Vertio, 1986; Weisner & Silver, 1981; Wharf, 1979).

Community based health promotion program planning is important for two reasons. First, society is becoming more complex and therefore solutions to problems require more resources and the cooperation of many organizations and people (Ashton et al, 1986; Cox, 1974; Fessler, 1976; Guldemond, 1977; Hancock & Duhl, 1986; Kickbush, 1986; Matarazzo, 1984; Wharf, 1979). There is no one quick fix. No one organization has the resources to deal with many health promotion needs found in a community. Second, working through community health promotion problems cooperatively increases community ownership and commitment of solutions (Ashton et al, 1986; Cox, 1974; Hancock & Duhl, 1986; Kickbush, 1986;

Matarazzo, 1984; Ross & Mico, 1980; Wharf, 1979). Community participation increases community understanding of its problems and increases its sense of control.

Public participation in community organization is necessary in all sizes and types of communities. Community planning and organizing grow out of the very life people live together, whatever the size or type of community it may be. It grows out of their efforts to meet their common needs. Whenever individuals and groups seek ways to pool their resources and efforts to achieve an improvement in community life, the community process is at work. Public participation in community organization is a process of developing relationships among individuals and groups that will enable them to plan and act together to bring about improvement in some phase of community life. High density networks have a strong influence on an individual's conformity to norms shared by the network and provide more effective and instrumental support in both everyday and crisis situations (Israel, 1982). Noting this, health promotion interventions suggest the encouragement of self help-mutual aid groups or community based problem solving organizations (Achieving Health for All, 1986; Active Health Report, 1985; Healthy People 2000, 1992; Kickbusch, 1981; WHO, 1984).

At present there is a need for more effective organization in health promotion for the two following reasons: 1) unmet needs exist in most communities as certain segments of the population may be inadequately served and certain kinds of services may be inadequate, and 2) needs for services change as communities change and all communities are undergoing change.

The community health review is not a simple inspection of housing or clinic buildings. It is a total, comprehensive developmental process examining the plans and resources which

exist and which are required for the community to begin to assume control over those services it needs to assure the good health of its citizens.

The term community is used in various contexts with varied meanings, depending on the frame of reference. In this project, community is a specific population living in a geographic area, under similar regulations and having common values, interests, and needs. The important concept is the community has geographic and interactional aspects (Edelman & Mandle, 1990; Nutbeam, 1985). Also, people are assumed to share the need for and use of resources in their environment. These resources are influenced by the passage of time and the environment in which they are located.

Important to any concept of community are people, the living systems who give it shape, character, and form. An individual's health is reflected in the community through the person's contribution to its statistical rates as well as to its cultural and psychologic makeup. Conversely, the community is reflected in the individual through similar modes of expression.

Community health promotion program planning should be led by a planning group which is made up of community citizens. Input from different community sources on health needs is basic to planning suitable health promotion programs.

Program planning for community health promotion has a series of interconnected steps. These steps are : 1) community study, 2) identify needs, 3) state program objectives, 4) inventory resources, 5) design the program(s), 6) implement the program, and 7) program evaluation (Dignan & Carr, 1981, 1987; Edelman & Mandle, 1990; Harvey, 1986; Kaufman & English, 1979).

This research focuses on a community study and needs assessment. The community

study involves the collection of detailed information about the community's health needs. One of the most crucial elements of program planning is a community analysis which is often referred to as a needs assessment (Dignan & Carr, 1981, 1987). In doing a needs assessment, the overall goal is better understanding of what makes a community function most effectively healthwise. An overview of the community is obtained, specific aspects of the community are examined, including health needs and interests of the people. The community study collects information about the community health needs and persons with these needs.

Identifying needs determines groups of people who have similar health promotion needs. The identified community needs will be the focus of the health promotion program. "A need may be defined as a state that exists when there is a gap or difference between a present situation and a hoped for required state." (Harvey, 1986, p. 2; Siegel, Attkisson, Carson, 1978, p. 3). Three concepts are important when thinking about needs: 1) What is the present situation? This is determined through the needs assessment. This is the What Is situation, 2) What can the situation be considering limitations of resources? This is the What Can Be situation, and 3) What the situation should be ideally. This is the What Should Be situation. Where 2) and 3) are the same, there are no constraints in reaching the What Should Be situation (Edelman & Mandle, 1990; Harvey, 1986). Often in health promotion the basis for program planning is the difference or gap between Concepts One and Two.

Needs and Needs Assessment

Determining needs is not an easy task. People often have difficulty discerning their own needs. However, when one can state What is and What is not desired, the discrepancy between the two can be considered a need (Bell, Sundell, Aponte, Murrell, & Lin, 1983;

Edelman & Mandle, 1990; Flournoy, 1984; Harvey, 1986; Nguyen, Attkisson, & Bottino, 1976; United Way of America, 1982). Focus of attention on needs should be those that are unmet or unrecognized (Nguyen, Attkisson, & Bottino, 1976).

An assessment of needs will uncover evidence of overlapping bodily, interpersonal and spiritual distress. Needs involve persons and their manifestations affect groups and communities, not just individuals (Bell et al, 1983). As Francis Bacon wrote more than 300 years ago:

> "...human philosophy, or humanity, hath two parts: the one considerath man segregate or distributively: the other, congregate or in society..." (Bacon cited in Hill, 1975, p. 509-517).

Clearly, people's needs ought to be among the basic criteria for designing programs.

In order to provide an accurate picture of the health needs of a community, a needs assessment can provide an effective channel of information (Weinstein, 1983). The systematic process allows one to make decisions with a view to discovering and identifying goods and services the community is lacking in relation to the generally accepted standards, and for which there exists some consensus as to the community's responsibility for their provision (United Way of America, 1982).

Needs assessments may be identified as systematic ways of identifying community needs (Bell et al, 1983). They are identified as planning tools; data collecting and program planning methods; methods for establishing program priorities; methods for generating data in order to make administrative decisions; processes that allow for program decisions based on systematically collected data; and/or vehicles through which existing programs can be

evaluated (Bell et al, 1983; Bloom, 1977; Blum, Hargreaves, Murrell & Warheit, 1977; Nguyen, Attkisson & Bottino, 1976; Siegel, Attkisson, & Carson, 1978; United Way of America, 1982).

A health needs assessment should be considered when there is an opportunity and a commitment either for planning new services or for reconstructing existing ones on the basis of needs that may be identified (Edelman & Mandle, 1990; Fortin et al, 1992; Hancock, 1982; Rossi & Freeman, 1985; Rossi, Freeman, & Wright, 1979; Siegel, Attkisson & Cohn, 1974; Siegel & Carr, 1981; Weinstein, 1983).

The concepts of health needs assessment are such that there is no set of generally agreed upon steps which, when carefully followed, lead one to a comprehensive assessment of needs (Bell et al, 1983; Cassell (in Dignan & Carr, 1981); Fessler, 1976; Green, 1977; Milio, 1975; Paul, 1955; Rossi Freeman, & Wright, 1979; Siegel, Attkisson & Carson, 1978; United Way of America, 1982; Wise, 1981).

There are several important methods that can be employed to obtain information about health needs. The method most often used is the citizen survey approach (Bell et al, 1983; Bell, Nguyen, Warheit, & Buhl, 1978; Cartwright, 1983; Chambers & Woodward, 1980; Crandell & Dohrenwend, 1967; Moore, 1983; Polit & Hungler, 1989; Schwab, Warheit, & Holzer, 1972). In the citizen survey approach the assessment effort is concerned with eliciting differing perspectives on the nature and magnitude of health needs directly from a sample or the entire population of persons living in a community (Bell et al, 1983; Moore, 1983; Polit & Hungler, 1989; Siegel, Atkisson & Carson, 1978; United Way of America, 1982).

Key questions have been developed that a needs assessment study should attempt to answer (United Way of America, 1982). A needs assessment study should, at a minimum, answer two fundamental questions: 1) Who is in need? What population or segment is experiencing particular need(s)? and 2) What is needed? What good(s) or service(s) is the community lacking?

A more meaningful needs assessment effort will answer the following additional questions: 3) Where are the goods and/or services needed? and 4) How much of each good or service is needed?

The research must provide at least a fair estimate of the demand in relation to supply (Moore, 1983; Polit & Hungler, 1989; Rossi & Freeman, 1979, 1982).

Community health needs assessment provides a basis for health promotion program planning. Needs assessment provides facts about community health needs and potential resources for meeting these needs, thus serving as a basis for program planning and development (Cassel in Dignan & Carr, 1981; Dever, 1980; Dignan & Carr, 1981; Fessler, 1976; Paul, 1955; Rossi, Freeman, & Wright, 1979; Weinstein, 1983, 1985).

Summary

In the new thinking health becomes the concern and responsibility of the collective as well as the individual, an important issue for all sectors and not the health sector alone. By emphasizing the necessity for collaboration and coordination across political, geographic and professional boundaries, the new thinking of health brings conscious recognition of important but often ignored interdependencies. A broader perspective is necessary to recognize the important role of lay persons and to work with them in defining community health problems

and solutions (Rootman, 1988). It is also important to recognize intimate links between professional activities and individual and community health and to increase the involvement of consumers and client groups in the process of policy development (Rootman, 1988).

Background

In Manitoba, the Interlake Region (map - Appendix A) remains unique, in that it is one of the two remaining regions in Manitoba that continues to have a Health Advisory Committee. This Committee holds quarterly meetings in the region. Speaking at the October 1986 quarterly meeting of the Interlake Health Advisory Committee, four Manitoba leaders in the field of Health Promotion tried to sell the idea of a community based health promotion program to the region (newspaper article - Appendix B).

In November 1986 a workshop was held in Stonewall, Manitoba. Three purposes of the workshop were identified. The first was to introduce participants to the meaning of community based health promotion planning. The second was to introduce participants to the steps in health promotion planning. The third purpose was to identify approaches to implement health promotion planning.

In March 1987, a major fitness seminar was held in Gimli, Manitoba. At this time community members wanted to pursue the enthusiasm of the fitness seminar of the November 1986 workshop and previous workshops.

In the latter part of March 1987 an initial meeting was held with interested community members from Gimli to consider formation of a community based health promotion committee. The committee agreed to pursue its efforts and formed the Gimli Health Promotion Committee. The Committee consisted of members of the community, members who

volunteered themselves because of interest in community based health promotion planning. The Committee consisted of a health educator, senior citizens, recreational director, councillor of the Rural Municipality of Gimli, public health nurse, outreach worker, members of the hospital auxiliary, members of the Women's Institute, member of the Interlake Health Advisory Board, two retired school teachers, member of the Senior New Horizon and an investigator. The investigator was the only member who did not reside in the community.

The Gimli Health Promotion Committee decided to employ the community based health promotion program planning. The idea that the community plays an active role in developing health promotion programs is what brought the Committee together.

The Gimli Health Promotion Committee was concerned about the health issues of the community; health issues in the context of health as a part of everyday living.

Meetings had been attended in the Interlake Region that raised the consciousness of health in community members. Maintaining the health of the community was identified as a priority but community members did not know the overall health of the community.

The Committee felt it was important to identify health needs of the community through the use of a needs assessment. The concept of developing the needs assessment tool specific to the area and the use of community members to develop and implement the tool were of prime importance. Community based health promotion program planning became the basis for the project.

The community backdrop, which includes geographic identifiers, business and commerce, demographic characteristics, social and political structure, has been well identified in Gimli on several occasions. Analysis of the community's health care system was done

previously and remains relevant.

In December 1975, a community profile and resource registry for the Gimli District Office was done. Gimli, the Rural Municipality of Gimli, Riverton, Pine Dock, Matheson Island, Arborg and Fisher Branch were included. Several commonly unmet needs were identified. These included: 1) Strengthening of parent-child relationships, particularly a need for parent training, 2) A need for more effective services to deal with alcoholism; 3) recreation facilities and housing are inadequate throughout the district; 4) A need for more employment opportunities and small businesses; 5) A need for increased and more regular medical input to some of the more isolated communities; 6) A general need for more foster home resources for the adolescents, elderly, mentally ill and mentally retarded.

Other information gathered included demographic data, geographical area, population and ethnic background, economic base, programs and services provided through the Gimli District Office.

In 1985 another community profile was done. A survey was conducted as a joint project of the four district offices of the Department of Health and Social Development and the Interlake Selkirk Mental Health Teams for the purpose of gaining a more specific understanding of what the needs of various communities of the Interlake were perceived to be by those who live and work in them. A total of 240 questionnaires were administered in the four district offices of the Department of Health and Social Development. A selected sample representing a broad section of community professionals, recipients of services and service club members were surveyed. The survey reported the following conclusion: there were more than adequate services provided to meet the needs of the population, however, there was no

one to deal specifically with adolescents or single parents.

Previous surveys and programs had been delivered by professional agencies and none had directly sought information from the general population. The idea of having community members develop and implement the needs assessment was a new concept. The Committee wanted to promote health through community organization health promotion program planning.

The aim of the Gimli Health Promotion Committee begins with community organization. Community organization would help to develop relationships among groups and individuals that would enable them to act together in creating and maintaining facilities and agencies through which they might realize their highest values in the common welfare of all members of the community.

The identification of unmet needs was an important step that would help the community focus on appropriate health promotion programs. The identification of needs goes from the present situation determined through a needs assessment: the What Is situation to a What Can Be situation. The needs assessment would collect information about community needs and identify persons with these needs.

The Committee wanted a general overview of health needs in Gimli and the Rural Municipality of Gimli. The health needs assessment would give participants a chance to examine community health issues in the context of health as a part of everyday living rather than at disease related issues.

Purpose of the Study

People in the community were demonstrating a willingness to act on matters of health.

Many were expressing their own ideas on the health needs of their communities as well as their eagerness to find ways of meeting those needs. Community and volunteer groups at the local level became committed to undertaking health promotion activities. This study was seen as the conception of the beginnings of community based health promotion in Gimli. This study focuses on community involvement and the concern of promoting health through, initially, the first steps of program planning: a needs assessment of the health of the community.

The purpose of the study was to determine the general health needs of the residents of Gimli and the Rural Municipality of Gimli. The health needs were identified by a needs assessment. The purpose of the survey was not to probe individual topics in great depth but to take a wide look at the health orientation of the citizens of Gimli and to gather the scope of data that would allow exploration of relationships among different aspects of health behaviour and the various factors which influence them.

The specific purposes of the health needs assessment were to provide a format for collecting information from a varied segment of the population, to determine what the health needs of the people were at present, whether these needs were being met by the present system, and if not, how they should be or could be met in the future.

This information was collected and analyzed to help plan and develop a community based health promotion program.

The Gimli Committee identified three phases and six goals. The health needs assessment was carried out in three phases. Phase One was the planning and preparation of the project, the developing and approving the questionnaire, and the training of volunteers. Phase Two

was the actual assessment. Phase Three was the analysis of results, review of the findings and determining a plan of action to meet identified needs.

Six goals were identified: 1) to determine the present status of health in the community and to identify problem areas by gathering data about health in the community; 2) to prioritize health needs/problems from the data and identify possible causes of the problems; 3) to raise awareness in the community to health issues and to increase community involvement in improving the level of health care; 4) to identify present services and determine how these can be maintained or improved to better meet these needs; 5) to identify areas of needs where no services are available; and 6) to become a credible source of health information and to develop a community health plan to meet the health needs of the community.

Research Questions

Needs assessments should answer the following questions: 1) Who is in need? 2) What is needed? and 3) Where are the goods and/or services needed? To determine health needs, several research questions were posed:

1. How do the people in Gimli perceive and rate their own health?
   (i) How do the specific age groups and genders rate their own health?
2. What efforts did the individual do to improve health?
   (i) How do the specific age groups and genders improve health?
3. What efforts could the individual do to improve health?
   (i) How do specific age groups and genders identify what they could do to improve health?

4. What is stopping you from making the improvements in 2.?

   (i) How do the specific age groups and genders identify what is stopping them from making improvements?

5. How important is it for government to deal with certain topics?

6. What topics do you need more information?

7. Should places such as schools, churches and the workplace promote health education?

8. What is the social environment of the community (work and friends)?

   (i) How do the specific age groups and genders identify with more than ten friends?

9. What is the physical environment of the community?

   (community inadequacies, accidents, risk of accidents or injuries outside work, exposure to substances that could endanger life, clean air, disease caused by environment, environmental control over disease, control over lung cancer and heart disease, risk of lung cancer and heart disease).

   (i) How do the specific age groups and genders identify with risk of accidents outside work; exposure to substances that could endanger life, disease caused by environment; environmental control over disease, control over lung cancer and heart disease; and risk of lung cancer and heart disease?

10. What are the individual responses of the community?

    (general feelings, happiness, and stress)

    (i) How do the specific age groups and genders identify with happiness?

11. What is the productivity and wealth of the community?

    (income and education)

Limitations

Several limitations are identified:

1. It is important to acknowledge that individuals may have difficulties with complete and accurate recall of facts and therefore to some extent influence the findings.
2. The Rural Municipality of Gimli, with its many resort areas, has many temporary residents. To rule out the temporary residents, the Manitoba Elections List of the area was obtained. This List is relevant to February 1986. It was noted that people may have moved since then, become deceased, and new residents would be missed and therefore affect the sample.
3. The accuracy of survey results was in part based upon the level of response rates across different demographic groupings. Low or inconsistent response rates may significantly affect the survey results.
4. Questions have been designed so that respondents could be expected to know the answer. Questions which employed medical terms were avoided as much as possible. Although layman's terms were used, some respondents may not have been able to comprehend the terms, for example, such as lung cancer and heart disease.
5. The survey may be handicapped by the reluctance of some individuals to supply information about themselves or other family members. This reluctance may be increased if the respondent knows the volunteer delivering the questionnaire. They may not want to give that volunteer the completed information for fear of having the volunteer know what they responded on the questionnaire.
6. The survey may be in a home for a couple of weeks if the volunteer cannot pick up the

questionnaire within a short period of time. There may be consultation on the answers if a youth and parent are requested to fill out the survey.

7. Respondents may not report spontaneous first reactions since they may take time to think things out or consult with others for appropriate or desirable responses. Knowing that you are a participant may alter your usual response - may respond unusually positive.
8. The refusal or non-return rate may be high enough to affect the validity and reliability of the results.

Delimitations

Two delimitations are identified:

1. The survey is of the non-institutionalized population only. It excludes hospital and personal care homes. The sample is then limited to those people who are not seriously ill at the time of the survey.
2. Although the survey is very broad it could not include questions on every topic of health. For example, questions on dental health are not asked.

Conceptual Framework

Taking It To The Community

Most of the research related to a health needs assessment has focused on illness. Few have been concerned with a health needs assessment that looks at health, as WHO puts it: " ...a resource for everyday living; the extent to which an individual or group is able to realize aspirations and satisfy needs and to change or cope with the environment...." (Achieving Health for All, 1986, p. 3).

Sixty-two studies under the heading of Health Needs were found at the University of Manitoba. Most centered on identifying illness and disease.

This health needs assessment follows the concepts of the Framework for Determinants of Health (Nurturing Health, 1987-1991).

Nurturing Health (1987-1991) helps to define specific determinants of health.

The Premier's Council on Health Strategy in Ontario recently released a series of reports providing a range of strategic advice on managing health care and promoting health in the context of a broad view of health (Nurturing Health: A Framework on the Determinants of Health, 1987-1991). The reports discuss such things as objectives and targets for health goals, and managing health human resources. One of them, Nurturing Health, outlines a dynamic framework on the determinants of health (Figure 1). This framework underlines the importance of prosperity to health and shows how health and prosperity are mediated through the role of the social environment. It also circumscribes the role of the conventional health care system in the population's overall health.

The development of the needs assessment closely follows the determinants of health as identified by Nurturing Health (1987-1991).

Nurturing Health (1987-1991) highlights an important fact: that a range of broadly defined factors in the social and physical environments have important consequences for health and disease. These determinants of health include early care and nurturing in childhood, social support, degree of control and empowerment in the workplace, employment and occupational status, sense of accomplishment and opportunity, and overall economic performance. Besides their links to health and disease, these factors are linked to the

unequivocal yardstick of mortality.

The framework identifies the determinants of health as: social and physical environment; individual responses and productivity and wealth.

Social Environment

Social environment includes five categories: health services; work hierarchy; unemployment, social networks; and prenatal/early childhood.

Wide disparities in health status are not unique to Canada and the relationship between characteristics of the social environment, socio-economic status and health is not a new discovery (Nurturing Health, 1987-1991).

It is determined that various social and economic factors play a large part in determining people's health for the following reasons:

1. Since the traditional medical care system concentrates on the treatment of ill health and disability, it can only make a limited contribution to the prevention of illness by nurturing overall good health (Bailer& Smith, 1986; Rachlis & Kushner, 1989).
2. The lifespan and the health of an individual worker is linked to his or her location in the job hierarchy and to associated factors such as degree of authority, freedom to make decisions and level of social support in the workplace (Johnson & Hall, 1988; Marmot & Tores, 1988; Wilkinson, 1986).
3. Unemployment, especially among poorer people, is associated with deteriorating physical and mental health (Andersen, 1987; D'Arcy, 1986, 1989).
4. People with more social contacts and friends tend to live longer than those with fewer (Berkman & Syme, 1979; House, 1988).

5. The harmful effects of poverty on the physical and mental health of children can be partially offset by public programs. Intervention can reduce the number of low birth weight babies, who are prone to suffer from major health problems (Milio, 1986; The Health of Canada's Children, 1990).

In regard to the needs assessment, the research questions reflect the importance of social environments as a determinant of health. The research dealt with unemployment and social networks. Health services are well known in the community and prenatal and early childhood programs are presently covered by the Gimli public health office. Work hierarchy was also not dealt with in this research project.

Physical Environment

Physical environment in this report is defined as structures or conditions that can be physically altered. Environmental factors that influence health are: occupational health, motor vehicle injuries, and air pollution.

The following reasons are identified for the importance of physical environment on health effects:

1. Workplace injuries and occupational illness exact a large toll in terms of diminishing the health of workers, yet many workplace injuries and illnesses are preventable. It is apparent the important health gains can be achieved through improved occupational health and safety measures (Nurturing Health, 1987-1991).
2. Motor vehicle accidents are the third leading cause of potential years of life lost in Canada. The potential exists to make important health gains in the area of road and motor vehicle safety (Robertson, 1986; Statistics Canada, 1986).

3. Indoor air pollution, especially second hand smoke, is a major health hazard (Bates & Sizto, 1987; Tye, 1990).

In regard to the needs assessment, the research questions reflect the importance of physical environments as a determinant of health. The research dealt with occupational health, motor vehicle injuries, and air pollution. The area of occupational health dealt with: work as a place of health promotion, exposure to substances that could endanger life, environmental sources of disease, risk of lung cancer, and heart disease. Besides motor vehicle accidents, exposure to other accidents in the community were explored. The only research into air pollution was whether the individual helped to promote clean air.

Individual Responses

There is growing evidence that mental health influences physical well-being although the exact pathways and the biological mechanisms are not yet clear. Individual response is considered an important determinant of health for the following reason:

1. Psychoneuroimmunology may go a long way to explaining a biological pathway linking social and environmental factors with the performance of the immune system and hence the health status of individuals (Barinage, 1989; Rees & Lutkins, 1967).

   In regard to the needs assessment, the research questions reflect the importance of individual responses as a determinant of health. The research dealt with general happiness and major sources of stress.

Productivity and Wealth

Thomas McKeown (1976) showed that the dramatic decline in mortality from infectious

diseases from the early 1800's to the middle 1970's could not be wholly explained by medical interventions or public health measures. Instead he attributed 70 to 75% of the gain in life expectancy to factors associated with the increased prosperity that resulted from the industrial revolution. Today, the firmest data on health determinants link health status to income (Nurturing Health, 1987-1991).

Three determinants are identified as: social rank, social policy and economy. They are identified as important to health for the following reasons:

1. Greater wealth (socio-economic status) is associated with greater health; poorer and middle income people appear to be more vulnerable than wealthy people to a variety of ailments. The type of ailments that disproportionately affect poorer people change over time (Black, Morris, Smith & Townsend, 1982; Health Promotion Survey, 1985; Wilkins, Russell, Adams & Brancknen, 1978; Wilkinson, 1986).
2. There is a strong relationship between socio-economic status and health status. The evidence indicates that when socio-economic differences are narrowed, population health status improves (Wilkinson, 1986);
3. National prosperity is important for health and the narrower the gap between rich and poor in a prosperous nation, the better the overall national health. Research suggests there may be an optimal ceiling for spending on the formal health care system; past a certain point such spending could be a drag on the nation's economy and hence its health (Marmot & Smith, 1989).

In regard to the needs assessment, the research questions reflect the importance of productivity and wealth as a determinant of health. The research dealt with income and

education.

Summary

The determinants have been presented within an overall framework that extends well beyond a traditional understanding of health as dependent on the health care system. The new framework allows one to consider the dynamic interplay of many other factors.

CHAPTER TWO

REVIEW OF LITERATURE

Introduction

Community and Health

The phrase community health is composed of two words: community and health. In order to collect information on health, one must consider the significance and implication of both words. We are dealing with a product: health, and a recipient: the community (Edelman & Mandle, 1990; Healthy People 2000, 1992; Smolensky & Haar, 1967).

Health is a social responsibility in and out of the community. Solving health needs by the democratic process, a community must have groups of interrelating and interacting individuals that function for a common purpose, which is community based health promotion program planning.

One cannot have adequate motivation for health or develop adequate participation by these groups unless there is a willingness to accept people, whoever they are, and wherever they may live, and work with them toward sharing goals, aspirations, and tasks (Dubos, 1959; Koos, 1953).

Many approaches may be used to assess community health. For instance, social indicators can monitor changes in the objective conditions of community life. Social indicators such as unemployment, and poverty and environmental features such as housing density, are all thought to influence community health (Liu, Proshansky & Barker in Bell et al, 1983). One of the most important standards for judging health in the community resides in the objective, and subjective evaluations of the goodness of life, as reported by community members (Campbell & Converse in Bell et al, 1983).

In-depth survey interviews can ask residents about activities, satisfactions, and crises to assess individual needs, and to study health in the community as a whole. By providing direct information about the life experiences of persons living under different physical and social conditions, subjective data can also put substance onto objective indicators of health.

When health needs are being identified, through a needs assessment, it becomes a tool for determining, justifying, and selecting of gaps or needs. Needs assessment is a tool that has been a long time in evolving. Needs assessment is a humanizing process to help make sure that we are using our time in the most effective and efficient manner possible (Kaufman & English, 1979).

In its broadest terms a community health needs assessment is a process which is used to gather information about a community's wants, desires, and resources (Edelman & Mandle, 1990; Hudson, 1988; Kaufman & English, 1979; MacStravic, 1978).

The identification of community health needs, which is the first part in program planning, is the emphasis in this project.

The review of literature deals with: Health, Determinants of Health; Program Planning; Need; Needs Assessment and Limitation of Needs Assessment.

Health

Introduction

Attempts have been made many decades ago to create a healthy society. Rudolf Virchow, the noted pathologist and reformer, travelled to Upper Silesia in 1848 to study the cause of an outbreak of typhus. What he found led him to carry out what was in effect a socio-environmental epidemiological study and his report dealt with broad political, social and

environmental causes of disease (Hancock, 1980).

In England, medical reform and the public health revolution had been pursuing similar lines. In 1875, Sir Benjamin Ward-Richardson addressed the Social Science Congress; his topic, Hygeia: A City of Health, dealt with a broad range of social and environmental causes of ill health. Many of the ideas that he advocated, including the elimination of tobacco and alcohol consumption, healthy workplaces, busway transit systems, community based group homes and other proposals to improve health are still on the agenda of public health professionals (Hancock, 1980).

This also was the era in which Pasteur and Koch were making their discoveries known. The decline of the public health approach and the ascendary of the biomedical approach had begun.

It was not until 1974, with the publication of A New Perspective on the Health of Canadians that public policy makers in the Western World began to take seriously the notion that future improvements in the health of Canadians lie mainly in improving the environment, moderating self-imposed risks, and adding to our knowledge of human biology (Lalonde, 1974).

The Lalonde report was the first modern government document to acknowledge that emphasis upon a biomedical health care system alone, without consideration given to environment and lifestyle, is not enough and that efforts need to be made to look beyond the traditional health care (sick care) system if the health of the public is to improve.

The move away from dependence upon the biomedical model has received substantial support from the World Health Organization. The strategy for attaining the goal of Health for

All by the year 2000 is based upon the recognition that: "Health does not exist in isolation. It is influenced by a complex of environmental, social and economic factors ultimately related to each other...action undertaken outside the health sector can have effects much greater than those obtained with it." (Nurturing Health, 1987-1991, p. 6).

Types of Health Concepts

Various concepts of health have evolved in response to health changes reflecting the shift from infectious to chronic disease patterns (Dever, 1980; Mausner & Kramer, 1985). Four models of health are identified as the: Ecological Model, Social Ecological Model, WHO Model and Holistic Models.

Ecological Model

The first concept of health, the ecological model, is essential to the investigation of infectious disease. This concept underlies the traditional approach of ecological balance. It involves a triad where the agent, the host, and environment are in dynamic equilibrium. When the balance is upset, disease occurs. The concept allows drug therapy, sanitation, immunization or surgery to tip the balance in favour of the host (man). This development was a natural consequence of the acceptance of the germ theory postulated by Koch. It assumes a single causative agent results in a single effect. This model continues to be used for new illnesses, diseases and hazards (Buck, 1985; Matarazzo, 1984; Mausner & Kramer, 1985).

Social Ecological Model

This model replaces the agent (an infectious disease consideration) with personal

behaviour factors. The model suggests situations where there may be no specific etiologic agent. It results in multiple cause, multiple effect or multiple cause, single effect. It recognizes that many factors influence a person's health. The model illustrates that behavioural factors have more impact than the physical environment but that all aspects contribute to a dynamic balance (Dever, 1980; Mauser & Kramer, 1985; Small, 1989).

World Health Organization Model

The concept of health held by WHO is an expansion of the social ecological model. This concept adds the dimension of mental well-being while retaining the social and physical characteristics. Health becomes a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity (constitution of the WHO, 1948, in Basic Documents 15th ed. WHO, Geneva, 1964). The basic difference between this concept and that of previous models is that health is defined by WHO in terms of what should be, rather than in terms of the components or factors which constitute health. The WHO concept has been a major thrust toward changing the belief systems concerning the dimensions of health. Unrestricted by a specific definition of health it has led to the development of multidimensional models that have broadened the framework of what constitutes health.

Holistic Models

Health activities in many parts of the world recognize limitations of traditional concepts of health, ecology, social ecology and WHO (Edelman & Mandle, 1990; Hancock, 1980, 1982, 1985, 1989; Healthy People 2000, 1992; Kickbusch, 1981; Mausner & Bahn, 1985). The result is a new concept of health that is broad, comprehensive and manageable from a

policy point of view based upon new epidemiological needs. This, in turn, has fostered non-traditional approaches to health planning and policy making in an era of new disease patterns.

Total or holistic health goes beyond the traditional definition of health - the absence of disease - to a more expansive and dynamic concept. It implies interplay between the physical, emotional and social aspects of our being. This approach reflects an attitude and lifestyle designed to achieve one's highest potential (Cassis & Birchmore, 1985; Nurturing Health, 1987-1991). Holistic means viewing a person's wellness from every possible perspective, taking into account every available concept and skill for the person's growth toward harmony and balance. It means treating the person, not the disease. The holistic approach promotes the interrelationship and unity of body, mind and spirit (Dever, 1980; Edelman & Mandle, 1990; Healthy People 2000, 1992; Mausner & Kramer, 1985).

The new holistic concepts of health are perceived by Blum (1974), Lalonde (1974) and Dever (1980). They reach the same basic conclusion. Health, with its many dimensions, contains four fundamental attributes: environment, lifestyle, human biology and system of health care. Blum (1974) calls it the environment of health, Lalonde (1974) calls it the health field concept and Dever (1980) labels it an epidemiological model for health policy analysis.

Holistic models have engendered a new belief system about what constitutes health, but people still retain the belief that if you want to feel better you go to the physician. This belief is a result of the single cause, single effect model associated with the ecological concept of health. Changes have occurred in what constitutes health but individuals have not let go of the medical care system as the only means to make us feel better.

Today we are faced with major chronic diseases and holistic illness. Holistic illness

results from the multiple cause, multiple effect model. Multiple causes are smoking, poor dietary habits, lack of exercise, stress. Multiple effects are heart disease, cancer, AIDS, motor vehicle accidents and stroke (Buck, 1985; Cassis & Birchmore, 1985; Dever, 1980; Edelman & Mandle, 1990; Hancock, 1980; Healthy People 2000, 1992; Kickbusch, 1981). However, prospects for health of the average individual have improved over recent decades. Two major challenges remain which are not adequately addressed by current health policies and practices. They are that various forms of preventable diseases and injuries continue to undermine the health and quality of life of many individuals and many thousands of individuals suffer from chronic disease, disability, various forms of emotional stress, and lack adequate community support to help them cope and live meaningful productive lives (Achieving Health for All, 1986).

Dynamic changes are required in the health field in providing a changing climate for a reordering of priorities away from concern with the sources of morbidity and toward better exploitation and utilization of the sources of health (Antonovsky, 1979; Califano, 1979).

People worry about nuclear war, pollution, unemployment, poverty and crime. People also worry about their health. They worry about cancer, Alzheimer's, AIDS, and the shortage of transplant organs. Since worries about health are highly specific, individuals fail to see how closely health is connected with some of their concerns. Until the connection is made, the actions necessary to create health will not be taken (Buck, 1985).

Factors must be changed if health is to be improved. The choice of factors is influenced by Antonovsky's (1979) concept, Sense of Coherence, as a basis for health. Coherence reflects a global orientation that expresses the extent to which one has a pervasive, enduring,

but dynamic feeling of confidence that one's internal and external environments are predictable and that there is a high probability that things will work out as reasonably can be expected (Antonovsky, 1979).

There is a need to tackle the wider environmental issues that shape individual choices, but are beyond the individual's control. Individuals must be brought to better health by providing them with a milieu that does not damage them physically and psychologically. In such an environment both the desire and the opportunity to indulge in unhealthy habits would be reduced (Achieving Health for All, 1986; Draper, Dennis, Griffiths & Popay, 1979).

Summary

Today's health is a concept which portrays it as a part of everyday living, an essential dimension of the quality of our lives. Quality of life in this context implies the opportunity to make choices and to gain satisfaction from living. Health is thus seen as a resource which gives people the ability to manage and even to change their surroundings (Achieving Health for All, 1986). This view emphasizes the role of individuals and communities in defining what health means to them.

Viewed from this perspective health ceases to be measurable strictly in terms of illnesses and death. It becomes a state which individuals and communities alike strive to achieve, maintain or regain, and not something that comes about as a result of treating and curing illnesses and injuries.

Three key issues appear in regard to health. The first is that health involves more than the presence or absence of disease. In addition to recovery from disease, other central concepts of health include coping with chronic conditions and maintaining or enhancing

current levels of health. Secondly, the factors that influence health go beyond individual lifestyle behaviour. Lifestyle does have an influence on health but other factors are important as well. Mutual aid and the influence of family and friends emerge as a major dimension of health behaviour and health status. Life circumstances such as income, education and employment are another set of factors understood to influence health. Thirdly, health is closely linked to quality of life. Health can be seen as a critical resource for achieving valued goods such as happiness and a good standard of living. Health can be seen as something that is affected by other aspects of quality of life. Poverty, for example, can work to make health resources inaccessible. Finally, the close links between health and quality of life suggest that health and quality are seen not just as a product of individual behaviour but also of institutional and social arrangements.

Health therefore can be viewed as a social construct incorporating a broad spectrum of values, behavioural elements, economic interests, environmental factors, and cultural concerns (Kickbusch, 1981).

This paper reflects the Determinants of Health as identified by the Premier's Council on Health Strategy: Nurturing Health, 1987-1991.

Health is an elusive phenomenon, one that is difficult to measure and to define. Although acute illness is observable and measurable, the gradual onset of many health problems is not. How good health might be measured is not clear. As a result, studies of the health of Canadians have focused on illness and recognizable problems.

Determinants of Health

Introduction

At the turn of the 20th Century, public health measures were widely recognized as important health safeguards. But in the following decades health became entirely equated with curative medicine. More recently, an increasing number of Canadians are beginning to realize the fundamental importance of social and physical environments to individual health (Achieving Health for All, 1986; Buck, 1985; Edelman & Mandle, 1990; Healthy People 2000, 1992; Hancock, 1985, 1989).

Universal access to quality medical care is an important principle in Canadian society (United States Department of Health and Human Services, 1989). However, the availability of high quality medical care does not mean there is equal access to health, which remains an unevenly distributed resource and some countries have better overall health, as measured by length of life (D'Arcy, 1989).

To understand disparities in health status and to formulate policies to improve health, one must recognize that a healthful lifestyle is not just a matter of individual choice (D'Arcy, 1989). The health of the population, as measured by mortality and morbidity, is expressed as health status within each income group. People in lower socio-economic groups experience poorer health and die sooner than people in middle income groups, who in turn experience poorer health and die sooner than individuals in higher income groups. While universal access to medical care can help people who become ill, it has little effect on differences in health status between income groups (D'Arcy, 1989).

Attitudes to health have been dominated by a viewpoint that equates health status with

the availability of physicians and hospitals. This belief is reflected in the size of the current health care industry which represents the largest cluster of economic activity in all modern states (Evans & Stoddart, 1990).

As a framework for understanding the determinants of health, it is limited to a focus on departures from health (illness) and the corresponding health care system. In this framework the causes of ill health to a person are like cold and wind to a house: they are external factors that public policy cannot control. The only possible response, then, is to attempt to diminish illness by putting more money into the health care system, and specifically into treatment.

This idea has led to the current situation where medical care, hospital care, laboratory tests and prescription drugs absorb most of our attention and money when it comes to addressing poor health. Increased spending on formal health care in developed economies is not having a corresponding impact on health status. At the same time, there is growing evidence that population health status may be significantly influenced by measures taken outside the formal health care system.

Clearly, a broader framework is required, one that reflects a wider range of relationships among the determinants of health. Health has come to be closely associated with individual lifestyle (Lalonde, 1974). Unhealthy activities such as smoking, are often referred to as self-imposed risks resulting from individual choice. This attitude, when not accompanied by a recognition that much behaviour is socially derived, sets the scene for blaming the victim (Nurturing Health, 1987-1991).

It is important to consider the nature of choice in these personal decisions. As Nancy

Milio (1975, 1986) notes: "...people with lesser incomes are forced to choose among fewer alternatives for coping. Thus a greater share of them turn to what is at hand - alcohol, cigarettes, food - all economically accessible in an affluent society if substituted for other things. And they turn most to the least costly (cigarettes) or most available (excess calories)." (p. 75).

When health is not viewed strictly as an individual matter, and the links between health and social environment are openly acknowledged, it becomes possible to think about the problem of poor health in a different light (Nurturing Health, 1987-1991).

The concept of the determinants of health demonstrates the complex interrelationships between the many determinants of health. The determinants of health identified are: social and physical environments, one's biological endowment, individual behavioural and immuno-logic responses and the importance of individual and national productivity and wealth (Figure #1).

Social Environment and Health

Wide disparities in health status are not unique to Canada and the relationship between characteristics of the social environment, socio-economic status and health are not a new discovery (Nurturing Health, 1987-1991). Social environment is divided into five categories: health services, work hierarchy; unemployment; social networks; and prenatal and early childhood.

