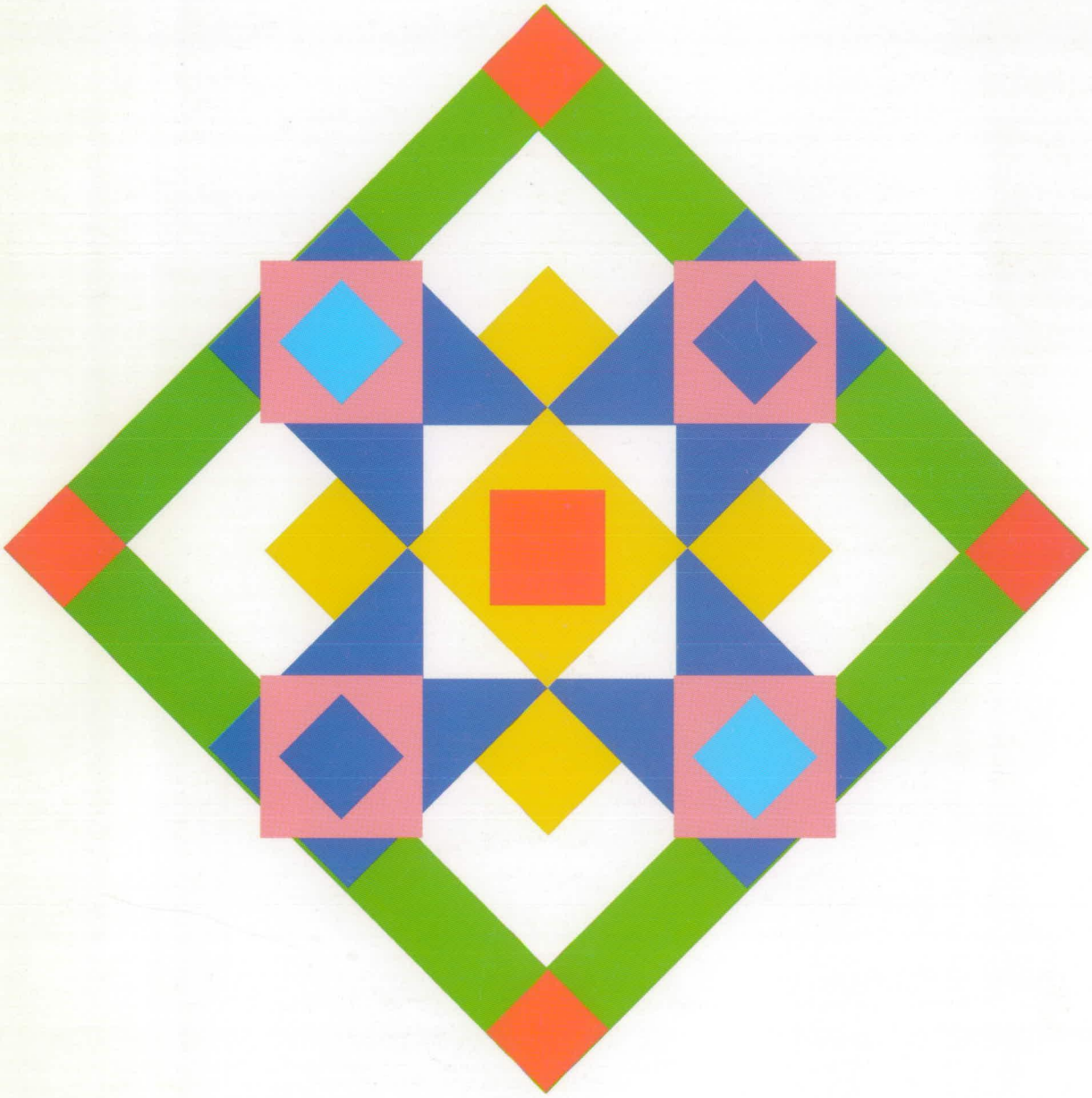
Health Promotion for Older Canadians:

Knowledge Gaps and Research Needs



Edited by:
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March, 1994

HEALTH PROMOTION FOR OLDER CANADIANS: KNOWLEDGE GAPS AND RESEARCH NEEDS

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INTRODUCTION

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Health promotion can be broadly defined as any program, targeting individuals, groups or communities in society, which promotes healthy behaviours (Epp, 1986). The field of health promotion has proliferated since the 1970s, at which time mounting pressures on governments and health institutions from many groups both within and outside of their respective health care systems supported a new perspective on health. In part, this approach has developed in opposition to an overmedicalized health care system, however, it has also arisen out of recognition that health extends beyond the absence of illness. Social-psychological, life-style, cultural, economic and environmental factors have been integrated into health promotion models in fundamental ways that have reshaped conceptions of the determinants and consequences of health.