Health Services

Since the traditional medical care system concentrates on the treatment of ill health and

disability, it can only make a limited contribution to the prevention of illness by nurturing overall good health (Nurturing Health, 1987-1991).

Today there is limited scope for effective medical intervention with many of the leading causes of death. While there are a few new effective treatments for particular types of cancer, primarily in children for instance, there has been little overall improvement for people suffering from the most common forms of cancer (Bailer & Smith, 1986).

The mortality rate for cardiovascular disease, the largest cause of premature death in Canada, has fallen steadily in the past 25 years, but researchers have concluded that medical intervention is responsible for only a small portion of this improvement. They suspect that factors such as smoking and eating habits explain much of the remaining decline in death rates (Wilkins, Russell, et al, 1986).

Work Hierarchy and the Organization of Work

The lifespan and health of an individual is linked to his or her location in the job hierarchy and to associated factors such as degree of authority, freedom to make decisions and level of social support in the workplace (Nurturing Health, 1987-1991).

A study of British civil servants (Wilkinson, 1986) reveals mortality differences for most causes of death between four classes of male civil servants. Over the period studied, those in the lowest class died at three times the rate of those in the highest class.

The study findings are all the more noteworthy because none of the employees was living in poverty, and all had good job security. All worked in the same location and were not exposed to industrial hazards.

The biggest gap was for lung cancer, chronic bronchitis and other respiratory diseases,

which are all strongly smoking-related. The extent of smoking differed markedly between the civil service classes. The study showed that 29% of the top class civil servants smoked, compared to 68% of the bottom class. This gradient in smoking behaviour raises the question of how this behaviour is a product of the social environment. The study also found, however, that non-smoking lower class civil servants had higher death rates due to chronic heart disease and other causes (not including cancer) than their higher class counterparts.

Another British study concluded that the organization of work, and in particular the freedom to make decisions, are the basis for the strong link between social class and heart disease (Marmot & Tores, 1988). Marmot and Tores (1988) found that the lower the decision latitude at work, the higher the proportion of smokers. They suggest that above a threshold of poverty, position on the social hierarchy per se may be a more important determinant of health and disease than material conditions.

Latitude in decision making is only one of the important factors in the organization of work that impacts on health. Workplace social supports, as measured by the number and quality of interactions with co-workers, also has an effect on health. Health is also affected by the stress-related demands of a job such as the pace of work, the frequency of deadlines and reporting requirements (Johnson & Hall, 1988).

Unemployment

Unemployment, especially among poorer people, is associated with deteriorating physical and mental health (Nurturing Health, 1987-1911).

Research on the health effects of unemployment has been conducted at both a population level where variations in the rates of unemployment are linked to variations in official

mortality and morbidity figures and on a smaller scale and case study basis.

A Danish study on unemployment and mortality found a significantly higher death rate - between 40% and 50% higher - among the unemployed than the employed. The study, which covered the decade from 1970 to 1980, found increased mortality from all the five major causes of death, especially from suicide or accidents. In areas of the country with higher overall unemployment rates, the relative death rate among the unemployed was higher (Nurturing Health, 1987-1991).

Increased mortality among the unemployed was interpreted to be a consequence of two factors: health-related selection (those who were unemployed because they were sick) and increased susceptibility associated with the psychosocial stress of unemployment (Iverson & Andersen, 1987).

A review of the research on unemployment and health completed for the World Health Organization by Wescott (1985) found that: "high levels of unemployment and economic instability cause an significant increase in the levels of mental ill health and also have adverse effects on the physical health not only of the unemployed but also of their families and the community in general" (p. 3).

The WHO review stated that research into the experience of people consistently unemployed for more than a few weeks' duration caused physiological stress.

Using data from the 1978 Canada Health Survey , D'Arcy (1986) found that the unemployed report significantly more psychological distress, anxiety and depressive symptoms, disability days, activity limitation, health problems, hospitalizations and visits and telephone calls to physicians, than did the employed.

More recently, a preliminary analysis of Statistics Canada's Social Survey (1986) found that the unemployed and those in insecure full time employment reported lower health and life satisfaction than the employed in secure jobs.

Studies have supported the view that unemployment or the threat of unemployment is a major stress factor and the stress response such as elevated blood pressure plus stress related behaviour such as weight gain and smoking are both risk factors in the pathogenesis of cardiovascular disease.

Social Networks

People with more social contacts and friends tend to live longer than those with fewer social contacts and friends (Nurturing Health, 1987-1991).

Researchers have found a clear link between social support networks and death rates, suggesting that social relationships or the lack thereof constitute a major risk factor for health.

A study by Berkman and Syme (1979) found that for both men and women, the more social contacts people had, the lower their mortality rate. The study established four categories from least to most social connections. It found that for men 60 to 69 years old the death rate among those with the least connections was 4 out of 10 compared to 2 out of 10 for those with the most connections. Comparable figures among women were 3 out of 10 and 1 out of 10, respectively. Overall, men with the least number of social contacts were more than twice likely to die as their same age counterparts having many contacts. For women, those with the least contacts were almost three times as likely to die at a given age. The study also found that married people liver longer than unmarried people. A link between widowhood and higher rates of illness and death was similarly well established.

Subsequent research by House (1988) has confirmed the California results leading to the observation that social relationships may rival the effects of well established health risk factors such as smoking, blood pressure, obesity and physical activity.

Prenatal/Early Childhood Conditions

Research shows that prenatal and early childhood conditions have a clear impact on health (Nurturing Health, 1987-1991).

The way in which children are cared for at an early age can influence their coping skills and by association, their health, not only for the rest of their childhood but also for their entire lives.

A recent review by the Ontario Ministry of Community and Social Services (1989) on early childhood interventions concludes that primary prevention projects for children can be successful. The review recommends integrated programs of services to families and children because: "...the close association between poverty and risk holds for every component of risk - from premature birth to poor health and nutrition, from failure to develop warm, secured, trusting relationships early in life to child abuse, from family stress to failure to master social skills. Programs aimed at any one risk will be helpful, but since the risk factors interact, programs aimed at multiple risk factors should produce greater, more stable and longer term effects." (Ontario Ministry of Community and Social Services 1989, p. 7).

The report warns that it is an illusion to believe that single, simple, relatively inexpensive, one-shot programs can produce long term positive advantages for economically disadvantaged children.

The harmful effects of poverty on the physical and mental health of children can be

partially offset by public programs.

Physical Environment and Health

Planning for health must address the importance of both the human made and the natural environment (Nurturing Health, 1987-1991). The boundary between the physical environment and the social environment can become blurred because of the complex interaction of the two. For this framework physical environment is identified as structures or conditions that can be physically altered.

A myriad of environmental factors influence health. For this framework, the three chosen were: occupational health, motor vehicle injuries and air pollution.

Occupational Health

Adults who work outside the home spend about one-quarter of their lives in the work-place, yet many have little choice about, or control over, their work settings.

Workplace injuries and occupational illness exact a large toll in terms of diminishing the health of workers, yet many workplace injuries and illnesses are preventable. A recent study from the Organization for Economic Co-operation and Development (1989) notes that occupational injury rates in Canada rose by about one-third from 1955-1987. During the same period, rates declined by half in France, Germany and the United Kingdom and by one-third in Sweden, Australia and Belgium.

It is apparent that important health gains can be achieved through improved occupational health and safety measures.

Motor Vehicles

Motor vehicle accidents are the third leading cause of potential years of life lost in Canada (Ministry of Transportation, 1986). This measurement looks at years of life lost before age 75, which is now the average life expectancy, so that deaths at earlier ages are seen to result in a greater loss of life.

People concerned about road safety are particularly frustrated by the fact that governments do not promote or adopt measures known to be effective in preventing injury. Leon Robertson (1986) of the Epidemiology Department at Yale University notes: "...one can ask in almost any community and find where the local 'dead man's' curve is located. What is not so easily found are public officials who understand that there are remedies, such as enhanced perception of curvature, energy absorbing guardrails, and removal of rigid objects... The attitude too often seems to be that human beings who are not perfect deserve the death penalty..."(p. 13).

Robertson (1986) notes that the maximum speed capacity of most vehicles is twice the maximum legal speed and that such capability is contrary both to goals of safety and fuel economy.

Transport Canada (1990) estimates that about 70% of Canadian drivers and passengers use seatbelts and if this level were pushed to 95% by 1995, some 13,000 fatalities and 340,000 injuries could be avoided over a 20-year period.

Federal officials note that West Germany, the United Kingdom and parts of Australia have already achieved 95% compliance with seatbelt laws (United States Department of Transport, 1986). They add, however, that for Canada to reach that level requires enforce-

ment and persuasion on a scale not yet seen in this country.

Air Pollution

The devastating effects of air pollution have been underscored recently by revelations form Eastern Europe, where enforcement of standards have been extremely lax (Nurturing Health, 1987-1991).

In Upper Silesia, a highly industrialized region of Poland, residents suffer from 15% more cases of circulatory disease, 30% more cancer, 47% more respiratory problems, 100% more diabetes and 100% more liver disease deaths than the national average (Tye, 1990).

In the Western World, where air pollution has been more vigorously controlled, the health effects are nonetheless discernible.

While standards for outdoor air pollution have existed for many years, attention has shifted recently to the importance of indoor air pollution, since most individuals spend 75% to 90% of their time indoors, in residences or public buildings (Leibowitz, 1983).

Research has shown, for instance, that one-third of non-smokers' lung cancer deaths are caused by exposure to the smoking of other people. This public health risk is larger than the hazardous air pollutants from all regulated industrial emissions combined (Repace, 1985).

Individual Responses

Psychoneuroimmunology, an emerging and still controversial field of knowledge, may go a long way to explaining a biological pathway linking social and environmental factors with the performance of the immune system and hence the health status of individuals (Nurturing Health, 1987-1991).

There is growing evidence that mental health influences physical well-being although the exact pathways and the biological mechanisms are not yet clear. Animal experiments show a direct linkage between the central nervous system and the immune system. It appears that soluble factors, often referred to as cytkokines, enable the central nervous system to communicate with the immune system (Dantzer & Kelley, 1989).

Psychological factors, which work through the central nervous system, may well influence the body's host defence system, perhaps through making people's vulnerability to disease depend on the state of the body's immune system.

Barinage (1989) reported on a Stanford University study of cancer deaths and psychological factors in human disease. Among women with breast cancer, those who engaged in supportive group psychotherapy lived, on average, one and one-half years longer than those in a control group who did not have psychotherapy. Both groups underwent standard medical therapy. The psychiatrist who conducted the research cautions that therapy may have led to better compliance with doctor orders; but clearly, something about being in these groups helped these women live longer.

This relationship between psychological factors and the immune system may be a key to explaining health outcomes related to income, unemployment, work hierarchy, span of control and social support (Nurturing Health, 1987-1991).

Productivity, Wealth and Health

Thomas McKeown (1976) showed that the dramatic decline in mortality from infectious diseases from the early 1800's to the middle 1970's could not be wholly, or even primarily, explained by medical interventions or public health measures. Instead, he attributed 70% to

75% of the gain in life expectancy to factors associated with the increased prosperity that resulted from the industrial revolution.

Today, the firmest data on health determinants link health status to income. There is a strong correlation, for instance, between income and life expectancy in Canadian males (Nurturing Health, 1987-1991), and it is not money itself, but the conditions, opportunities and amenities provided by money that are important to health.

Three components of productivity, wealth and health are social rank, social policy and economy.

Social Rank

Greater wealth (socio-economic status) is associated with greater health; poorer and middle income people appear to be more vulnerable than wealthy people to a variety of ailments. The type of ailments that disproportionately affect poorer people change over time (Nurturing Health, 1987-1991).

Canadian data indicate a clear link between socio-economic status and health status. In the Canada Health Promotion Survey of 1985, people surveyed were asked to rate their own health, activity limitations and happiness. A recently published special review (Wilkins, 1988) of the survey found that: for persons aged 25 to 64, health status and quality of life are clearly lowest among the poor, those with little education, and the unemployed, while they are highest among the rich, the university educated, and those employed in professional/ managerial occupations. This supports other studies which show that the poorer you are, the less healthy you are likely to be, over a shorter lifetime.

Recent research (Barinage, 1989) using Canada Pension Plan data found that the more a

man earns in the 10 to 20 years before retirement, the longer he is likely to live. The study found a remarkable association between men's life expectancy at age 65 and their average annual income when they were age 42 to 64. The disparity in life expectancy is striking: men in the bottom 5% in earnings in the two decades before retirement were twice as likely to die by the age of 60 than men in the top 5%.

British research indicates that the relative health inequalities between occupational classes persist over many decades, even though the causes of death have changed significantly (Black, Morris, Smith & Townsend, 1982).

A recent Canadian study points to similar conclusions (Wilkins, Russell, et al, 1986). An update of research based on 1971 data of mortality rates in Canadian urban areas found that relative mortality (lowest compared to highest) between income groups narrowed only slightly in the 15 years between 1971 and 1986. This study also showed that, over the 15-year time span, certain causes of death became more prevalent, some remained the same, and others declined as causes of death. For example, deaths from lung cancer increased; there were no changes in deaths from breast cancer or alcoholism; and deaths due to infectious diseases declined.

Together, the British and Canadian research seems to indicate that if certain diseases known to be associated with lower income groups were eliminated, the socio-economic differential would express itself through some other diseases. This observation should not serve as an argument against tackling particular diseases that afflict those groups. It does suggest, however, that a disease specific approach to health inequalities is not, in itself, adequate. More generally, it suggests some overall greater vulnerability to a variety of

specific ailments among poorer people as opposed to wealthier people.

Social Policy

There is a strong relationship between socio-economic status and health status. The evidence indicates that when socio-economic differences are narrowed, population health status improves (Nurturing Health, 1987-1991).

While disease specific responses to health inequalities are not likely to be sufficient in reducing these disparities, social policy can make an important difference.

Evidence of an important link between life expectancy and the distribution of income among a country's citizens was apparent in Wilkinson's (1986) research which used 1970 life expectancy figures. This research shows an overall higher life expectancy in developed countries with a narrow range between lowest and highest income groups than in countries with a wider gap. The Netherlands, Sweden and Norway ranked at the top for life expectancy and a narrow range between top and bottom income groups. The United States, Spain, West Germany and France were clustered together at the lower end of the spectrum. Canada, Australia, and the United Kingdom were all in the middle.

The Economy

National prosperity is important for health and the narrower the gap between rich and poor in a prosperous nation, the better the overall national health. Research suggests there may be an optimal ceiling for spending on the formal health care system; past a certain point such spending could be a drag on the nation's economy and hence its health (Nurturing Health, 1987-1991).

As previously indicated, it is clear that the socio-economic well-being of a population is related to national prosperity, as well as public policy.

Equally, how much a nation can afford to spend on the quality of the social environment and nurturing opportunities for health as well as access to health care is directly related to its ability to generate income (Nurturing Health, 1987-1991).

Japan presents an interesting example of how income, income distribution, and national prosperity are linked to health status. In this case, however, superior population health status does not appear to correspond with the high levels of expenditure on health care we have come to expect (United States Department of Health and Human Services, 1989).

Japan appears to bear out the importance of prosperity to longevity. From a middle of the road position in life expectancy in 1965, the Japanese soared to top place in 1987. During the same period, the Japanese economy also accelerated. By 1987, Japan ranked 4th in GNP after Switzerland, the United States and Norway (Marmot & Smith, 1989).

Researchers who have considered the impact of health care, diet, organization of work and other factors on longevity, speculate that the large and rapid improvement in life expectancy is due to the marked success of the Japanese economy.

Japanese gains in life expectancy have been dramatic. In 1955, the life expectancy at birth for Japanese males was 63.6 years; by 1986 the comparable figure was 75.2. For Japanese women, the comparable figures over that period were 67.8 to 80.9 years (Marmot & Smith, 1989).

Another important factor in the Japanese life expectancy is the distribution of income. In a review of the data Marmot & Smith (1989) noted that Japan, with the fastest rate of growth

of any country, has the smallest relative differences in income between the top and the bottom 20% of groups, and goes on to consider how this fact might relate to Japan's life expectancy gains.

The foregoing gains were made while Japan remained a relatively low cost nation in terms of medical spending. In 1987, Japan spent an estimated 6.8% on health care as compared to 11.2% in the United States and 8.6% in Canada.

Summary

The determinants have been presented within an overall framework that extends well beyond a traditional understanding of health as dependent on the health care system. The new framework allows one to consider the dynamic interplay of many other factors that are important. Based on accumulating research evidence, it is clear that it is essential to adopt a new framework for understanding health. The challenge lies in using the knowledge to develop effective public policies that will ensure a healthy and prosperous population.

Program Planning

Program planning can be considered as part of a cycle involving three phases: 1) program planning, 2) program implementation, and 3) program evaluation (Blum, 1974; Dignan & Carr, 1981, 1986).

Program planning is the phase in which the details are planned for delivery of the service in question. The implementation phase is the period of time when the program plans are tried out. The program evaluation phase is when the outcomes of the program are measured. Phase One is the emphasis in this research paper.

Program Planning

There is no one correct model for planning. There are a number which are available and that work. Some work better than others in given conditions, some are more conceptual than practical, and some are more practical than conceptual.

Dignan and Carr (1981, 1986), Edelman and Mandle (1990), Harvey (1986), and Kaufman and English (1979), provide similar models for program planning.

Seven steps are identified as important aspects of program planning: Step One is the community study; Step Two is identifying needs; Step Three is stating program objectives; Step Four is inventory resources; Step Five is developing the program; Step Six is implementing the program; and Step Seven is program evaluation.

Step One

Step One is identified as the assessment of the community (Edelman & Mandle, 1990); community study (Harvey, 1986); community analysis (Dignan & Carr, 1981, 1986); and identifying problem based upon needs (Kaufman & English, 1979). This is the critical step to assure that the problem solving process is valid, useful, and important. The basic tool for this task is a needs assessment.

This involves the collection of detailed information about the community's health needs. After a general overview of the community is obtained, specific aspects of the community are examined. The community study will collect information about community health needs and identify resources available to meet the needs that are identified. Who is in need and what is needed are identified.

Various standards are used in analyzing data. Several criteria suggested by the National

Commission on Community Health established an important frame of reference when analyzing health promotion and protection resources of a community (Edelman & Mandle, 1990). The first is that health services should be comprehensive. Health promotion and protection services should be provided for all persons in a community who need them. The second is that health care requires adequate facilities, personnel and financial resources. Unless adequate health promotion and protection services are available, comprehensive health care is not provided to a community. The third is that health care should be available, accessible, and acceptable. Community data may indicate that health care is available but not easily accessible. One should explore the data concerning the health perception and health management pattern and then determine what available resources are directed toward preventing problems such as motor vehicle accidents. In this way gaps in health promotion and protection services can be identified more readily.

Dignan and Carr (1981, 1986) identify five basic parts to a community analysis. Four of the parts: 1) community backdrop, 2) analysis of the community's health status, 3) analysis of the community's health care system, and 4) analysis of the community's social assistance system, are designed to direct information collection in areas that reflect distinct aspects of the community. The fifth part, community diagnosis, involves the translation of the collected information into statements describing resources and needs within the community under scrutiny and identifying target populations. Community analysis provides a format whereby facts and problems pertaining to the community can be evaluated. When a community analysis is finished, it becomes the foundation from which the need for further investigations can be identified.

Step Two

Step Two is identified : as community diagnosis (Edelman & Mandle, 1990); identifying needs (Harvey, 1986); defining and verifying the problem (Dignan & Carr, 1981, 1986); and, identified in Step One by Kaufman and English (1979), as identifying problems based upon needs.

Once information about a community is obtained, the data must be sorted out, organized and synthesized in a meaningful way to ascertain patterns of health activities and trends. Decision making and judgement are particularly significant during the diagnostics phase. The objective data of the assessment are examined for clues to determine whether patterns emerge or clustering of information occurs. During this stage the community makes decisions and begins to formulate ideas and tentative judgements about possible health concerns, possible community groups at risk and probable etiologies and relationships.

Here, gaps between current outcomes and desired outcomes are determined, placed in priority order, and the most important are selected for action.

Community diagnosis, the final step in community analysis, involves synthesizing all collected data and determining gaps between health problems and services. The gaps are indicators of needs within the community and any subpopulations within the community that may be affected by health problems.

To make a diagnosis one first summarizes the data and then makes one or more of the following judgements (Edelman & Mandle, 1990): The first is that no problem exists but a potential concern may be offset by providing health promotion. The second is that a problem exists but is recognized by community members or health related professionals and is being

effectively handled. The third is that a problem exists that has been recognized by the community but resources are inadequate or the community has not responded. The fourth is that a problem exists that the community recognizes but cannot deal with at this time. The fifth is that a problem or potential health concern exists that needs further study.

A need may be defined as "a state that exists when there is a gap of difference between a present situation and a hoped for or required state." (Harvey, 1986, p. 2; Siegel, Attkisson & Carson, 1978, p. 3). Three concepts are important when thinking about needs: 1) What is the present situation? 2) What can the situation be, considering time, money or motivation? and 3) What the situation should be ideally. Where 2) and 3) are the same, there are no constraints in reaching the What should be situation. Often in health promotion the basis for program planning is the difference or gap between Concepts 1) and 2). That is, we can only reach a limited or What can be situation. Once needs have been identified it is relatively easy to move to the next step in the planning process. If health promotion interventions are to be successful, it is necessary to define behaviours related to the health needs. The basis of health promotion is planned behaviour change, planned changes in the behaviours that are related to a new desired situation. To change behaviours, a program must be based on a thorough understanding of the current behaviours of the people and the new behaviours related to the desired situation.

Step Three

Step Three is identified as stating program objectives (Edelman & Mandle, 1990; Harvey, 1986) and establishing program goals and defining and assessing behaviour (Dignan & Carr, 1981, 1986).

In conducting a community assessment that focuses on promoting health, one considers the following objectives: 1) identify populations at risk; 2) identify actual and potential community health concerns; 3) identify community strengths; 4) identify gaps in community health promotion resources; 5) identify mismatches between the status quo and community oriented health related goals; and 6) establish a data base from which to plan health promotion services and plan community health related responses.

If needs and behaviours have been effectively identified, the stating of objectives is clear. The objectives should describe the future situation. The more clearly the objectives pinpoint expected behaviours, outcomes, or future situations, the more useful they will be. Once objectives have been stated, they guide the action that will move the individual, group or community toward a new situation or set of behaviours.

Step Four

Step Four is identified as inventory resources (Edelman & Mandle, 1990; Harvey, 1986). Once the program objectives have been stated, the next step involves inventorying the more specific resources available that can be used as an aid to reach the chosen objectives. Most of the resources found within the community should have been identified in the community study. These resources can be classified into two groups. One group, the internal resources, are those directly or locally available to people involved in a specified program. The second group, the external resources, must be requested from others outside the community. Generally, resources are human, material services and instructional.

Step Five

Step Five is identified as planning (Edelman & Mandle, 1990), developing or designing

the program(s) plan (Dignan & Carr, 1981, 1986; Harvey, 1986), and selecting solution strategy(ies) from among alternatives (Kaufman & English, 1979).

The desired goals are expected to resolve existing or potential health needs. The identification of the specific or potential health needs, together with the planned actions to achieve the desired outcome, become the framework and data for evaluation.

The designing of the health promotion program must focus on two points. The first is to identify the content of the program. This is all the things that people need to learn and be able to do to attain new behaviours or reach the chosen objectives. This involves the awareness, knowledge, motivation, skills, practice and reinforcement necessary to reach the desired situation reflected in the chosen objectives. The second involves methods and techniques necessary to deliver the content. Strategies are the large scale operations of the total program. They include health education, marketing, advocacy, community development, and legislation. Methods are the general means or approaches to be used within strategies. These could be such things as print media, direct contact and experimental learning. Techniques further subdivide methods providing a wide variety of approaches to the behaviour change process. Techniques are the fine tuning of methods.

Step Six

Step Six is identified as implementing the program (Edelman & Mandle, 1990; Harvey, 1986) and as implementing selected methods and means (Kaufman & English, 1979).

Here is where most other approaches really start. The needs have been identified and justified, the detailed behaviour requirements listed, and alternative methods and means are selected. The time for design, implementation and installation is at hand. This is the

designing and doing portion of the system. This step is the actual use of the designed program to achieve the chosen objectives which reflect community health needs. Implementation is a training, watching and testing stage.

The success or failure of the plan will depend on the team's intellectual, interpersonal and technical skills. As the plan is implemented, one learns more about the community and their own responses, strengths, limitations and abilities to cope and adapt. Although the implementation phase has an action focus, it also includes assessment, planning, and evaluation activities to monitor the actions taken to resolve, reduce, eliminate, or control the health need.

Step Seven

Step Seven is identified as program evaluation (Dignan & Carr, 1981, 1986; Edelman & Mandle, 1990; Harvey, 1986) and determining performance effectiveness and revising as necessary (Kaufman & English, 1979).

As previously noted, the plan, which includes the diagnosis, provides the framework for evaluation. The community is the focus, its objectives define what is evaluated.

Now that everything has been designed, developed, and used in the operational setting, it is time to see what worked and what did not work. The effectiveness and efficiency of the methods and means are here determined. This is an ongoing step which is accomplished with all previous functions. At each step along the way there is constant determination of the extent to which each and every behaviour requirement has been achieved, and when it has not been, appropriate revisions and changes are to be accomplished.

Evaluation is an ongoing process. The frequency of evaluation is dependent on the

situation, the changes expected, and the objectives. In any population group, existing or potential health needs will be resolved or controlled within different intervals. Because evaluation is determined by immediate, intermediate, and long range goals, the process is continued until the goals are realized.

The results of evaluating the community program are also important, since they may indicate the need to reassess, revise or modify the plan. Community planning is not always effective in achieving the goals related to health needs of the community. One must reassess the situation and plan a new approach, then implement and evaluate the revised plan. Thus, the program plan is a continuous cycle.

Program evaluation in community health promotion planning has three aspects: process evaluation, impact evaluation and outcome evaluation. The first is to see how well the program was implemented. The second is to find out whether chosen objectives have been attained. The third is to see the effect the program has on health or meeting of needs. Process and impact evaluation results are mostly immediate results while outcome results may require waiting for some time in the future.

Summary

There is no one correct model for planning.

There are seven steps that are identified as important aspects of program planning. Step One is the community study. This involves the collection of detailed information about the community's health needs. Step Two is identifying needs. Needs are determined, placed in priority order, and the most important are selected for action. Step Three is stating program objectives. This involves stating the required future situation. Step Four is

inventory resources. This is the identification of necessary resources needed to reach the chosen objectives. Step Five is developing the program. This involves identifying the content of the program along with methods and techniques necessary to delivery the content. Step Six is implementing the program. It is the actual use of the designed program. Step Seven is program evaluation. One looks at the program to see what worked and did not work.

Need

Introduction

There are few uniformly accepted definitions of needs. A literature review indicates many different perspectives.

A large share of the literature does not even bother to discuss or attempt to define the word. The meaning is assumed to be clear and obvious.

Need is a word with variable meaning because it does not have a specific referent. It does not refer to something in particular but rather to something which does not exist (Bell et al, 1983; United Way of America, 1982). The concept of need is sometimes vague and means different things to different people.

Definitions of Need

A few definitions of need are examined. Webster (1975) defines need as:

" 1) necessity; compulsion; obligation; as, there is no need to worry now; 2) a lack of something useful, required or desired; as I feel the need for a long rest; 3) something useful, required, or desired that is lacking; want; requirement; as what are his daily needs? 4) (a) a condition in which there is a deficiency of something; a time or situation of

difficulty; a condition requiring relief or supply; as a friend in need; (b) a condition of poverty; state of extreme want;" (p. 637).

A 1975 report by the United States Department of Health, Education and Welfare defines need in a manner consistent with the open ended character of the dictionary meaning of the term.

A human need is any identifiable condition which limits a person as an individual or a family member in meeting their full potential. Human needs are usually expressed in social, economic or health related terms and are frequently qualitative statements (United Way of America, 1982). According to Kahn (1969), needs are social definitions representing a view of what an individual or group requires in order to play a role, meet a commitment, participate adequately in a social process, retain an adequate level of energy and productivity at a given moment in history.

The concept of human need has confounded most scholars and practitioners in the field of human services. Assessing human needs as a scientific method in social planning has further exacerbated the problem.

Need(s) in a human resources context are thought of as basic human needs, subsistence needs and survival needs. The term need is essentially a normative concept which invariably involves value judgements and is greatly influenced by the social, political and economic conditions of the time (United Way of America, 1982). Moroney (1977) identifies three key factors that influence the definition of need: standard of living, the socio-political environment and the availability of resources and technology.

In addition to the normative concept of need three other categories of need are identified

in the literature: relative need, perceived need and expressed need (Moroney & Bradshaw in United Way of America, 1982). While normative need establishes the most desirable standards for a given service, relative need is basically concerned with the equity of services. In relative need, one measures the situation of one population group in one geographical location to that of others without reference to any most desirable standard of services. Perceived need is simply what people perceive their needs to be. Expressed need is measured in terms of the client's demand for services.

The theoretical literature on human needs and their implications for society is not abundant. For the present purpose, the writings of Erikson (1968), Maslow (1970) and Ponsioen (1962) are relevant.

Erik Erikson (1968) sees human needs in developmental perspective and identifies eight identity crises in the human life cycle. As people go through these eight critical stages of their lives, various health and social services can be sorted out as responses to these crises.

Abraham Maslow (1970) has conceptualized a hierarchy of needs. Constructing a theory of human motivation, Maslow (1970) expounds the concepts of a series of needs from lower to higher, starting with the most basic of human needs, the physiological needs. He goes on to identify safety needs, belongingness, love needs, esteem needs and the need for self actualization.

Ponsioen (1962) focuses on the basic survival needs of people as distinguished from all other needs. Ponsioen (1962) contends that every society's first duty is to take care of the basic survival needs of its citizens, which include biological, emotional, social and spiritual aspects.

These three theoretical constructs of human needs have assisted as organizational principles for the classification and understanding of health and human services and at the same time contribute to some of the problems inherent in needs assessment research.

Needs are also basic to the human condition. Masserman (1955) has described man's three primordial needs: 1) the biologic requisites for survival: air, water, food and shelter; 2) the interpersonal needs for companionship and affection essential for a sense of identity, emotional expression, and a meaningful existence; and 3) the spiritual yearnings for a faith that gives a transcendent meaning to life. When basic needs are not fulfilled because of personal inadequacies, biologic as well as social, or because of frustration, conflict and deprivation, illness often results.

Illustrative Definitions of Need

There are also a number of formal statements defining need. These definitions will be reviewed as well as their implications for comprehensive need assessment.

Jeffers, Borganno, and Bartlett (1971), after distinguishing between demand, want and need for medical services, define need as: "...the quantity of medical services which medical opinion believes ought to be consumed (in order for the population) to remain or become as healthy as is permitted by existing medical knowledge." (p. 91).

This definition has been extended to cover need for health and human service in general even though it addresses the question of need for medical services.

This definition does not allow input by the persons or groups whose needs are to be met or who may be affected by the implications of the assessment process (Bell et al, 1983).

A similar approach is offered by Lund (1973). When a circumstance is labelled

necessary or desirable by those with control over the organization a need may be said to exist. The term organization refers to health and human service delivery systems and programs.

Unlike Jeffers et al (1971), Lund (1973) make the determination of need for health and human service contingent upon the opinion of organizational control agent rather than medical experts.

Wan and Soifer (1975) are less restrictive concerning who is responsible for determining need. They indicate a need is usually measured by the symptoms of an illness perceived by the individual, the response and evaluation of the disabling effects, or by medical assessment of health status and physician rated urgency of the condition.

Reiff (in Bell et al, 1983) indicates each instance of need should be considered on an individual case-by-case basis. One must identify and assess need for services at all levels of social organization where health and human service delivery of operations take place. Reiff (in Bell et al, 1983) describes six strata of social organization: the individual, the group or family, the organization or social network, the institutional system, the community and society. These are increasingly complex levels of social organization, each subsuming all the previous levels. A comprehensive needs assessment program therefore must identify needs at each level.

Blum (1974) offers the most detailed approach to conceptualizing need for health services. In addition to elucidating the concepts of deviance, disability, illness, disease and good health or well-being, he enumerates eight aspects of health which must be measured. These eight are: prematurity of death, disease, discomfort, illness, internal satisfaction,

external satisfaction, positive health and capacity to participate. Blum (1974) also enumerates indices for each aspect, at both individual and community levels. When all aspects are measured, one would be in a position to plan effectively for health and human services. The difficulty is that, as Blum (1974) puts it: "measurements define situations and attitudes convert situations into problems. Since the activity of measurement yields information, this information potentially can be converted into value based statements of need." (p. 93).

Siegel, Attkisson and Carson (1978) view need as a relative concept, depending primarily upon those who undertake the identification and assessment effort. A need becomes the gap that is viewed as a necessary level or condition by those responsible for this determination and what actually exists. This relativistic approach is congruent with the present state of affairs in which needs assessments become activities that are unrelated to one another (Bell et al, 1983).

In conclusion, the examination of approaches to measuring and defining need can result in conceptual and operational deficiencies. They are as follows: 1) Exclusive reliance on expert opinion or organizational control agents for determining when a need state exists; 2) Insufficient emphasis and lack of consideration for need states that transcend the individual level of social organization; 3) Lack of specific operational criteria for determining the existence of a need state and for differentiating between met and unmet needs; 4) Lack of a systematic framework with which to integrate divergent methodologic inputs into the process of needs identification and assessment.

Summary

The following points can be made about needs:

A need must not be defined solely in terms of the method or strategy used to measure its antecedent or consequent conditions. A need can be an inferred state of affairs. A need may be identified as "....a state which exists when there is a gap or difference between a present situation and a hoped for required state..." (Harvey, 1986, p. 2; Siegel, Attkisson, Carson, 1978, p. 3). While its occurrence is predictable on the basis of certain conditions it is not always directly observable. Inputs into the conceptualization and the perception of a need come from many perspectives. Need, therefore, is a relative concept and community agreement about priorities among needs is a prerequisite to taking action on the information about needs. The assessment of need is productive insofar as it functions as an environmental monitoring system to provide early warnings for health and human service programs and helps identify unrecognized or unmet needs.

It is possible to conceptualize need so that all of the above points are met (Bell et al, 1983). Focus of attention on needs should be those that are unmet or unrecognized.

An unmet need is said to exist when certain conditions prevail (Bell et al, 1983): "1) The recognition of a problem, a dysfunctional somatic or psychological state, or an undesirable social process; 2) The judgement that satisfactory solutions are not accessible, are not currently adequate, or do not exist in the community; and 3) The necessity to reallocate existing resources or to appropriate new resources." (p. 99).

The concept problem involves: 1) perception of What Is, 2) a comparison level, that is, What Should Be, and 3) an evaluation of the extent and saliency of the discrepancy between the two. Problem recognition and solution identification occur within the system of values, preferences and attitudes of persons within the community that undertakes needs assessment.

Nguyen, Attkisson, and Bottino (1976) propose resource assessment as the key process in arriving at consensus about the relative priorities among unmet needs. Resource refers to the means of achieving the desired remediation of unmet needs. Solutions to problems require the expenditure or mobilization of resources.

The definition of need implies a sequential process of determining and documenting: 1) The need situation for each level of social organization, in the light of values, tastes, preferences, attitudes and the existent knowledge in the community; 2) The resources required to narrow the discrepancy between What Is and What Should Be; 3) The consensus regarding relative priorities of unmet needs, and 4) the programmatic deployment of resources.

When needs are being identified, when determinators of What Should Be are being delineated, the values of people are part of their behaviour. Values of people individually and collectively, are an integral and undeniable fact of needs assessment and planning (Kaufman & English, 1979).

An assessment of needs will uncover evidence of overlapping bodily, interpersonal and spiritual distress. Needs involve persons and their manifestations affect groups and communities, not just individuals (Bell et al, 1983).

Clearly, people's needs ought to be among the basic criteria for designing programs.

Needs are attributable to people; people have needs, therefore, the concept of need is meaningful only to someone to whom the need is attributable. Because need is a concept of some desired status someone has to define the attributes of desired status. The definers may obtain this data by survey which is direct contact with the needs (Coffing & Hutchinson, 1974).

Needs Assessment

Introduction

People have engaged in needs assessment activities since time immemorial, however the systematic techniques and terminology used today are of recent origin (Bell et al, 1983; Carlson, 1985; Dohrenwend & Dohrenwend, 1981; Hapenney, 1978; Hudson, 1988; Kaufman & English, 1979; MacStravic, 1978; Siegel, Attkisson, & Carson, 1978; United Way of America, 1982; Warheit, Bell & Schwab, 1977).

While the term needs assessment is relatively modern, the type of endeavour represented by it goes back several centuries. Students of the history of the Roman Empire are familiar with the work of Caesar's census takers, whose data were used for many purposes.

Scholars and historians of social work research refer to specific examples of needs determination activities in more recent times. For instance, the great prison reformer, John Howard (1726-1790), used the survey method to document first hand various practices in a number of England's prisons and hospitals. He used his recorded data and detailed field observations to mobilize needed reforms (Hancock, 1980).

Paul Kellogg, between 1909 and 1914, directed a survey in Pittsburgh. The survey was the first major environmental study of the impact of industrialization and urbanization on the lives of the resident of a big city (Hancock, 1980).

The 1960's and 1970's witnessed a sudden increase of activity in the needs assessment field, particularly in health and human services. This development was brought about largely by the convergence of three factors: growing federal influence, demands for efficiency and accountability in resource allocation and the consumer movement (United Way of America, 1982).

The political climate and social conditions of the mid sixties and seventies, which resulted in large scale social legislation and unprecedented growth in social programs, made it imperative for social scientists to look for new planning tools. Needs assessment developed as the answer.

Definitions of Needs Assessment

There are widely different views and definitions of needs assessment. The literature indicates that there are few uniformly accepted definitions of needs assessment. The following is a sampling of the literature on the definition of needs assessment.

Bell, Sundel, Aponte, Murrell & Lin (1983):

The basic activity of a needs assessment is where a human service agency collects information about its potential customers and then uses that information to re-use existing programs and develop new ones.

The United Way of America (1982)

Needs assessment is looked upon as a systematic process of data collection and analysis as inputs into resource allocation decisions. The needs assessment helps to discover and identify goods and services the community is lacking in relation to the generally accepted standards, and for which there exists some consensus as to the community's responsibility for their provision.

Pat Yoder Wise (1981)

Needs assessments are a means for documenting what individuals believe to be their needs and the purpose of the needs assessment is to identify needs.

Rossi and Freeman (1979, 1982, 1985).

A critical first step in the design of any program is to verify that a problem exists in sufficient degree and extent to warrant an intervention. This process of verification and mapping out of the extent and location of a problem with its attendant target population is called needs assessment. This first step is crucial because professionals in their zeal to identify a need may often overestimate its size or mistake its character.

Kaufman and English (1979)

Kauman and English (1979) suggest a taxonomy of needs assessment. They indicate there is no right or wrong needs assessment modes, only differences as to whether a particular mode is appropriate. The taxonomy includes: 1) Alpha - assume few or no givens concerning starting conditions and ground rules for operation or resolution; 2) Beta - attends to finding the gaps between current organizational outputs and required or desired outputs. It assumes the validity and utility of the goals and objectives of the sponsoring or target agency; 3) Gamma - starts by determining discrepancies concerning methods which become the means for problem resolution; 4) Delta - gap analysis relative to implementation of selected methods which becomes the means; 5) Epsilon - gap analysis to the existing objectives derived, not to any referent outside of the implementing agency; 6) Zeta - a gap analysis for the entire process, based on the entire process as given and only discrepancies relative to the system are determined.