Health promotion research can be defined as any rigorous research activity that attempts to establish the efficacy or efficiency of a health promotion program and/or to further our understanding of the etiology and causes of health behaviours and their amelioration. The evaluation of health promoting activities encompasses the determination of specific outcomes, investigation into the process of program organization and delivery, and the examination of questions such as how partnerships are formed between researchers and communities to solve health problems. Health
promotion research draws from research strategies originating from various epistemological traditions, including both quantitative and qualitative approaches. The inclusion of concepts of community and individual empowerment, self-help, mutual aid, etc. into the language of health promoters has led to greater acceptance of differing methodologies, as well as their triangulation. It has also

challenged researchers to integrate new theories and conceptual frames into our analyses. Further, we are witnessing a growing interest in participatory health promotion research, which attempts to significantly involve the people for whom the health promoting activity is intended.

In recent years, there has been a rapid growth in programs attempting to apply health promotion principles to improve the health of older individuals. However, research has not kept pace and there has been a disturbing tendency in the literature to assume that research findings for younger age groups are applicable to all older adults. As an indication that this is not necessarily the case, research in the area of exercise behaviour demonstrates that both the tailoring of the activity program and its likely effects are age-specific. Even within the broader field of health promotion, there are significant gaps between our theoretical models and our program implementation models. It appears as though we have reached a watershed in health promotion research for older adults, one that challenges us to work within this area of research in creative and innovative ways.

THE ORIGIN AND GOALS OF THIS BOOK

The chapters that comprise this book originated as papers presented at a workshop bearing the same title held on October 28, 1993 in Montreal, Quebec, in conjunction with the 23rd Annual Meeting of the Canadian Association on Gerontology. As the member organization of the British Columbia Consortium for Health Promotion Research specialized in issues of aging, the Simon Fraser University Gerontology Research Centre took responsibility for sponsoring and organizing the workshop.

The objectives of the workshop were: 1) to critically review existing research findings and research tools and strategies applied to health promotion programs targeted to the elderly and 2) to identify knowledge gaps and prioritize topics that should contribute to the agenda for future health promotion and aging research in Canada.

ORGANIZATION AND CONTENT OF THE BOOK

The book contains eight chapters. The first seven chapters present a comprehensive review of the literature on their chosen topic and reflect a diversity of theoretical and methodological approaches to research on health promotion and aging.

The first chapter is written by Helene Payette and addresses the difficulties in evaluating nutrition interventions for older adults. Gina Bravo, in Chapter 2 examines the effectiveness of exercise programs for osteoporotic women through a meta-analysis of 15 studies. In Chapter 3, Joseph Tindale and Susan Hardie describe a participatory health promotion research project with older adults who are consumers of the mental health system. In Chapter 4, Joan Norris, Adam Davey, and Stephanie Kuiack address the challenges associated with evaluation of self-help and mutual aid programs for older adults. A description of participants and an outcome evaluation of a "Living Well" program is presented in Chapter 5, written by Dorothy Craig and Carol Timmings. Nancy Hall provides a community health perspective on research on seniors' health promotion programs in Chapter 6. Chapter 7, written by the workshop organizers and the editors of this volume, Andrew Wister and Gloria Gutman, articulates the problems and potentials of using large data sets for health promotion research. The eighth and concluding chapter provides the recommendations that were the end product of the workshop. These, and summaries of the preceding chapters, are presented in French at the end of the volume.

ACKNOWLEDGMENTS

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into the workshop and then into this book. We also wish to express our sincere thanks to the individuals who contributed the seven papers presented at the workshop and later, expanded them into the chapters found here. Thanks also to Norah Holtby, Program Assistant with the SFU Gerontology Diploma Program, who assisted with the book's production.

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CHAPTER 1

POTENTIALS AND PITFALLS IN EVALUATING NUTRITIONAL STATUS AND NUTRITIONAL INTERVENTIONS IN OLDER ADULTS

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ROLE OF NUTRITION IN HEALTH PROMOTION FOR THE ELDERLY

In the recent past, nutrition in the elderly was not considered as important as that in young adults for whom food habits have been traced as etiological or promoting agents for the development of many chronic diseases, such as cardiovascular diseases and cancer. It is still widely believed that concern about nutrition is not relevant in the elderly population because: 1) unhealthy food habits that have been established for years cannot be changed; 2) it's too late anyway, the harm has already been done; and 3) nutritional needs decrease with aging and, in any case, the thinner old people are, the better they feel and the healthier they are.

Recent research findings have demonstrated the crucial role of nutrition in promoting and maintaining health and independence in the elderly. Analyses of data collected in the context of NHANES-1 Epidemiologic Follow-up Study in the U.S. suggested a U-shaped relationship between, on the one hand, anthropometric indices of nutritional status and, on the other, functional capacities (Galanos, Pieper, Cornoni-Huntley, Bales & Fillenbaum, 1992) and mortality (Cornoni-Huntley et al., 1991), after controlling for confounding variables such as smoking habits, diseases and short-term mortality. Both high and low body weight were associated with a higher risk of functional limitations and mortality. Risk of coronary heart disease increases in older women with a body mass index (BMI = weight/height2) greater than 25 and

also in thinner women, particularly those who experienced significant weight loss (Harris, Ballard-Barbasch, Madans, Makuc & Feldman, 1993). The risk remains significantly higher even after controlling for age, smoking and alcohol habits, blood pressure, diabetes, cholesterol levels, education and estrogen use. At a later age, being underweight as well as overweight was identified as a risk factor for the development of cardiovascular disease. Furthermore, a positive association was observed between weight loss and cardiovascular mortality among older persons (Deeg et al., 1990).

The amount of weight lost over the previous year along with serum albumin concentration were two of the most important factors in predicting the risk of developing an infectious disease or major complication among patients admitted to a geriatric rehabilitation unit (Sullivan, Patch, Walls & Lipschitz, 1990). Discounting cases where weight loss is a manifestation of an underlying terminal disease, it is valid to state that weight loss is related to inadequate dietary intake and can be prevented by appropriate and early nutritional intervention (Gray-Donald & Payette, in press).

In a community setting, risk of falling was associated with poor nutritional status as illustrated by anthropometric or biochemical indices (Vellas et al., 1992). Analysis of data from NHANES-1 Epidemiologic Follow-up Study suggested that weight loss plays an independent role in the risk of hip fracture in post-menopausal women (n=1500) aged 60 to 74 years at baseline (Harris, Looker, Madans & Bacon, 1992). These findings are of concern in view of the importance of falls and fractures in initiating functional dependency in the elderly. Other indices of nutritional status, such as inadequate energy intake and serum albumin concentration, appear among the risk factors for physical disability (Hubert, Bloch & Fries, 1993).

In hospital, nutritional supplements are beneficial to undernourished elderly patients in terms of general health including time to recovery (Bastow, Rawlings & Allison, 1983; Schorah et al., 1981). In a generally healthy elderly population,

nutritional supplements improved immune response and resistance to infectious diseases (Chandra, 1992). Infections are still a major cause of morbidity in elderly patients (Yoshikawa, Norman & Grahn, 1985).

ASSESSMENT OF NUTRITIONAL STATUS IN THE ELDERLY

The maintenance of optimal nutritional status by consuming nutritious foods in sufficient quantities appears to be an essential part of health promotion for elderly people. The methods used in nutritional assessment need to be valid, reliable and precise, whether in the context of:

- **nutrition surveys** designed to: 1) describe nutritional status, 2) identify subgroups at risk of malnutrition, or 3) obtain information on the extent of existing nutritional problems;

- **nutritional surveillance** designed to monitor the nutritional status of selected population groups (e.g., a high-risk subgroup identified in nutrition surveys); or

- **nutrition screening** in order to identify as early as possible malnourished individuals requiring intervention.

Selection bias is particularly critical in nutrition surveys of those aged 65 and older because this age group is extremely heterogeneous in health status and disease burden (Zimmer et al., 1985). The sampling method may systematically exclude certain segments of the population and preclude the identification of true nutritional problems or identification of high risk groups. Participation bias (or self-selection bias) has the same impact on research results since participants in research and health promotion programs tend to be healthier and more educated, have a higher income and be better nourished than non-participants (Euronut SENECA investigators, 1991; Wagner, Grothaus, Hecht & LaCroix ,1991).