Warheit, Bell, Schwab (1977)

A needs assessment program can be identified as an attempt to create the needs of a population living in a community.

Minnesota State Planning Agency (1977)

Needs assessment is the process of identifying the incidence, prevalence, and nature of certain conditions within a community or target group. The ultimate purpose is to assess the adequacy of existing services and resources in addressing those conditions. The extent to which those conditions are not adequately addressed denotes a need for new or different services or resources.

Wayne Kimmell (1977)

Needs assessment is an act of estimating, evaluating or appraising a condition in which something necessary or desirable is required or wanted.

Bowers (1976)

The formal needs assessment process includes specific procedures for identifying needs, setting priorities and relating them to the community education program on a continuing basis.

Human Service Institute (1975)

Needs assessment is closely related to goal and objective setting in that needs data provide a measure of demand for services against which the service goals and objectives should be set. Needs assessment is also related to resource allocation in that the identified needs become one of the primary considerations upon which to develop.

Center for Social Research and Development (1974)

Needs assessment deals with the attempt to define what is required to insure that a population is able to function at an acceptable level in various domains of living.

The basic output of a needs assessment is information. The purpose for which this

information is used typically concerns program evaluation, program planning, or program development (Murrell, 1977).

Need assessors who embrace this position would like to: 1) Gather the widest range of information on situations or circumstances that may qualify as need states; 2) Submit this information to the widest range of interest groups for their considerations as to whether the situation or circumstance is a need state, and 3) Reconcile the diverse viewpoints regarding what needs actually exist at each level of social organization and how the services for meeting these identified needs should be rank ordered in terms of their priorities.

Needs Assessment Strategies and Methods

Strategies

Needs assessment strategies have been well documented (Bell et al, 1983; Buhl, Warheit, Bell, 1978; Otis, 1972; Siegel, Atkisson & Carlson, 1978; Turner, Gardener & Higgins, 1970; United Way of America, 1982; Warheit et al, 1977).

The large number of assessment strategies available fall into one of three conceptual positions: rationalistic, empirical and relativistic (Bell et al, 1983).

Rationalistic Position

Need for health and human services is predicated on a pathology or deviance from a rationally determined ideal state of affairs. Two instrumentalities are usually employed to identify or anticipate divergence from ideal conditions, epidemiologic descriptors (symptoms and their prevalence or incidence) and sociodemographic indicators.

Empirical Position

Empiricists conceive of need for health and human services as deviance from a normative

or observed state of good health and well-being. They assume that such need motivates individuals to seek services and this need is translated into demand for services through the interplay of economic forces and the mechanisms of a free market economy.

Relativistic Position

Relativists rely on the interplay of interest groups in the community to achieve a kind of sociocultural political consensus regarding the level and extent of need for services. They believe that comprehensive identification and assessment of needs must consider the full range of perspectives and values.

Each of these three positions, rationalistic, empirical and relativistic, has strong points as well as shortcomings. The rationalistic position has strongly influenced the needs assessment field. Its methodology is highly technical and many currently favoured strategies derive from it. However, statements about need based on these methodologies, because they are opinions of health and health-related professionals, represent a highly selected viewpoint. Similarly, statements about needs derived from the empirical position, that is based on indices of demand for services, are also limited because there are sociocultural factors that prevent conditions that can be interpreted as needs states from being so recognized. A needs assessment program based on the relativistic position offers the possibility of the most comprehensive statements about health and human service needs at each level of community organization; however, it involves a complex process that has not been fully developed.

Methods

General Systems Theory

Broskowski (1976) presents basic concepts of general systems theory and applies them to

the process of needs assessment. He discusses the concept of environmental monitoring in examining the behaviour of service provider organizations as open systems. Broskowski (1976) also draws systems implications for assessment of organizations and communities in relation to the prevention of illness.

General systems theory proceeds on the assumption that there are principles similar across all levels and types of systems, both living and non-living. A system is looked upon as a set of interacting units with relationships among them. The word set implies that the units have some common properties, which is essential if they are to interact or to have the relationships. The state of each unit is constrained by, conditioned by, or dependent on the state of other units.

The general systems theory in the needs assessment process implies that there is a conceptualization of the total community as the system. The agencies and citizens within the community now become system components that are more or less interconnected. Needs assessment data would have to address broad ranges of human needs and human service resources. Organizations responsible for a community needs assessment would have to consider an assessment of these community groups or geographical areas most affected by environmental factors promoting stress and increased susceptibility. Instead of asking people about their specific problems, symptoms or felt needs, they could be asked about how many changes have recently been experienced or how much control one felt one has over one's own life circumstances.

The answers could prove useful in predicting problems before they occur and in identifying areas with a high need for interventions designed to reduce negative environmental factors.

Convergent Analysis

Nguyen, Attkisson and Bottino (1976) examine basic assumptions underlying needs identification and the issues and problems in the conceptualization of needs. They believe that the goals of comprehensive needs assessment can be achieved by applying the concept of convergent analysis to needs assessment (Siegel, Attkisson & Carson, 1978).

Convergent analysis is a methodologic and conceptual framework in which information relative to human service needs is assessed and given priority in a progressive, sequential manner. It is the second of two operational stages in establishing the need states in a social area, the other being needs identification.

In the needs identification stage, the primary task is to collect the widest range of information using needs documentation methods. The synthesis and integration of this information is accomplished through convergent analysis (Siegel, Attkisson, & Carson, 1978).

Needs assessment is best viewed as consisting of two phases: 1) problem recognition and 2) solution identification through convergent analysis. In the first phase, one attempts to explore and identify areas where there are discrepancies between existing and desired or necessary conditions. The methodologies involved range from community surveys to community group approaches.

In the second phase of needs identification one attempts to accomplish these tasks: 1) integrate the wide range of data and perspectives collected, 2) explore the nature of the solutions to the identified problems, and 3) identify the types and levels of resources necessary for these solutions. The third task is necessary because of the intensity and extent of problems, also on the amount and type of resources that must be deployed to solve the

problems.

At the present, the first stage of needs assessment, that is, needs determination, has received a large share of attention and therefore is much more fully developed than the second state.

Summary

Needs assessment is basically a data collection endeavour. It does not dictate any particular methodology or combination of methodologies. Methodology may range from relatively crude and unsophisticated approaches to complex efforts employing advanced communication and research technologies.

There is no one best methodology. Individual factors such as cost, time, staff capacity and legal requirements will do much to dictate the choice of method(s) to be employed.

Before deciding on a method(s) one must determine the nature of the total effort and identify the questions one wants answered. Eight key questions (United Way of America, 1982) have been developed that a needs assessment study should attempt to answer.

A needs assessment study should, at a minimum, answer two fundamental questions:

"1. Who is in need? What population or segment is experiencing particular need(s)?

2. What is needed? What good(s) or service(s) is the community lacking?" (p. 13).

A more meaningful needs assessment effort will answer the following three additional questions:

"3. Where are the goods and/or services needed?

4. How much of each good or service is needed?" (United Way of America, 1982, p. 13-14).

The research must provide at least a fair estimate of the demand in relation to supply.

"5. Is the problem one of demand and supply or one of access and distribution? Occasionally, one discovers than an unfilled need is due not to the absence of a service but rather to oversupply in one area and undersupply in another" (United Way of America, 1982, p. 14).

Finally, a truly well designed and comprehensive needs assessment study will answer the following three questions in addition to the five points above:

"6. What is needed (or less needed)? This deals with a question of oversupply, duplication or underutilization of certain services.

7. What will it cost? Limited resources often make it necessary to establish priorities among competing needs and goods and services responses.

8. How can it be funded? It considerably strengthens a needs assessment report to include a section on potential sources of funding for new or expanded services" (United Way of America, 1982, p. 14).

The eight questions will help decision makers to determine the scope of the needs assessment one wishes to undertake.

Types of Needs Assessment

Among the types of needs assessment approaches used, most are limited to an examination of the health services of a community; others are designed to determine service utilization patterns (Warheit, Bell, & Schwab, 1977).

Community Health Services and Utilization Patterns

Warheit, Bell and Schwab (1977) indicate that needs assessment programs take place within two environments: that of an agency and that of the community in which it is located. The needs assessment is designed with researching and planning to determine a community's health service needs and utilization patterns.

These needs assessment programs are intended to provide data on the basis of which agencies will be able to: 1) identify extent and kinds of needs there are in a community, 2) evaluate systematically their existing programs, and 3) plan new ones in light of community needs.

In the area of mental health and needs assessment, Siegel, Attkisson and Cohn (1974) have identified the following types of information usually sought:

1. Distribution of mental disorders in a population and factors influencing this distribution (Bell, Nguyen, Warheit, & Buhl, 1978).
2. Relationships of social health or ecological characteristics of neighbourhood or environment to rates of mental disorder (Schwab, Warheit, & Holzer, 1972).
3. Identification of the community's most urgent problems which command high priorities in terms of specific services to be developed (Moore, 1983).
4. Determination of the etiology of mental health disorder (Bell, Nguyen, et al, 1978).
5. Identification of perspectives on the politics related to mental healthy in a community (Bell, Nguyen, et al, 1978).
6. Identification of current and/or potential resources available for addressing identified problems (Carr & Wolfe, 1976).

7. Inventory of hospitalization and other service utilization rates (Moore, 1983).

The strategies for obtaining these types of information range from the simple use of service utilization statistics, through large scale designed surveys to community forums (Delbecq & Van de Ven, 1971; United Way of America, 1982).

The assessment of the needs studies provide a base from which programs can be designed and conducted.

If the focus of the needs assessment is on the specific needs of the community and the patterns of care being provided, the following data can be provided (Warheit et al, 1977): 1) Needs and service patterns of specific populations and sociodemographic groups in the community; 2) Comparative analysis of the goals, activities, and client patterns of human service agencies with the needs and service patterns of those in the community; 3) Development/modification of agency based programs to meet specific needs within various groups in the community; and 4) Evaluation outcome and input studies.

Human Services

Needs assessment studies can monitor area and population characteristics which influence need, want and demand for human services (Delbecq & Van de Ven, 1971; Siegel, Attkisson, & Carson, 1978). The needs assessment becomes an environmental monitoring system that is: 1) Designed to measure and make judgements about program relevance, adequacy and appropriateness; 2) Based on systematic collection and analysis of information; 3) Regarding the need for health and human services; 4) As filtered through multiple levels of societal perspectives; and

5) As generated through multiple measurement approaches.

Relevant variables that merit careful consideration when planning an assessment of human service needs include (Siegel, Attkisson, & Carson, 1978): 1) Information. What assessment data are most relevant for the local program and how easily can the desired data be obtained; 2) Resources available. What staff and fiscal resources are available to the assessment effort and are these resources sufficient to obtain the desired information? 3) State of program development. Is the service system new or in early program planning stages and is there a service system organizational network? 4) Community attitudes. What is the community's tolerance for surveys and other approaches to assessment?

Health Needs Assessment

The meaning of the phrase health needs assessment is not widely agreed upon (Chambers & Woodward, 1980). No single approach will provide all the health and health care information required for an adequate assessment of needs (Bloom, 1977; Dignan & Carr, 1981; Green, 1977; Milio, 1975; Rossi, Freeman & Wright, 1979; Warren, 1977; Warren & Warren in Dignan & Carr, 1981; Weinstein, 1983).

There is no standard health needs assessment as with any other needs assessment. The design of the needs assessment depends on the type of collection of information required.

A health needs assessment is one way of assessing the present health status of a community and also of discovering what the people of the community see as the needs that will have to be met to achieve their optimum state of health (Cassel, 1974; Crompton, 1981; Dignan & Carr, 1981; Kish, 1965; Paul, 1955; Ross & Lappin, 1967; Warren, 1977; Witkin, 1977). Planning a health needs assessment should concern itself with the entire society (Dever, 1980). Planning for one dimension of health without full consideration of the

interdependencies with other parts of society ignores the fact that health is a part of the larger system. Community health needs assessment must be planned with this concept of a system.

Summary

In doing a health needs assessment the overall goal is better understanding of what makes a community function most effectively, healthwise.

No one method is best for all needs assessment purposes (Weinstein, 1983, 1985).

The method should include obtaining subjective judgements from consumers about the identified health need(s) and proposed solution(s).

The proper focus of needs assessment should embrace all levels of social organization. At the individual level problems often arise because the person's role in the economic system process is unsatisfactory, goals of personal well-being and health are not met, social interactions are grossly dysfunctional, or the individual's ecological environment has been drastically disturbed. Each area of functioning, singly or in combination with another, can give rise to a specific problem in living or need state.

At the higher end of the spectrum of social organization, that is, the community level, the value system and social political structure of the commonwealth as a whole, when dysfunctional, can also give rise to problems.

Limitations of Needs Assessment

Considerable confusion exists about such basic questions as: 1) What is a need? 2) What is a needs assessment? and 3) When should a needs assessment be made, and if it

is, which of many available models should be used? (Kaufman & English, 1979).

In attempting to define a taxonomy of needs assessments one finds that there are no right or wrong modes. Rather, there is an array of possible choices available to those who wish to design successful interventions without risking construction of a solution for which there is no related problem.

Needs assessment is not a panacea. The problems in producing an assessment that will have an impact on service planning and resource allocation are numerous and cannot be overrated (Bell et al, 1983; Blum, 1974; Broskowski, 1976; Crompton, 1981; Schwab, Warheit & Fennell, 1973; Siegel, Attkisson & Carson, 1978; United Way of America, 1982; Warheit, Bell & Schwab, 1977; Witkin, 1977). Exaggerated claims of the efficiency and utility of needs assessment have been known to result in unrealistic and unrealized expectations.

Methodologic and Strategy Issues

There currently exist a number of needs assessment methods that provide different types of data than can be used for different purposes and vary considerably in their rigorousness.

Each assessment can be analyzed according to Bell et al, 1983: 1) its theoretical and conceptual underpinnings; 2) its source of information; 3) reliability and validity of its data, 4) amount of technical expertise it requires, 5) amount of judgement required in translating its data into program operations; and 6) cost.

The conceptual underpinnings of assessment methods vary considerably between those which are atheoretical and those with a clear rationale. Social indicators, for example, as Bloom (1977) argues, are derived inductively rather than deductively, that is, the researcher uses some atheoretical procedure to select a set of social indicators from a pool of available

data. On the other hand, client analysis, as presented by Scheff (1967) has a clear conceptual rationale. In between these polar extremes are a number of other methods. Survey approaches, for example, vary considerably depending on their purpose, method and utility.

Needs assessment strategies vary as to the source of their information. Social indicators and client utilization, for example, rely on secondary sources (Bloom, 1977, 1981), and the reliability of their data is variable, providing opportunities for considerable error. Other approaches use first hand information. Surveys, for example, solicit data directly from the community at large, service recipients, and service providers. Since the data collection is under the control of the researcher, reliability can be checked, and can even be improved.

Selection of assessment strategies has often been dictated by convenience, political expediency and cost. Although these factors cannot be overlooked, one should not lose sight of the purpose of the assessment and the need to be methodologically rigorous. As Turns and Newby (in Bell et al, 1983) point out, needs assessors and program people must be concerned with the reliability and validity of their strategies. There are, however, a number of factors that can jeopardize this rigorousness. Researchers, for example, sometimes modify survey items to suit their own situation. Thus few standard survey scales exist, hindering progress in the field since comparisons across studies and over time cannot be accomplished.

Uniformity within a particular needs assessment approach should not be assumed. For example, social indicators can be developed theoretically, empirically, statistically, and clinically. Bloom (1977, 1981) points out that broad constructs, such as quality of life, may be constructed in a variety of ways. Standardization of needs assessment approaches is needed before social scientists can determine the reliability, validity, and relative efficacy of

each method. Such standardization would allow more effective comparisons between methods, more reliable longitudinal studies, and more accurate determination of program impacts.

Needs assessment approaches vary in the technical expertise, that is, the amount of knowledge and experience they require. Although some methods appear simple, all can be complex depending on the purpose, scope, and type and amount of data collected.

The more complicated the strategy used, the more the translation of data into program operations is hindered. Greater sophistication requires more technical expertise, and often experts lack the knowledge of, experience with, and sensitivity to programs and people that are necessary for a smooth transition from data to program operations. Greater complexity also requires more personnel and organizational structure to carry out the study. Bigger and more complex needs assessment strategies are not necessarily better. Care must be taken not only in avoiding overly sophisticated needs assessments, but also in curbing the tendency to gather excessive amounts of data.

Assessment strategies differ in the amount of judgement required to translate data into program operations. For example, social indicators data in particular, because of its generality, must be judged more carefully than data from other strategies. Survey results vary considerably, but this approach can be designed so as to minimize the judgement process and to have programs follow reasonably directly from the data. Thus, the nature of the needs assessment strategy, in part dictates the amount of judgement necessary for program planning.

Cost includes the total amount of program resources needed to plan, carry out, and use a needs assessment. It will depend on the scope and complexity of the organization, and its

service programs.

Several authors Nguyen, Attkisson and Bottino (1976); Warheit, Bell & Schwab, 1977 have advocated using multiple needs assessment methods and strategies. This approach, according to these authors, has the advantage of providing a comprehensive picture of human service needs from multiple perspectives while compensating for individual strategy shortcomings (Aponte, 1978). It involves : "1) integration of a wide range of data from multiple needs assessment strategies; 2) exploration of solutions to multiple health and human service problems; 3) an identification of types and levels of resources required for meeting identified needs; and 4) documentation of the priorities of needs and their solutions through consensus of diverse conditions" (Bell et al, 1983, p. 294). There is a need in the field for greater methodologic and strategic specificity and diversity.

Summary

In its broadest terms, community needs assessment is a process which is used to gather information about a community's wants, desires and resources. The purpose of a needs assessment is to aid the decision makers of the community in the: 1) identification and prioritizing of community needs; 2) development of policies for community agencies; 3) identification and allocation of available community resources; 4) avoidance of duplication of community services; and 5) implementation of plans.

Health promotion is the process of empowering people to take over, and be responsible for their health through: "...1) critical awareness of social issues and structures such as pollution and economic inequality; 2) organization around social issues identified by different disadvantages groups and other consumers as health endangering; 3) awareness of

lifestyle choices hazardous to personal health and how such choices relate to larger, social health issues; and 4) visible and financial commitment on the part of governments, medical and other professionals, and other large social institutions to redress the social inequalities and policy contradiction leading to poor health..." (Labonte & Penfold, 1981, p. 45).

The issues of causation of disease on the determinants of health have often focused on the question of medical care and its value versus the impact of social and environmental factors. There are some extreme views about the importance to health of natural processes in contrast to medical intervention, which is regarded as artificial. A widely read book, written in 1975 by a former priest, Ivan Illich, argued that modern medical technology usually did more harm than good.

Another issue has developed with respect to the responsibilities of society or government for ensuring conditions that are conducive to health, as against the individual's responsibility for his or her own behaviour (Nurturing Health, 1987-1991). This is well illustrated by the habit of smoking cigarettes which has been demonstrated to cause lung cancer and to contribute strongly to cardiovascular disease. Although the decision to smoke is, of course, an individual one, it is influenced by national policies such as to encourage the growing of tobacco and to permit glamorous advertising of cigarettes. How much of the cigarette habit, therefore, can be considered individual rather than social responsibility?

Beyond social measures, it is an individual responsibility to maintain a healthy lifestyle. Such behaviour, in turn, is subject to social influence through deliberate health promotion of various circumstances that influence behaviour.

Modifying human behaviour is always difficult, whereas, adjusting the environment may

be feasible even if expensive.

Even when the potential of classical environmental and immunological prevention has been realized, the capacity of preventive action to protect health is still large. Trauma from road accidents, farm or industrial machinery, and simple falls is a major cause of disability and death in all types of developing countries. Establishing safe environmental conditions, protected machinery, along with warnings and education, can reduce these hazards. Safe working conditions can reduce the risk of cancer and other disorders.

These preventive strategies imply various causes of disease or injury that may be modified or eliminated before damage is done. Working and living conditions may be stressful and cause psychosomatic tensions in the individual. These, in turn, may lead to excessive smoking and drinking alcohol, to poor dietary habits, to inadequate sleep, and other forms of behaviour that contribute to disease. The preventive challenge is to attempt to establish living and working conditions that are not stressful.

The many social and environmental factors that cause or contribute to disease or injury do not affect all persons alike.

CHAPTER THREE

PROCEDURES

Introduction

The health needs of the residents of Gimli and the Rural Municipality of Gimli are the basic inputs in the designing of community based health promotion programs for Gimli.

Many approaches may be used to assess health needs. One of the most important standards for judging health needs in the community resides in the subjective evaluations of the goodness of life as reported by the community members themselves (Campbell & Converse in Bell et al, 1983). Surveys can find out about residents' activities, their values, their satisfactions and their crises, to assess individual needs, and to study well-being in the community as a whole. By providing direct information about the life experiences of persons living under different social conditions, subjective data can put substance into objective indicators of health (Aponte, 1978; Bell et al, 1983; Bell & Mellan, 1974; Cartwright, 1983; Chambers & Woodward, 1980; Dohrenwend, 1973, 1977; Dohrenwend & Dohrenwend, 1981; Moore, 1983; Polit & Hungler, 1989).

Health needs as expressed through a survey are not necessarily real needs but more accurately reflect wants and desires. The framework of Nurturing Health (1987-1991): social and physical environments, physical responses and wealth, does not attempt to determine every possible health need, but gives an accurate overall picture of the health of the community, as the residents see it and live it.

The Gimli Committee identified three phases in the health needs assessment. This project covers Phase One, Two and part of Three. Phase One is the planning and preparation

of the project: developing and approving the questionnaire and training volunteers. Phase Two is the actual assessment being done. Phase Three is the analysis of the results and review of findings. The remainder of Phase Three, which is planning, implementation and evaluation of the program, is to be covered by the Health Promotion Planning Committee.

Selecting Health Needs Assessment Approach

Seventeen specific approaches to needs assessment are identified (Bell et al, 1983; United Way of America, 1982; Warheit, Bell & Schwab, 1977). It is made clear that there is no such thing as the best single method or combination of methods. Each method has its strengths and weaknesses. The approaches differ not in their basic methodologies but in what they use as their source of information. These approaches can be used as parts of an integrated sequential program or they can be conducted independently. The relative effectiveness of any one of them is best measured by its success in securing the information necessary to implement the goals outlined in the description, conceptualization, and operational process. There is no best combination of methods.

Survey Approach

There are several important methods that can be employed to obtain information about health needs. The method most often used is the citizen survey approach (Bell et al, 1983; Chambers & Woodward, 1980; Moore, 1983; Polit & Hungler, 1989; Siegel, Attkisson, Carson, 1978). The citizens' survey approach is used in this study. Contacting citizens often is the only way to obtain firsthand information from citizens. In the citizen survey approach the assessment effort is concerned with eliciting differing perspectives on the nature and

magnitude of health needs directly from a sample or the entire population of persons living in a community (Bell et al, 1983; Cartwright, 1983; Chambers & Woodward, 1980; Coffing & Hutchinson, 1974; Crandell & Dohrenwend, 1967; Moore, 1983; Polit & Hungler, 1987; Siegel, Attkisson, Carson, 1978).

Applied to needs assessment, a citizens' survey consists of structured interview schedules or questionnaires that are designed to elicit information from respondents regarding their health, social well-being, and the patterns of care or services currently received or previously used (Rossi & Freeman, 1979, 1982, 1985; Warheit, Bell, & Schwab, 1977).

Historical Perspective

In ancient times, surveys designed for the enumeration of populations were often used for purposes of taxation, the procurement of labourers for work projects, or military duty. By contemporary standards, the design and methodologies of Caesar's census takers can compare with those of the Bureau of the Census. Early Roman censuses were effective sources of valuable information and, to this day, surveys represent one of the most useful tools for the collection of information about individuals. Although the survey approach is not the only useful one for needs assessment studies, it is, when done correctly, the most scientifically valid and, hence, the best for assessing needs and restructuring service programs (Warheit, Bell & Schwab, 1977).

Data Gathering Techniques

Many researchers consider the general population survey one of the best approaches to needs assessment because it yields the most reliable and valid data about the needs of the

geographical area covered. Three most common techniques used in surveys to gather information are the telephone interview, mailed questionnaire or the personal interview (Bell et al, 1983; United Way of America, 1982).

Each of these survey methods has its advantages and disadvantages. Although methodology of each is somewhat different, their basic format is the same. Each employs a series of questions asked of respondents. The keys to being successful are a technically sound, bias free survey instrument, and the selection of a random sample that is statistically representative of the population whose needs are being surveyed.

Advantages and Disadvantages

The advantages of survey approaches to needs assessments are many (Chambers & Woodward, 1980; Moore, 1983; Polit & Hungler, 1989; Spiegel & Hyman, 1978; United Way of America 1982; Warheit, Bell & Schwab, 1977).

Four common advantages are identified. The first advantage is that provide the most scientifically valid and reliable information obtainable about individuals. A second advantage is that survey information can be used to clarify the relevance of information obtained through other needs assessment approaches. In many instances, the citizen survey approach is the only means for collecting information that can corroborate and integrate the findings of all other needs assessment approaches. A third advantage is its flexibility. Surveys can be designed in an extremely wide variety of ways to answer questions related to need for services. This design flexibility permits a choice of sampling techniques, item and instrument construction, specificity of inquiry, and also permits a multiplicity of data analysis procedures. This degree of flexibility is lacking in other assessment techniques. The fourth

advantage is that people themselves, not professionals or agencies, provide the data.

Eight common disadvantages are identified (Blum, 1974; Chambers & Woodward, 1980; Crandell & Dohrenwend, 1967; Dohrenwend & Dohrenwend, 1981; Mechanic, 1974, 1978; Polit & Hungler, 1989; Siegel, Attkisson, & Cohn, 1974). The first disadvantage, as with all needs assessment approaches, is that the validity of survey data is a basic problem. The second disadvantage is that it is often difficult to ascertain the reliability of the responses to survey questions. The third disadvantage is that large surveys that are designed to measure prevalence or incidence are more difficult to define, conceptualize, and operationalize than any of the other needs assessment approaches. The fourth disadvantage is that some individuals are reluctant to supply information about themselves or other family members. Refusal and non-return rates may be high enough to reduce the effectiveness of a survey. The fifth disadvantage is that a survey requires expertise and support staff to execute the tool properly. The sixth disadvantage is that the tool is relatively expensive. The seventh disadvantage is that often time to collect and report data is too long, leading to an outdated report. The eighth disadvantage is that unless questions are relevant and carefully worded and pretested, quality of information will be poor.

Population

Names of the residents of Gimli and the Rural Municipality were taken from a 1986 Elections Manitoba List. This was the best source of population as it provided the list of permanent residents. There are many temporary residents, especially during the summer, because of the cottage and beach areas.

The Elections Manitoba List provided names of residents for the following areas: Gimli

Centre (town), Gimli Northwest (town), Gimli Northeast (town), Gimli Southeast (town), Gimli Southwest (town) (Appendix C), Gimli Rural North, Gimli Rural West, Gimli Rural South, Winnipeg Beach North, Camp Morton, Husavick, Arnes and Willow Point (Appendix D).

Total names on the Elections List is 3,049. A random sample was taken from the general population. A systematic random sampling (Moore, 1983) was used. Number 18 was selected at random. The first eighteenth on the list and every eighteenth individual thereafter were selected for the sample. Youth aged 12 - 18 would be identified in the respondent's home and asked to complete the questionnaire.

The total number of the survey sample was 169 (n = 169). Forty-seven were excluded from the sample for the following reasons: 1 - was unable to fill in the survey; 1 - was deceased; 2 - were on holidays; 2 - were illiterate; 5 - refused; 3 - no one was home; 5 - moved; and 28 - were partially filled in. Seven 12 to 18-year-olds also answered the questionnaire. Total questionnaires returned were 129, for a return rate of 129/169 = 76.33%.

Minimizing Disadvantages and Limitations

Attempts were made to minimize the known disadvantages of surveys.

Large surveys are difficult to define, conceptualize and operationalize. The measurement of health in this survey follows the concepts of Nurturing Health (1987-1991), which includes the social and physical environment, individual responses, and productivity and wealth. The survey also covered areas important in maintaining or improving health. The concepts and operationalizing of Nurturing Health (1987-1991) are found throughout the survey.

The refusal and non-return rates may be high enough to reduce the effectiveness of the

survey. Community based volunteers were used to encourage respondents to decrease their refusal.

A survey requires expertise and support staff to execute the tool properly. As the committee members were involved at the outset of the development of the tool, all members were familiar with the concepts involved in the tool development. The volunteers also were oriented to the tool. As a result the community based committee and volunteers were very familiar with the survey. The survey became a community based project.

The tool can be relatively expensive. The only cost incurred was travel time incurred by the volunteers to deliver the questionnaires. The money was provided by a small grant from the community. No other costs were incurred as all other aspects were voluntary.

The time to collect and report data can be too long. All results were to be given to the planning committee upon completion of the survey.

Quality of information can be poor unless questions are relevant and carefully worded and pretested. All questions were developed and revised using the planning committee's constant feedback. The questionnaire was pretested with a professional group, a small group of different ages, and with the volunteers before final printing of the questionnaire. This also helped to assure the validity of the tool.

Several limitations have been identified with the project. Attempts were made to minimize the effects of the limitations.

Individuals may have difficulty with complete and accurate recall of facts. As most questions relate to health, it was felt most individuals have good recall of questions relating to their health.

There are many temporary residents in the town and Rural Municipality of Gimli. The most accurate indication of permanent residents was the Manitoba Elections List. A year had passed since the List was published. It was recognized that new residents would be missed.

The accuracy of survey results is based upon level of response rates across different demographic groupings. A random sample was done. This would allow for equal opportunity of all age groups. The difficulty was reaching the 12 - 18 age group with a random sample as the survey was not allowed in the school. As a result the 12 - 18 age group may not be representative of the population group.

Respondents were expected to know the answers. As much as possible, medical terms were avoided. There may be a reluctance of individuals to supply information about themselves. Volunteers were used to encourage increased response and at the same time maintain confidentiality of the completed questionnaire.

Consultation on answers, if a youth and an adult completed the questionnaire, was possible. To avoid the changing of answers and to decrease consultation time, volunteers were asked to pick up completed questionnaires within three weeks.

The refusal or non-return rate may be high enough to affect validity and reliability. The use of volunteers from the community was to increase the return rate of questionnaires so that the validity and reliability were not affected.

Instrumentation

The health needs of the population of Gimli and the Rural Municipality of Gimli were assessed using a self-administered questionnaire. Volunteers were recruited to drop off the questionnaire at the appropriate address, to answer any questions about the survey, and to

pick up the completed questionnaire within seven to fourteen days.

Delivering the questionnaire was chosen for cost and efficiency reasons. The cost per contact would be significantly lower considering the large sample and geographical dispersion of potential respondents. Dillman (1978) rates the face interview and telephone interview as preferable to the mail questionnaire in such characteristics as: 1) control over selection of respondents within sampling units; 2) likelihood that unknown bias from refusals will be avoided; 3) success with open ended questions and controlling sequence of questions; and 4) success in avoided item non-response. Factor One was not a consideration in this study. Factors Two and Four were not of great concern because of emphasis on volunteers from within the community delivering and picking up the questionnaire. Factor Three is not of particular concern in this study since the sequence in which questions are answered does not generally matter and open ended questions are avoided.

Questionnaire Development

Health surveys can cover a variety of topics. Suchman (1967) provides a comprehensive overview of the ways that surveys have been used in public health. These include studies of: 1) the ecology (distribution) and etiology (causes) of disease; 2) the response to illness or maintenance of health on the part of the patient or public, and 3) the personnel and organizations in the health care professions. In Health Surveys in Practice and Potential, Cartwright (1983) cites a number of examples of topics that health surveys can address: general measures of health and sickness, the nature of disease, assessment of needs, use of services, effects and side effects of care, acceptability of services, and the organization of care.

Aday (1987) draws upon these reviews and helps to refine and systematize the range of

possible applications of health surveys. Health status becomes the focal point for classifying topics in health surveys. It is the explicit or implicit focus of health surveys as defined here: studies that ask questions about those factors that influence, measure, or are affected by, people's health.

The development of the questionnaire was based upon the determinants of health as indicated by Nurturing Health (1987-1991). Several other sources were used to help develop the questionnaire. As no one questionnaire was found to meet the needs of the specific community, several sources were used in the development of the questionnaire. The sources used were Aday (1987), Canada Health Promotion Survey (1985); Durham Region District Health Council Community Survey (1985); Faber and Reinhardt (1982); Report of the West Virginia School Health Education Assessment Project (1977); Canada Health Survey (1974); Self Study Guide for Community Health Action Planning (1967); and Warren (1955).

Sources

Aday (1987) refers to characteristics of environment, health care system, population, health status and utilization of services. The characteristics of the environment have predictors, indicators, and outcomes of health. It begins with the larger environment in which an individual lives and works. Political, cultural and social beliefs about health and medical care, the organization and status of the community's economy and nature of the physical environment itself define both the limits and possibilities for health and health care of the individuals residing in a particular community (Aday, 1987).

The characteristics of the health care system include such health care organizations as hospitals and community mental health centers. The idea is to learn about their basic

structure or operations or their performance in terms of certain indicators. Many innovative health care programs have emerged in recent years to deal with the special health care needs of selected groups. Surveys have been conducted of the client populations of these programs to determine whom they serve and what participants have gained from the programs.

Surveys of the characteristics of the population at risk in a community have been widely used in needs assessment and strategic planning or marketing studies for new health care facilities or programs. Demographics such as the age, sex, and ethnic composition of a community indicate the potential need and demand for certain health services such as prenatal care, hypertension screening, or elderly day hospital.

Response to questionnaires about an individual's health and health care attitudes and knowledge may signal which groups are at particular risk of contracting certain illnesses because of beliefs that demonstrate their ignorance of the disease or its causes or their unwillingness to seek appropriate screening or treatment services for it.

Determinations of health using surveys can be based either on individuals' own reports of their health, or on clinical judgements or exams conducted by health professionals. Further, individuals' reports could reflect simply their subjective perceptions of how healthy they are or describe the impact being ill had on their ability to function in their daily lives. Differing conclusions about health can result depending on the particular dimension examined and the specific indicators chosen to measure it.

Surveys of health care utilization could ask questions to determine the type of service used (hospital, physician), the site or location at which services are received (public health clinic, doctor's office), and the purpose of the visit (preventive, illness related).

As in choosing health status measures in surveys, survey researchers should consider the particular dimensions they want to tap in their study or methodological research on various ways of collecting health care utilization data.

The Active Health Report: Perspectives on Canadians' Health Promotion Survey (1985) presents and discusses results of Canada's health. It was the first national survey to ask Canadians how they feel about their own health. Past surveys have studied nature and cause of people's of people's health problems.

The purpose of the survey was to explore the health, knowledge, attitudes, beliefs and behaviour of adult Canadians; to find out what Canadians think, feel and know about health, and how these things relate to what they do. This type of information is of prime importance to those who want to promote health. Health promotion often attempts to achieve its goals by changing the health related behaviour. Knowledge, attitudes and beliefs are some of the keys to the development of effective and innovative strategies and programs.

The report offers a comprehensive picture of the health knowledge, attitudes, behaviour and intention of Canadians. Findings emphasized that health is affected by social and environmental concerns as well as lifestyle and medical factors. Health is linked to the living and working conditions. Health is determined not only by individual behaviour but also by life circumstances, relationships with family and friends and availability of social policies and programs that make it a priority.

The questionnaire covered a wide range of topics. The aim was not to probe individuals in great depth, but to take a wide view of the health orientation of Canadians and to gather data that will explore relationships among different aspects of health behaviour and the

various factors which influence them.

The questionnaire covered the following areas: self rating of health, efforts made to improve health, self care practices, exploration of health knowledge, attitudes and beliefs, influence of persons on health and health behaviour, relationship of self rated health and health behaviour to education and employment, and roles of schools, business and government in improving health.

The Durham Region District Health Council Community Health Survey (June 1985) looked at health in general in such areas as nutrition, stress, exercise, support systems, accidents and injuries.

Breslow and Somers (1978) identified lifetime health monitoring that was later identified by Faber and Reinhardt (1982) as health risk estimation and risk reduction. This approach was termed lifetime health monitoring by Breslow and Somers (1978). Their Lifetime Health Monitoring Program divided the lifespan into ten periods based on changing lifestyle, health needs and problems. For each period, specific health goals can be assigned with a number of different types of interventions that may reduce health risk. Interventions deal with economic issues, environmental controls, work, school, home environments, and family relationships.

Approaching risk reduction in the 1980's requires a broad view of the determinants of health and illness. The Surgeon General summarizes the causes of the major killers: we are killing ourselves by our careless habits, by carelessly polluting the environment, and by permitting harmful social conditions to persist.

Risk reduction requires looking at not only what medicine can do but what public health

and public policy can contribute. An important contribution to setting organized strategies for health improvements is dividing the life cycle into coherent stages and addressing the risks and their potential reduction separately for each stage.

Faber and Reinhardt (1982) have developed a lifestyle assessment questionnaire that is designed to assess one's current level of wellness and the potential risks or hazards that one chooses to face at that particular point in one's life. It will indicate sources of information that will help the individual learn more about gaining higher levels of wellness; identify possible consequences of risks that one chooses to take, and assess one's interest in improving quality of life. High level wellness (Dunn, 1961) is an integrated method of functioning which is oriented toward maximizing the potential of which the individual is capable within the environment where one is functioning.

The Lifestyle Assessment Questionnaire includes : 1) wellness inventory section which looks at current level of wellness, self care, vehicle safety, drug usage, social environmental contributions to the community, emotional management, occupational satisfaction and spiritual involvement; 2) personal growth section that identifies areas on which one would like more information, or sources for continued learning; 3) risk of death section that assesses current state of risk and identifies problems most likely to interfere with the quality of life; and 4) alert section that is used to identify high risk problems such as drinking and driving or past medical problems.

The report of the West Virginia School Health Education Assessment Project (1977) attempts to better define the existing condition of school health problems: health knowledge of students, existing information concerning health status of the school age child, students'

interest in areas of health studies and existing school health programs.

The primary purpose of health promotion is to help people establish patterns of living that will discourage disease and enhance health, thus improving the quality of life. Health status can only be measured on a continuum which does not remain constant. Russell (1975) sees health as a term used to refer to the quality of functioning of a person in totality and that health education goes on continuously because it can relate to any and all behaviours that make up an active day, week, and ultimately, life.

When the Canada Health Survey was proposed in 1974, adequate Canadian statistics describing the principle causes of morbidity and mortality and utilization of health care services and their cost, had been available for several years. This information has tended to emphasize only a part of the total health picture, namely the illness which comes to the attention of the health care system. While important, this information left significant areas untouched. The Canada Health Survey (1974) was intended to fill these gaps by providing health statistics compatible with A New Perspective on the Health of Canadians (Lalonde, 1974).