There is a lack of valid and reliable methods for screening the elderly for nutritional risk. Some validation work is in progress on a "Public Awareness Check- List" aimed at the general elderly population developed by the Nutrition Screening Initiative in the U.S. (Posner, Jette, Smith & Miller, 1993). At the present time, we are in the process of validating a tool to screen for nutritional risk among community-living functionally-dependent elderly people. Clearly, more research work is needed in this area in the context of promoting nutritional health for senior Canadians.

NUTRITIONAL ASSESSMENT METHODS

Among the different methodologies used for nutritional assessment, the **dietary method** yields information on the first stage of nutritional deficiency. The aim of this method is to assess the adequacy of dietary intake. The **laboratory method (also called the biochemical method)** is used to identify a subsequent stage of nutritional deficiency. The method documents, for example, the depletion of tissue stores of specific nutrients and decreased levels of nutrients or their metabolites in certain body fluids and tissues. **Anthropometry** is the measurement of physical dimensions and body composition. It provides information on past nutritional history and is useful in identifying imbalances in protein or energy. The **clinical method** involves taking a medical history and doing a physical examination in order to detect signs or symptoms associated with malnutrition (e.g. glossitis of the tongue). The clinical signs and symptoms are nonspecific and they develop at an advanced stage of nutrient depletion. Since it is desirable, in the context of health promotion, to detect nutritional deficiencies before a clinical symptom develops, and because laboratory methods require invasive blood sampling and are less practical in the field, the following discussion will focus on dietary and anthropometric methods for the nutritional assessment of the elderly.

Dietary assessment: measurement and indices

There are three stages in the process of dietary or anthropometric assessment of nutritional status. The first stage in

dietary methodology consists of measuring individual food consumption and, in anthropometry, of measuring physical dimensions such as height and weight. The second stage involves the computation of indices; examples include nutrient intakes estimated from food consumption data, and body mass index (BMI=weight/height2) derived from a combination of height and weight. The last step consists mainly of comparing the collected data with norms or predetermined cutoff points in order to identify risk levels.

Some of the methods used to measure individual food intake may present some limitations when used with elderly populations. In the 24-hour recall method, subjects are asked by a qualified interviewer to recall their exact food intake during the preceding 24-hour period. The method is easy, rapid and not too demanding for the interviewed subjects. The interviewer ensures the accuracy of portion size estimates. The use of 24-hour recall with elderly people has been criticized on the grounds of poor memory associated with aging (Campbell & Dodds, 1967). However, this drawback has been disproved by other authors who have demonstrated the capacity of older subjects to recall foods and beverages consumed the previous day with satisfactory accuracy (Dubois & Boivin, 1990). The issue regarding this method is more of a concern with the use of only one day's food recall to estimate "usual" individual energy and nutrient intake. Many studies investigating the nutritional status of elderly individuals assumed that the one day food consumption represents their usual food intake and then examined the computed nutrition indices in relation to other health characteristics of the individual or compared them with nutrition recommendations. But the food intake of an older person may vary according to the day of the week, season, daily disease symptoms, provision of help with preparation of meals, or with a stressful event such as the death or illness of a close relative. A few studies examined the impact of these factors on intra-individual variability in nutritional intake in elderly populations (Borrelli, Cole, Di Biase & Contaldo, 1989; Hunt, Leonard, Garry & Goodwin, 1983; McAvay & Rodin, 1988; Nelson, Black, Morris & Cole, 1989). This information is essential in determining the number of days of dietary intake to be obtained

from each subject in order to reflect usual energy and nutrient intake. This latter variable should be used when the relationship between diet and biological parameters is being assessed, when the adequacy of the diet is being examined by comparing intake with recommendations, as well as when obtaining information on the extent of nutritional problems or evaluating the impact of nutrition programs. We have demonstrated that three non-consecutive 24-hour recalls were sufficient to accurately describe the usual intake of most nutrients in both free-living independent (Payette & Gray-Donald, 1991) and functionally-dependent (Gray-Donald & Payette, in press) elderly subjects.

As regards recording methodology, the subject is asked to record a detailed description of all foods and beverages consumed during a specific time period, as well as their method of preparation and cooking. The quantities consumed are either weighed or estimated by the subject. The application of this method is limited in elderly people since the respondents must be highly motivated, numerate and literate. Furthermore, the method is not practical in cases where writing is difficult or impossible because of arthritis or Parkinson's disease. It could be used in healthy, free-living, highly-educated elderly subjects; however, this group of the population is generally well nourished and shows a low prevalence of nutritional problems (Garry, Goodwin, Hunt, Hooper & Leonard, 1982; McGandy et al., 1986; Payette & Gray-Donald, 1991).

The food frequency questionnaire is designed to assess the frequency with which certain food items or food groups are consumed during a specific period of time (day, week, month or year). The information can be obtained by interview or the questionnaire can be self-administered. It was originally designed to obtain qualitative information about usual food consumption patterns; some semi-quantitative forms have also been developed (Gibson, 1990). Food frequency questionnaires have rarely been used with elderly populations. One limitation could be the level of abstraction that may be difficult for the extremely elderly to understand. However, some validation procedures are in progress in Australia using a large random sample of elderly people (Horwath, 1993). Another limitation of the method is the fact that

it ranks subjects into broad categories of intake of different food components and provides little information on the total quantity of food consumed, which is frequently the nutritional risk experienced by elderly people. More research is needed to evaluate the use of this method in different subgroups of the aging population.

A diet history attempts to estimate the usual food intake of individuals over a relatively long period of time (Burke, 1947). It is labor-intensive, unsuitable for large surveys and requires a highly-skilled interviewer. The length of the interview is a major limitation in the use of this method with older people.

In summary, the most common and practical tool used for collecting food consumption data for community-dwelling elderly is the repeated 24-hour recall. However, it was not always appropriately used until now.

Dietary assessment: interpretation

Once we have obtained the relevant index - "usual nutrient intake", we need to interpret it. The adequacy of the diet is evaluated by comparing individual nutrient intake with nutrition recommendations such as the Recommended Nutrient Intake (RNI) in Canada (Ministere de la Sante et du Bien-etre social, 1990) and the Recommended Dietary Allowances (RDA) in the United States (Committee on Dietary Allowances, Food and Nutrition Board, National Research Council, 1989). Current recommendations for people aged 50 and over are largely extrapolated from those for young adults. They are age- and sex-specific and intended for generally healthy populations that are homogeneous in terms of health status, medication use and food habits. The age categories for older adults in the Canadian norms are 50-74 and 75 and over, and the American norms have only one category for 50 and over, whereas the elderly population is a highly heterogeneous one. Physiological age is not necessarily equivalent to chronological age as the aging process develops differently from one individual to the next.

At the present time, there is no consensus on nutritional requirements for the elderly and much debate surrounds the appropriate recommended nutrient intake for this population group (Hegsted, 1989; Russell & Suter, 1993; Schneider, Vining, Hadley & Farnham, 1986). As an illustration of the difficulties in establishing nutritional requirements, let us examine the controversy about the protein needs of older adults. Some authors state that the recommended amount (0,8g/kg body weight) is not sufficient to maintain nitrogen metabolic balance (which is the best biochemical index for detecting inadequate protein intake) in elderly people. It is argued that current data suggest that health in aging (for subjects with no debilitating disease) can be maintained on an average daily intake of 1g protein per kg body weight (Kritchevsky, 1992). It is recognized that nitrogen balance is substantially affected by the amount of energy in the diet and energy intakes are dramatically decreased in certain sedentary groups of older people. The degree of chronic illness is also relevant to protein requirements. It may not be satisfactory to propose nutrition recommendations only for the healthy elderly; they should also take into account people who need additional energy, protein and nutrients to compensate for the ravages caused by chronic disease. In the field of nutritional requirements, we need to examine different groups of older people ranging from the healthy to the sick (Kritchevsky, 1992). Links between vitamin and mineral nutriture and certain age-associated chronic diseases and degenerative changes still have to be elucidated. Furthermore, the effect of medication use on nutritional status needs to be addressed in ongoing research.

Anthropometric assessment

The first step in the assessment of nutrition anthropometry is the measurement of physical dimensions such as weight, height and skinfolds. In a community setting, weight can easily be obtained with a portable electronic scale which gives precise measurements if it is used according to standardized techniques and is calibrated before each use. Problems may arise, however, with older people who have difficulty standing erect without help.

The validity of self-reported weight has been studied and a high correlation has been observed between measured and recalled weight in elderly people (Boutier & Payette, 1994; Rowland, 1990).