Summarized, the New Perspective on the Health of Canadians (Lalonde, 1974) looks at risk factors that lead to a positive or negative health status with its resulting consequences. Risk factors deal with: 1) lifestyle - such as alcohol and tobacco use and preventive behaviour; 2) biomedical - such as family disease; and 3) environment - such as the presence of lead and zinc. Health status deals with:

1) reported health such as activity, limitations, impairments, hearing, vision, and dental status; and 2) physical health such as cardiorespiratory fitness. Consequences deal with:

1) utilization - such as professionals providing care, reasons not sought and disability days.

This perspective focuses on the need for the individual and society taking responsibility for avoiding health problems by reducing lifestyle, biomedical and environmental hazards. It acknowledges that there is a positive element to health, being dissatisfied with a definition which goes no farther than an absence of disease.

The Canadian Health Survey was intended to answer three major questions: 1) Who is exposed to the risk of future illness? 2) What is the current health status of the population? and 3) What is the impact of illness?

The Self Study Guide for Community Health Action Planning (1967) emphasizes in the guide the need for organizing and conducting a study of community health services. The guide provides a series of guidelines to help recognize salient facts about the community in a way that will make it practicable to try to resolve the health problems that turn up. It is based on considerable studies which include a comparison of self studies made recently in 21 United States communities, supplemented by an analysis of some 450 earlier studies and actions taken by other communities.

Guidelines for questions include: 1) community and its organization of health services (program areas, administrative and support activities); 2) personal community health services (communicable disease control, sexually transmitted disease, mental health, alcoholism, health needs of the young and the aged, and injury prevention); and 3) environmental community health services (water supply, housing and sewage disposal).

Ronald Warren (1955) provides a working manual of community work. Less emphasis is placed on formal agencies, and broader coverage is made in other aspects (housing,

recreation, religious activities, aids to family living, provision for special groups, communication per press, radio, television, and community's social groups).

Warren (1955) states health care is a dynamic nature of communities.

The fight against communicable disease has been won, but chronic diseases have moved in as the number one health problem.

Warren (1955) felt strongly that there should be an increased recognition of psychological aspects of health, increased stress, tendency to consider the whole family rather than the individual as the basic practice unit and a tendency to emphasize prevention wherever possible.

The following questions were developed for the questionnaire. They were developed according to the framework of Nurturing Health (1987-1991).

Social Environment

Social environment is divided into five categories: health services, work hierarchy, unemployment, social networks, prenatal and early childhood (Nurturing Health, 1987-1991). Health services and prenatal and early childhood were not covered in this project.

The following sources were used to develop questions: Aday (1987) - the consideration of predictors, indicators, and outcomes of health begins with the larger environment in which an individual lives and works; Faber and Reinhardt (1982) - Section One of the lifestyle assessment included sections on wellness, social environmental contributions to the community, and occupational satisfaction; Health Promotion Survey (1985) - Section Six deals with influences of persons, family, friends in health and health behaviour; Durham Region Survey (1985) deals with support systems; and Canada Health Survey (1974) - Section Two

of the survey deals with family, friends and lifestyle.

The following questions were developed for the questionnaire. Work and unemployment questions were 15-18 and social networks were 25 and 43 (How you spent your free time and How many friends do you have?) (Appendix E).

Physical Environment

Planning for health must address the importance of both human made and the natural environments (Nurturing Health 1987-1991). The boundary between the physical environment and the social environment can become blurred because of the complex interaction of the two. For this questionnaire physical environment is identified as "structures or conditions that can be physically altered" (Nurturing Health, 1987-1991, p. 1).

A myriad of environmental factors influence health. For this questionnaire, the three chosen were: occupational health, accidents and air pollution.

The following sources were used to develop the questions: Aday (1987) - nature of the physical environment defined both the limits and possibilities for health and health care of individuals residing in a particular community; knowledge may signal which groups are at particular risk of contracting certain illnesses because of beliefs that demonstrate their ignorance of the disease or its causes; of their unwillingness to seek appropriate screening or treatment services for it; Durham Region Survey (1985) - deals with accidents and injuries; Faber and Reinhardt (1982) - Section One deals with vehicle safety and Section Three deals with risk of death; Canada Health Survey (1974) - Section One deals with accidents; West Virginia School Health Development and Education Project (1977) - helps to better define existing conditions of school health problems; Self Study Guide for Community Health (1967)

- Section Three deals with environmental health services such as water supply, housing, and sewage disposal and Section Two deals with personal community health services such as injury prevention; Warren (1955) - provides a working manual of community life with a broad coverage in housing, recreation, religious activities, aids to family living and communication per peers.

The following questions were developed for the questionnaire. Accident questions are from 19 - 23: 24 - exposure to substances that could endanger life; 56 - risk of having lung cancer and heart disease; 57 - control over lung cancer and heart disease; 58 - disease caused by environment; 59 - control over environmental sources of disease and air pollution is No. 62 (f) (Appendix E).

Individual Responses

There is growing evidence that mental health influences physical well-being although the exact pathways and the biological mechanisms are not clear (Nurturing Health, 1987-1991). Two indicators dealt with in this questionnaire were happiness and stress.

The following sources were used to develop the questions: Aday (1987) - responses to questionnaires about an individual's health and happiness may signal which appropriate groups are at risk of decreasing health; Health Promotion Survey (1985) - Section Five deals with exploration of attitudes and beliefs; Durham Region Survey (1985) - deals with stress; Faber and Reinhardt (1982) - Section One, the wellness inventory section, deals with emotional awareness, acceptance and emotional management; Canada Health Survey (1974) - Section Two deals with lifestyle and your health along with general feeling; Self Study Guide for Community Health Action Planning (1967) - Section Two deals with mental health;

Warren (1955) - deals with aspects of increased stress with consideration of the whole family.

The following questions were developed for the questionnaire. Question 44 deals with how many people one could talk to if one needs help; Question 45 deals with sources of stress; 46 deals with general happiness; 47 deals with rating general happiness and in Basic Facts; Question 6 asks for major sources of stress in the last twelve months (Appendix E).

Productivity, Wealth and Health

Today the firmest data on health determinants link health status to income (Nurturing Health, 1987-1991). The framework in the determinants of health as identified by Nurturing Health (1987-1991) indicate three components: social rank, social policy and economy. The questionnaire does not deal with social policy.

The following sources were used to develop questions: Aday (1987) - characteristics of population deal with income and education and they, in turn, can indicate the potential need and demand for certain health services; Canada Health Survey (1974) - deals with basic facts.

The following questions were developed for the questionnaire. In Basic Facts at the end of the questionnaire, Question 7 deals with education and Question 8 deals with income (Appendix E).

Health Status

The determinants of health as determined by Nurturing Health (1987-1991) have clarified and defined what is meant by the term health and helps to develop valid and reliable indicators of the concept.

However, determinators of health can also be individuals' own reports of their health. Individual reports could reflect simply their subjective perceptions of how healthy they are or describe efforts to improve functioning in everyday life. Conclusions can be made about health along with specific indicators chosen to measure it (Aday, 1987).

Some of the questions that were developed were not pertinent to this thesis but were pertinent for the community's needs.

The following sources were used to develop questions: Health Promotion Survey (1985) - Section One deals with health knowledge, behaviour and intentions and roles of schools and governments in improving health; Durham Region Survey (1985) - deals with rating health, nutrition and exercise; Faber and Reinhardt (1982) - Section One of the wellness inventory deals with current level of wellness and self care; Section Two of the personal growth identifies areas on which one would like more information or sources for continued learning; West Virginia School Project (1977) - deals with health knowledge of students, health status of school aged child, existing school health programs; Canada Health Survey (1974) - Section One deals with health status and activity limitation and Section Two deals with lifestyle and activity limitation.

The following questions were developed for the questionnaire. Questions 1 - 14 deal with church, school and general questions on the community. Questions 25 - 33 deal with recreation, free time, and adequacy of recreational facilities. Questions 34 - 36 deal with fitness. Questions 37 - 42 deal with nutrition. Question 42 asks who one seeks help from. Questions 50 - 55 deal with improving health, what information is needed, parent programs, government, and importance of health. Questions 60 and 61 deal with sources of information

about health and the most important thing in the past year to improve health. Questions 62 - 65 deal with who one seeks help from, workplace, and the most important health need in Gimli (Appendix E).

Characteristics of Population

The last part of the questionnaire deals with basic facts about the respondents. Questions 1 to 8 deal with age, gender, marital status, language, what has happened in the last twelve months, income and education (Appendix E).

Summary

Overall the questionnaire was divided into eight sections (Appendix E) and the following sections and questions were developed for the questionnaire. Section One is Community. Questions 1 - 14 deal with church, school and general questions on the community. Section Two is Occupation and Employment. Questions 15 - 18 deal with general questions on employment. Section Three is Safety. Questions 19-24 deal with accidents, risk of accidents outside work, and exposure to substances that could endanger life. Section Four is Recreation. Questions 25 - 33 deal with general questions on recreational activities and services. Section Five is Fitness. Questions 34 - 36 deal with physical exercise. Section Six is Nutrition. Questions 37 - 41 deal with general questions about food and diets. Section Seven is Mental Health. Questions 42 - 47 deal with family living and social relationships. Questions 48 and 49 deal with basic concerns for youth aged 12 - 18 years of age. One question was on home life and one was on sex. Section Eight is Health. Questions 50 - 65 deal with the individual's health and that of the community. The end of the questionnaire deals with

basic facts such as age, gender, marital status, language, what happened to one in the last twelve months, highest grade achieved and household income. Ninety percent of the questionnaire was fixed responses and 10% asked for long answer responses.

Summary

The following questions from the survey were used for the research questions (Appendix E):

1. How do people perceive and rate their own health? - #50
2. Health is the most important consideration in life. - #62 (a)
3. What efforts did individual do to improve health in last year? - #61
4. What efforts could individual do to improve health? - #51
5. What is preventing you from making improvements? - #52
6. How important is it for government to deal with topics? - #54
7. What topics do you need more information? - #53

   Sources of information. - #60
8. Should places such as schools, churches and workplace promote health education? - #7, #9 and #64
9. What is the social environment of the community, work? - #15 - 18;

   and friends? #25, #42 - 44
10. What is the physical environment, community inadequacies? - #1; accidents? - #19 - 22; risk of accidents or injuries outside work? - #23; exposure to substances that could endanger life? - #24; clean air? - #62(f); disease caused by environment and control over environmental sources of disease? - #58 - 59; control over lung cancer and heart

disease? - #57; risk of having lung cancer and heart disease? - #56

11. Individual responses of the community, general feelings - #46; happiness - #47; stress - #45; and Basic Facts - #6
12. Income - Basic Facts - #8; education - Basic Facts - #7

Training the Volunteers

The number of volunteers employed and the length of time it takes to train them depend on the magnitude and complexity of the project. Training procedures normally take approximately two-to-three days of structured activity. As the population of Gimli and surrounding rural municipality is at 3,049, eight volunteers were recruited to deliver the 169 surveys. Volunteers were recruited through word of mouth and an ad had been placed in the local newspaper (Appendix F).

Orientation

Orientation was scheduled for October 13, 1987 in the evening. As the volunteers would not be interviewing the respondents, less time was required to train them. Approximately three hours were used for volunteer training plus they could have contact with any members of the Gimli Health Promotion Committee, as they resided in Gimli. As the volunteers knew the Committee members they did not hesitate to indicate concerns or difficulties. A meeting was scheduled for the week of October 13, 1987 (one evening session).

Following is the procedure that was used for the orientation evening.

The objectives of the survey were made explicit to the volunteers and they were told the uses for the findings. This explication of the project's objectives needed to be reiterated

throughout the training process to make the volunteers conscious of the importance of their activities. Experience has shown that when volunteers are told of the significance of the research and are made to feel they are part of an important and exciting process, they are more likely to respond with a sense of dedication (American Hospital Association, 1973; Church, 1962; Cox, 1974; McLellan, 1981; McMahon, 1971; Rainman, 1975). In order to acquaint the volunteers with the interview instrument, every item in the survey was read aloud with as full an explanation of the intention of the question as the situation warranted. Volunteers were then encouraged to ask questions about any of the items on the survey, why they were there, how they would be used, and the kinds of problems they were likely to encounter.

At the end of the day the volunteers were given sample instruments with instructions to seek out neighbours or friends to give them the questionnaire. The volunteers were to drop off the questionnaire in the Gimli Public Health Office to any member of the Gimli Health Promotion Committee. This would also allow for any discussion regarding some of the particular problems or concerns encountered by the respondents that did the questionnaire, and give the Committee a sense of whether the volunteer is really interested in continuing.

The training of the volunteer is vital to the research process. The volunteer stands between the researcher and the data and, unless the volunteer is successful in securing honest, complete, and accurate information, the objectives of the research will either be diminished or limited in their utility (American Hospital Association, 1973; Church, 1962; Cox, 1974; McLellan, 1981; McMahon, 1971; Rainman, 1975).

Field Procedures

1. Before the study began, publicity about the survey was disseminated by word of mouth by the community members.
2. Assigning I.D. number. Each household in Gimli and the rural municipality was given a number according to the address.
3. Preparing face sheets. The face sheet was attached to the instrument along with the I.D. number. The use of face sheets permits the volunteer to have the name and address of the household member. It was torn off the survey at the time it was delivered and destroyed to help preserve respondent anonymity.
4. Notifying respondents of their selection. About 7 to 10 days before going into the field, letters were sent to the households selected for inclusion in the study. The letter informed the recipient of the study's objectives and why it was important for them to cooperate with the volunteers. The letter told the recipients how they were selected (Appendix G).
5. Making volunteer assignments. Each of the volunteers was given a number of assignment cards: approximately 15, along with the face sheet and survey. Cards were arranged so the addresses were as close together as possible. This reduced travel time and costs and generally increased the efficiency of contacting the respondents.
6. Selecting the 12-18-year-old respondent. The school board in the area twice rejected the proposal to have the questionnaire done in the school. As a result, households that were randomly chosen were asked if a 12-18-year-old child lived in the household and if present, sought permission to have the student also fill out the questionnaire.

7. Record keeping. This involved keeping track of each volunteer as to whom they were assigned to deliver the questionnaire, and what the completion, refusal, not at home, or unable to locate rate was. This provided a check on the progress of research and also permitted an evaluation of the interviewer's performance.
8. Handling non response. There were four basic sources of non response: refusals, not at home, unable to locate, and unable to be interviewed. Upon refusal, the volunteer sought to gather as much information as possible. The estimated age, race, sex of the respondent were noted. The characteristics of the house, area, and any other data deemed important to the study were collected. For those not at home, callback procedures were required. The volunteers arranged their next visits at a different time of the day or week in an effort to find the respondent at home. A minimum of three callbacks was employed. When an address could not be located, the house may have burned or been torn down, or been vacant, such information was entered on the face sheet.
9. Feedback sessions between the researcher, Committee and volunteers. During the course of the study (last week of November, 1987) the researcher and Committee were available to discuss problems and more importantly, lend a sympathetic ear to some of the frustrations of the volunteers.
10. Uncompleted questionnaires. One is likely to discover uncompleted questionnaires. Volunteers, on the arranged pick-up date, were to quickly glance at the questionnaire to see if it was incomplete, and encourage the respondents to complete the questionnaire.
11. Notice of appreciation. A brief notice indicating appreciation was to appear in the local newspaper to thank the respondents for their cooperation. The results of the survey were also to appear in the local newspaper.

Validity

The questionnaire used in this study was an amalgam of several questionnaires and resources. Therefore, it was treated as a new questionnaire.

The degree to which a sample of test items represents the area of content the test is designed to measure is content validity (Moore, 1983).

Face validity was done. Face validity was the professional appraisal of what appears to be valid for the content the test attempts to measure (Moore, 1983). Five professionals validated the content of the questionnaire according to criteria established by the author (Appendix H).

Piloting

After modifications were made to the survey according to comments from the validating committee and the Gimli Health Promotion Committee, the questionnaire was pilot tested with ten individuals aged 20 - 50. They were told in general terms that a survey was to be done and they were being asked to pretest it. They were each given the questionnaire and asked to fill it out in the presence of the researcher. This pretest had two critical aspects: both the verbal feedback and the non-verbal feedback. Often it is the non-verbal feedback which proves to be the most useful, for example, the hesitation before answering or skipping a question (Dillman, 1978).

Minor changes were made to the questionnaire based on the pretest.

Volunteers also were given the pilot test questionnaire with instructions to seek out friends or neighbours to complete it.

Ten questionnaires were completed: two were from 12 - 18; four were from 19 - 34; two

were from 35 - 49; two were from 65 and older age groups. No difficulty was reported from this cross section.

Method

Guidelines as established by Dillman (1978) were followed closely during the implementation stage. His total design method for mail surveys was adopted to positively affect both the quality and quantity of response.

To maximize survey response three things must be done: minimize the cost for responding (including monetary and time costs); maximize rewards for doing so (more verbal appreciation and personalization techniques are critical); and establish trust that rewards will be delivered (supplying results to decision makers). All of these factors were considered in the design of the cover letter (Appendix G) and implementation of the hand delivery of the questionnaires. Additional suggestions outlined by Statistics Canada were considered, one being that potential respondents receive advance notification of the survey.

The cover letter was mailed two weeks before the questionnaires went out (Appendix G). The questionnaire and introduction were delivered by the volunteers to each house the last week of November, according to the volunteers' convenience.

Pick-up of the questionnaire was to be done within fourteen days. Again, at the decision between the volunteer and individual who completed the questionnaire, individual arrangements were made for pick-up between volunteer and individual. No deadline date was established, so all returns were accepted.

Data Analysis

Each item on the questionnaire was coded from 1 to 279 and written comments were tallied.

The coded information was keypunched, verified and then analyzed using programs from the Statistical Analysis System (SAS).

Descriptive statistics included frequency of distribution of responses in all categories and frequency distribution of response by age group and gender in some categories.

CHAPTER FOUR

RESULTS

Introduction

One hundred and sixty-nine questionnaires were delivered to the Gimli residents by volunteers during the first two weeks of November 1987.

From the original sample of 169 members of the community, 47 were excluded. They were deleted for the following reasons: 1 was unable to complete the questionnaire; 1 was deceased; 2 were on holidays; 2 were illiterate; 5 refused; 5 moved; 5 could not be reached at home; and 28 only partially completed the questionnaire. Seven 12-18-year-old members agreed to respond to the questionnaire. These seven youths resided in homes in which an adult was completing the questionnaire. In total, there were 122 questionnaires completed by adults and 7 completed by youth, for a total sample of 129.

Completed questionnaires were picked up and delivered to the Gimli Health Office by the volunteers within 21 days of initial delivery. Ninety-five questionnaires were picked up within seven days; twenty-two within fourteen days and twelve within three weeks.

The questionnaire identified the following demographics (Table 1):

The percentage of the sample of 12-18-year-olds was small compared to the percentage of the Gimli population that is in the 12-18 age group. The 12-18 age group is approximately 5% smaller than the overall 12-18-year-olds in Gimli. The remainder of the age groups is similar to the overall population of Gimli, with the majority being females. The sample is similar for all age groups except the 12-18 age group. Ninety-three respondents were married, 6 were widowed, 4 were divorced, 2 were separated and 22 were single.

TABLE 1

DEMOGRAPHICS OF SAMPLE

Age Group	No. of Respondents	Males	Females	Married	Widowed	Divorced	Separated	Single
12-18	7	4	3	0	0	0	0	7
19-34	36	14	22	28	0	2	1	5
35-49	35	13	21	29	1	2	1	4
50-64	30	12	15	25	1	0	0	3
65 and older	21	7	12	11	4	0	0	3
Total Respondents	129	50	73	93	6	4	2	22

How Do People Perceive and Rate Their Own Health?

Respondents were asked to rate their health. The responses to research question number one, How do the people in Gimli perceive and rate their own health, are identified in Tables 2 and 3. The results are a perception of personal health reported in Table 2. The findings show that 47.6% (59) of all respondents reported their health to be excellent while 47.6% (59) of all respondents reported their health to be fair and 4.8% (6) of all respon dents reported their health to be fair and 4.8% (6) of all respondents reported their health to be poor.

When examining the excellent health responses, 56.0% (28) of males and 39.72% (29) of females responded as such (Table 2). Looking at the gender responses by age group shows that the highest percentages of males reporting excellent health were in the 12-18 years (75.0%) and 19-34 years (85.71%) age groups, with the lowest percentage in the 65 years and older (28.57%) age group. For females, the highest percentages were in the 12-18 years (66.6%), 35-49 years (47.61%) and 50-64 (46.66%) age groups, with the lowest percentage in the 65 years and older

(25.0%) age group.

When examining the fair health responses, 34.0% (17) of males and 46.57% (34) of females responded as such (Table 2). Gender responses by age group show that the highest percentages of males reporting fair health were in the 65 years and older (71.42%) and the 50-64 years (41.66%) age groups, with the lowest percentage in the 19-34 years (7.14%) age group. For females, the highest percentages were in the 50-64 years (46.66%) and 19-34 years (45.45%) age groups, with the lowest percentage in the 12-18 years (25.0%) age group.

An examination of the poor health responses shows that 6.0% (3) of males and 2.73% (2) of females responded as such (Table 2). Gender responses by age groups show that the highest percentage of males reporting poor health was in the 50-64 years (16.66%) age group, with the lowest percentage in the 35-49 years (7.69%) age group. For females, the highest percentage was in the 50-64 years (10.0%) age group, with the lowest percentage in the 19-34 years (4.54%) age group.

Overall, more than 90.0% of males and 86.0% of females reported their health as excellent or fair. If one separates the 12-18 years old age group from the other groups, males are most likely to report their health to be excellent in the 19-34 years age group whereas females are most likely to report their health as excellent in the 35-49 years and 50-64 years age groups. As would be expected, the lowest percentages of males and females reporting excellent health were in the 65 years and older age group. Only 6.0% of males and 2.73% of females reported poor health. Poor health was reported by one or more male or female at each of the 19-34, 35-49 and 50-64 age groups.

TABLE 2

PERCEPTION OF HEALTH

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		EXCELLENT				FAIR				POOR			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	3	2	5	0	1	1	2	0	0	0	0
	2.		75.0	66.6			25.0	25.0			0	0	
	3.				71.42				28.57				0
19 - 34 Years	1.	0	12	7	19	2	1	10	13	0	0	1	1
	2.		85.71	31.81			7.14	45.45			0	4.54	
	3.				52.77				36.11				2.77
35 - 49 Years	1.	1	5	10	16	3	5	9	17	0	1	0	1
	2.		38.46	47.61			38.46	42.85			7.69	0	
	3.				45.71				48.57				2.85
50 - 64 Years	1.	1	5	7	13	0	5	7	12	1	2	0	3
	2.		41.66	46.66			41.66	46.66			16.66	0	
	3.				43.33				40.0				10.0
65 Years & Older	1.	0	2	3	5	0	5	5	10	0	0	0	0
	2.		28.57	25.00			71.42	41.66			0	0	
	3.				23.80				47.61				0
No Age Group		0	1	0	1	3	0	2	5	0	0	1	1
Total		2	28	29	59	8	17	34	59	1	3	2	6
Total Sample Gender Pct.			56.00	39.72			34.0	46.57			6.0	2.73	
Total Sample Response Pct.					47.58				47.58				4.83

Sample response = 124

Health is the Most Important Consideration in My Life

After respondents rated their health they were asked to determine if health is an important part of their lives. Table 3 indicates that 68.03% (83) agree, 20.49% (25) disagree, and 11.47% (14) have no opinion.

Sixty percent (30) of males and 64.38% (47) of females agreed that health is an important consideration in their lives (Table 3). The greatest percentage of responses across all age groups that felt health was important was in the 65 years and older (76.19%) age group, followed closely by the 12-18 years (71.41%) age group. The lowest percentage of responses across all age groups that felt health was important was in the 19-34 years (47.22%) age group. The gender responses by age group show that the highest percentage of males reporting health as an important consideration in life was in the 65 years and older (100.0%) age group and lowest percentage in the 19-34 years (35.71%) age group. For females, the highest percentages were in the 65 years and older (75.0%) and 50-64 years (73.33%) age groups, with the lowest percentage in the 19-34 years (54.54%) age group.

Twenty percent (10) of males and 16.43% (12) of females disagreed with health being the most important consideration in their lives (Table 3). The greatest percentage of responses across all age groups that disagreed with health being the most important consideration in one's life was in the 35-49 years (31.42%) age group and the lowest percentage of responses was in the 65 years and older (4.76%) age group. The gender responses by age group show that the highest percentage of males disagreeing with health being an important consideration in one's life was in the 19-34 years (35.71%) age group, with the lowest percentage in the 50-64 years (8.33%) age group. For females, the highest percentage was in

the 35-49 years (23.80%) age group, with the lowest percentage in the 50-64 years (6.66%) age group.

Fourteen percent (7) of males and 8.21% (6) of females had no opinion on health being the most important consideration in one's life (Table 3).

Overall, across all age groups, more than 60.0% of males and females agreed that health is the most important consideration in their lives, while 20.0% or less of males and females disagreed. It is interesting to note that from the age group of 19-34, there is a trend of an increasing percentage of males and females agreeing health is an important consideration. At each age group, more than 50% of females see health as important. More than 50% of males see health as important from 12-18 years and 50 years and older.

TABLE 3

HEALTH IS THE MOST IMPORTANT CONSIDERATION IN LIFE

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		AGREE				DISAGREE				NO OPINION			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	3	2	5	0	0	0	0	0	1	0	1
	2.		75.0	66.6			0	0			25.0	0	
	3.				71.42				0				14.28
19 - 34 Years	1.	0	5	12	17	1	5	4	10	1	3	2	6
	2.		35.71	54.54			35.71	18.18			21.42	9.09	
	3.				47.22				27.77				16.66
35 - 49 Years	1.	1	6	12	19	2	4	5	11	0	1	2	3
	2.		46.15	57.14			30.76	23.80			7.69	9.52	
	3.				54.28				31.42				8.57
50 - 64 Years	1.	2	8	11	21	0	1	1	2	0	2	1	3
	2.		66.66	73.33			8.33	6.66			16.66	6.66	
	3.				70.0				6.66				10.0
65 Years & Older	1.	0	7	9	16	0	0	1	1	0	0	0	0
	2.		100.0	75.0			0	8.33			0	0	
	3.				76.19				4.76				0
No Age Group		3	1	1	5	0	0	1	1	0	0	1	1
Total		6	30	47	83	3	10	12	25	1	7	6	14
Total Sample Gender Pct.			60.0	64.38			20.0	16.43			14.0	8.21	
Total Sample Response Pct.					68.03				20.49				11.47

Sample Response = 122

Efforts The Individual Took To Improve Health In the Past Year

The responses to research question number two, What efforts did the individual do to improve health, are identified in Table 4. Respondents were asked to identify what they did to improve their health in the past year (Table 4).

The first most frequent effort identified was that the respondents improved eating habits to improve their health. Of the total responses of efforts the individual took to improve health, 24.17% (51) selected "improved eating habits" (Table 4). The gender responses by age group for "improved eating habits" show that the highest percentages of males were in the 50-64 years (58.33%) and 35-49 (53.84%) age groups and the lowest percentage was in the 19-34 years (28.57%) age group. For females, the highest percentage was in the 50-64 years (60.0%) age group, with the lowest percentage in the 65 years and older (25.0%) age group.

The second most frequent effort identified was that the respondents increased their exercise to improve their health. Of the total responses of efforts the individual took to improve health, 19.9% (42) selected increased their exercise (Table 4). The gender responses by age group for "increased exercise" shows that the highest percentage of males was in the 12-18 years (75.0%) age group and the lowest percentage was in the 35-49 years (15.38%) age group. For females, the highest percentage was in the 12-18 years (66.66%) age group and the lowest percentage was in the 19-34 years (13.63%) age group.

The third most frequent effort identified was that the respondents lost weight to improve their health. Of the total responses of efforts the individual took to improve health, 16.58% (35) selected "lost weight" (Table 4). The gender responses by age group for "lost weight"

shows that the highest percentage of males was in the 50-64 years (33.33%) age group and the lowest percentage was in the 35-49 years (15.38%) age group. For females, the highest percentage was in the 65 years and older (33.33%) age group and the lowest percentage was in the 50-64 years (13.33%) age group.

The fourth most frequent effort identified was that the respondents learned to manage stress to improve their health. Of the total responses of efforts the individual took to improve health, 11.84% (25) selected "learned to manage stress" (Table 4). The gender responses by age group for "learned to manage stress" shows that the highest percentage of males was in the 65 years and older (28.57%) age group and the lowest percentage was in the 19-34 years (21.42%) age group. For females, the highest percentage was in the 35-49 years (23.80%) age group, and the lowest percentage was in the 65 years and older (8.33%) age group.

The fifth most frequent effort identified was that the respondents drank less alcohol to improve their health. Of the total responses of efforts the individual took to improve health, 9.0% (19) selected "drank less alcohol" (Table 4). The gender responses by age group for "drank less alcohol" shows that the highest percentage of males were in the 19-34 years (28.57%) and 65 years and older (28.57%) age groups and the lowest percentage was in the 35-49 years (15.38%) age group. For females, the highest percentage was in the 19-34 years (18.18%) age group and the lowest percentage was in the 35-49 years (4.76%) age group.

The sixth most frequent effort identified was that the respondents did nothing to improve their health. Of the total responses of efforts the individual took to improve health, 8.53% (18) selected "did nothing" (Table 4). The gender responses by age group for "did nothing" show that the highest percentages of males were in the 35-49 years (15.38%) and 65 years

and older (14.28%) age groups. There were no other male responses in the other age groups. For females, the highest percentage was in the 19-34 years (31.81%) age group and the lowest percentage was in the 65 years and older (8.33%) age group.

The seventh most frequent effort identified was that the respondents quit smoking. Of the total responses of efforts the individual took to improve health, 7.58% (16) selected "quit smoking" (Table 4). The gender responses by age group for "quit smoking" show that the highest percentage of males was in the 65 years and older (28.57%) age group and the lowest percentage was in the 19-34 years (14.28%) age group. For females, the highest percentage was in the 35-49 (19.04%) age group and the lowest percentage was in the 65 years and older (8.33%) age group.

Overall, more males did more in the past year in regard to improving their health. More males than females improved eating, increased exercise, lost weight, managed stress, drank less alcohol, and quit smoking. Although there were females who did make improvements in health, they were the lowest percentage in all areas except doing nothing. The age groups, from 12 years to 64 years, were the highest percentage in making improvements. However, those in the 65 years and older age group were the lowest percentage in making improvements. It is interesting to note that no 12-18-year-olds indicated they improved eating habits, managed stress, or drank less alcohol.

TABLE 4

WHAT IS THE MOST IMPORTANT THING YOU HAVE DONE IN THE PAST YEAR TO IMPROVE YOUR HEALTH?

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		LEARNED TO MANAGE STRESS				DRANK LESS ALCOHOL				NOTHING			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	0	0	0	0	0	0	0	0	0	0	0
	2.		0	0			0	0			0	0	
	3.				0				0				0
19 - 34 Years	1.	0	3	2	5	0	4	4	8	0	0	7	7
	2.		21.42	9.09			28.57	18.18			0	31.81	
	3.				13.88				22.22			0	19.44
35 - 49 Years	1.	0	3	5	8	1	2	1	4	0	2	3	5
	2.		23.07	23.80			15.38	4.76			15.38	14.28	
	3.				22.85				11.42				14.28
50 - 64 Years	1.	1	3	3	7	0	3	1	4	1	0	2	3
	2.		25.0	20.0			25.0	6.66			0	13.33	
	3.				23.33				13.33				10.0
65 Years & Older	1.	0	2	1	3	0	2	0	2	0	1	1	2
	2.		28.57	8.33			28.57	0			14.28	8.33	
	3.				14.28				9.52				9.52
No Age Group		1	1	0	2	0	0	1	1	0	0	1	1
Total		2	12	11	25	1	11	7	19	1	3	14	18
Total Sample Gender Pct.			24.0	15.06			22.0	9.58			6.0	19.17	

Table continues...

TABLE 4

WHAT IS THE MOST IMPORTANT THING YOU HAVE DONE IN THE PAST YEAR TO IMPROVE YOUR HEALTH?

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		IMPROVED EATING HABITS				INCREASED EXERCISE				LOST WEIGHT			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	0	0	0	0	3	2	5	0	1	0	1
	2.		0	0			75.0	66.66			25.0	0	
	3.				0				71.42				14.28
19 - 34 Years	1.	0	4	7	11	0	8	3	11	1	4	5	10
	2.		28.57	31.81			57.14	13.63			28.57	22.72	
	3.				30.55				30.55				27.77
35 - 49 Years	1.	0	7	7	14	2	2	6	10	3	2	5	10
	2.		53.84	33.33			15.38	28.57			15.38	23.80	
	3.				40.0				28.57				28.57
50 - 64 Years	1.	1	7	9	17	0	3	6	9	0	4	2	6
	2.		58.33	60.0			25.0	40.0			33.33	13.33	
	3.				56.66				30.0				20.0
65 Years & Older	1.	0	3	3	6	0	3	2	5	0	2	4	6
	2.		42.85	25.0			48.85	16.66			28.57	33.33	
	3.				28.57				23.80				28.57
No Age Group		1	1	1	3	1	1	0	2	1	0	1	2
Total		2	22	27	51	3	20	19	42	5	13	17	35
Total Sample Gender Pct.			44.0	36.98			40.0	26.02			26.0	23.28	

Table continues...

TABLE 4

WHAT IS THE MOST IMPORTANT THING YOU HAVE DONE IN THE PAST YEAR TO IMPROVE YOUR HEALTH?

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

QUIT SMOKING

		No Gender	Male	Female	Total
12 - 18 Years	1.	0	1	0	1
	2.		25.0	0	
	3.				14.28
19 - 34 Years	1.	1	2	0	3
	2.		14.28	0	
	3.				8.33
35 - 49 Years	1.	1	0	4	5
	2.		0	19.04	
	3.				14.28
50 - 64 Years	1.	0	2	2	4
	2.		16.66	13	
	3.			.33	13.33
65 Years & Older	1.	0	2	1	3
	2.		28.57	8.33	
	3.				14.28
No Age Group		0	0	0	0
Total		2	7	7	16
Total Sample Gender Pct.			14.0	9.58	

Listed in descending order

Note: Respondents were asked to check all options that applied.

Efforts The Individual Could Do To Improve Health

The responses to research question number three, What efforts could the individual do to improve health, are identified in Table 5. Respondents were asked to identify what they could personally do to improve their health (Table 5).

The first most frequent response identified for what could be done to improve health was to increase exercise. Of those who responded, 84 selected "would like to increase exercise" (Table 5). The gender responses by age group for" would like to increase exercise" show that the highest percentage of males was in the 19-34 years (71.42%) age group and the lowest percentage was in the 12-18 years (25.0%) age group. For females, the highest percentages were in the 12-18 years (100.0%) and 35-49 years (76.19%) age groups and the lowest percentage was in the 65 years and older (16.66%) age group.The second most frequent response identified for what could be done to improve health, was to improve eating habits. Of those who responded, 76 selected "would like to improve eating habits" (Table 5). The gender responses by age group for "would like to improve eating habits" show that the highest percentage was in the 12-18 years (75.0%) age group and the lowest percentage was in the 65 years and older (28.57%) age group. For females, the highest percentage was in the 12-18 years (100.0%) age group and the lowest percentage was in the 50-64 years (26.66%) age group.

The third most frequent response identified for what could be done to improve health was to worry less. Of those who responded, 56 selected "would like to worry less" (Table 5). The gender responses by age group for "would like to worry less" show that the highest percentages of males were in the 12-18 years (50.0%) and 35-49 years (46.15%) age groups

and the lowest percentage was in the 65 years and older (14.28%) age group. For females, the highest percentage was in the 35-49 years (52.38%) age group and the lowest percentage was in the 19-34 years (36.36%) age group. There were no female responses in the 12-18 years age group.

The fourth most frequent response identified for what could be done to improve health was to learn to relax. Of those who responded, 49 selected "would like to learn to relax" (Table 5). The gender responses by age group for "would like to learn to relax" show that the highest percentage of males was in the 65 years and older (42.85%) age group and the lowest percentage was in the 35 - 49 years (30.76%) age group. For females, the highest percentage was in the 35-49 years (47.61%) age group and the lowest percentage was in the 65 years and older (25.0%) age group.

The fifth most frequent response identified for what could be done to improve health was to get out more. Of those who responded, 45 selected "would like to get out more" (Table 5). The gender responses by age group for "would like to get out more" show that the highest percentages of the males were in the 35-49 years (30.76%) and 19-34 years (28.57%) age groups and the lowest percentage was in the 50-64 years (25.0%) age group. For females, the highest percentage was in the 35-49 years (42.85%) age group and the lowest percentage was in the 35-49 years (20.0%) age group.

The sixth most frequent response identified for what cold be done to improve health was to stop smoking. Of those who responded, 38 would like to stop smoking (Table 5). The gender responses by age group for "would like to stop smoking" show that the highest percentages of males were in the 19-34 years (42.85%) and 50-64 years (41.66%) age groups

and the lowest percentage was in the 65 years and older (14.28%) age group. For females, the highest percentage was in the 19-34 years (36.36%) age group and the lowest percentage was in the 50-64 years (26.66%) age group.

The seventh most frequent response identified for what could be done to improve health was to spend more time with friends. Of those who responded, 33 selected would like to spend more time with friends (Table 5). The gender responses by age group for "would like to spend more time with friends" shows that the highest percentage of males was in the 19-34 years (28.57%) age group and the lowest percentage was in the 35-49 (7.69%) age group. For females, the highest percentage was in the 12-18 years (33.33%) age group and the lowest percentage was in the 35-49 years (23.80%) age group.

The eighth most frequent response identified for what could be done to improve health was to reduce alcohol intake. Of those who responded, 25 selected "would like to reduce alcohol intake" (Table 5). The gender responses by age group for "would like to reduce alcohol intake" show that the highest percentage of males was in the 19-34 years (50.0%) age group and the lowest percentage was in the 35-49 years (23.0%) age group. For females, the highest percentage was in the 35-49 years (23.80%) age group and the lowest percentage was in the 50-64 years (13.33%) age group.

The ninth most frequent response identified for what could be done to improve health was to spend more time with close friends. Of those who responded, 23 selected "would like to spend more time with close friends" (Table 5). The gender responses by age group for "would like to spend more time with close friends" show that the highest percentage of males was in the 50-64 years (25.0%) age group and the lowest percentage was in the 35-49 years

(15.38%) age group. For females, the highest percentage was in the 12-18 years (66.66%) age group and the lowest percentage was in the 35-49 years (14.28%) age group.

The tenth most frequent response identified for what could be done to improve health was to make new friends. Of those who responded, 20 selected "would like to make new friends" (Table 5). The gender responses by age group for "would like to make new friends" show that the highest percentage of males was in the 35-49 years (15.38%) age group and the lowest percentage was in the 50-64 years (8.33%) age group. For females, the highest percentage was in the 12-18 years (33.33%) age group and the lowest percentage was in the 50-64 years (6.66%) age group.

The eleventh most frequent response identified for what could be done to improve health was to change jobs. Of those who responded, 16 selected "would like to change jobs" (Table 5). The gender responses by age group for "would like to change jobs" show that the highest percentage of males was in the 19-34 years (64.28%) age group and the lowest percentage was in the 50-64 years (8.33%) age group. For females, the highest percentage was in the 35-49 years (14.28%) age group and the lowest percentage was in the 19-34 years (13.63%) age group.