Stature measurement, however, poses real practical problems in older adults. First, height decreases with advancing age (Chumlea, Garry, Hunt & Rhyne, 1988; Cline, Meredith, Boyer & Burrows, 1989) almost entirely because of shrinkage of the vertebral column. Furthermore, many older persons suffer from spinal deformities, such as kyphosis, or are unable to stretch their knees, with the result that stature measures are spurious. Indirect estimates of stature from a measure of knee height was demonstrated to be accurate in a small non-representative sample of elderly persons (Chumlea, Roche & Steinbaugh, 1985). The equations developed need to be validated with large representative samples. Recalled height was shown to be highly correlated with measured height in elderly population groups (Boutier & Payette,1994; Heany & Ryan, 1988; Rowland, 1990).

Body mass index (BMI=weight/height2) calculated from height and weight measures is an estimate of adiposity. Cut-off points have been proposed as guidelines for the evaluation of weight in adult populations based on epidemiological, clinical and metabolic evidence relating BMI levels to the development of chronic diseases and mortality (Health and Welfare Canada, 1988). A U-shaped relationship was demonstrated between weight and mortality, with both the underweight and the overweight at higher risk. The use of the BMI as a predictor of morbidity and mortality risk in the elderly population has been restricted owing to the observed changes in physical dimensions (e.g. height) and body composition (e.g. redistribution of fat) (Borkan, Hults, Gerzof, Robbins & Silbert, 1983; Forbes, 1987). Recent studies with a large sample of elderly subjects suggested a similar U-shaped relationship in older age groups but body weights related to optimal survival appear to be higher than those currently recommended for younger adults (Cornoni-Huntley et al., 1991;Harris et al.,1988).There is a dearth of appropriate standards for the anthropometric assessment of nutritional status in the elderly population.

Similar difficulties arise with the measurement of tricep skinfold that is used together with arm circumference to estimate percent body fat and mid-arm muscle area which reflects muscle mass (Gibson, 1990). The measure is altered because of tissue flaccidity, increased compressibility of subcutaneous tissue and decreased elasticity of the skin so that isolating adipose tissue from muscle is difficult. Further problems arise when these measures are used to estimate body composition. Arm circumference and tricep skinfold measurements are used to estimate subcutaneous fat deposits and muscle bone area with the assumption that the size and proportion of fat and fat-free mass measured at the mid-arm are good estimates for the body as a whole (Gibson, 1990). Normal aging is associated with loss of skeletal muscle mass (Cohn et al., 1980; Kehayias, Zhuang, Fiatarone, Roubenoff & Evans, 1991) and redistribution of adipose tissue from peripheral to central and intra-abdominal deposition (Schwartz et al., 1990). These changes limit the ability of measurements such as arm circumference and triceps skinfold to correctly predict muscle, bone or fat area in the elderly since predictive equations and reference data are derived from measurements in young and middle-aged adults.

In summary, anthropometric indices of nutritional status in the elderly can lead to spurious interpretation because of the alteration in the composition and physical properties of certain tissues and the use of invalid assumptions in the derivation of body composition. There is a need for reference data and age-appropriate norms obtained from a large representative sample of older Canadians.

EVALUATION OF NUTRITION PROGRAMS FOR COMMUNITY-LIVING ELDERLY

Two types of nutrition programs are presently available for elderly populations. In the case of congregate meals, elderly people in a given community are invited to share a lunch meal with their peers. These programs are generally offered by local community centers and the objectives are both nutritional and social

(Schwartz, 1987). The "Meals on Wheels" program consists of home-delivered lunch meals. Volunteers deliver meals one to five days a week. Clearly, the two programs are not intended for the same population group. Participants in "Meals on Wheels" are more homebound, functionally dependent, chronically ill and at a higher nutritional risk as compared to participants in congregate meals who are mainly autonomous, generally healthy and able to go to the community center where the meal is offered.