The twelfth most frequent response identified for what could be done to improve health was to move. Of those who responded, 11 selected "would like to move" (Table 5). The gender responses by age group for "would like to move" show that the highest percentage of males was in the 19-34 years (28.57%) age group and the lowest percentage was in the 50-64 years (8.33%) age group. For females, the highest percentage was in the 35-49 years (14.28%) and the lowest percentage was in the 19-34 years (4.54%) age group.

The thirteenth most frequent response identified for what could be done to improve health was to leave home. Of those who responded, 5 selected "would like to leave home." The gender responses by age group for "would like to leave home" show that the highest percentage of the males were in the 35-49 years (7.69%) and 19-34 years (7.14%) age groups There were no male responses in the other age groups. For females, the highest percentage was in the 19-34 years (9.09%) age group and the lowest percentage was in the 35-49 years (5.71% age group. There were no female responses in the other age groups.

Overall, more females would like to make improvements in their health. Females would like to: increase exercise, improve eating habits, worry less, learn to relax, get out more, and spend more time with friends and close friends. Across all age groups the highest percentage of responses were in the 12-18 years, 19-34 years and 35-49 years. More males than females would like to stop smoking, reduce alcohol intake, change jobs, and move. Across all age groups, the highest percentages for males wanting to make improvements were in the 19-34 years, followed closely by the 35-49 years. The 50-64 years and the 65 years and older age groups for males and females were the lowest percentages in wanting to make improvements in their health.

These results differ from Table 4 in that it was mostly males who made improvements in their health in the past year, while the results in Table 5 demonstrate that it is females who would like to make improvements in their health.

Highest responses in efforts done to improve health in the past year (Table 4) were similar to efforts one could do to improve health (Table 5). Highest responses for efforts done to improve health in the last year were: increased exercise, improved eating habits, and

managed stress. Highest responses for efforts that could be done to improve health were: increase exercise, improve eating habits, and learn to manage stress. Lowest responses in Table 4 and Table 5 were similar in that drinking less alcohol and smoking less were identified.

TABLE 5

THE MOST IMPORTANT THING(S) YOU PERSONALLY COULD DO TO IMPROVE YOUR HEALTH

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		LEARN TO RELAX				GET OUT MORE				STOP SMOKING			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	1	0	1	0	0	1	1	0	0	0	0
	2.		25.0	0			0	33.33			0	0	
	3.				14.28				14.28				0
19 - 34 Years	1.	0	5	9	14	0	4	8	12	0	6	8	14
	2.		35.71	40.9			28.57	36.36			42.85	36.36	
	3.				38.88				33.33				38.88
35 - 49 Years	1.	3	4	10	17	2	4	9	15	1	5	6	12
	2.		30.76	47.61			30.76	42.85			38.46	28.57	
	3.				48.57				42.85				34.28
50 - 64 Years	1.	0	4	4	8	0	3	3	6	1	5	4	10
	2.		33.33	26.66			25.0	20.0			41.66	26.66	
	3.				26.66				20.0				33.33
65 Years & Older	1.	0	3	3	6	0	2	5	7	0	1	0	1
	2.		42.85	25.0			28.57	41.66			14.28	0	
	3.				28.57				33.33				4.76
No Age Group		2	0	1	3	2	1	1	4	0	0	1	1
Total		5	17	27	49	4	14	27	45	2	17	19	38
Total Sample Gender Pct.			34.0	36.98			28.0	36.98			34.0	26.02	

Table continues...

TABLE 5

THE MOST IMPORTANT THING(S) YOU PERSONALLY COULD DO TO IMPROVE YOUR HEALTH

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		EXERCISE MORE				IMPROVE EATING HABITS				WORRY LESS			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	1	3	4	0	3	3	6	0	2	0	2
	2.		25.0	100.0			75.0	100.0			50.0	0	
	3.				57.14				85.71				28.57
19 - 34 Years	1.	1	10	15	26	1	8	14	23	1	5	8	14
	2.		71.42	68.18			57.14	63.63			35.71	36.36	
	3.				72.22				63.88				38.88
35 - 49 Years	1.	4	9	16	29	4	7	13	24	3	6	11	20
	2.		69.23	76.19			53.84	61.90			46.15	52.38	
	3.				82.85				68.57				57.14
50 - 64 Years	1.	1	6	10	17	0	6	4	10	0	5	6	11
	2.		50.0	66.66			50.0	26.66			41.66	40.0	
	3.				56.66				33.33				36.66
65 Years & Older	1.	0	0	2	2	0	2	5	7	0	1	5	6
	2.		0	16.66			28.57	41.66	33.33		14.28	41.66	
	3.				9.52								28.57
No Age Group		2	1	3	6	3	0	3	6	1	1	1	3
Total		8	27	49	84	8	26	42	76	5	20	31	56
Total Sample Gender Pct.			54.0	67.12			52.0	57.53			40.0	42.46	

Table continues...

TABLE 5

THE MOST IMPORTANT THING(S) YOU PERSONALLY COULD DO TO IMPROVE YOUR HEALTH

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		SPEND MORE TIME WITH FRIENDS				REDUCE ALCOHOL INTAKE				SPEND MORE TIME WITH CLOSE FRIENDS			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	1	1	2	0	0	0	0	0	0	2	2
	2.		25.0	33.33			0	0			0	66.66	
	3.				28.57				0				28.57
19 - 34 Years	1.	0	4	7	11	0	7	3	10	0	3	8	11
	2.		28.57	31.81			50.0	13.63			21.42	36.36	
	3.				30.55				27.77				30.55
35 - 49 Years	1.	2	1	5	8	1	3	5	9	1	2	3	6
	2.		7.69	23.80			23.0	23.80			15.38	14.28	
	3.				22.85				25.71				17.14
50 - 64 Years	1.	0	2	4	6	0	3	2	5	0	3	0	3
	2.		16.66	26.66			25.0	13.33			25.0	0	
	3.				20.0				16.66				10.0
65 Years & Older	1.	0	1	3	4	0	0	0		0	0	0	
	2.		14.28	25.0			0	0			0	0	
	3.				19.04				0				0
No Age Group		2	0	0	2	0	0	1	1	1	0	0	1
Total		4	9	20	33	1	13	11	25	2	8	13	23
Total Sample Gender Pct.			18.0	27.39			26.0	15.06			16.0	17.8	

Table continues...

TABLE 5

THE MOST IMPORTANT THING(S) YOU PERSONALLY COULD DO TO IMPROVE YOUR HEALTH

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		MAKE NEW FRIENDS				CHANGE JOBS				MOVE			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	0	1	1	0	0	0	0	0	0	0	0
	2.		0	33.33			0	0			0	0	
	3.				14.28				0				0
19 - 34 Years	1.	1	2	6	9	0	6	3	9	0	4	1	5
	2.		14.28	27.27			64.28	13.63			28.57	4.54	
	3.				25.0				25.0				13.88
35 - 49 Years	1.	0	2	2	4	1	2	3	6	0	0	3	3
	2.		15.38	9.52			15.38	14.28			0	14.28	
	3.				11.42				17.14				8.57
50 - 64 Years	1.	1	1	1	3	0	1	0	1	0	1	1	2
	2.		8.33	6.66			8.33	0			8.33	6.66	
	3.				10.0				3.33				6.66
65 Years & Older	1.	0	0	2	2	0	0	0		0	0	1	1
	2.		0	16.66			0	0			0	8.33	
	3.				9.52				0				4.76
No Age Group		1	0	0	1	0	0	0	0	0	0	0	0
Total		3	5	12	20	1	9	6	16	0	5	6	11
Total Sample Gender Pct.			10.0	16.43			18.0	8.21			10.0	8.21	

Table continues...

TABLE 5

THE MOST IMPORTANT THING(S) YOU PERSONALLY COULD DO TO IMPROVE YOUR HEALTH

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		LEAVE HOME			
		No Gender	Male	Female	Total
12 - 18 Years	1.	0	0	0	0
	2.		0	0	
	3.				0
19 - 34 Years	1.	0	1	2	3
	2.		7.14	9.09	
	3.				8.33
35 - 49 Years	1.	0	1	1	2
	2.		7.69	4.76	
	3.				5.71
50 - 64 Years	1.	0	0	0	0
	2.		0	0	
	3.				0
65 Years & Older	1.	0	0	0	0
	2.		0	0	
	3.				0
No Age Group		0	0	0	0
Total		0	2	3	5
Total Sample Gender Pct.			4.0	4.10	

Listed in descending order

Note: Respondents were asked to check all options that applied

Preventing You from Making Improvements

The responses to research question number four, What is stopping you from making improvements, are identified in Table 6. Respondents were asked to identify what was preventing them from making improvements in their health. Table 6 identifies their responses.

The most frequent factor identified by respondents as preventing them from making improvements in health was that they did not see the problem as serious. The total response to this factor was 51 (Table 6). By gender, 50.05% (25) of males and 34.24% (25) of females responded as such. The gender responses by age group show that the highest percentage of males for selecting "did not see the problem as serious" was in the 65 years and older (71.42%) age group and the lowest percentage was in the 19-34 years (42.85%) age group. For females, the highest percentage was in the 50-64 years (46.66%) age group and the lowest percentage was in the 19-34 years (22.72%) age group.

The second most frequent factor identified by respondents as preventing them from making improvements in health was a lack of discipline. The total response to this factor was 49 (Table 6). By gender, 24.0% (12 of males) and 45.20% (33) of females responded as such. The gender responses by age group show that the highest percentage of males that selected "a lack of discipline" was in the 35-49 years (30.76%) group and the lowest percentage was in the 65 years and older (14.28%) age group. For females, the highest percentage was in the 12-18 years (100.0%) age group and the lowest percentage was in the 65 years and older (8.33%) age group.

The third most frequent factor identified by respondents as preventing them from making improvements in health was a lack of time. The total response to this factor was 42 (Table

6). By gender, 38.0% (19) of males and 28.76% (21) of females responded as such. The gender responses by age groups show that the highest percentages of males that selected "a lack of time" were in the 35-49 years (53.84%) and 19-34 years (50.05%) age groups and the lowest percentage was in 65 years and older (14.28%) age group. For females, the highest percentages were in the 12-18 years (33.33%) and 19-34 years (31.81%) age groups and the lowest percentage was in the 65 years and older (16.66%) age group.

The fourth most frequent factor identified by respondents as preventing them from making improvements in health was lack of energy. The total response to this factor was 27 (Table 6). By gender, 22.0% (11) of males and 19.17% (14) of females responded as such. The gender responses by age group show that the highest percentage of males that selected "a lack of energy" was in the 12-18 years (50.05%) age group and the lowest percentages were in the 19-34 years (14.28%) and the 65 years and older (14.28%) age groups. For females, the highest percentage was in the 19-34 years (27.27%) age group and the lowest percentage was in the 50-64 years (13.33%) age group.

The fifth most frequent factor identified by respondents as preventing them from making improvements in health was "don't know how to get started." The total responses to this factor were 14 (Table 6). By gender, 6.0% (3) of males and 10.95% (8) of females responded as such. The gender responses by age group show that the highest percentage of males that selected "don't know how to get started" was in the 12-18 years (25.05%) age group and the lowest percentages were in the 35-49 years (7.69%) and in the 19-34 years (7.14%) age groups. For females, the highest percentage was in the 19-34 years (18.18%) age group and the lowest percentage was in the 35-49 years (4.76%) age group.

The sixth most frequent factor identified by respondents preventing them from making improvements in health was lack of knowledge. The total response to this factor was 10 (Table 6). By gender, 6.0% (3) of males and 8.21% (6) of females responded as such. The gender responses by age group show that the highest percentage of males that selected "a lack of knowledge" was in the 65 years and older (14.28%) age group and the lowest percentage was in the 35-49 years (7.69%) age group. For females, the highest percentage was in the 19-34 years (18.18%) age group and the lowest percentage was in the 50-64 years (6.66%) age group.

The seventh most frequent factor identified by respondents preventing them from making improvements in health was "too depressed." The total response to this factor was 7 (Table 6). By gender, 2.0% (1) of males and 6.84% (5) of females responded as such. The gender responses by age group show that the highest percentage of males that selected "too depressed" was in the 12-18 years (25.0%) age group. There are no other male responses in the other age groups. For females, the highest percentage was in the 19-34 years (13.63%) age group and the lowest percentage was in the 35-49 years (4.76%) age group.

Overall, while respondents could identify more than one reason for not making improvements in health the top five reasons in order were: did not see the problem as serious; lack of discipline; lack of time; lack of energy; and don't know how to get started. Overall, by gender, more females identified a lack of discipline, don't know how to get started, lack of knowledge and too depressed as factors in preventing them from making improvements in health. A high percentage by age group of females occurred across all age groups. By gender, more males identified a lack of time and energy and do not see the problem as

serious, as factors in preventing them from making improvements in health. A high percentage by age group of males occurred across all age groups.

TABLE 6

PREVENTING YOU FROM MAKING IMPROVEMENTS

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		PROBLEM NOT SERIOUS				LACK OF SELF-DISCIPLINE				LACK OF TIME			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	0	1	0	0	1	3	4	0	1	1	2
	2.		0	33.33			25.0	100.0			25.0	33.33	
	3.				14.28				57.14				28.57
19 - 34 Years	1.	0	6	5	11	1	3	10	14	0	7	7	14
	2.		42.85	22.72			21.42	45.45			50.0	31.81	
	3.				30.55				38.88				38.88
35 - 49 Years	1.	1	7	7	15	1	4	10	15	2	7	6	15
	2.		53.84	33.33			30.76	47.61			53.84	28.57	
	3.				42.85				42.85				42.85
50 - 64 Years	1.	0	6	7	13	1	3	7	11	0	3	4	7
	2.		50.0	46.66			25.0	46.66			25.0	26.66	
	3.				43.33				36.66				23.33
65 Years & Older	1.	0	5	5	10	0	1	1	2	0	1	2	3
	2.		71.42	41.66			14.28	8.33			14.28	16.66	
	3.				47.61				9.52				14.28
No Age Group		0	1	0	1	1	0	2	3	0	0	1	1
Total		1	25	25	51	4	12	33	49	2	19	21	42
Total Sample Gender Pct.			50.0	34.24			24.0	45.20			38.0	28.76	

Table continues...

TABLE 6

PREVENTING YOU FROM MAKING IMPROVEMENTS

1. Frequency 2. Age Group Gender Pct. 3. Age Group Sample Pct.		LACK OF ENERGY				DON'T KNOW HOW TO GET STARTED				LACK OF KNOWLEDGE			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	2	0	2	0	1	0	1	0	0	0	0
	2.		50.0	0			25.0	0			0	0	
	3.				28.57				14.28				0
19 - 34 Years	1.	0	2	6	8	0	1	4	5	0	0	4	4
	2.		14.28	27.27			7.14	18.18			0	18.18	
	3.				22.22				13.88				11.11
35 - 49 Years	1.	1	4	4	9	1	1	1	3	0	1	0	1
	2.		30.76	19.04			7.69	4.76			7.69	0	
	3.				25.71				8.57				2.85
50 - 64 Years	1.	0	2	2	4	1	0	1	2	1	1	1	3
	2.		16.66	13.33			0	6.66			8.33	6.66	
	3.				13.33				6.66				10.0
65 Years & Older	1.	0	1	2	3	0	0	1		0	1	1	2
	2.		14.28	16.66			0	8.33			14.28	8.33	
	3.				14.28				4.76				9.52
No Age Group		1	0	0	1	1	0	1	2	0	0	0	0
Total		2	11	14	27	3	3	8	14	1	3	6	10
Total Sample Gender Pct.			22.0	19.17			6.0	10.95			6.0	8.21	
Total Response Pct.					13.5				7.0				5.0

Table continues...

TABLE 6

PREVENTING YOU FROM MAKING IMPROVEMENTS

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		TOO DEPRESSED			
		No Gender	Male	Female	Total
12 - 18 Years	1.	0	1	0	1
	2.		25.0	0	
	3.				14.28
19 - 34 Years	1.	0	0	3	3
	2.		0	13.63	
	3.				8.33
35 - 49 Years	1.	0	0	1	1
	2.		0	4.76	2.85
	3.				
50 - 64 Years	1.	0	0	1	1
	2.		0	6.66	
	3.				3.33
65 Years & Older	1.	0	0	0	0
	2.		0	0	
	3.				0
No Age Group		1	0	0	1
Total		1	1	5	7
Total Sample Gender Pct.			2.0	6.84	

Listed in descending order

Note: Respondents were asked to check all options that applied

Important For Government To Deal With Certain Topics

The responses to research question number five, How important is it for government to deal with certain topics, are identified in Table 7. Table 7 identifies how the respondents felt about the importance of government dealing with certain health topics.

The most frequent responses were in the "important" and "extremely important" categories. Topics that were identified with the most frequent responses as important for the government to deal with were: opportunities for fitness (50); accident prevention at home (39); accident prevention at work (39); accident prevention at school (33); and eating habits (33).

Topics that were identified with the most frequent responses as "extremely important" for the government to deal with were: better housing (50); child health (43); improved sanitation (36); and accident prevention at school (33).

Overall, the most frequent responses were in the "important" and "extremely important" categories. Important topics identified were: eating habits; accident prevention at home; and opportunities for fitness. Extremely important topics identified were: child health; environmental control; accident prevention at work and school; and improved sanitation.

Table 7

HOW IMPORTANT IS IT FOR GOVERNMENT TO DEAL WITH EACH TOPIC?

CHILD HEALTH

	FREQUENCY	Percent	CUMULATIVE FREQUENCY	CUMULATIVE Percent
1.	3	2.5	3	2.5
2.	7	5.9	10	8.5
3.	36	30.5	46	39.0
4.	29	24.6	75	63.6
5.	43	36.4	118	100.0

EATING HABITS

	FREQUENCY	Percent	CUMULATIVE FREQUENCY	CUMULATIVE Percent
1.	22	19.5	22	19.5
2.	27	23.9	49	43.4
3.	42	37.2	91	80.5
4.	14	12.4	105	92.9
5.	8	7.1	113	100.0

ENVIRONMENTAL CONTROL - BETTER HOUSING

	FREQUENCY	Percent	CUMULATIVE FREQUENCY	CUMULATIVE Percent
1.	1	0.8	1	0.8
2.	9	7.3	10	8.1
3.	29	23.6	39	31.7
4.	34	27.6	73	59.3
5.	50	40.7	123	100.00

Note: 1. = not important
2. = somewhat important
3. = important
4 . = very important
5. = extremely important

Table continues...

Table 7

HOW IMPORTANT IS IT FOR GOVERNMENT TO DEAL WITH EACH TOPIC?

ACCIDENT PREVENTION AT HOME

	FREQUENCY	Percent	CUMULATIVE FREQUENCY	CUMULATIVE Percent
1.	13	11.4	13	11.4
2.	22	19.3	35	30.7
3.	39	34.2	74	64.9
4.	22	19.3	96	84.2
5.	18	15.8	114	100.0

ACCIDENT PREVENTION AT WORK

	FREQUENCY	Percent	CUMULATIVE FREQUENCY	CUMULATIVE Percent
1.	3	2.6	3	2.6
2.	10	8.5	13	11.1
3.	39	33.3	52	44.4
4.	31	26.5	83	70.9
5.	34	29.1	117	100.0

ACCIDENT PREVENTION AT SCHOOL

	FREQUENCY	Percent	CUMULATIVE FREQUENCY	CUMULATIVE Percent
1.	6	5.2	6	5.2
2.	12	10.3	18	15.5
3.	33	28.4	51	44.0
4.	32	27.6	83	71.6
5.	33	28.4	116	100.0

Note: 1. = not important
2. = somewhat important
3. = important
4 . = very important
5. = extremely important

Table continues...

Table 7

HOW IMPORTANT IS IT FOR GOVERNMENT TO DEAL WITH EACH TOPIC?

IMPROVED SANITATION

	FREQUENCY	Percent	CUMULATIVE FREQUENCY	CUMULATIVE Percent
1.	2	1.8	2	1.8
2.	15	13.3	17	15.0
3.	34	30.1	51	45.1
4.	26	23.0	77	68.1
5.	36	31.9	113	100.0

OPPORTUNITIES FOR FITNESS

	FREQUENCY	Percent	CUMULATIVE FREQUENCY	CUMULATIVE Percent
1.	4	3.5	4	3.5
2.	21	18.4	25	21.9
3.	50	43.9	75	65.8
4.	25	21.9	100	87.7
5.	14	12.3	114	100.0

Note:
1. = not important
2. = somewhat important
3. = important
4 . = very important
5. = extremely important

Need More Information

The responses to research question number six, What topics do you need more information, are identified in Table 8. Table 8 shows the number of responses for which topics respondents felt they needed more information. In order of frequency, respondents identified: stress management (36); parenting skills (27); AIDS (26); environmental control (23); family relationships (21); child development (17); safety and accident prevention (17); breast self-examination (15); drug abuse (14); mental health (11); smoking (11); alcohol abuse (10); menopause (8); nutrition (7); and birth control (5), as topics they needed more information.

Table 8

TOPICS ON WHICH YOU NEED MORE INFORMATION

Need More Information	Frequency
Stress Management	36
Parenting Skills	27
AIDS	2
Environmental Control	23
Family Relationships	21
Child Development	17
Safety, Accident Prevention	17
Breast Self-Examination	15
Drug Abuse	14
Mental Health	11
Smoking	11
Alcohol Abuse	10
Menopause	8
Nutrition	7
Birth Control	5

Listed in descending order
Note: Respondents were asked to check all options that applied

Most of the respondents obtained information about health from several sources (Table 9). The major sources, in order, were: doctor (97); television (86); and newspapers (70).

A small number of respondents obtained information from: other health professional (24); government health department (21); and from others (12); "others" were identified as friends.

Table 9

PRESENT SOURCE(S) OF INFORMATION ABOUT HEALTH

Source	Frequency
Doctor	97
Television	86
Newspapers	70
Other Health Professional	24
Government Health Department	21
Other	12

Listed in descending order
Note: Respondents were asked to check all options that applied

Should Places Such As School Promote Health Education? Should Churches Promote Health Care? and Should the Workplace Promote Healthier Behaviour?

The responses to research question number seven, Should places such as schools, churches and the workplace promote health education, are identified in Tables 10, 11 and 12. Table 10 identifies a frequency distribution of functions that individuals would like to see the school system assume. In order of frequency, the functions were in career counselling (88);

driver training (76); recreational programming (68); family life training (65); health education (62); on the job training (46); and community centre work (42).

Table 10

FUNCTIONS THE SCHOOL SYSTEM SHOULD ASSUME IN THE NEXT FEW YEARS

Functions	Frequency
Career Counselling	88
Driver Training	76
Recreational Programming	68
Family Life Training	65
Health Education	62
On the Job Training	46
Community Centre Work	42
None	0

Listed in descending order
Note: Respondents were asked to check all options that applied

Table 11 identifies a frequency distribution of functions that individuals would like to see the churches in the community assume. In order of frequency, the functions were: counselling (61); recreation (17); family life training (22); education (22); athletics (8); economic assistance (5); and health care (5).

Table 11

FUNCTIONS THAT HAVE BEEN TAKEN
UP BY THE CHURCHES IN YOUR COMMUNITY

Functions	Frequency
Counselling	61
Recreation	26
Family Life Training	22
Education	22
Athletics	8
Health Care	5
Economic Assistance	5
TOTAL RESPONSES	149

Listed in descending order
Note: Respondents were asked to check all options that applied

Table 12 identifies a frequency distribution of responses for "should a place of work promote good health habits?" Of the total responses, 66.35% (71) responded "yes"; 14.0% (15) responded "no"; and 19.95% (21) responded "don't know."

Table 12

PLACE OF WORK IS AN APPROPRIATE
AREA TO PROMOTE GOOD HEALTH HABITS

	Frequency	% of Responses
1.	71	66.35
2.	15	14.0
3.	21	19.96

Sample response = 107

Note: 1. = yes
2. = no
3. = don't know

Overall, more than 50% of all respondents felt that the school system needed to focus on some form of health education. Churches were seen to be important in counselling and the workplace should promote healthier behaviour.

Social Environments (Work, Unemployment, Social Networks)

The responses to research question number eight, What is the social environment of the community, are identified in Tables 13, 14, 15 and 16. Table 13 identified the employment status of the respondents. Table 14 identified respondents with more than 10 friends. Table 15 identified how respondents spent their free time and Table 16 identified health and friends.

Work and Unemployment

Table 13 identifies the work status of the respondents.

Fifty-five were employed full time; 6 employed full time and part time; and 28 were employed part time. Fourteen responded to "work part time for some other reason." The reason for working part time most identified was a physical handicap. The 12-18 age years group also would be most likely working part time. Twenty-eight respondents were retired, and 19 were self employed. Eighty-eight were employed, while the remainder were retired (28); 2 were unemployed; 3 were ill, and 7 identified another reason such as maternity leave and educational leave.

Table 13

EMPLOYMENT STATUS

Employed full time		55
	full time and part time	6
	part time only	28
Employed full time and/or part time		
	self-employed	2
	work for an employer	15
	both self-employed & work for an employer	2
Working part time		
	retired	12
	homemaker	9
	go to school	4
	only want to work part time	1
	some other reason	14
If you are unemployed, check all that are appropriate		
	retired	28
	maternity leave	0
	temporarily laid off	0
	ill	3
	homemaker	5
	going to school	6
	some other reason	7

Social Networks

One hundred and six respondents (80.91%) identified having more than ten friends (Table 14). Six did not identify a specific age group and ten did not identify gender. High

percentages of responses were found in each age group: 71.42% in the 12-18 years age group; 80.55% in the 19-34 years age group; 82.55% in the 35-49 years age group; 70.0% in the 50-64 years age group; and 76.19% in the 65 years and older age group, for having ten or more friends. With respect to gender 80.0% (40) of males and 76.71% (56) of females reported 10 or more friends. The gender responses by age group show that the highest percentages for males that selected ten or more friends were in the 65 years and older (100.0%) and in the 19-34 years (92.85%) age groups and the lowest percentage was in the 35-49 years (61.53%) age group. For females, the highest percentage was in the 35-49 years (80.95%) age group and the lowest percentage was in the 19-34 years (63.63%) age group.

Table 14

PEOPLE, INCLUDING RELATIVES, CONSIDERED TO BE YOUR FRIENDS
(More than 10 Friends)

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		No Gender	Male	Female	Total
12 - 18 Years	1.	0	3	2	5
	2.		75.0	66.66	
	3.				71.42
19 - 34 Years	1.	2	13	14	29
	2.		92.85	63.63	
	3.				80.55
35 - 49 Years	1.	4	8	17	29
	2.		61.53	80.95	
	3.				82.85
50 - 64 Years	1.	2	8	11	21
	2.		66.66	73.33	
	3.				70.0
65 Years & Older	1.	0	7	9	16
	2.		100.0	75.0	
	3.				76.19
No Age Group		2	1	3	6
Total		10	40	56	106
Total Sample Gender Pct.			80.0	76.71	

While 106 respondents had 10 friends or more, Table 15 shows that 24.21% (31) spend a lot of time by themselves and almost all of the time by themselves; while 24.21% (31) spend half of the time by themselves and half of it with others; 25.78% (33) spend a lot of time with others; and 25.78% spend almost all of the time with others.

Table 15

THE FOLLOWING BEST DESCRIBES HOW YOU SPENT YOUR FREE TIME DURING THE LAST TWO WEEKS

Free Time Spent in Last Two Weeks	Frequency	% of Responses
Almost all of it by myself	9	7.03
A lot of it by myself	22	17.18
About half of it by myself and half of it with others	31	24.21
A lot of it with others	33	25.78
Almost all of it with others	33	25.78

Note: Sample response = 128

Health and Friends

Fifty respondents who identified excellent health have more than 10 friends; 44 respondents who have fair health have more than 10 friends; and 4 respondents who have poor health have more than 10 friends (Table 16).

Table 16

TABLE OF HEALTH BY FRIENDS

HEALTH	FRIENDS					
Frequency Percent Row Pct. Col. Pct.	1 - 2	3 - 5	6 - 7	8 - 10	More than 10	Total
0	0	0	1	1	8	10
	0.00	0.00	0.76	0.76	6.11	7.63
	0.00	0.00	10.00	10.00	80.00	
	0.00	0.00	11.11	10.00	7.55	
EXCELLENT	1	2	1	3	50	57
	0.76	1.53	0.76	2.29	38.17	43.51
	1.75	3.51	1.75	5.26	87.72	
	50.00	50.00	11.11	30.00	47.17	
FAIR	1	1	7	5	44	58
	0.76	0.76	5.34	3.82	33.59	44.27
	1.72	1.72	12.07	8.62	75.86	
	50.00	25.90	77.78	50.00	41.51	
POOR	0	1	0	1	4	6
	0.00	0.75	0.00	0.76	3.05	4.58
	0.00	16.67	0.00	16.67	66.67	
	0.00	25.00	0.00	10.00	3.77	
TOTAL	2	4	9	10	106	131
	1.53	3.05	6.87	7.63	80.92	100.00

Physical Environments

The responses to research question number nine, What is the physical environment of the community, are identified in Tables 17 to 30. Community inadquacies are identified in Table 17. Accidents are identified in Tables 18 to 20. Risk of accidents or injuries outside of work are identified in Table 22. Exposure to substances that could endanger life are identified in Table 23. Promoting clean air is identified in Table 24. Disease caused by environmental hazard is identified in Table 25. Environmental control over disease is identified in Table 26. Control over lung cancer and heart disease are identified in Tables 27 and 28. Risk of getting lung cancer and heart disease are identified in Tables 29 and 30.

Need Improvement In Your Community

Several concerns were expressed by the respondents in regard to the physical environment (Table 17). The following, in order of frequency, were identified as needing improvement: a lack of cooperation by local government and/or citizens (24); community facilities (22); housing (17); school facilities (11); and sewage disposal (11).

Table 17

NEED IMPROVEMENT IN YOUR COMMUNITY

Need Improvement	Frequency
Lack of cooperation by local government/citizens	24
Community facilities	22
Housing	17
School facilities	11
Sewage disposal	11

Listed in descending order
Note: Respondents were asked to check all options that applied

Accidents

Thirty-five respondents identified being in an accident or having a family member who was involved in an accident during the past twelve months (Table 18).

Twenty-four of the 35 respondents indicated who the accident happened to. Eight identified themselves as having had an accident (ages 17-36); 1 identified father (age 58); 1 identified husband (age 81); 1 identified sister (age 24); 1 identified nephew (age 26); 2 identified brother (ages 12 and 30); 4 identified son (ages 7.5 to 20); 6 identified daughter (ages 15 months to 7). One did not identify who was involved in the accident.

Table 18

DURING THE PAST 12 MONTHS HAS ANYONE IN THE FAMILY HAD ANY TYPE OF ACCIDENT?

	Frequency	% of Responses
1.	35	26.7
2.	94	72.86

Sample responses = 129

Note: 1. = yes
2. = no

Table 19 presents a frequency distribution of responses to where the accidents occurred. Of those respondents who reported having had an accident, 12 occurred at home, inside and outside; 6 occurred in sport; 6 occurred at work; 5 occurred on the street or highway; 4 occurred at a place of recreation; and 2 occurred at school.

Table 19

WHERE DID THE ACCIDENT OCCUR?

Accidents that Concerned You	Frequency
Accident (at home & outside)	12
Sport related	6
At work	6
Street or highway	5
Place of recreation	4
At school	2

Listed in descending order
Note: Respondents were asked to check all options that applied

Many accidents that occurred in the community were a concern to the respondents. Table 20 presents a frequency distribution of which accidents occurred in the community that were a concern.

The following accidents in order of frequency were identified: motor vehicle (83); snowmobile (53); all terrain cycle (ATC) (37); fishing (35); boating (29); farming (28); home (22); and bicycle (21)

Table 20

IN THE PAST FIVE YEARS WHICH ACCIDENTS HAVE OCCURRED IN YOUR COMMUNITY THAT CONCERNED YOU?

Accidents of Concern	Frequency
Motor Vehicle	83
Snowmobile	53
ATC	37
Fishing	35
Boating	29
Farming	28
Home	22
Bicycle	21

Listed in descending order
Note: Respondents were asked to check all options that applied

Seatbelts

Table 21 identifies how frequently the respondents did use their seatbelts. While 57.36% (74) responded "always did up their seatbelts", 27.9% (36) did up their seatbelts most of the time; 6.20% (8) did up their seatbelts sometimes; and 8.53% (11) never did up their seatbelts.

Table 21

IN THE PAST TWO WEEKS WHEN TRAVELLING IN A MOTOR VEHICLE AS A PASSENGER/DRIVER, HOW OFTEN DID YOU FASTEN THE SEAT BELT?

Seat Belt Use	Frequency	% of Responses
Always	74	57.36
Most of the time	36	27.90
Sometimes	8	6.20
Never	11	8.52
Seat belts not available	0	0.0

Sample response = 129
Listed in descending order
Note: Respondents were asked to check all options that applied

Risk of Accidents and Injuries Outside of Work

Respondents were asked to identify if they were at risk of accidents and injuries outside of work. The findings show that 7.50% (9) responded "always"; 7.5% (9) "most of the time"; 46.66% (56) "some of the time"; 36.6% (44) "never"; and 1.66% (2) "don't know" (Table 22) if they were at risk of accidents and injuries outside of work.

When examining the "always at risk of accidents and injuries outside of work" responses, 8.0% (4) of males and 5.47% (4) of females responded as such (Table 22). Gender responses by age group show that the highest percentage of males selecting "always at risk of accidents and injuries outside of work" was in the 50-64 years (8.33%) age group, followed by the 35-49 years (7.69%) and the 19-34 years (7.14%) age groups. There were no male responses in the other age groups. For females, the highest percentage was in the 19-34 years (9.09%) age

group, with the lowest percentage in the 35-49 years (4.76%) age group.

When examining the "most of the time at risk of accidents and injuries outside of work" responses, 8.0% (4) of males and 4.10% (3) of females responded as such (Table 22). Gender responses by age group show that the highest percentage of males selecting "most of the time at risk of accidents or injuries outside of work" was in the 12-18 years (25.0%) age group and the lowest percentage was in the 35-49 years (7.69%) age group. For females, the highest percentage was in the 50-64 years (13.33%) age group and the lowest percentage was in the 19-34 years (4.54%) age group.

When examining the "some of the time" at risk of accidents and injuries outside of work responses, 48.0% (24) of the males and 41.09% (30) of the females responded as such (Table 22). Gender responses by age group show that the highest percentage of males selecting "some of the time" at risk of accidents outside of work were in the 12-18 years (75.0%) age group, followed by the 19-34 years (50.0%) and the 50-65 years (50.05%) age groups. The lowest percentage was in the 35-49 years (7.69%) age group. For females, the highest percentage was in the 12-18 years (66.66%) age group and the lowest percentage was in the 35-49 years (23.80%) age group.

When examining the "never" at risk of accidents and injuries outside of work responses, 24.0%(12) of males and 38.35% (28) of females responded as such (Table 22). Gender responses by age group show that the highest percentage of males selecting "never" at risk of accidents and injuries outside of work was in the 65 years and older (42.85%) age group and the lowest percentage was in the 19-34 years (14.28%) age group. For females, the highest percentage was in the 19-34 years (45.45%) age group and the lowest percentage was in the

35-49 years (23.80%) age group.

Overall, 46.66% of the total sample responded with "some of the time" responses being at risk of accidents and injuries outside of work. By gender, 48.0% of males identified that they were at risk of accidents and injuries outside of work some of the time. More males than females responded to "always", "most of the time" and "some of the time" to being exposed to risks of accidents or injuries outside work. By age groups, the highest percentage of males were across all age groups. More females than males responded to "never" at risk of accidents and injuries outside of work. By gender, 38.35% of females identified they were never at risk of accidents and injuries outside of work. By age groups, the highest percentage of females were in the 19-34 years (45.45%) age group, followed closely by the 65 years and older (41.66%) age group.

Table 22

OUTSIDE OF WORK, ARE YOU EXPOSED TO ANY RISKS OF ACCIDENTS OR INJURIES?

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		ALWAYS				MOST OF THE TIME				SOME OF THE TIME			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	0	0	0	0	1	0	1	0	3	2	5
	2.		0	0			25.0	0			75.0	66.66	
	3.				0				14.28				71.42
19 - 34 Years	1.	0	1	2	3	0	2	1	3	0	7	6	13
	2.		7.14	9.09			14.28	4.54			50.0	27.27	
	3.				8.33				8.33				36.11
35 - 49 Years	1.	1	1	1	3	2	1	0	3	1	5	11	17
	2.		7.69	4.76			7.69	0			7.69	23.80	
	3.				8.57				8.57				48.57
50 - 64 Years	1.	0	1	0	1	0	0	2	2	0	6	6	12
	2.		8.33	0			0	13.33			50.0	40.0	
	3.				3.33				6.66				40.0
65 Years & Older	1.	0	0	0	0	0	0	0	0	0	3	5	8
	2.		0	0			0	0			42.85	41.66	
	3.				0				0				38.09
No Age Group		0	1	1	2	0	0	0	0	1	0	0	1
Total		1	4	4	9	2	4	3	9	2	24	30	56
Total Sample Gender Pct.			8.0	5.47			8.0	4.10			48.0	41.09	
Total Sample Response Pct.					7.5				7.5				46.66

Table continues...

Table 22

OUTSIDE OF WORK, ARE YOU EXPOSED TO ANY RISKS OF ACCIDENTS OR INJURIES?

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		NEVER				DON'T KNOW			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	0	1	1				
	2.		0	33.33					
	3.				14.28				
19 - 34 Years	1.	1	2	10	13	1	0	0	1
	2.		14.28	45.45			0	0	
	3.				36.11				2.77
35 - 49 Years	1.	0	4	5	9	1	0	0	1
	2.		3076	23.80			0	0	
	3.				25.71				2.85
50 - 64 Years	1.	1	3	6	10				
	2.		25.0	40.0					
	3.				33.33				
65 Years & Older	1.	0	3	5	8				
	2.		42.85	41.66					
	3.				38.09				
No Age Group		2	0	1	3	0	0	0	2
Total		4	12	28	44	2	0	0	2
Total Sample Gender Pct.			24.0	38.35					
Total Sample Response Pct.					36.66				1.66

Sample Response = 120

Exposed to Substances Outside of Work that Could Endanger Life

Respondents were asked to identify if they felt they were exposed to any substances outside of work that could endanger one's life. The findings show that 7.90% (9) identified "always"; 1.70% (2) "most of the time"; 35.89%(42) "some of the time"; 52.99% (62) "never"; and 1.70% (2) "don't know" if they were exposed to substances outside of work that could endanger life (Table 23).

When examining the "always" exposed to substances outside of work that could endanger life responses, 10.0%(5) of males and 4.10%(3) of females responded as such (Table 23). Gender responses by age group show that the highest percentage of males reporting "always" exposed to substances outside of work that could endanger life was in the 12-18 years (25.0%) age group and the lowest percentage was in the 19-34 years (7.14%) age group. For females, the highest percentage was in the 35-49 years (9.52%) age group and the lowest percentage was in the 19-34 years (4.54%) age group.

Only 2.0% (1) of males responded "most of the time" exposed to substances outside of work that could endanger life (Table 23). There were no females who responded "most of the time." The one male was in the 65 years and older (14.28%) age group.