CONGREGATE MEALS

Few evaluation studies of congregate meals exist and the majority originate in the United States. They mainly have examined the dietary intake - generally only one day's intake - of participants and compared them with nutrition recommendations (RDA) (Committee on Dietary Allowances, Food and Nutrition Board, National Research Council, 1989). Nutrients most likely to be deficient in the diet were energy (Caliendo, 1980; Clarke, Schlenker & Merrow, 1981; Grandjean, Korth, Kara, Smith & Schaefer, 1981; Leclerc & Thornbury, 1983; Walker & Beauchene, 1991), calcium (Caliendo, 1980; Grandjean, Korth, Kara, Smith & Schaefer, 1981; Leclerc & Thornbury, 1983; Walker & Beauchene, 1991) thiamin (Caliendo, 1980; Grandjean, Korth, Kara, Smith & Schaefer, 1981; Leclerc & Thornbury, 1983) vitamin A (Grandjean, Korth, Kara, Smith & Schaefer, 1981; Leclerc & Thornbury, 1983) and vitamin B6 (Grandjean, Korth, Kara, Smith & Schaefer, 1981). These studies differ greatly with respect to dietary assessment methodology which is often inappropriate; for example, one to three day's intake are used including weekend or not, consecutive or not, including day of congregate meal or not. Therefore, conclusions based on the results obtained are difficult to establish.

The congregate meal generally contributes 33% to 60% of the total daily energy and nutrient intake (Caliendo, 1980; Holahan & Kunkel, 1987; Kohrs, O'Hanlon & Eklund, 1978). However, some authors mentioned that the contribution of the congregate meal was no different from a lunch meal consumed at home (Holahan & Kunkel, 1987). It may be that this variable is not relevant in an evaluation of the impact of nutrition programs on the elderly.

The comparison of participants with non-participants in congregate meals to evaluate the impact of the meals poses several methodological problems. First, the choice of a comparison group is difficult. We reviewed three studies with different sampling techniques where neighbours and those on a waiting list for the program were used as sources of non-participants, with the assumption that these people were similar to the participants. Results suggest no difference in nutritional intake between participants and non-participants (Leclerc & Thornbury, 1983) or a slightly higher intake of certain nutrients among the participants (Khors et al., 1980; McNaughton & Kilgore, 1986). Sample sizes are generally too small (n=26 to 27 per group) to account for the great inter-individual variability in this population and subject characteristics are not reported. Therefore, these studies suffer from a lack of statistical power and possibly also, a lack of comparability of the control and experimental groups. Further, neither the social nor the psychological impact of the congregate meals was rigorously evaluated in any of these studies (Schwartz, 1987; Walker & Beauchene, 1991).

To our knowledge, similar nutrition programs in Canada have never been evaluated. Results from American evaluation studies suggest that these programs may be inadequate with respect to meeting the dietary requirements of older people for certain nutrients. Well-planned evaluation studies are essential in order to offer appropriate services and target the elderly sub-population that will benefit most from these programs.

MEALS ON WHEELS

Three Canadian studies assessed the dietary intake of elderly people receiving home-delivered meals (Johnson & Feniak, 1965; Lee, Olsen & Friel, 1984; Owen, Krondl & Csima, 1992). The strategies were essentially similar to those used to evaluate congregate meals. They reported low mean energy intakes and marginal intakes of calcium, iron, vitamins A and C, thiamin and riboflavin compared to Canadian nutrition recommendations.

Results from American studies are similar: a high proportion of elderly subjects receiving home-delivered meals were consuming less than two-thirds of the recommended intakes (RDA) of many vitamins (A, B6, C, thiamin, riboflavin) and minerals (calcium, iron, magnesium, zinc) (Asp & Darling, 1988; Steele & Bryan, 1986; Stevens, Grivetti & McDonald, 1992; Walden, Hayes, Lee & Montgomery, 1988). Some authors went a little further in the assesment of nutritional status and reported a high prevalence (more than 30%) of protein-energy malnutrition (Bunker, Lawson, Stansfield & Clayton, 1987; Lipschitz, Mitchell, Russell, Steele & Milton, 1986).

Contribution of the home-delivered meal to total daily intake was also examined in order to evaluate the impact of this program. It varied from 22% to 57% depending on the subjects and the nutrient studied (Owen, Krondl & Csima, 1992; Walden, Hayes, Lee & Montgomery, 1988). Obviously, this proportion is highly dependent on total daily intake, being lower for better nourished individuals. Fifty percent of the subjects studied reported saving part of the meal for consumption at a later time (Asp & Darling, 1988). Utilisation of the total energy provided by the meal varied from 75% (Owen, Krondl & Csima, 1992) to 85% (Fogler, Coleman, Krondl, & Lau, 1992).