When examining the "some of the time" exposed to substances outside of work that could endanger life responses, 40.0% (20) of males and 24.65%(18) of females responded as such (Table 23). Gender responses by age group show that the highest percentage of males reporting "some of the time" exposed to substances outside of work that could endanger life were in the 12-18 years (50.0%) and the 35-49 years (46.15%) age groups and the lowest percentage was in the 50-64 years (25.0%) age group. For females, the highest percentage

was in the 50-64 years (40.0%) age group and the lowest percentage was in the 19-34 years (4.54%) age group.

When examining the "never" exposed to substances outside of work that could endanger life responses, 38.0% (19) of males and 54.79%(40) of females responded as such (Table 23). Gender responses by age group show that the highest percentage of males reporting "never" exposed to substances outside of work was in the 50-64 years (50.05%) age group and the lowest percentage was in the 12-18 years (25.0%) age group. For females, the highest percentage was in the 65 years and older (75.05%) age group and the lowest percentage was in the 50-64 years (33.33%) age group.

Overall, 52.99% of the total sample responses, identified with "never" being exposed to any substances that could endanger life outside of work. More males than females responded "always", "most of the time", and "some of the time" being exposed to substances outside of work that could endanger one's life. By gender, 62.0% of males identified with being exposed to substances outside of work that could endanger life. Across all age groups, the highest percentages of males were in the 12-18 years (25.0% with "always" and 50.0% with "some of the time") and 65 years and older (14.28%) age group for "most of the time." By gender, more females than males responded with "never" being exposed to substances outside of work that could endanger life. For females, 54.79% identified with "never" being exposed to substances outside of work that could endanger life. Across all age groups, the highest percentage of females was in the 19-34 years (72.72%) age group.

Table 23

OUTSIDE OF WORK, ARE YOU EXPOSED TO ANY SUBSTANCES THAT COULD ENDANGER YOUR LIFE?

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		ALWAYS				MOST OF THE TIME				SOME OF THE TIME			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	1	0	1	0	0	0	0	0	2	0	2
	2.		25.0	0			0	0			50.0	0	
	3.				14.28				0				28.57
19 - 34 Years	1.	0	1	1	2	0	0	0	0	1	6	1	8
	2.		7.14	4.54			0	0			42.85	4.54	
	3.				5.55				0				22.22
35 - 49 Years	1.	0	1	2	3	1	0	0	1	2	6	8	16
	2.		7.69	9.52			0	0			46.15	38.09	
	3.				8.57				2.85				45.71
50 - 64 Years	1.	0	1	0	1	0	0	0	0	0	3	6	9
	2.		8.33	0			0	0			25.0	40.0	
	3.				3.33				0				30.0
65 Years & Older	1.	0	0	0	0	0	1	0	1	0	3	2	5
	2.		0	0			14.28	0			42.85	16.66	
	3.				0				4.76				23.80
No Age Group		1	1	0	2	0	0	0	0	1	0	0	2
Total		1	5	3	9	1	1	0	2	4	20	18	42
Total Sample Gender Pct.			10.0	4.10		2.0	0.0				40.0	24.65	
Total Sample Response Pct					7.69				1.70				35.89

Table continues...

Table 23

OUTSIDE OF WORK, ARE YOU EXPOSED TO ANY SUBSTANCES THAT COULD ENDANGER YOUR LIFE?

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		NEVER				DON'T KNOW			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	1	2	3				
	2.		25.0	66.66					
	3.				42.85				
19 - 34 Years	1.	1	6	16	23		1	0	1
	2.		42.85	72.72			7.14	0	
	3.				63.88				2.77
35 - 49 Years	1.	1	4	7	12	1			
	2.		30.76	33.33					
	3.				34.28				
50 - 64 Years	1.	1	6	5	12				
	2.		50.0	33.33					
	3.				40.0				
65 Years & Older	1.	0	2	9	11				
	2.		28.57	75.0					
	3.				52.38				
No Age Group		0	0	1	1	1	0	0	1
Total		3	19	40	62	2			2
Total Sample Gender Pct.			38.0	54.79					
Total Sample Response Pct.					52.99				1.70

Sample Response = 117

The results in Table 23 are similar to those in Table 22 for risk of accidents and injuries outside work. A majority of females reported "never" while males are the majority in either "always", "most of the time", and "some of the time" categories for risk of accidents and injuries outside work.

Promote Clean Air

Respondents identified they did their part to promote clean air. Seventy point three percent (76) of respondents agreed that they helped to promote clean air; 21.29% (23) had no opinion; and 8.33% (9) disagreed (Table 24).

Table 24

I DO MY PART TO PROMOTE CLEAN AIR

	Frequency	% of Responses
1.	76	70.4
2.	9	8.3
3.	23	21.3

Sample response = 108

Note: 1. = agree
2. = disagree
3. = no opinion

Disease Caused by Environmental Hazard

Respondents were asked to identify if they felt disease can be caused by things in the environment. The findings show that 13.95% (18) responded "always"; 30.23% (39) "most of

the time"; 55.81% (72) "some of the time"; and no one responded to "don't know" for disease caused by environmental hazard (Table 25).

When examining the "always" responses to disease caused by environmental hazard, 16.0% (8) of males and 10.95% (8) of females responded as such (Table 25). Gender responses by age group show that the highest percentage of males reporting disease is "always" caused by environmental hazard was in the 19-34 years (71.42%) age group and the lowest percentage was in the 12-18 years (25.0%) age group. For females, the highest percentage was in the 35-49 years (23.80%) age group and the lowest percentage was in the 65 years and older (8.33%) age group.

When examining the "most of the time" responses to disease caused by environmental hazard", 32.0% (16) of males and 24.65% (18) of females responded as such (Table 25). Gender responses by age group show that the highest percentage of males reporting disease is caused "most of the time" by environmental hazard was in the 50-64 years (50.05%) age group and the lowest percentage was in the 35-49 years (23.07%) age group. For females, the highest percentage was in the 12-18 years (66.66%) age group and the lowest percentage was in the 65 years and older (16.66%) age group.

When examining the "some of the time" responses to disease caused by environmental hazard, 50.0% (25) of males and 58.90% (43) of females responded as such (Table 25). Gender responses by age group show that the highest percentage of males reporting disease is "some of the time" caused by environmental hazard was in the 12-18 years (75.0%) age group; followed by 53.84% in the 35-49 years age group; 50.0% in the 19-34 years age group and 50.0% in the 50-64 years age group. The lowest percentage was in the 65 years and

older (28.57%) age group. For females, the highest percentage was in the 50-64 years (80.0%) age group and the lowest percentage was in the 35-49 years (47.61%) age group.

Overall, of the total sample responses, 55.81% identified with "some of the time" disease caused by environmental hazards. By gender, 48.0% of males responded "always" and "most of the time" to disease being caused by environmental hazards. Across all age groups the highest percentages of males were in the age groups of 19-34 (71.42%) years and 50-64 years (50.0%). By gender, 58.90% of females responded "some of the time" that disease is caused by environmental hazards. Across all age groups, a high percentage of the females was in the age group of 50-64 years (80.0%).

Table 25

DISEASE IS CAUSED BY HAZARDS IN THE ENVIRONMENT

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		ALWAYS				MOST OF THE TIME				SOME OF THE TIME			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	1	0	1	0	0	2	2	0	3	0	3
	2.		25.0	0				66.66			75.0	0	
	3.				14.28				28.57				42.85
19 - 34 Years	1.	0	1	2	3	0	5	5	10	2	7	12	21
	2.		71.42	9.09			35.71	22.72			50.0	54.54	
	3.				8.33				27.77				58.33
35 - 49 Years	1.	0	1	5	6	3	3	5	11	1	7	10	18
	2.		7.69	23.80			23.07	23.80			53.84	47.61	
	3.				17.14				31.42				51.42
50 - 64 Years	1.	1	0	0	1	1	6	3	10	0	6	12	18
	2.		0	0			50.0	20.0			50.0	80.0	
	3.				3.33				33.33				60.0
65 Years & Older	1.	0	4	1	5	0	2	2	4	0	2	7	9
	2.		57.14	8.33			28.57	16.66			28.57	58.33	
	3.				23.80				19.04				42.85
No Age Group		1	1	0	2	1	0	1	2	1	0	2	3
Total		2	8	8	18	5	16	18	39	4	25	43	72
Total Sample Gender Pct.			16.0	10.95			32.0	24.65			50.0	58.90	
Total Sample Response Pct.					13.95				30.23				55.81

Sample Response = 129

Control Over Environmental Sources Of Disease

Respondents were asked to identify if they felt they had control over environmental sources of disease. The findings show that 2.32% (3) responded "always"; 19.37% (25) "most of the time"; 50.0% (61) "some of the time"; 27.04% (33) "never"; and no one responded to "don't know" if they had control over environmental sources of disease (Table 26).

When examining the "always" have control over environmental sources of disease responses, 4.0% (2) of males responded as such (Table 26). Gender responses by age group show that the highest percentages of males reporting "always" have control over environmental sources of disease were in the 50-64 years (8.33%) and in the 35-49 years (7.69%) age groups. No females responded with "always."

When examining the "most of the time" having control over environmental sources of disease responses, 24.0% (12) of males and 53.06% (11) of females responded as such (Table 26). Gender responses by age group show that the highest percentage of males reporting "most of the time" having control over environmental sources of disease was in the 35-59 years (30.76%) age group and the lowest percentage was in the 19-34 years (14.28%) age group. For females, the highest percentage was in the 12-18 years (33.33%) age group and the lowest percentage was in the 65 years and older (8.33%) age group.

When examining the "some of the time" having control over environmental sources of disease responses, 44.0% (22) of males and 49.31% (36) of females responded as such (Table 26). Gender responses by age group show that the highest percentage of males reporting "some of the time" having control over environmental sources of disease was in the 65 years and older (57.14%) age group and the lowest percentage was in the 12-18 years (25.0%) age

group. For females, the highest percentage was in the 50-64 years (73.33%) age group and the lowest percentage was in the 19-34 years (31.81%) age group.

When examining the "never" having control over environmental sources of disease responses, 24.0% (12) of males and 24.65% (18) of females responded as such (Table 26). Gender responses by age group show that the highest percentage of males reporting "never" having control over environmental sources of disease was in the 12-18 years (50.0%) age group and the lowest percentage was in the 65 years and older (14.28%) age group. For females, the highest percentages were in the 19-34 years (36.36%) and the 35-49 years (33.33%) age groups and the lowest percentage was in the 50-64 years (6.66%).

Overall, of the total sample responses, 50.0% identified that they had control over environmental sources of disease some of the time. By gender, a small percentage (4.0%) of males "always" felt they had control over environmental sources of disease. The only male age groups that responded to "always" having control over environmental sources of disease were in the 35-49 years (7.69%) and 50-64 years (8.33%) age groups. More females than males felt they had control "most of the time" (53.06%) and "some of the time" (49.31%) over environmental sources of disease. Across all age groups, the highest percentage of females was in the age groups of 50-64 years (20.0% for "most of the time" and 73.33% for "some of the time"). By gender, equal percentages of males (24.0%) and females (24.65%) felt they never had control over environmental sources of disease, with the highest percentage by age group of males being in the 12-18 years (50.0%) and the highest percentage of females being in the 19-34 years (36.36%) age group.

Table 26

CONTROL OVER ENVIRONMENTAL SOURCES OF DISEASE

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		ALWAYS				MOST OF THE TIME				SOME OF THE TIME			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	0	0	0	0	1	1	2	0	1	1	2
	2.		0	0			25.0	33.33			25.0	33.33	
	3.				0				28.57				28.57
19 - 34 Years	1.	0	0	0	0	0	2	3	5	2	7	7	16
	2.		0	0			14.28	13.63			50.0	31.81	
	3.				0				13.88				44.44
35 - 49 Years	1.	1	1	0	2	0	4	2	6	1	4	11	16
	2.		7.69	0			30.76	9.52			30.76	52.38	
	3.				5.71				17.14				45.71
50 - 64 Years	1.	0	1	0	1	1	3	3	7	0	5	11	16
	2.		8.33	0			25.0	20.0			41.66	73.33	
	3.				3.33				23.33				53.33
65 Years & Older	1.	0	0	0	0	0	2	1	3	0	4	4	8
	2.		0	0			28.57	8.33			57.14	33.	
	3.				0				14.28			333	38.09
No Age Group		0	0	0	0	1	0	1	2	0	1	2	3
Total		1	2	0	3	2	12	11	25	3	22	36	61
Total Sample Gender Pct.			4.0	0.0			24.0	53.06			44.0	49.31	
Total Sample Response Pct.					2.45				20.49				50.0

Table continues...

Table 26

CONTROL OVER ENVIRONMENTAL SOURCES OF DISEASE

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		NEVER			
		No Gender	Male	Female	Total
12 - 18 Years	1.	0	2	0	2
	2.		50.0	0	
	3.				28.57
19 - 34 Years	1.	0	4	8	12
	2.		28.57	36.36	
	3.				33.33
35 - 49 Years	1.	0	2	7	9
	2.		15.38	33.33	
	3.				25.71
50 - 64 Years	1.	1	3	1	5
	2.		25.0	6.66	
	3.				16.66
65 Years & Older	1.	0	1	2	3
	2.		14.28	16.66	
	3.				14.28
No Age Group		2	0	0	2
Total		3	12	18	33
Total Sample Gender Pct.			24.0	24.65	
Total Sample Response Pct.					27.04

Sample Response = 122

There are similarities to the previous table (Table 25). More males felt disease was "always" caused by environmental hazards and "always" had control over environmental sources of disease. More females felt disease was caused by environmental hazards "some of the time" and had control "some of the time" over environmental sources of disease.

Control Over Lung Cancer

Respondents were asked to identify if they felt they had control over whether or not they got lung cancer. The findings show that 9.82% (22) indicated "always"; 33.03% (37) "most of the time"; 41.07% (46) "some of the time"; and 16.07% (18) "never" having control over lung cancer (Table 27).

When examining the "always" having control over lung cancer responses, 14.0% (7) of males and 4.10% (3) of females responded as such (Table 27). Gender responses by age group show that the highest percentage of males reporting "always" having control over lung cancer was in the 12-18 years (50.0%) age group and the lowest percentages were in the 19-34 years (14.28%) and the 65 years and older (14.28%) age groups. For females, the highest percentage was in the 19-34 years (9.09%) age group and the lowest percentage was in the 65 years and older (8.33%) age group.

When examining the "most of the time" having control over lung cancer responses 28.0% (14) of males and 27.39% (20) of females responded as such (Table 27). Gender responses by age group show that the highest percentage of males reporting "most of the time" having control over lung cancer was in the 35-49 years (38.46%) age group and the lowest percentage was in the 65 years and older (14.28%) age group. For females, the highest percentage was in the 50-64 years (40.0%) age group and the lowest percentage was in the

19-34 years (13.63%) age group.

When examining the "some of the time" having control over lung cancer responses, 30.0% (15) of males and 38.35% (28) of females responded as such (Table 27). Gender responses by age group show that the highest percentage of males reporting "some of the time" having control over lung cancer was in the 50-64 years (58.33%) age group and the lowest percentages were in the 19-34 years (14.28%) and the 65 years and older (14.28%) age groups. For females, the highest percentage was in the 35-49 years (47.61%) age group; followed closely by the 50-64 years (46.66%) age group; and the lowest percentage was in the 19-34 years (40.90%) age group.

When examining the "never" having control over lung cancer responses, 16.0% (8) of males and 10.95% (8) of females responded as such (Table 27). Gender responses by age group show that the highest percentage of males reporting "never" having control over lung cancer was in the 19-34 years (35.71%) age group and the lowest percentage was in the 65 years and older (14.28%) age group. For females, the highest percentage was in the 35-49 years (19.04%) age group and the lowest percentage was in the 19-34 years (9.09%) age group.

Overall, of the total sample responses, 41.07% felt they had control over lung cancer "some of the time." More males identified they "always" (14.0%) and "never" (16.05%) had control over getting lung cancer. Across all age groups, the highest percentage of males was in the age groups of 12-18 years (50.0%) and 19-34 years (35.71%) age groups. More females identified that they "some of the time" (38.35%) had control over getting lung cancer. Across all age groups the highest percentages of females were in the age groups of 35-49

years (47.61%) and 50.64 years (46.66%). By gender, equal percentages of males (28.0%) and females (27.39%) identified they had control "most of the time" over getting lung cancer, with the highest percentage by age group of males in the 35-49 years (38.46%) and the highest percentage of females in the 50-65 years (40.0%) age group.

Table 27

CONTROL OVER LUNG CANCER

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		ALWAYS				MOST OF THE TIME				SOME OF THE TIME			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	2	0	2	0	1	1	2	0	1	0	1
	2.		50.0	0			25.0	33.33			25.0	0	
	3.				28.57				28.57				14.28
19 - 34 Years	1.	0	2	2	4	1	4	3	8	0	2	9	11
	2.		14.28	9.09			28.57	13.63			14.28	40.90	
	3.				11.11				22.22				30.55
35 - 49 Years	1.	0	0	0		1	5	6	12	2	4	10	16
	2.		0	0			38.46	28.57			30.76	47.61	
	3.				0				34.28				45.71
50 - 64 Years	1.	0	2	0	2	0	2	6	8	1	7	7	15
	2.		16.66	0			16.66	40.0			58.33	46.66	
	3.				6.66				26.66				50.0
65 Years & Older	1.	0	1	1	2	0	1	3	4	0	1	0	1
	2.		14.28	8.33			14.28	25.0			14.28	0	
	3.				9.52				19.04				4.76
No Age Group		1	0	0	1	1	1	1	3	0	0	2	2
Total		1	7	3	11	3	14	20	37	3	15	28	46
Total Sample Gender Pct.			14.0	4.10			28.0	27.39			30.0	38.35	
Total Sample Response Pct,					9.82				33.03				41.07

Table continues...

Table 27

CONTROL OVER LUNG CANCER

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		NEVER			
		No Gender	Male	Female	Total
12 - 18 Years	1.	0	0	0	
	2.		0	0	
	3.				0
19 - 34 Years	1.	0	5	2	7
	2.		35.71	9.09	
	3.				19.44
35 - 49 Years	1.	0	2	4	6
	2.		15.38	19.04	
	3.				17.14
50 - 64 Years	1.	1	0	0	1
	2.		0	0	
	3.				3.33
65 Years & Older	1.	0	1	2	3
	2.		14.28	16.66	
	3.				14.28
No Age Group		1	0	0	1
Total		2	8	8	18
Total Sample Gender Pct.			16.0	10.95	
Total Sample Response Pct.					16.07

Sample Response = 112

Control Over Heart Disease

Respondents were asked to identify if they had control over getting heart disease. The findings show that 11.96% (14) responded "always"; 32.47% (38) "most of the time"; 42.73% (50) "some of the time"; and 12.82% (15) "never" having control over getting heart disease (Table 28).

When examining the "always" having control over heart disease responses, 14.0% (7) of males and 8.21% (6) of females responded as such (Table 28). Gender responses by age group show that the highest percentage of males reporting "always" having control over heart disease was in the 12-18 years (50.05%) age group and the lowest percentage was in the 19-34 years (7.14%) age group. For females, the highest percentage was in the 65 years and older (25.0%) age group and the lowest percentage was in the 19-34 years (4.54%) age group.

When examining the "most of the time" having control over heart disease responses, 30.0% (15) of males and 26.02% (19) of females responded as such (Table 28). Gender responses by age group show that the highest percentage of males reporting "most of the time" having control over getting heart disease was in the 65 years and older (42.85%) age group and the lowest percentage was in the 50-64 years (8.33%) age group. For females, the highest percentage was in the 50-64 years (40.0%) age group, and the lowest percentage was in the 19-34 years (9.09%) age group.

When examining the "some of the time" having control over heart disease responses, 36.0% (18) of males and 42.46% (31) of females responded as such (Table 28). Gender responses by age group show that the highest percentage of males reporting "some of the time" having control over getting heart disease was in the 50-64 years (58.33%) age group

and the lowest percentage was in the 19-34 years (21.42%) age group. For females, the highest percentage was in the 50-64 years (53.33%) age group and the lowest percentage was in the 65 years and older (16.66%) age group.

When examining the "never" having control over heart disease responses, 12.06% (6) of males and 8.21% (6) of females responded as such (Table 28). Gender responses by age group show that the highest percentage of males reporting "never" having control over getting heart disease was in the 19-34 years (35.71%) age group and the lowest percentage was in the 35-49 years (7.69%) age group. For females, the highest percentage was in the 35-49 years (19.04%) age group and the lowest percentage was in the 19-34 years (9.09%) age group.

Overall, of the total sample responses, 42.73% felt they had control over heart disease "some of the time" and 12.82% felt they "never" had control over getting heart disease. By gender, more males felt they "always" (14.0%), "most of the time" (30.0%), and "never" (12.0%) had control over getting heart disease. The highest percentages by age group of males were in the 12-18 years (50.0%) 65 years and older (42.85%); and 19-34 years (35.71%). More females felt they had control over getting heart disease "some of the time" (42.46%). The highest percentage by age group of females was in the 50-64 years (53.33%).

Table 28

CONTROL OVER HEART DISEASE

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		ALWAYS				MOST OF THE TIME				SOME OF THE TIME			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	2	0	2	0	1	1	2	0	1	0	1
	2.		50.0	0			25.0	33.3			25.0	0	
	3.				28.57				28.57				14.28
19 - 34 Years	1.	0	1	1	2	1	4	2	7	0	3	10	13
	2.		7.14	4.54			28.57	9.09			21.42	45.45	
	3.				5.55				19.44				36.11
35 - 49 Years	1.	0	0	1	1	2	5	6	13	1	5	9	15
	2.		0	4.76			38.46	28.57			38.46	42.85	
	3.				2.85				37.14				42.85
50 - 64 Years	1.	0	3	1	4	1	1	6	8	0	7	8	15
	2.		25.0	6.66			8.33	40.0			58.33	53.33	
	3.				13.33				26.66				50.0
65 Years & Older	1.	0	1	3	4	0	3	3	6	0	2	2	4
	2.		14.28	25.0			42.85	25.0			28.57	16.66	
	3.				19.04				28.57				19.04
No Age Group		1	0	0	1	0	1	1	2	0	0	2	2
Total		1	7	6	14	4	15	19	38	1	18	31	50
Total Sample Gender Pct.			14.0	8.21			30.0	26.02			36.0	42.46	
Total Sample Response Pct.					11.96				32.47				42.73

Table continues...

Table 28

CONTROL OVER HEART DISEASE

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		NEVER			
		No Gender	Male	Female	Total
12 - 18 Years	1.	0	0	0	
	2.		0	0	
	3.				0
19 - 34 Years	1.	0	5	2	7
	2.		35.71	9.09	
	3.				19.44
35 - 49 Years	1.	0	1	4	5
	2.		7.69	19.04	
	3.				14.28
50 - 64 Years	1.	1	0	0	1
	2.		0	0	
	3.				3.33
65 Years & Older	1.	0	0	0	
	2.		0	0	
	3.				0
No Age Group		2	0	0	2
Total		3	6	6	15
Total Sample Gender Pct.			12.0	8.21	
Total Sample Response Pct.					12.82

Sample Response = 117

Responses were similar for lung cancer (Table 27) and heart disease (Table 28). Percentages of responses were similar: "always" - 11 (9.82%) lung cancer and 14 (11.96%) heart disease; "most of the time" - 37 (33.03%) lung cancer and 38 (32.47%) heart disease; "some of the time" - 46 (41.07%) lung cancer and 50 (42.73%) heart disease; "never" - 18 (16.07%) lung cancer and 15 (12.82%) heart disease.

By gender, more males responded with "always" having control over lung cancer and heart disease, with the highest percentage by age group in the 12-18 years. Also by gender, more males responded with having control "most of the time" over lung cancer and heart disease, with the highest percentage by age group in the 35-49 years. By gender, more females responded with having control "some of the time" over lung cancer and heart disease, with the highest percentage by age groups in the 35-49 years and 50-64 years. By gender, more males responded with "never" having control over lung cancer and heart disease, with the highest percentage by age group in the 19-34 years. There are no responses in the 12-18 years age group for "never" having control over lung cancer.

Risk of Getting Lung Cancer and Heart Disease

In addition to identifying control, respondents were asked to identify if one was at risk of getting lung cancer and heart disease.

Risk of Getting Lung Cancer

For lung cancer, 26.31% (3) said "yes", 42.10% (48) said "no", and 31.57% (36) "don't know" if they were at risk of developing lung cancer (Table 29).

When examining those who responded "yes" to being at risk of getting lung cancer

12.0% (6) of males and 27.39% (20) of females responded as such (Table 29). Gender responses by age group show that the highest percentage of males reporting "yes" to being at risk of getting lung cancer was in the 35-49 years (38.46%) age group and the lowest percentage was in the 19-34 years (7.14%) age group. There were no other male responses in the remaining age groups. For females, the highest percentage was in the 12-18 years (33.33%) age group and the lowest percentage was in the 65 years and older (8.33%) age group.

When examining those who responded "no" to risk of getting lung cancer, 46.0% (23) of males and 31.50% (23) of females responded as such (Table 29). Gender responses by age group show that the highest percentage of males reporting "no" to being at risk of getting lung cancer was in the 35-49 years (46.15%) age group and the lowest percentage was in the 50-64 years (33.33%) age group. For females, the highest percentage was in the 19-34 years (45.45%) age group and the lowest percentage was in the 65 years and older (8.33%) age group.

When examining those who responded "don't know" to risk of getting lung cancer, 30.0% (15) of males and 23.28% (17) of females responded as such (Table 29). Gender responses by age group show that the highest percentages of males reporting "don't know" risk of getting lung cancer were in the19-34 years (42.85%) and in the 65 years and older (42.85%) age groups and the lowest percentage was in the 12-18 years (25.0%) age group. For females, the highest percentage was in the 35-49 years (47.61%) age group and the lowest percentage was in the 19-34 years (4.54%) age group.

Overall, 42.10% of the total sample responses identified they have "no" risk of getting

lung cancer. However, by gender, 27.39% of females said "yes" to risk of getting lung cancer. Across all age groups the highest percentage of females was in the 12-18 years and decreased with each age group to 65 years and older. The highest percentages of females were in the age groups of 12-18 years (33.33%); 19-34 years (31.81%); and 50-64 years (26.66%). By gender, 46.0% of males said "no" (46.0%) and "don't know" (30.0%) to being at risk of getting lung cancer. Across all age groups, the highest percentages of males were in the age groups of 12-28 years (75.0%); 19-34 years (42.85%); 35-49 years (46.15%); and 65 years and older (42.85%) age group. Also by gender, 23.28% of females identified that they "do not know" risk of getting lung cancer, with the highest percentage of age group of females in the 35-49 (47.61%) years.

Table 29

RISK OF GETTING LUNG CANCER

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		YES				NO				DON'T KNOW			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	0	1	1	0	3	1	4	0	1	0	1
	2.		0	33.33			75.0	33.33			25.0	0	
	3.				14.28				57.14				14.28
19 - 34 Years	1.	0	1	7	8	1	6	10	17	1	6	1	8
	2.		7.14	31.81			42.85	45.45			42.85	4.54	
	3.				22.22				47.22				22.22
35 - 49 Years	1.	2	5	5	12	1	6	4	11	1	0	10	11
	2.		38.46	23.80			46.15	19.04			0	47.61	
	3.				34.28				31.42				31.42
50 - 64 Years	1.	0	0	4	4	0	4	6	10	2	5	2	9
	2.		0	26.66			33.33	40.0			41.66	13.33	
	3.				13.33				33.33				30.0
65 Years & Older	1.	0	0	1	1	0	3	1	4	0	3	4	7
	2.		0	8.33			42.85	8.33			42.85	33.33	
	3.				4.76				19.04				33.33
No Age Group		2	0	2	4	0	1	1	2	0	0	0	0
Total		4	6	20	30	2	23	23	48	4	15	17	36
Total Sample Gender Pct.			12.0	27.39			46.0	31.5			30.0	23.28	
Total Sample Response Pct.					26.31				42.10				31.57

Sample Response = 114

Risk of Getting Heart Disease

For heart disease 41.17% (49) said "yes", 36.97% (44) said "no", and 21.84% (26) "don't know" if they were at risk of getting heart disease (Table 30).

When examining those who responded "yes" to risk of getting heart disease, 26.0% (13) of males and 41.09% (30) of females responded as such (Table 30). Gender responses by age group show that the highest percentage of males reporting "yes" to risk of getting heart disease was in the 35-49 years (53.84%) age group and the lowest percentage was in the 19-34 years (14.28%) age group. For females, the highest percentage was in the 50-64 years (60.0%) age group and the lowest percentage was in the 65 years and older (25.0%) age group.

When examining those who responded "no" to risk of getting heart disease, 40.0% (20) of males and 30.13% (22) of females responded as such (Table 30). Gender responses by age group show that the highest percentage of males reporting "no" to risk of getting heart disease was in the 12-18 years (100.0%) age group and the lowest percentage was in the 35-49 years (23.07%) age group. For females, the highest percentage was in the 19-34 years (40.90%) age group and the lowest percentage was in the 65 years and older (8.33%) age group.

When examining those who responded "don't know" to risk of getting heart disease, 20.0% (10) of males and 19.17% (14) of females responded as such (Table 30). Gender responses by age groups show that the highest percentage of males reporting "don't know" to risk of getting heart disease was in the 19-34 years (35.71%) age group and the lowest percentage was in the 65 years and older (14.28%) age group. For females, the highest percentage was in the 65 years and older (33.33%) age group and the lowest percentage was

in the 19-34 years (9.09%) age group.

Overall, by gender 41.09% of females identified "yes", they were at risk of heart disease, while men said "no" (40.0%), they were not at risk of heart disease. Across all age groups, a high percentage of females was in the age group of 50-64 years (60.0%) and a high percentage of males was in the age group of 12-18 years (100.0%). By gender, almost equal percentages of males (20.0%) and females (19.17%) "don't know" if they were at risk of heart disease, with the highest percentage by age group of males in the 19-34 years (35.71%) and the highest percentage of females in the 65 years and older (33.33%).

Table 30

RISK OF GETTING HEART DISEASE

1. Frequency
2. Age Group Gender Pct.
3. Age Group Sample Pct.

		Yes				No				Don't Know			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	0	1	1	0	4	1	5	0	0	0	
	2.		0	33.33			100.0	33.33			0	0	
	3.				14.28				71.42				0
19 - 34 Years	1.	0	2	7	9	1	6	9	16	1	5	2	8
	2.		14.28	31.81			42.85	40.90			35.71	9.09	
	3.				25.0				44.44				22.22
35 - 49 Years	1.	3	7	8	18	1	3	7	11	0	0	5	5
	2.		53.84	38.09			23.07	33.33			0	23.8	
	3.				51.42				31.42				14.28
50 - 64 Years	1.	1	2	9	12	0	3	4	7	1	4	2	7
	2.		16.66	60.0			25.0	26.66			33.33	13.33	
	3.				40.0				23.33				23.33
65 Years & Older	1.	0	2	3	5	0	3	1	4	0	1	4	5
	2.		28.57	25.0			42.85	8.33			14.28	33.33	
	3.				23.80				19.04				23.8
No Age Group		2	0	2	4	0	1	0	1	0	0	1	1
Total		6	13	30	49	2	20	22	44	2	10	14	26
Total Sample Gender Pct.			26.0	41.09			40.0	30.13			20.0	19.17	
Total Sample Response Pct.					41.17				36.97				21.84

Sample Response = 119

Similarities appear between lung cancer (Table 29) and heart disease (Table 30). More females said "yes" to risk of getting lung cancer (27.39%) and heart disease (41.09%), with the highest percentage by age group in the 35-49 years. More males identified "no" risk of lung cancer (46.0%) and heart disease (40.0%), with the highest percentages by age groups in the 12-18 year and 19-34 years. Also, more males "don't know" if they were at risk of getting lung cancer (30.0%), with the highest percentages by age groups in the 35-49 years and 65 years and older. By gender, equal percentages of males (20.0%) and females (19.17%) identified they "don't know" if they were at risk of getting heart disease, with the highest percentage by age group of males in the 19-34 years and the highest percentage of females in the 65 years and older. There are no responses in the 12-18 years age group for "don't know" risk of getting heart disease.

Individual Responses

The responses to research question number ten, What are the individual responses of the community, are identified in Tables 31 to 35. General feelings are identified in Table 31. Happiness is identified in Table 32. Health and happiness are identified in Table 33. Major sources of stress are identified in Tables 34 and 35.

Individuals were asked to respond to different feelings (Table 31).

Of those who responded "on top of the world", the responses were as follows: 7 "always"; 35 "most of the time"; 58 "some of the time"; and 4 "never."

Of those who responded "very lonely" or "remote from other people", the responses were as follows: 2 "always"; 6 "most of the time"; 50 "some of the time"; and 54 "never."

Of those who selected "particularly excited" or "interested", the responses were as

follows: 5 "always"; 32 "most of the time"; 71 "some of the time"; and 4 "never."

Of those who responded "depressed" or "very unhappy", the responses were as follows: 4 "always"; 5 "most of the time"; 57 "some of the time" and 48 "never."

Of those who responded "pleased about having accomplished something", the responses were as follows: 22 "always"; 31 "most of the time"; 56 "some of the time"; and 5 "never."

Of those who responded "bored", the responses were as follows: 4 "always"; 7 "most of the time"; 49 "some of the time"; and 45 "never."

Of those who responded "proud of something you have done", the responses were as follows: 13 "always"; 19 "most of the time"; 75 "some of the time"; and 7 "never."

Of those who responded "proud of something you have done", the responses were as follows: 13 "always"; 19 "most of the time"; 75 "some of the time"; and 7 "never."

Of those who responded "things going your way", the responses were as follows: 10 "always"; 38 "most of the time"; 56 "some of the time"; and 10 "never."

Overall, most respondents had generally good feelings about themselves some of the time.

Table 31

DURING THE PAST FEW WEEKS, HOW OFTEN HAVE YOU FELT...

ON TOP OF THE WORLD?

	FREQUENCY	Percent	CUMULATIVE FREQUENCY	CUMULATIVE Percent
1.	7	6.1	7	6.1
2.	35	30.4	42	36.5
3.	58	50.4	100	87.0
4.	15	13.0	115	100.0

VERY LONELY, REMOTE FROM OTHER PEOPLE?

	FREQUENCY	Percent	CUMULATIVE FREQUENCY	CUMULATIVE Percent
1.	2	1.8	2	1.8
2.	6	5.4	8	7.1
3.	50	44.6	58	51.8
4.	54	48.2	112	100.0

PARTICULARLY EXCITED OR INTERESTED?

	FREQUENCY	Percent	CUMULATIVE FREQUENCY	CUMULATIVE Percent
1.	5	4.5	5	4.5
2.	32	28.6	37	33.0
3.	71	63.4	108	96.4
4.	4	3.6	112	100.0

DEPRESSED OR VERY UNHAPPY?

	FREQUENCY	Percent	CUMULATIVE FREQUENCY	CUMULATIVE Percent
1.	4	3.5	4	3.5
2.	5	4.4	9	7.9
3.	57	50.0	66	57.9
4.	48	42.1	114	100.0

Note: 1. = always
2. = most of the time
3. = some of the time
4. = never

Table continues...

Table 31

DURING THE PAST FEW WEEKS, HOW OFTEN HAVE YOU FELT...

PLEASED ABOUT HAVING ACCOMPLISHED...?

	FREQUENCY	Percent	CUMULATIVE FREQUENCY	CUMULATIVE Percent
1.	22	19.3	22	19.3
2.	31	27.1	53	46.5
3.	56	49.1	109	95.6
4.	5	4.4	114	100.0

BORED?

	FREQUENCY	Percent	CUMULATIVE FREQUENCY	CUMULATIVE Percent
1.	4	3.8	4	3.8
2.	7	6.7	11	10.5
3.	49	46.7	60	57.1
4.	45	42.9	105	100.0

PROUD OF SOMETHING YOU HAVE DONE?

	FREQUENCY	Percent	CUMULATIVE FREQUENCY	CUMULATIVE Percent
1.	13	11.4	13	11.4
2.	19	16.7	32	28.1
3.	75	65.8	107	93.9
4.	7	6.1	114	100.0

THINGS WERE GOING YOUR WAY?

	FREQUENCY	Percent	CUMULATIVE FREQUENCY	CUMULATIVE Percent
1.	10	8.8	10	8.8
2.	38	33.3	48	42.1
3.	56	49.1	104	91.2
4.	10	8.8	114	100.0

Note: 1. = always
2. = most of the time
3. = some of the time
4. = never

Happiness

Table 32 identifies the responses to being "very happy", "fairly happy" and "not happy." Seventy-five percent (93) are "fairly happy"; 21.77% (27) are "very happy" and 3.22% (4) are "not happy."

When examining those who responded to being "very happy", 20.0% (10) of males and 20.54% (15) of females responded as such (Table 32). Gender responses by age group show that the highest percentage of males reporting being "very happy" was in the 19-34 years (35.71%) age group and the lowest percentage was in the 50-64 years (8.33%) age group. For females, the highest percentage was in the 19-34 years (27.27%) age group and the lowest percentage was in the 65 years and older (8.33%) age group.

When examining those who responded to being "fairly happy", 70.0% (35) of males and 71.23% (52) of females responded as such (Table 32). Gender responses by age group show that the highest percentages of males reporting being "fairly happy" were across all age groups. The highest percentages of age groups for males reporting being "fairly happy" were in the 12-18 years (75.0%); 35-49 years (76.92%); 50-64 years (75.0%); 65 years and older (85.71%) with the lowest percentage in the 19-34 years (50.0%) age group. For females, there also were high percentages across all age groups. The highest percentages of age groups for females reporting "fairly happy" were in the 12-18 years (100.0%); 35-49 years (66.66%); 50-64 year (80.0%); 65 years and older (75.0%) with the lowest percentage in the 19-34 years (54.54%) age group.

When examining those who responded to being "not happy", 1.36% (1) of females responded as such (Table 32). One female was identified in the 50-64 years (6.66%) age

group. No males responded to being "not happy."

Overall, by gender, equal percentages of males (20.0%) and females (20.54%) identified with being "very happy." The highest percentages by age groups of males (35.71%) and females (27.27%) being "very happy" were in the 19-34 years. Also, by gender, equal percentages of males (70.0%) and females (71.23%) identified with being "fairly happy." There were high percentages of being "fairly happy" across all age groups with the lowest percentages of males and females in the 19-34 years (males 50.0% and females 54.54%) age group.

Table 32

HAPPINESS

1. Frequency 2. Age Group Gender Pct. 3. Age Group Sample Pct.		VERY HAPPY				FAIRLY HAPPY				NOT HAPPY			
		No Gender	Male	Female	Total	No Gender	Male	Female	Total	No Gender	Male	Female	Total
12 - 18 Years	1.	0	1	0	1	0	3	2	5	0	0	0	0
	2.		25.0	0			75.0	100.0			0	0	
	3.				14.28				71.42				0
19 - 34 Years	1.	0	5	6	11	1	7	12	20	1	0	0	1
	2.		35.71	27.27			50.0	54.54			0	0	
	3.				30.55				55.55				.02
35 - 49 Years	1.	1	1	5	7	3	10	14	27	0	0	0	0
	2.		7.69	23.8			76.92	66.66			0	0	
	3.				20.0				77.14				0
50 - 64 Years	1.	1	1	3	5	0	9	12	21	1	0	1	2
	2.		8.33	20.0			75.0	80.0			0	6.66	
	3.				16.66				70.0				6.66
65 Years & Older	1.	0	2	1	3	0	6	9	15	0	0	0	0
	2.		28.57	8.33			85.71	75.0			0	0	
	3.				14.28				71.42				0
No Age Group		0	0	0	0	2	0	3	5	1	0	0	1
Total		2	10	15	27	6	35	52	93	3	0	1	4
Total Sample Gender Pct.			20.0	20.54			70.0	71.23			0.0	1.36	
Total Sample Response Pct.					21.77				75.0				3.22

Sample Response = 124

Health and Happiness

Table 33 identifies responses of rating health and being happy. From the 54 who identified "excellent health", 22 were "very happy" and 32 were "fairly happy." From the 56 respondents who identified health as "fair", 4 were "very happy", 49 were "fairly happy" and 3 were "not happy." From the 6 who responded to "poor health", 5 were "fairly happy" and 1 was "not happy."

Overall, while most people were happy, persons with perceived excellent health were most likely to be very happy.

Table 33

HEALTH AND HAPPINESS
IN SUMMING UP, YOUR DAYS ARE

HEALTH Frequency Percent Row Pct. Col. Pct.	Very Happy	Fairly Happy	Not Happy	Total
0	1 0.81 12.50 3.70	7 5.65 87.50 7.53	0 0.00 0.00 0.00	8 6.45
EXCELLENT	22 17.74 40.74 81.48	32 25.81 59.26 34.41	0 0.00 0.00 0.00	54 43.55
FAIR	4 3.23 7.14 14.81	49 39.52 87.50 52.69	3 2.42 5.36 75.00	56 45.16
POOR	0 0.00 0.00 0.00	5 4.03 83.33 5.38	1 0.81 16.67 25.00	6 4.84
TOTAL	27 21.77	93 75.00	4 3.23	124 100.00

Sample Response = 124

Major Source(s) of Stress in Life

Respondents were asked to identify their major sources of stress.

Frequency of responses are identified in Table 34. Forty-four responded "work"; 41 "family"; 38 "state of the world"; 33 "home life"; 28 identified "no stress"; 25 identified "getting ahead"; and 23 "job dissatisfaction" as major sources of stress.

Work and home life were most frequently identified as the major sources of stress.

Table 34

MAJOR SOURCE(S) OF STRESS

Major Source of Stress	Frequency
Work	44
Family	41
State of the World	38
Home Life	33
None	28
Getting Ahead	25
Job Dissatisfaction	23

Listed in descending order
Note: All respondents were asked to check all options that applied

Sources of Stress in the Last Twelve Months

Respondents also were asked to identify the major sources of stress that occurred to them in the last 12 months (Table 35).

Specific sources of stress that happened in the last 12 months are identified in Table 35.

Forty-six indicated "none of these"; 30 "death of someone close"; 18 had "financial problems"; 17 had "someone move out of the house"; 17 had "a serious illness of someone close"; 12 had "a serious illness" and 11 "changed jobs." Nine "lost a job" or were "unemployed"; 8 "got married"; 8 "started working"; 8 "retired from full time work" ; 7 had an "arrival of baby at home"; 6 had "someone move in" with them; 4 "quit a job"; 3 "stopped full time schooling" and 1 "separated from spouse."

Home and work life were again identified most frequently as major sources of stress that occurred in the last twelve months. These findings are similar to Table 34.

Table 35

WHICH OF THE FOLLOWING HAS HAPPENED TO YOU DURING THE LAST TWELVE MONTHS?

Has Happened to You in Last 12 Months	Frequency
None of these	46
Death of someone close	30
Financial problems	18
Someone moved out of home	17
Serious illness of someone close	17
Serious illness	12
Changed jobs	11
Lost a job or was unemployed	9
Got married	8
Started working	8
Retired from full time work	8
Arrival of baby at home	7
Someone moved in with you	6
Quit a job	4
Stopped full time schooling	3
You and your spouse separated	1

Listed in descending order

Note: Respondents were asked to check all options that applied

Productivity, Wealth and Health

The responses to research question number eleven, What is the productivity and wealth of the community, are identified in Tables 36 and 37. Income is identified in Table 36 and education is identified in Table 37.

Income

Income is identified in Table 36 and education is identified in Table 37. Table 36 demonstrates the relationship of health and income.

When examining those who responded to "excellent health", 6 had an income of $15,000 - $19,999; 6 had an income of $20,000-29,999; 5 had an income of $30,000-39,999; and 8 had an income of $40,000-49,999.

When examining those who responded to "fair health", four had an income under $9,999; 9 had an income of $10,000-14,999; 3 had an income of $15,000-15,999; 8 had an income of $20,000-29,999; 5 had an income of $30,000-39,999; and 3 had an income of $40,000-49,999.

When examining those who responded to "poor health", 1 had an income under $9,999;

1 had an income of $10,000-14,999; 1 had an income of $15,000-15,999; and 1 had an income of $20,000-29,999. No one in poor health had an income above $29,999.

Overall, persons with perceived excellent and fair health were most likely to have a higher income than those who have a perception of poor health.

Table 36

TABLE OF HEALTH BY INCOME

HEALTH	INCOME							
Frequency Percent Row Pct Col Pct	0	Under $9,999	$10,000- -$14,999	$15,000- -$19,999	$20,000- -$29,999	$30,000- -$39,999	$40,000- -$49,999	TOTAL
0	4	1	3	2	1	0	0	11
	2.96	0.74	2.22	1.48	0.74	0.00	0.00	8.15
	36.36	9.09	27.27	18.18	9.09	0.00	0.00	
	6.35	11.11	21.43	16.67	6.25	0.00	0.00	
EXCELLENT	30	3	1	6	6	5	8	59
	22.22	2.22	0.74	4.44	4.44	3.70	5.93	43.70
	50.85	5.08	1.69	10.17	10.17	8.47	13.56	
	47.62	33.33	7.14	50.00	37.50	50.00	72.73	
FAIR	27	4	9	3	8	5	3	59
	20.00	2.96	6.67	2.22	5.93	3.70	2.22	43.70
	45.76	6.78	15.25	5.08	13.56	8.47	5.08	
	42.86	44.44	64.29	25.00	50.00	50.00	27.27	
POOR	2	1	1	1	1	0	0	6
	1.48	0.74	0.74	0.74	0.74	0.00	0.00	4.44
	33.33	16.67	16.67	16.67	16.67	0.00	0.00	
	3.17	11.11	7.14	8.33	6.25	0.00	0.00	
TOTAL	63	9	14	12	16	10	11	135
	46.67	6.67	10.37	8.89	11.85	7.41	8.15	100.00

Education

Table 37 demonstrates the relationship of health and education.

When examining those who responded "excellent health": 4 had completed postgraduate university; 1 had completed undergraduate university; 5 had completed some university; 16 had completed technical/vocational training; 16 had completed Grades 10-12; 5 had completed Grades 7-9; and 1 had completed Grades 1-6.

When examining those who responded "fair health": 2 had completed postgraduate university; 4 had completed undergraduate university; 5 had completed some university; 8 had completed technical/vocational training; 17 had completed Grades 10-12; 9 had completed Grades 7-9; and 7 had completed Grades 1-6.

When examining those who responded "poor health", there was 1 in each of the 7 school level categories from Grades 1-6 to some university.

Overall, persons with perceived excellent and fair health were most likely to have a higher education level than those who have poor health.

Table 37

TABLE OF HEALTH BY EDUCATION

HEALTH	EDUCATION								
Frequency Percent Row Pct. Col. Pct.	0	Grade 1-6	Grade 7-9	Grade 10-12	Technical/ Vocational	Some University	Undergrad University	Postgrad University	Total
0	1	0	8	1	0	1	0	0	11
	0.74	0.00	5.93	0.74	0.00	0.74	0.00	0.00	8.15
	9.09	0.00	72.73	9.09	0.00	9.09	0.00	0.00	
	5.00	0.00	34.78	2.86	0.00	8.33	0.00	0.00	
Excellent	11	1	5	16	16	5	1	4	59
	8.15	0.74	3.70	11.85	11.85	3.70	0.74	2.96	43.70
	18.64	1.69	8.47	27.12	27.12	8.47	1.69	6.78	
	55.00	11.11	21.74	45.71	64.00	41.67	20.00	66.67	
Fair	7	7	9	17	8	5	4	2	59
	5.19	5.19	6.67	12.59	5.93	3.70	2.96	1.48	43.70
	11.86	11.86	15.25	28.81	13.56	8.47	6.78	3.39	
	35.00	77.78	39.13	48.57	32.00	41.67	80.00	33.33	
Poor	1	1	1	1	1	1	0	0	6
	0.74	0.74	0.74	0.74	0.74	0.74	0.00	0.00	4.44
	16.67	16.67	16.67	16.67	16.67	16.67	0.00	0.00	
	5.00	11.11	4.35	2.86	2.86	8.33	0.00	0.00	
	20	9	23	35	25	12	5	6	135
TOTAL	14.81	6.67	17.04	25.93	18.52	8.89	3.70	4.44	100.00

CHAPTER FIVE

DISCUSSION, RECOMMENDATIONS, AND CONCLUSION

Discussion

Perception of Health and Importance

People should be persuaded to maintain and enhance the good health they are enjoying, that is, persuade them to avoid potential problems. Promotional activities should begin by accepting these perceptions as valid and building upon them (Health Promotion Survey, 1985). How the residents see their health becomes the backdrop against which programs and initiatives are developed. They help to determine strategies and must be taken into consideration in planning.

The majority of the non-institutionalized residents of Gimli who participated in the study felt that they were quite healthy for their age. Of the total sample responses, 47.6% identified they were in fair or excellent health. Of the gender sample responses, 34.0% of males and 46.57% of females identified themselves in fair health. Across all age groups the highest percentage of the males was in the 65 years and older age group and the highest percentages of females were in the 19-34 years and 50-64 years age groups that identified fair health. The lowest percentage of responses that identified fair health were: males - 19-34 years age group; females - 12-18 years age group. Also by gender, 6.0% of males and 2.73% of females identified that they were in poor health. Across all age groups that identified poor health, one male was in the 35-49 years age group and two males were in the 50-64 years age group. For females, one female was in the age group of 19-34 years of age.

1. Identified need: Increase the perception of health of males and females in fair health to excellent health, and increase the perception of poor health to fair health. Health promotion should focus their programs for males in the 19-34 years, 35-49 years, and 50-64 years age groups and for females in the 12-18 years and 19-34 years age groups. Although a small percentage indicated a perception of poor health, it is important to identify the factors leading to their poor health.

   Respondents were asked to identify if health was the most important consideration in one's life. Of the total sample responses, 25 disagreed, and 14 had no opinion whether health is the most important consideration in life. By gender sample for the 25 that disagreed, 20.0% of males and 16.43% of females responded as such. By gender sample for the 14 that had no opinion, 14.0% of males and 8.21% of females responded as such. The 25 that disagreed had the highest percentage of responses for males in the 19-34 years age group and for females the highest percentage was in the 35-49 years age group. In the 14 that had no opinion, the highest percentages of males were in the 12-18 years and in the 19-34 years age group. For females the highest percentages of responses were in the 19-34 years and in the 35-49 years age groups.

2. Identified need: Males and females in all age groups need to feel health is the most important consideration in life. Health promotion programs should focus on males in the 12-18 years and 19-34 years age groups.

Life Changes to Improve Health

A higher percentage of males as compared to females has made efforts to make changes in their lives to improve their health in such areas as: eating, exercise, weight loss, stress

management, drinking less alcohol and smoking cessation. Although females did make efforts to make changes in their lives to improve their health, most of the females did nothing. Across all age groups the highest percentages of females that did nothing were in the 19-34 years and 50-64 years age groups.

3. Identified need: Maintain improvement of health for the males in all areas and increase the efforts to improve the health of all females in all areas. Health promotion programs should focus on maintaining efforts made by males in all age groups to improve their health. For females, health promotion programs should focus on nutrition, exercise, weight and stress management, and smoking cessation. Programs should assist females to make improvements in their health, especially in the age groups of 19-34 years and 50-64 years.

Despite generally good self care, most people still have room for improvement and changes. Although 59 respondents had excellent health and 59 had fair health, more females would like to improve health in all areas, increase exercise, improve eating habits, worry less, learn to relax, and get out more. Males would like to stop smoking, reduce alcohol intake, change jobs, and move.

4. Identified need: Health promotion needs to focus on programs that would assist males and females in all age groups, with an emphasis in the 12-18 years age group to exercise more, improve eating habits, worry less, and learn to relax. Males require an emphasis in the areas of smoking cessation and reducing alcohol intake.

It is important to increase the number of years of good health for the citizens of Gimli by reducing illness, disability and premature death. This objective reflects a more traditional

view of health as the absence of disease. It is noted that the absence of disease remains a critical component of the new broader definition of health (Nurturing Health, 1987-1991). Reducing illness, disability, and premature death are not all that it takes to increase the number of years of good health for the individuals of Gimli. However, this concept helps define the boundaries for this goal. This focus does not imply that the focus is strictly on treatment of illness.

It is important to increase the proportion of the population practising healthy eating and physical activity habits. Dietary factors play a prominent role in heart disease, stroke, hypertension, cancer and diabetes. Physical inactivity is also a risk factor for heart disease independently, and through the development of other risk factors like obesity, hypertension and high risk blood lipid profiles. Physical activity can help mental health problems. It can also improve functional capacity in the elderly, prolonging the time before the threshold for dependence is reached.

Barriers to Adopting Health Behaviours

Though people perceive a need for improvement, they also feel that there are barriers and difficulties which keep them from making these changes.

Respondents identified several barriers. Females saw the barriers as follows: lack of discipline; don't know how to get started; lack of knowledge; and were too depressed. For females, the 12-18 years age group were the majority in lack of discipline; the19-34 years age group for don't know how to get started; 19-34 years age group for lack of knowledge; and 19-34 years age group for too depressed. No respondents were identified in the 12-18 years age group for being too depressed and lack of knowledge.

Males saw the barriers as: had a lack of time and energy; and did not see the problem as serious. For males, the 65 years and older age group had a majority that did not see the problem as serious; the 19-34 years and 35-49 years age groups for lack of time and the 12-18 years and 35-49 years age groups for a lack of energy.

The portrait of the respondents, the majority of whom would like to enhance, maintain, or recover their health is not consistent with much of the early thinking in health promotion (Nurturing Health, 1987-1991; Health Promotion Survey, 1985). Perhaps this is simply because early health promotion efforts have been successful and people have changed. Whatever the reasons for current differences, the recognition that much of current health arose from people's personal lifestyles led to the conclusion that people are either ill informed about health or that they were not sufficiently concerned or motivated to take corrective actions (Health Promotion Survey, 1985). This survey indicates residents claim to be concerned about health and motivated to act. Respondents may be acting on other priorities, or they may be encountering barriers to action. The most important task for health promotion is to help these residents achieve the healthy aspirations they already have. As well, those who see the problem as not serious, or have a lack of self discipline, or a lack of time and energy and don't know how to get started must be taken into account. The design of innovative programs to reach this group will be a major challenge. The significant minority who do not make an effort to improve health presents a special problem, because very often it may be poor health itself that is preventing them from making an effort to improve health, or at least influencing their choice of health priorities.

5. Identified need: Health promotion programs are needed to focus on several barriers that

were identified by the respondents. Females need to improve discipline in the 12-18 years age group; know how to get stared in the 19-34 years age group; increase knowledge in the 19-34 age group; and become less depressed in he 19-34 years age group. Males need to improve time management in the 19-34 years and 35-49 years age groups; and increase energy in the 12-18 years and 35-49 years age groups.

Health Role of Institutions

Various institutions have for a long time played an important role in promoting health (Nurturing Health, 1987-1991). Federal, provincial, and local health agencies have delivered health information, enacted health legislation and maintained the medical system. But government is by no means the only source of health promotion. Schools, churches, businesses, community groups, and especially volunteer health organizations have all been taking active roles (Health Promotion Survey, 1985).

Topics which were rated by the respondents as important for government to deal with were: child health, eating habits, environmental control and accident prevention. This indicates perhaps that demands for government action may be precipitated by information in the first place and that information is central in making people aware of health issues, in achieving social consensus of these issues, and in mobilizing support for healthy public policies.

Respondents felt that the government should deal with such topics as child health, environmental control, accident prevention at work, school and home, improved sanitation, nutrition and opportunities for fitness.

6. Identified need: Health promotion programs are needed to focus in assisting respondents

to enact healthy public policy on child health, environmental control, accident prevention, nutrition and fitness.

Residents strongly support an active role for social institutions in promoting health. For schools, respondents identified career counselling , driver training, recreational programming, family life training, health education, job training and community centre work. For churches counselling, family life training, recreation, and education were identified as important. For workplace, 71 responded to yes; 21 don't know and 15 said no to support for health promotion in the workplace. There is as need for public policies that support health.

7. Identified need: Schools, churches and the workplace should be places of health promotion. Health promotion programs need to encourage investments in public policies outside of the traditional health care system. To nurture health, one must invest in other areas of public policy - for instance, those involving work conditions, the school environment and churches.

Schools are an important environment in which to identify problems. Better linkage with community based social services and agencies are necessary for appropriate referral. Psycho-social programs include outreach to parents to identify and assist in early resolutions of problems, improved systems to monitor signs of academic or personal difficulties promptly, before and after school programs and parent education programs.

8. Identified need: Health promotion programs should focus on increasing school based psycho-social programs aimed at preventing, identifying and treating psycho-social problems. Health promotion should be given adequate time and emphasis in the school curriculum.

Need for Information

Many respondents felt they needed information on one or more topics. Highest responses were in stress management, parenting skills, AIDS, environmental control, family relationships, child development and safety and accident prevention. Lowest responses were in drug abuse, smoking, mental health, alcohol abuse, and nutrition.

While there is a substantial demand for information it should be indicated that there were many who felt there were no health topics for which they needed information. The result needs to be treated with a certain amount of caution. It does not imply, for instance, that these people do not require health information. They may have a need for information of which they are unaware. Nor does it mean that as new health information is made available no attempt should be made to deliver it. The results do suggest, however, that information ought to be carefully directed. Much of the desire for information on specific topics comes from people whose intentions are to change their health habits. Perhaps if more people had formed intentions to change their health practices in particular ways, the demand for information might be much greater.

9. Identified need: Health promotion programs are needed to provide information to all age groups on the areas of stress management, parenting skills, AIDS, and environmental control, family relationships, and safety.

There is a powerful link between individual health and social and physical environment (Nurturing Health, 1987-1991). The link between health and social and physical environment has not yet been widely understood. Many people still think health gains are possible only through expenditures on the formal health care system. But the medical treatment system has

a limited role to play in improving the overall health of the population. Research data shows that other factors are more important determinants of health than the formal health care system. The health care system must be subjected to continuous quality improvements, but if the goal is to nurture health, investments must be made in other areas of public policy (Rachlis & Kushner, 1989; Bailer & Smith, 1986). These investments are premised on the recognition that healthful lifestyle is not just a matter of individual choice (Health Promotion Survey, 1985).

Social Environment

The social environment involves three components: work hierarchy, unemployment, social networks, and prenatal and early childhood conditions. Work hierarchy and prenatal and early childhood conditions were not thoroughly explored in this survey. The only information obtained in work hierarchy is that 28 respondents were dissatisfied with their jobs. Two respondents indicated they were unemployed at the time of the survey. The public health office at the time of this survey had a maternal and child program which dealt with such issues as low birth weight.

One hundred and six respondents identified they had more than ten friends. By gender, 40 (80.0%) of males and 56 (76.71%) of females responded as such. At the same time, 77.57% of respondents spend a lot of time with others. The respondents appear to be a friendly people. Although many have friends that they spend a lot of time with, the last choice for seeking information on health was from friends.

The availability and quality of one's social support is a determinant of health and well-being. Many elderly people, low income youth, sole support parents, and people with chronic

physical or mental illness or disability require varying levels of support to live in the community. Caregiver supports should be fostered through identification and monitoring of natural helpers, provision of relevant information, counselling and training, availability of respite care and support for professional services.

People with more social contacts and friends tend to live longer than those with fewer (House, 1988; Berkman & Syme, 1979). There are many ways in which friends and family might affect a person's health. Some of these are direct; people intervene directly to protect others from their bad habits. Friends and family can influence health indirectly through knowledge, attitudes and beliefs, and most importantly, health practices. How we think about health, the attitudes we maintain, the information we have on health issues, the health practices we engage in --all of these are strongly influenced by what our friends and family think, feel, know and do. The behaviour and actions of close friends and family are major components of the social reality within which individuals enact their quest for health and thus have an important effect on health itself (Health Promotion Survey, 1985; Nurturing Health, 1987-1991).

This shift in the understanding of lifestyle has extremely important consequences for health promotion (Health Promotion Survey, 1985; Nurturing Health, 1987-1991). It means that health promotion must emphasize the social environment much more in the design of programs. Too often, health promotion initiatives are aimed at individuals without regard for their social environment. This works for some people. However, very often people persist in their unhealthy habits and fail to adopt good ones despite knowing better, even despite real intentions to change. The profound effect of peer influences and social environment plays an

important role here.

Given this, we should be aware than when we ask people to give up smoking, drug use, heavy drinking, and so on, we are not just asking people to change a habit, we are asking them to change a major aspect of their social life (House, 1988). Just as peer influence can prevent a person from making a change, it can also support individual change when group norms are changing at the same time. This suggests that we must develop programs and initiatives aimed not just at individuals, but at groups. The model of individuals making rational health decisions for and by themselves, uninfluenced by their friends and family, must be replaced by a more appropriate view of health behaviour that takes into account the interactions of people within their social environments (Nurturing Health, 1987-1991).

Health promotion must tap the potential for change inherent in each person's network of friendships. The influences that friends have on each other form a tremendous resource for health promotion.

Networks of friends already operate, in effect, as informal health networks in many ways. Increasingly, as emphasis in health promotion is put on mutual aid programs and initiatives, programs will have to be developed to address these networks.

10. Identified need: Continue to maintain social networks in the community at all age groups. Health promotion programs should focus on increasing efforts to assist family members and neighbours to care for each other and for other members of their community. Many elderly people, youth, sole support parents, and people with chronic physical or mental problems or disability require varying levels of support to live in the community.

Physical Environment

The physical environment includes occupational health, motor vehicle injuries and air pollution. Respondents identified inadequacies in community facilities, housing, school facilities and sewage disposal. Thirty-five respondents identified that an accident had occurred: most at home, others at sport, work and the highway. Although accidents were a concern, only 57.36% use seatbelts all the time. At the same time, 70.3% of the total sample responses do their part to promote clean air.

Accidental injuries are the second leading cause of death when measured by potential years of life lost (Robertson, 1986; Statistics Canada, 1986). The principal cause of death and disability from accidental injuries are those associated with motor vehicle traffic accidents. A combination of education, policy with respect to alcohol for example, and environmental control factors with respect to speed limits, road and car design for example, is needed to reduce the consequences of motor vehicle traffic accidents (Robertson, 1986; Statistics Canada, 1986).

11. Identified need: Health promotion programs are needed to focus on preserving the integrity of the physical environment that is essential to the health of the population. One must promote or adopt initiatives known to reduce illness and prevent injury or death. Public policy is required on adequate community facilities, housing, schools, sewage disposal, and policies on safety re: work, sport and highways. Provide habitats that support health and wellbeing and have in place a plan to have transitional housing and emergency shelters to all people in need.
12. Identified need: Health promotion programs are needed to focus on reducing injury and

death arising from accidents and increasing the use of seatbelts to 100%.

Empowerment means giving people both the opportunity and capability to participate in decisions that affect programming, policy and physical environments. Participation in community governance structures and institutions is an effective mechanism through which individuals and communities may gain greater control over their life conditions.

13. Identified need: Health promotion programs are needed to assist in the empowerment of community members to influence policy, programming and the allocation and management of resources relating to health and social services. In order to design healthier environments there is a need to identify research into and development of emerging technologies that will enable one to obtain detailed, quantified information on the health effects of different environments. There is a need to educate the public about the effects of environment on health and on the means of creating healthy environments; to review existing institutions; to determine how much control individuals have over their environments; and to ensure that there are no restrictions, whether inadvertent or otherwise, on the opportunities of any age group in a community setting.

As the physical environment is an important aspect in health, it is surprising that 72 (55.81%) felt disease was caused by environmental hazards only some of the time. Of the total sample responses, 33 (27.04%) felt they never had control over environmental sources of disease and 61 (50.05) had control some of the time. Across all age groups and gender, most of the respondents that identified that disease was caused by environmental hazards some of the time and never were female and in the 19-34 years, 35-49 years and 50-64 years age groups.

14. Identified need: Although more females responded than males, health promotion programs are needed to focus on both males and females in the 19-34 years, 35-49 years, and 50-64 years age groups in regard to needing education in the relationship of environmental hazard and disease.

Heart and Lung Disease

Respondents were asked to identify their control over getting lung cancer and heart disease. Of the total sample responses, 46 (41.07%) responded to some of the time having control over getting lung cancer. By gender, most were females (38.35%) and across all age groups the highest percentages were in the age groups of 35-49 years and 50.64 years. Of the total sample responses 18 (16.07%) responded to never having control over getting lung cancer. By gender, most were males (16.0%) and across all age groups, the highest percentages were in the age groups of 35049 years and 50-64 years.

For having control of getting heart disease, of the total sample responses 50 (41.73%) responded to some of the time of having control over getting heart disease. By gender, most were females (42.46%) and across all age groups, the highest percentage was in the age group of 19-34 years. Of the total sample responses, 15 (12.82%) responded to never having control over getting heart disease. By gender, most were males (12.0%) and across all age groups the highest percentage was in the age group of 19-34 years.

15. Identified need: Health promotion programs are needed to focus on making individuals aware that they can increase control over getting lung cancer and heart disease. Programs need to focus on females 19-34 years, 35-49 years and 50-64 years age groups. These groups need to feel they have greater control over lung cancer and heart disease.

For the males that responded to never having control, they need assistance in the age groups of 19-34 years, 35-49 years, and 50-64 years to increase greater control over lung cancer and heart disease.

Respondents were asked to identify if they were at risk of developing lung cancer and heart disease. Of the total sample responses, 44 (36.97%) felt they were at no risk of having heart disease. By gender, most were males (40.0%) and across all age groups the highest percentage was in the age group of 12-18 years. Of the total sample responses, 26 (21.84%) didn't know if they were at risk of having heart disease. By gender, there were equal percentages for males and females (20.0% males and 19.17% females) and across all age groups the highest percentages were in the age groups of 19-34 years, 50-64 years and 65 years and older.

Of the total sample responses, 48 (41.10%) said no to the risk of having lung cancer. By gender, most were males (46.0%) and across all age groups the highest percentages were in the age groups of 12-18 years and 19-34 years. Of the total sample responses, 36 (31.57%) did not know if they were at risk for lung cancer. By gender, most were males (30.0%) and across all age groups the highest percentages were in the age groups fay 35-49 years and 65 years and older.

16. Identified need: Health promotion programs are needed to focus on increasing the knowledge of risks of disease for lung cancer and heart disease. Programs need to concentrate in the populations of males and females in all the age groups. The 12-18 years age group need to know the risks leading to lung cancer and heart disease, with an emphasis in heart disease.

17. Identified need: Health promotion programs are needed to reduce illness, disability, and premature death from cancer and heart disease.

As indicated previously, this reflects a more traditional view of health as the absence of disease. It is noted that the absence of disease remains a critical component of the new broader definition of health.

Cancer is the largest contributor to potential years of life lost (Statistics Canada, 1986). Projections of the cancer burden predict for the year 2002 almost 60,000 new cases per year as compared with just 20,000 in 1970 and 34,000 in 1986 (Statistics Canada, 1986). Achievement of reducing cancer rates requires the development and implementation of a comprehensive cancer control program. Such a program encompasses primary prevention, early detection, screening, active cancer treatment, rehabilitation, and psycho-social support and palliative care.

Heart disease accounts for over one-third of all deaths (Statistics Canada, 1986). Thirty-nine per cent of deaths in Canada in 1990 were due to cardiovascular disease (Heart and Stroke Foundation of Canada, 1990). Canada's rate for men was 245 per 100,000 and for women was 134 per 100,000 (Heart and Stroke Foundation of Canada, 1990).
It also represents the leading cause of disability. Incidence has declined in the last thirty years due to such factors as changes in lifestyle, dietary changes, reductions in smoking, improved drugs to treat arrhythmias, improved surgical techniques and the emergence of cardiac care units. Further decreases in heart disease can be expected with further reductions in smoking, hypertension and serum cholesterol and with further improvement and coordination of diagnostic, treatment and rehabilitation services. An integrated cardiovascular disease

control program which coordinates and extends into community prevention, early diagnosis, treatment and rehabilitation activities, would help to reduce the illness, disability and premature death from heart disease.

Traditionally, information delivery has been a central focus of health promotion. It has always been felt that accurate health knowledge and positive attitudes and beliefs were the key to change behaviour (Health Promotion Survey, 1985; Nurturing Health, 1987-1991). It was found in this survey, at least for the subjects investigated, health promotion programs do not seem to be influencing behaviour as strongly as one might expect. This suggests that while improved knowledge is a key factor in behaviour change, it is not always sufficient by itself to instigate the kinds of changes people need most to make. Health promotion campaigns that rely solely upon information dissemination should not be accompanied by unrealistic expectations of behaviour change. Information needs to be accompanied by other forms of action such as training and education, by group support and community action, and by social consensus building. People change or persist in their habits for a variety of reasons; being well informed just helps them take the right action when they do decide to change.

Quality of Life

Mental health influences affect physical wellbeing. Although the exact pathways and the biological mechanisms are not yet clear, individual responses that incorporate mental health influences may go a long way to explaining a biological performance of the immune system and hence the health status of individuals (Dantzer & Kelly, 1989; Barinage, 1989). Of the total sample responses, 93 rated themselves as fairly happy. By gender, 37.63% of males and 55.91% of females responded as such. Of the total sample responses, 27 rated themselves as

very happy. By gender, 37.04% of males and 55.56% of females responded as such. Of the total sample responses, four rated themselves as not happy. Most of the population is happy with generally good feelings some of the time. Major sources of stress that were identified by the respondents were home life and work.

18. Identified need: Health promotion programs are needed to focus on decreasing the stress involved in the workplace and home life while maintaining the general happiness of the community.

It is known that happier people rate themselves as healthier (Nurturing Health, 1987-1991). The apparent effects of quality of life on health itself raise the issue of health as a social condition. Past health promotion approaches have focused heavily upon the role of individuals and institutions in achieving health but have paid less attention to the effects of other social factors and conditions (Health Promotion Survey, 1985).

This notion of health as a social condition suggests that many of the factors that affect the health of individuals and, by extension, of populations, may arise from sectors traditionally considered outside the purview of traditional health concerns (Nurturing Health, 1987-1991).

If these factors are not incorporated into new approaches to health, the potential for improvement of health will be limited. The notion that health affects quality of life suggests that health is not only an end but a means as well. Good health enables and poor health inhibits the pursuit of the highly valued aspects of life --happiness and income, to name just two.

Income, education and employment are important, not only in their own right or by virtue

of the ways in which they directly affect health, but also as indicators of the wider web of life circumstances and social relationships which can influence health (McKeown, 1976).

A good income can make health related purchases like nutritious foods and safety equipment easier. Conversely a poor income makes it difficult to make these purchases. Just as income affects health, health affects income (Milio, 1975, 1986). Good health can make it easier for a person to earn a good living, while poor health can make it hard for a person even to earn a living at all.

For those that identified household income: Nine were under $9,999; 14 in the $10,000 - 14,999; 12 in the $15,000 - 19,999; 16 in the $20,000 - 29,999; 12 in the $30,000 - 39,999; 11 in the $40,000 - 49,999; and 15 over $50,000. The 59 respondents that were in excellent health have no one below $15,000. The 59 respondents that were in fair health have no one below $10,000 and no one above $49,999. For the 6 respondents in poor health no one was above $29,999.

Respondents in the lowest income bracket are three times more likely to rate their health as poor as those in the highest income group (Black et al, 1982; Wilkins, Russell, et al, 1986). Respondents in the lowest income bracket are also less likely to rate their health as excellent than are those in the highest income group (Black et al, 1982; Wilkins, Russell, et al, 1986). Low income individuals encounter more barriers to health than do upper income individuals. They are much more likely to be unemployed and poorly educated, and their friends are more likely to smoke and less likely exercise regularly.

19. Identified need: Health promotion programs are needed to focus on increasing incomes of the population that are under $40,000 by providing opportunities for people to meet

their economic needs. Programs need to provide more employment opportunities by developing and establishing economic development strategies tailored to the local economy. There is a need to develop programs to support employment for low wage workers and employable people with disabilities to ensure they are better off through employment. In the study it was identified that some people were not working because of a physical problem.

An adequate income and safe meaningful employment are major determinants of health. Priority for intervention should be given to recipients of social assistance, low wage/low skilled workers, employable disabled persons, displaced worker, and single parent families (Wilkinson, 1986).

It is important to ensure that social assistance payments cover the actual cost of a basic range of necessary goods and services consistent with overall community standards of living. Necessary goods and services include food, household maintenance costs, clothing, recreation, and transportation. It is important to develop programs to support employable people with disabilities to ensure they are better off through employment.

Education can be a resource for health. Good education can provide people with the knowledge and skills required to make healthy decisions. Lack of education can influence health by limiting earnings, or by limiting access to health information. Poor health can influence education by limiting people's ability to improve their education.

The highest grade identified for the respondents were: Nine completed Grades 1-6; 23 completed Grades 7-9; 35 completed Grades 10-12; 25 completed technical/vocational training; 12 had some university training; 5 completed and undergraduate university degree;

and 6 completed a post graduate university degree. For the 59 respondents in fair health the majority had completed Grades 10-12 level. The six that were in poor health had one respondent in each of the levels, Grade 1 to some university.

Those with good education are almost twice as likely to rate their health as excellent as those with poor education. Those with poor education are three times more likely to rate their health as only fair or poor.

Those who rate their health as excellent are more than twice as likely to have post-secondary education than those who rate their health as poor (Black et al, 1986; Wilkins, Russell, et al, 1986).

20. Identified need: Health promotion programs are needed to focus on increasing education opportunities for all up to and including university training. Programs need to provide all individuals with equitable access to quality education. Programs need to have in place improved local mechanisms to link skill and knowledge formation and retraining to requirements of the economy. Worker preparation should be a shared responsibility of the community through the education system, and business and labour sections through apprentice upgrading and retraining mechanism.

People's knowledge and skills affect their opportunities for economic wellbeing, as well as their capacity to act on information to protect and improve individual and community health (Wilkins, 1988).

The effects of lower levels of education can be seen in other aspects of their life circumstances as well. They are more likely to report that they have a low income and that they are unemployed. People with less education are less likely to feel that they need health infor-

mation than those who are better educated. Perhaps this is because the well educated place a greater value on information, know better how to use it, and have personal and financial resources to do so (Black et al, 1982; Health Promotion Survey, 1985; Wilkins, 1988; Wilkinson, 1986).

Unemployment can influence health by causing stress, low self esteem, and feelings of depression or helplessness (Andersen, 1987; Johnson & Hall, 1988; Marmot & Tores, 1988; Wilkinson, 1986). It also restricts income and hence the resources available for health purchases. Poor health on the other hand, can limit a person's ability to work or to find suitable employment.

There is a strong relationship between life circumstances and perceived health. Income, education and employment status are related to a person's perceived state of health (Nurturing Health, 1987-1991). As well, perceived health affects a person's ability to achieve other basic needs and aspirations. Those who report poor health are more likely to be poorer, less educated, or unemployed.

Given the importance of social and economic factors, the question for health promotion is: To what extent can meaningful improvements be made in the health of disadvantaged individuals by using health promotion approaches? A related question is: Are major improvements in the life circumstances of the disadvantaged a prerequisite for improving their health? And if so, are there ways these life circumstances can be altered to make them more supportive of health? At a minimum, innovative approaches will be required. To start, there must be an explicit recognition that the implications of social policies often go beyond matters of economics or social welfare. Health promotion programs must improve the health

of all individuals, not just of those who are well off. Greater wealth is associated with greater health. Poorer and middle income people appear to be more vulnerable than wealthy people to a variety of ailments. The type of ailments that disproportionately affect poorer people change over time. Evidence indicates that when socio-economic differences are narrowed, population health status improves.

Overall, if healthy public policy deals with the issues of the community and the community is able to provide the necessary resources, the population as a whole should be able to increase their health. Healthy public policy emphasizes the shift from a public health promotion model, in which health is associated largely with lifestyle choices to a model where health is increasingly tied to changes in the social and physical environment. Nurturing Health (1987-1991) is a conceptual instrument that provides a framework for these changing views of health and for building public support toward health orientation in public policy.

Recommendations

Health promotion will need to follow debates on issues such as replacing current indicators of national health rates of illness with indicators that recognize the psycho-social dynamics of health. There is need for an approach to health promotion, one in which the improvement of health status is viewed as a specific objective of public policy rather than as a collection of important specialty programs. The point that has been arrived is at where there is some public consensus on the key determinants of health, there is agreement that, rather than pouring even more dollars into cure, the public policy agenda should be shifted towards the promotion of health, based on what is known about the determinants of health.

Health promoting initiatives have traditionally concentrated on raising people's awareness or increasing their knowledge. The focus has been on building skills in people and changing their attitudes. Such health promotion efforts are valid, but if one is to genuinely assist these individuals and, more importantly, the population as a whole, there must be a reinforcement of health promotion with aggressive public policy measures.

One would want to see Gimli people live longer in good health, and where disease and disability are progressively reduced. The people should realize their full health potential through a safe, non-violent environment, adequate income, housing, food and education and a valued role to play in family, work and the community. The people should have equitable access to affordable and appropriate health care regardless of geography, income, age, gender or cultural background.

Five goals will help to make this vision a reality:

1. Shift emphasis to health promotion and disease prevention.
2. Foster strong and supportive families and communities.
3. Ensure a safe, high quality physical environment.
4. Increase the number of years of good health for the citizens by reducing illness, disability premature death.
5. Provide accessible, affordable and appropriate health services for all.

There is a need for public policies that support health. There is a relationship between health and our social and physical environments. To nurture health, investments must be made in other areas of public policy, for instance those involving working conditions and the environment.

Key Factors in Promoting Health

1. There is a powerful link between individual health and social and physical environments. The link between health and social and physical environment has not yet been widely understood. Many people still think health gains are possible only through expenditures on the formal health care system. But the medical treatment system has a limited role to play in providing the overall health of the population. Research data show that other factor are more important determinants of health than the formal health care system.
2. Health has been closely associated with individual lifestyle and therefore individual choice. People's lifestyle choices such as smoking, drinking, and eating habits are strongly influenced by the social environments. A healthy lifestyle is not just a matter of individual choice.
3. Although universal access to medical care can certainly help people who become ill, it has little effect on differences in health status between income groups. While the largest group affected by social and physical environments is the middle class, the most dramatic health differences exist between the rich and the poor. These socio-economic gradients in health status persist over time, even though major causes of death change, suggesting an overall greater vulnerability on the part of poorer people. Policies directed at promoting healthy social and physical environments have improved the overall health of the population and have compressed the gradients in health status.
4. Social and physical environments as manifested in the places people work and live, their education, income and social supports have a major impact on people's health.
5. There is a very strong link between economic status and the health of its population.

National prosperity is vital to people's physical and mental health. The distribution of income within a society is important. Life expectancies are higher in productive economies and less in income disparity.

6. Research has identified a long list of important social and physical factors that can influence our individual health. These determinants of health include early childhood experience, education, employment status, income, workplace hazards, supportive family and friends and the environment (Nurturing Health, 1987-1991).
7. Finally, it is clear that any initiatives concerning the determinants of health must take into account the social, physical and economic framework of society.

Conclusion

It is essential that the community be involved in determining their health needs and that community based health promotion program planning be the premise in program planning. People make the system function. They are also the key to delivering the quality and quantity of health services in the future. Changing funding and incentives in the current health care system, and the shift to community based health services as an equal partner with the institutional sector, directly affect health care providers and workers throughout the system who are trying to meet the health needs of the population. It is important to enable the community to deliver care with improved productivity and quality of outcome.

Vision of health is based on a view that extends well beyond conventional views to include an understanding that people are most likely to realize their full potential when they live in safe and supportive communities, in healthy environments, with adequate incomes and housing and with meaningful and rewarding roles in life. Nurturing Health (1987-1991) is a

conceptual instrument that provides a framework for these changing views of health.

A questionnaire is one means of assessing health needs and it is this technique that was applied to determine the health needs of the residents of Gimli and the Rural Municipality of Gimli.

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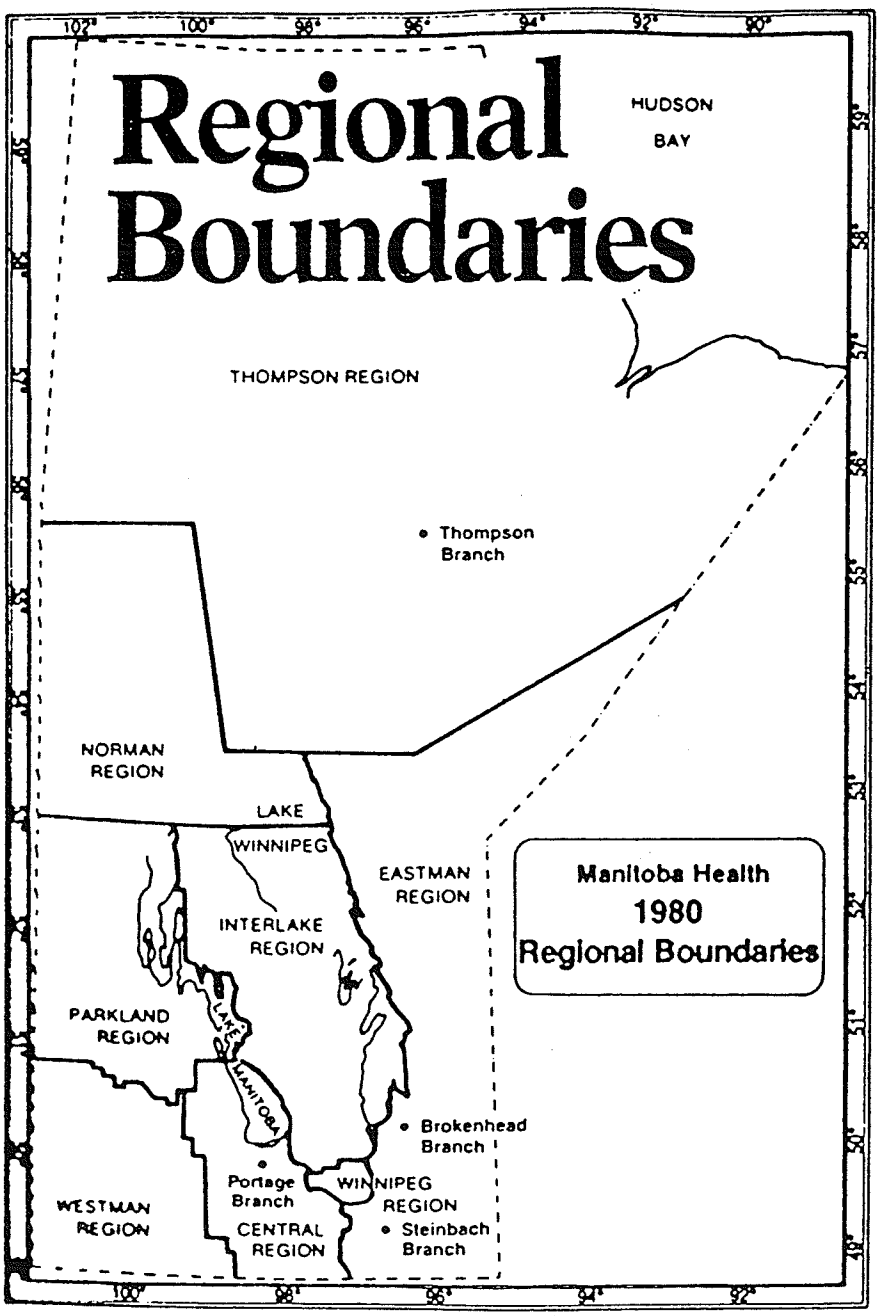
APPENDICES

Appendix A

Regional Boundaries of Manitoba


Regional Boundaries
HUDSON BAY
THOMPSON REGION
Thompson Branch
NORMAN REGION
LAKE WINNIPEG
EASTMAN REGION
INTERLAKE REGION
PARKLAND REGION
LAKE MANITOBA
Brokenhead Branch
Portage Branch
WINNIPEG REGION
WESTMAN REGION
CENTRAL REGION
Steinbach Branch
Manitoba Health
1980
Regional Boundaries

Appendix B

Newspaper Article: new approach proposed to combat lifestyle disease

New approach proposed to combat lifestyle disease

By Lorne Reimer

With lifestyle, not infection, considered today's main source of fatal disease, a proposal was laid out for a new kind of health promotion program in the Interlake recently.

Speaking at the quarterly meeting of the Interlake Health Advisory committee held in Stonewall last week, four Manitoba leaders in the field of health promotion tried to sell the idea of a community-based health promotion program for the region.

Dr. Dale Galskey from the social and preventive medicine department of the University of Manitoba Faculty of Medicine said they'd like to see the concept demonstrated in a rural setting.

The idea brought mixed response from members of the committee (made up of municipal representatives and public health staff from throughout the region), but a steering committee was eventually formed to look at implementation.

"The Interlake region with its existing Health Advisory Committee is in a unique position to implement community-based health promotion planning within a rural setting," the spokesman said in his opening remarks to the committee.

"As we've moved away from the agricultural way of life, our lifestyle is not as healthy anymore," Dr. Galskey added.

He explained that over the last 80 years, there has been a 96 per cent decrease in infectious diseases and at the same time a 97 per cent increase in lifestyle-related diseases.

"In the change from agricultural society to industrial society, so has our disease pattern changed," he said.

Of the so-called lifestyle related diseases, Dr. Galskey said cancer, heart disease and accidents are now the three largest killers.

And it's lifestyle factors like poor nutrition, smoking, mechanization and lack of physical activity that are the most strong contributing factors, according to the spokesman.

Galskey said that while the medical and scientific community can take credit for eradicating many infectious diseases, changing lifestyle is going to have to go "right down to the grassroots level."

"We have a system to fight infections, it's these lifestyle diseases that are really killing people," he said.

"Obviously this takes planning," he added. "Otherwise I don't think we'll see much reduction in the numbers of dying and disabled from lifestyle diseases."

Also speaking on behalf of the program that would involve citizens in health promotion planning were Dr. Dexter Harvey, co-author of the written proposal; Dr. Juri Manfreda of the Faculty of Medicine; and Ulrich Wendt, the chief of Manitoba's health promotion directorate.

Lending their support at the meeting from Interlake Health and Community Services were regional director John Gow; senior regional nurse Pat Kinrade; and regional medical officer Dr. Chris Greensmith.

"All we're going to do is take a lot of existing resources and plug in these resources with a team.... If there's any duplication, then we haven't planned properly," Kinrade said.

However some committee members had serious doubts whether such a scheme could work for the area. Said Dr. Tony Grogan of Teulon, "having worked here six years, I'd be very pessimistic about the message getting across to the community."

He also wondered about the cost of such a program.

However, Dr. Harvey insisted that because the program will simply be combining local input with existing resources, there shouldn't be any extra cost.

Instead there should be future savings in health costs if the program does what it's supposed to by moving toward a healthier population.

"We're hoping what you'll be doing won't duplicate our activities, but complement," said Harvey, adding that it would make their job easier if health promotion comes from within the community rather than from outside the community.

Under the community-based health promotion planning proposal, Harvey said there'd be a coordinated effort for promoting health involving citizens, health professionals, and government and voluntary agencies.

Jack Oatway of the health advisory committee indicated his interest in the proposal by saying that it could be something for the committee to sink its teeth into.

He commented the Interlake the only region left in the provin with a health advisory committe and it could flounder unless n interest is generated.

Added another member, Re Renooy, "if we reject this pr posal we might be sorry. If it's worthwhile program let's take a vantage of it. We have nothing lose."

The first step, according to Harvey, is to organize a day-long orientation session on public health issues.

He then said it's up to the community to identify the needs and decide on what approach to take. One example cited by Harvey was to encourage local restaurants to assist people on special diets by outlining specific contents in menu.

However, there was some doubt about how restaurant operators would respond to this suggestion.

Other programs promoted at the community level might involve fitness or anti-smoking, according to organizers.

Adds Ulrich Wendt, director of health promotion for Manitoba, "it's a very hard job to convince people to change their lifestyle. The damage from unhealthy behaviour takes years to show up.

"But if communities decide they want to take responsibility to spread the message, we'll get that message a lot further. We're interested in the long run. If you have a healthier society, you'll have much less health costs."

On the steering committee for the community-based demonstration project are committee members Helgi Austman, Rens Renooy, Jack Oatway, and Nick Huminicki.

The committee also agreed to support a major fitness seminar to take place in Gimli this March.

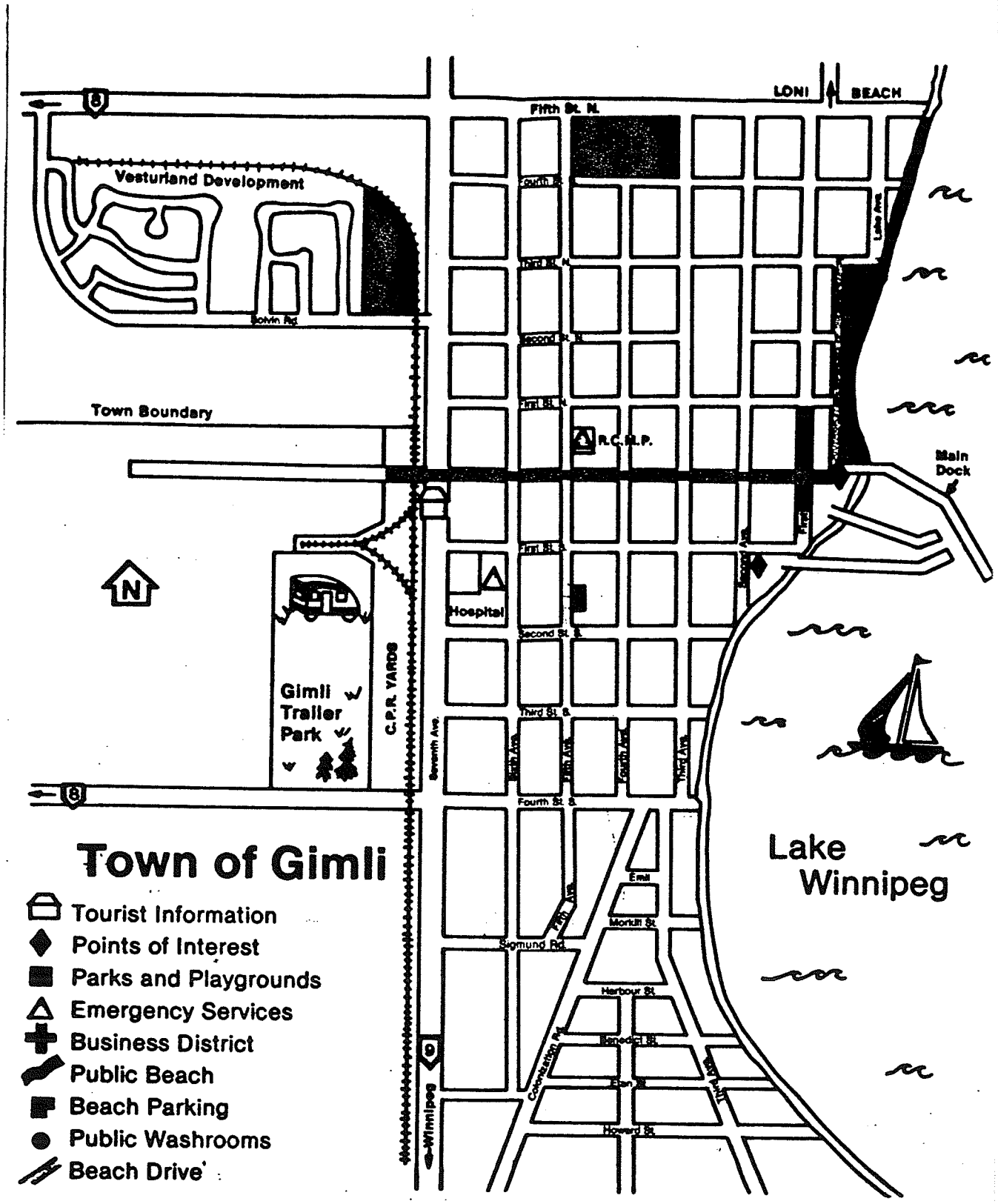
A committee of Interlakers has been planning the three-day event for some time now, according to Dave Cain, director of the Interlake Sports Development Association.

They expect to draw about 120 to the conference with most of the costs covered by the Manitoba Lotteries Foundation.

The members of the Interlake Health Advisory Committee agreed to be the sponsoring non-profit organization to make application to the province for a subsidy of about $14,000.

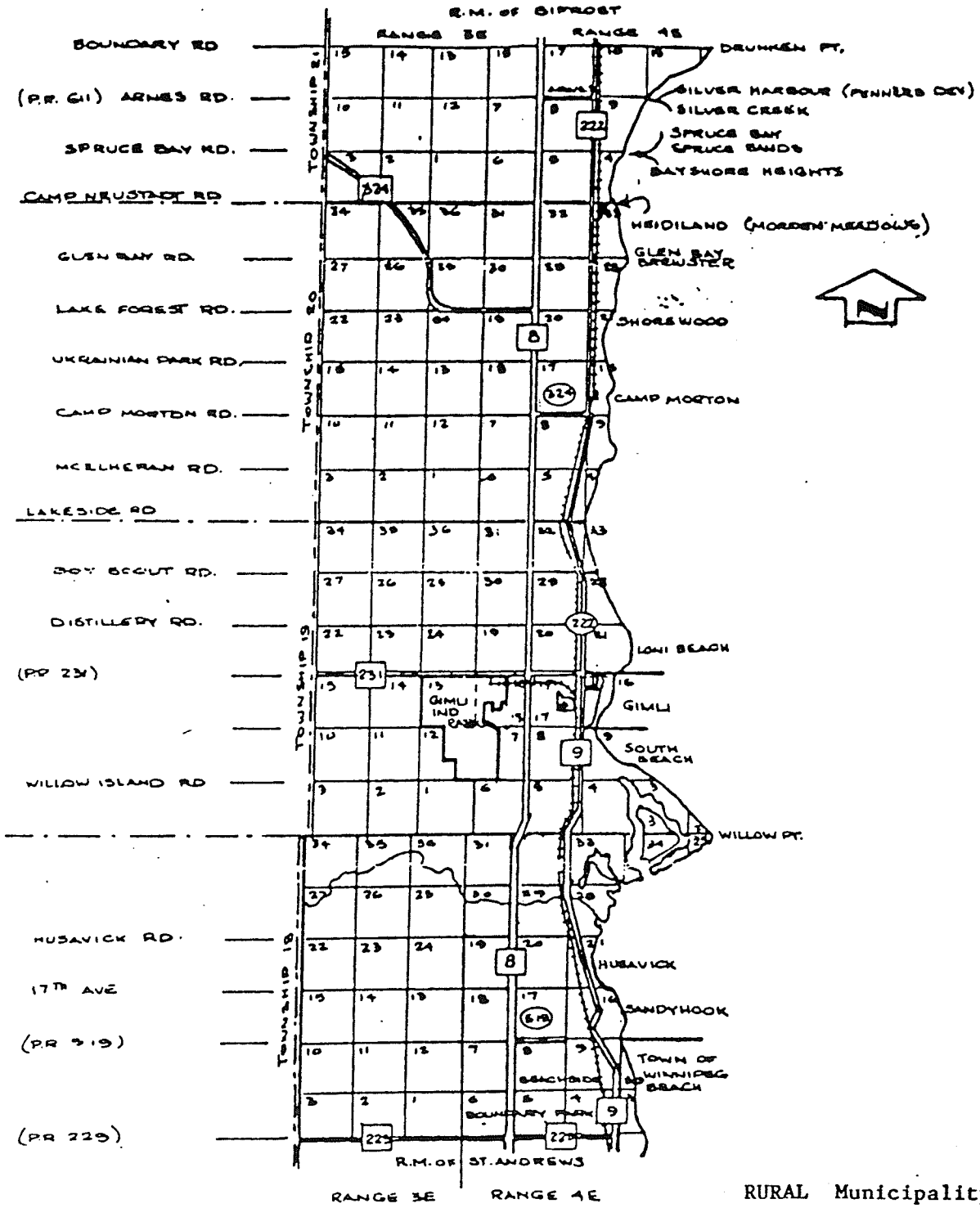
Appendix C

Town of Gimli


Town of Gimli
Tourist Information
Points of Interest
Parks and Playgrounds
Emergency Services
Business District
Public Beach
Beach Parking
Public Washrooms
Beach Drive
Lake Winnipeg
LONI BEACH
Fifth St. N.
Vesturland Development
Town Boundary
R.C.M.P.
Main Dock
Hospital
Gimli Trailer Park
C.P.R. YARDS
Seventh Ave.
Sixth Ave.
Fifth Ave.
Fourth Ave.
Third Ave.
Second Ave.
First Ave.
Lake Ave.
Fourth St. N.
Third St. N.
Second St. N.
First St. N.
First St. S.
Second St. S.
Third St. S.
Fourth St. S.
Emil
Mortlift St.
Sigmund Rd.
Harbour St.
Benedict St.
Elan St.
Howard St.
Coronation Rd.
Winnipeg

Appendix D

Rural Municipality of Gimli



RURAL Municipality of Gimli

Appendix E

Health Needs Questionnaire

GIMLI COMMUNITY HEALTH SURVEY

Hello. My name is _____. I'm calling from the Gimli Health Promotion Committee. You received a letter approximately one week ago explaining the survey. I would now like to ask you to fill out the questionnaire. Any information you give will be kept completely confidential.

I. COMMUNITY

Questions 1 - 14 deal with your community (example: church, school)

1. Which of the following need improvement in your community? (Check all that are appropriate)
   (a) housing_____
   (b) supply of water, gas, electricity_____
   (c) sewage disposal_____
   (d) financial services_____
   (e) school facilities_____ Specify which ones_____
   (f) community facilities_____ Specify which ones_____
   (g) cooperation by local government and/or citizens_____
   (h) other____ Specify_____

2. Do the school's policies serve the needs of all students in your community?
   (a) always_____
   (b) most of the time_____
   (c) some of the time_____
   (d) never_____
   (e) don't know_____

3. Which of the following school-run activities are available to students outside of school time?

	Yes	No	Don't Know
(a) clubs	___	___	___
(b) athletics	___	___	___
(c) music	___	___	___
(d) drama	___	___	___
(e) craft and hobby work	___	___	___
(f) publications (yearbook, school paper)	___	___	___
(g) dances and socials	___	___	___
(h) student government	___	___	___

4. Should more special help be available for children who have physical/mental handicaps?

   (a) Yes____

   (b) No____ (if answered *No*, go to question #5)

   (c) Don't know_____

5. What types of programs are needed for children with handicaps?

	Yes	No	Don't Know
(a) vocational (job) planning	___	___	___
(b) emotional adjustment	___	___	___
(c) performance	___	___	___
(d) social participation	___	___	___

   (e) other Specify_____

6. In which of the following ways does the school system function as a community centre? (Check all that are appropriate)

   (a) sponsor active community improvement programs____

   (b) presents programs, concerts____

   (c) carries on adult education programs____

   (d) makes auditorium, gymnasium, classrooms available to community____

   (e) sponsors community-wide events____

   (f) other Specify_____

   (g) don't know____

7. What functions would you like to see the school system emphasize in the next few years? (Check **all** that are appropriate)

   (a) career counselling____

   (b) community centre work____

   (c) family life training____

   (d) health education____

   (e) recreational programming____

   (f) driver training_____

   (g) on the job training (example: fishing) ____

   (h) other____ Specify_____

   (i) none____

8. Are the churches in the Gimli district involved in any of the following activities? (Check all that are appropriate)

(a) Sunday School____
(b) adult Bible study group____
(c) men's or women's club____
(d) young people's club____
(e) young adult club____
(f) concerts____
(g) church choir____
(h) church office open daily____
(i) church open daily for devotion____

9. What services would you like the churches in your community to emphasize in the next few years? (Check all that are appropriate)

(a) counselling____
(b) family life training____
(c) economic assistance____
(d) health care____
(e) education____
(f) athletics____
(g) recreation____
(h) other Specify_____
(i) don't know____

10. Does the local newspaper function as a community bulletin board for letting people know of coming events in the community?

(a) yes____ (b) no____ (c) don't know____

11. Are enough educational features (such as health, nutrition, and recreation) published by your newspaper (in columns, special stories?)

(a) yes____ (b) no____ (c) don't know____

12. Does your community have enough voluntary citizen groups that coordinate and plan for health-related programs?

(a) yes____ (b) no____ (c) don't know____

13. Should the community recognize mental health as a part of its concern?

(a) yes____ (b) no____ (c) don't know____

14. Are there sufficient day-care centres for young children in your area?

(a) yes____ (b) no____ (c) don't know____

II. OCCUPATION AND EMPLOYMENT

15. Please check off your employment status:

(a) employed full-time____

(b) employed full-time and part-time____

(c) employed part-time only____ If employed part-time, answer question #16.

(d) unemployed____ If unemployed, answer question #18.

16. If you are employed full-time and/or part-time, are you:

(a) self-employed?____

(b) work for an employer?____

(c) both self-employed and work for an employer?____

17. Are you working part-time because:

(a) you are retired?____

(b) you are a homemaker?____

(c) you go to school?____

(d) only want to work part-time?____

(e) some other reason____ Specify_____

18. If you are unemployed, check all that are appropriate:

(a) unemployed and looking for work____
(b) retired____
(c) on maternity leave____
(d) temporarily laid off____
(e) ill____
(f) homemaker____
(g) going to school____
(h) some other reason____ Specify_____

III. SAFETY

Questions #19-24 are concerned with safety in your home and the community.

19. During the past 12 months has anyone in the family had any type of accident?

(a) yes____ Who? (e.g. myself, sister, mother)_____ age____

(b) no____ If no, go to #21

20. If you answered *yes* to question #19, where did this accident occur?

(a) at home (inside)____
(b) at home (outside)____
(c) street, highway____
(d) parking lot____
(e) at work____
(f) at school____
(g) at place of recreation____
(h) sport____
(i) other____ Specify_____

21. In the past five years, which types of accidents have occurred in your community that concerned you? (Check all that are appropriate)

(a) farming____

(b) fishing____

(c) motor vehicle____

(d) boating____

(e) home____

(f) snowmobile____

(g) bicycle____

(h) ATC (all-terrain cycle)____

22. In the past two weeks when travelling in a motor vehicle as a passenger/driver, did you fasten the seatbelt

(a) always?____ (b) most of the time?____ (c) sometimes?____

(d) never?____ (e) seatbelts not available____

(f) did not travel in a motor vehicle in the past two weeks____

23. Outside of work, are you exposed to any risk of accidents or injuries?

(a) always____

(b) most of the time____

(c) some of the time____

(d) never____ If exposed, specify_____

(e) don't know____

24. Outside of work are you exposed to any <u>substances</u> that could endanger your life?

(a) always____

(b) most of the time____

(c) some of the time____

(d) never____ If exposed, specify_____

(e) don't know____

IV. RECREATION

Questions #25 - 33 deal with your free time.

25. Which of the following best describes how you spent your free time during the last two weeks? (Check **one** only)

    (a) almost all if it by myself____

    (b) a lot of it by myself____

    (c) about half of it by myself and half of it with others____

    (d) a lot of it with others____

    (e) almost all of it with others____

26. Which of the following recreational facilities are adequate to meet the needs of Gimli? (Check **all** that are appropriate)

    (a) playgrounds for various age groups____

    (b) golf courses____

    (c) athletic fields____

    (d) recreational buildings____

    (e) swimming pool or beaches____

    (f) skating____

    (g) skiing____

    (h) camping centres____

    (i) boating, canoeing facilities____

    (j) fishing facilities____

    (k) horse, bicycle paths____

    (l) picnic grounds with equipment____

27. Are enough programs available in your community in the following areas?

	yes	no	don't know
(a) active game and sport	____	____	____
(b) arts, crafts, drama, music	____	____	____
(c) nature, gardening, camping and outing activities	____	____	____
(d) social recreation and dancing	____	____	____
(e) general club (girl guides) and hobby activities	____	____	____

28. Is there a need for a teen activity centre?

(a) yes____ (b) no____ (c) don't know____

29. Are users of public recreation facilities encouraged to offer suggestions for for changes in the program?

(a) always____

(b) most of the time____

(c) some of the time____

(d) never____

(e) don't know____

30. Is there any age group or other group of people in your community in need of recreational services which are not available to them?

(a) yes____ Specify_____

(b) no____

(c) don't know____

31. Do you travel outside your community for any of your recreational activities?

(a) yes____ For what and how often?_____

(b) no____

32. When you leave the community for shopping or other purposes to which community or city do you go?_____

33. In the past two weeks how many times have you watched a television program of an educational nature? (e.g. *Nature of Things*)

(a) 0____

(b) 1____

(c) 2____

(d) 3 or more ____

V. FITNESS

Questions #34 - 36 are about physical exercise that makes you sweat and makes your heart beat fast.

34. Do you think you are physically active?

(a) yes____ (b) no____

35. Would you like to increase the amount of physical exercise that you do?

(a) yes____ Specify_____

(b) no____

(c) don't know____

36. Are there reasons that would make greater participation in physical exercise difficult for you?

(a) yes____ Specify_____

(b) no____

VI. NUTRITION

Questions #37 - 41 are about *nutrition*.

37. Following a healthy diet is expensive and time-consuming.

(a) agree____ (b) disagree____ (c) unsure____

38. Would you rather be overweight than have to give up many of the foods you like?

(a) agree____ (b) disagree____ (c) unsure____

39. On the average, how many times a week do you eat the following foods?

	less than 2 times/wk.	2 times wk.	more than 2 times/wk.
(a) red meat (beef, pork	____	____	____
(b) whole grain bread/cereal	____	____	____
(c) vegetables	____	____	____
(d) fish or poultry	____	____	____
(e) dairy products	____	____	____
(f) fruit	____	____	____

40. When you choose the foods you are going to eat, do you choose them according to: (Check **all** that are appropriate)

(a) Canada's food guide?____

(b) personal likes and dislikes?____

(c) what the newspaper and television ads suggest you eat?____

(d) other____ Specify_____

41. Have you tried changing to 'healthier' eating habits?

(a) yes____

(b) no____ If no, please state reason(s)_____

_____

VII. MENTAL HEALTH

Questions #42 - 47 deal with the areas of family living and social relationships.

42. If you or your family were having problems, would you seek help from a:

	yes	no	don't know
(a) professional counsellor	____	____	____
(b) radio program which solves problems over the air	____	____	____
(c) family or friend	____	____	____
(d) magazine	____	____	____
(e) clergy	____	____	____

(f) other Specify_____

43. How many people, including relatives, do you consider to be your close friends?

(a) 1 - 2____ (b) 3 - 5____ (c) 6 - 7____

(d) 8 - 10____ (e) more than 10____ (f) none____

44. How many of these (from #43) are people you could talk to if you need help or had a problem?

(a) none____

(b) a few____

(c) about one-half____

(d) most or all____

45. What is/are source(s) of stress in your life at this time?

(Check **all** that are appropriate)

(a) none____

(b) home life____

(c) family____

(d) work____

(e) job dissatisfaction____

(f) state of the world____

(g) competition____

(h) getting ahead____

(i) other___ Specify_____

(j) don't know____

46. During the past few weeks, how often have you felt:

	always	most of the time	some of the time	never
(a) on top of the world?	_____	_____	_____	_____
(b) very lonely, remote from other people?	_____	_____	_____	_____
(c) particularly excited or interested in something?	_____	_____	_____	_____
(d) depressed or very unhappy	_____	_____	_____	_____
(e) pleased about having accomplished something	_____	_____	_____	_____
(f) bored	_____	_____	_____	_____
(g) proud because someone complimented you on something you had done	_____	_____	_____	_____
(h) that things were going your way	_____	_____	_____	_____

47. In summing up, would you say your days are:

(a) very happy?____

(b) fairly happy?____

(c) not happy?____

QUESTIONS #48 AND 49 ARE FOR YOUTH, 12 TO 18 YEARS OF AGE

48. Which of the following are true for you?

	always	most of the time	some of the time	never
(a) my parent(s)/(guardian(s) understand me	_____	_____	_____	_____
(b) my parent(s)/guardian(s) expect too much of me	_____	_____	_____	_____
(c) my parent(s)/guardian(s) trust me	_____	_____	_____	_____
(d) I would like to leave home	_____	_____	_____	_____
(e) I have fun with my parent(s)/ guardian(s)	_____	_____	_____	_____
(f) I have a happy home life	_____	_____	_____	_____

49. I have learned about sex through: (Check **all** that are appropriate)

(a) parents____

(b) friends____

(c) school classes____

(d) books____

(e) T.V.____

(f) radio____

VIII. HEALTH

Questions #50 - 65 relate to your health and that of your community

50. Compared to other persons of your age, would you say your health is:

(a) excellent?____ (b) fair?____ (c) poor?____ (d) don't know____

51. What is/are the most important thing(s) you personally could do to improve your health? (Check **all** that are appropriate)

(a) exercise more____

(b) improve eating habits____

(c) stop smoking____

(d) reduce alcohol intake____

(e) learn to relax____

(f) worry less____

(g) get out more____

(h) make new friends____

(i) change jobs____

(j) move____

(k) leave home____

(l) spend more time with friends____

(m) spend more time with close friends____

(n) other____ Specify_____

(o) none____

52. Which of the following are preventing you from making improvements you checked in question #51? (Check **all** that are appropriate)

(a) problem not serious____

(b) lack of time____

(c) lack of self-discipline____

(d) lack of energy____

(e) too depressed____

(f) don't know how to get started____

(g) lack of knowledge____

(h) none____

53. On which of the following topics do you feel you need more information? (Check **all** that are appropriate)

(a) safety and accident prevention____

(b) breast self-examination____

(c) stress management____

(d) family relationships____

(e) parenting skills____

(f) environmental control (re: pollution)____

(g) child development____

(h) smoking____

(i) drug abuse____

(j) alcohol abuse____

(k) AIDS____

(l) menopause____

(m) birth control____

(n) nutrition____ Specify_____

(o) mental health____ Specify_____

(p) other____ Specify_____

54. How important do you feel it is for the government to deal with each of the following topics?

	not important	somewhat important	very important	extremely important	important
(a) child health	_____	_____	_____	_____	_____
(b) eating habits	_____	_____	_____	_____	_____
(c) environmental control - i.e. pollution	_____	_____	_____	_____	_____
(d) better housing	_____	_____	_____	_____	_____
Accident prevention:					
(e) home	_____	_____	_____	_____	_____
(f) work	_____	_____	_____	_____	_____
(g) school	_____	_____	_____	_____	_____
(h) improved sanitation	_____	_____	_____	_____	_____
(i) opportunitiess for fitness	_____	_____	_____	_____	_____

55. Are enough health care programs (such as parenting skills, understanding the development of children) available for parents in the community?

(a) yes____ (b) no____ (d) don't know___

56. Do you feel you are at risk of having:

	yes	no	don't know
(a) heart disease?	____	____	____
(b) lung cancer?	____	____	____

57. I have control over whether or not I get the following diseases:

	always	most of the time	some of the time	never
(a) heart disease	_____	_____	_____	_____
(b) lung cancer	_____	_____	_____	_____

58. Do you think disease is caused by things in the environment such as pollution, food additives or work hazards?

(a) always____

(b) most of the time____

(c) some of the time____

(d) never____

(e) don't know____

59. I have control over environmental sources of disease:

(a) always____

(b) most of the time____

(c) some of the time____

(d) never____

(e) don't know____

60. What is/are your **present major** source(s) of information about health? (Check **all** that are appropriate)

(a) newspapers____

(b) magazines____

(c) television____

(d) doctor____

(e) other health professional____ Specify_____

(f) government health department____

(g) other____ Specify_____

61. Check the most important thing you have done in the past year to improve your health. (Check **only one**)

(a) increased exercise____

(b) lost weight____

(c) improved eating habits____

(d) quit smoking____

(e) drank less alcohol____

(f) learned to manage stress____

(g) nothing____

(h) other___ Specify_____

62. For each of the following statements indicate whether you agree, disagree, or have no opinion for each statement:

	agree	disagree	unsure
(a) My health is the most important consideration in my life.	____	____	____
(b) Whenever I am ill, no matter how mild the symptom, I take it seriously.	____	____	____
(c) I only think about my health from time to time.	____	____	____
(d) I participate in volunteer activities benefitting others.	____	____	____
(e) I would use a method of birth control to prevent unwanted pregnancy.	____	____	____
(f) I do my part to promote clean air.	____	____	____

63. During the past 12 months how many times did you seek help or advice from a :

	0	1-3	4-5	6-8	more than 8 times
(a) medical doctor?	____	____	____	____	____
(b) dentist?	____	____	____	____	____
(c) public health nurse?	____	____	____	____	____
(d) pharmacist?	____	____	____	____	____
(e) psychologist?	____	____	____	____	____
(f) social worker?	____	____	____	____	____
(g) counsellor?	____	____	____	____	____
(h) police officer?	____	____	____	____	____
(i) minister?	____	____	____	____	____
(j) teacher?	____	____	____	____	____

64. Do you think your place of work is an appropriate area to promote good health habits?

(a) yes____ (b) no____ (c) don't know____

65. What do you think is the most important health need/problem in Gimli?

_____

_____

_____

_____

_____

SOME BASIC FACTS ABOUT YOU

1. Age group:

   (a) 12 - 18 years____

   (b) 19 - 34 years____

   (c) 35 - 49 years____

   (d) 50 - 64 years____

   (e) 65 years and older____

2. In what year were you born?_____

3. Sex
   (a) male____ (b) female____

4. Present marital status:

   (a) married____

   (b) common law____

   (c) widowed____

   (d) divorced____

   (e) separated____

   (f) single (never married) ____

   (g) other___ Specify_____

5. What language do you use most of the time? (Choose **one** only)

   (a) English____

   (b) Ukrainian____

   (c) Icelandic____

   (d) Other___ Specify_____

6. Which of the following has happened to you during the last 12 months? (Check **all** those that apply to you)

   (a) stopped full-time schooling____

   (b) started working____

   (c) changed jobs____

   (d) lost a job or was unemployed____

   (e) quit a job____

   (f) retired from full-time work____

(g) had financial problems____

(h) got married____

(i) arrival of a baby at home____

(j) someone moved out of your home____

(k) someone moved in with you____

(l) you and your spouse separated____

(m) serious illness____

(n) serious illness of someone close____

(o) death of someone close____

(p) none of these____

(q) other____ Specify_____

7. What is the highest grade or year of school you completed?

(a) Grade 1 - 6____

(b) Grade 7 - 9____

(c) Grade 10 - 12____

(d) Technical/Vocational Training____

(e) Some University Training____

(f) Undergraduate University Degree____

(g) Postgraduate University Degree____

8. For statistical purposes we need to know your total **household** income for 1986. Please check the line which best represents **all** the money **all** members of your household earned or received (before taxes):

(a) under $9,999____

(b) $10,000 - $14,999____

(c) $15,000 - $19,999____

(d) $20,000 - $29,999____

(e) $30,000 - $39,999____

(f) $40,000 - $49,999____

(g) over $50,000____

(h) not sure____

Appendix F

Newspaper Article: Gimli health group seeks volunteers

24 THE INTERLAKE SPECTATOR Wednesday, September 2, 1987

Gimli health group seeks volunteers

Six months ago Gimli residents combined their efforts to form a committee which would look at the health issues concerning their community.

The committee consists of citizens who will be studying the environmental, recreational, social and mental health needs within the area.

In the past, other health programs have been started through government agencies but have not always dealt with community concerns.

This recently formed committee intends to identify the needs of the community through the use of a survey which will involve community participation. Programs will then be developed according to the responses received from the survey.

Volunteers are currently required as interviewers for the survey. The survey will be conducted during the last week in October. For more information about the program, contact Wade Bilodeau in Gimli.

Appendix G

Cover Letter to Each Survey Resident

November 23, 1987

Dear community resident,

Your community will be given the opportunity to participate in a survey that looks at the health needs of Gimli. During the week of November 30th you will be asked to fill out the questionnaire.

A trained volunteer will leave a questionnaire at your home. At this time the volunteer will make arrangements, at your convenience, to pick up the completed questionnaire. When the questionnaire is picked up, it is placed in an envelope and sealed. All answers you give are confidential and your name never appears on the completed questionnaire.

If there is a youth, aged 12 - 18 years old, who resides in your house, your permission, for their participation will also be requested. Approximately 45 minutes of your time is required to complete the questionnaire.

You, along with 300 of your neighbors will be asked to complete the survey. Upon completion of the survey, a summary of the results will be forwarded to you.

The survey was developed by the Gimli Health Promotion Committee. This committee is composed of members of Gimli who want to know your views on health.

Your assistance in completing the survey is very important to determine the overall health needs of Gimli.

Thank you for your co-operation.

If you have any questions contact Wade Bilodeau at

Yours truly,

Gimli Health Promotion Committee
P.O. Box 1290
Gimli, Manitoba

Appendix H

Questionnaire for Validating Committee

CONTENT VALIDATION OF KOSHELUK'S QUESTIONNAIRE

1. Can you think of other sources that should be added to the questionnaire?

   Yes (if yes, what sources?)

   No

2. Should any sources be deleted?

   Yes (if yes, which ones and why?)

   No

3. Should any topics be added to this list?

   Yes (if yes, what topics and why?)

   No

4. Should any topics be deleted?

   Yes (if yes, what topics and why?)

   No

5. Are there any questions that you found difficult to interpret?

   Yes (if yes, which question(s) and why?)

   No

6. Does the questionnaire create a positive impression, one that motivated you to answer it?

   Yes

   No (if no, please comment)

7. Did/would you feel uncomfortable answering any of the questions?

   Yes (if yes, which one(s) and why?)

8. Were there any words that you did not understand?

   Yes (if yes, which word(s)?)

   No

9. Does any aspect of the questionnaire suggest bias on the part of the researcher?

   Yes (if yes, which aspect(s)?)

   No

10. How long did it take you to complete the questionnaire?