One American study compared the food consumption of 32 subjects receiving home-delivered meals five times a week with that of 22 subjects on the waiting list for this service (Steele & Bryan, 1986). It appeared that the control group had a higher intake of carbohydrate, thiamin and iron than the "Meals on Wheels" clients. However, the experimental group was older and no mention was made of the health status of the subjects or other variables potentially associated with dietary intake. Using another strategy, Walden, Hayes, Lee and Montgomery (1988) compared the food consumption of 16 elderly "Meals on Wheels" recipients during weekdays to their food intake at weekends when the service was not available. Weekend intakes of energy and macronutrients were lower than those on weekdays. However, other non-measured factors may have been responsible for the difference observed.

One study from the Netherlands (De Graaf, Staveren, Sneeuw & Stam, 1990) described the characteristics of recipients of home-delivered meals (n=77) . They were older, less healthy, less mobile, frequently homebound and more isolated than the general elderly Dutch population. It appears likely that elderly participants in nutrition programs, particularly those receiving "Meals on Wheels" services, represent a subgroup of the elderly population at higher risk of energy and nutrient deficiencies. It may be that community nutrition programs currently offered to older Canadians are inadequate in terms of satisfying their nutritional requirements, and they need to be strictly evaluated.

METHODOLOGICAL GAPS AND RESEARCH NEEDS IN EVALUATION STUDIES OF NUTRITION PROGRAMS FOR THE ELDERLY

To summarize the methodological gaps that were noted in evaluation studies of nutrition programs for the elderly, first we should mention the selection of participants. Participation rates, when reported, are very low so we may need to adopt more flexible data collection procedures such as multiple recruitment contacts, flexible follow-up schedules and making provision for proxy respondents. Secondly, the choice of control group and sample size warrant strict consideration in order to ensure that the studies have adequate statistical power to detect the effect of these programs. Furthermore, appropriate dietary assessment methodology should be selected according to the objectives of the study and the characteristics of the study subjects.

In addition to having data on healthy older adults, we need to know the extent to which comprehensive health promotion programs are useful for older adults with chronic disease, psychological distress, or functional disabilities. These sub-groups are more frequent users of medical care services and nutrition and health programs may have the greatest detectable impact on them. Further, research is needed to characterize those who do and do not agree to participate in nutrition programs in order to assess the

accessibility and feasibility of these programs and their place in the continuum of care.

In terms of research needs in health promotion for older Canadians, valid and reliable tools to screen for nutritional risk as well as methods for collecting dietary and anthropometric data in the community should be developed and made available to community researchers and health professionals. In order to interpret nutritional data and plan appropriate nutritional intervention, we need to know more about nutritional requirements in health and disease states, and also age-appropriate norms for anthropometric indices will have to be developed. Nutrition programs should be monitored for their effectiveness as measured, not only by improved nutritional intake, but also by improved functioning. To this end, it may be necessary to develop functionally-oriented nutritional assessment (Institute of Medicine, 1990).

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CHAPTER 2

EXERCISE PROGRAMS FOR OSTEOPOROTIC WOMEN

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OSTEOPOROSIS: EXTENT OF THE PROBLEM

Osteoporosis is an age-related disease characterized by an excessive reduction in bone mass when compared to that of individuals of the same age. The resulting bone fragility predisposes to fractures following minor trauma. In North America, osteoporosis is the most common skeletal disorder and is second only to arthritis in terms of musculo-skeletal morbidity (Ausenhus, 1988). In Canada, it is estimated that more than 850,000 individuals suffer from osteoporosis and that some 2.5 million women risk painful and sometimes disabling fractures (Josse, 1989). By the age of 60, 25% of women will have suffered a compression fracture (Quigley, 1986). Among those aged 50 and over, the risk of sustaining a hip fracture quadruples each decade (Lukert, 1982). Such fractures among the extremely old have serious consequences. Death occurs in 12% to 20% of the cases with 16% dying within three months of the fracture. Half of the survivors will end their days in a long-term care facility.

The treatment of fractures due to osteoporosis costs Canadians approximately $300 million per year (Tenenhouse, 1989). But the costs cannot be measured solely in terms of dollars; fracture victims undergo a dramatic reduction in their quality of life attributable to hospitalizations, surgical interventions, diminished physical capacities and deterioration in social contacts. Psychological effects such as the loss of self-esteem or the fear of falling are two other factors that need to be considered. Because of these physical and psychological consequences, osteoporosis is recognized as a major public health problem and as one of the main causes of declining autonomy among the elderly.

REVIEW OF THE LITERATURE

The gravity of the preceding data, combined with the continual aging of the population, has given rise to a growing interest in developing strategies designed to prevent or slow down the progression of the disease. In particular, the potential of physical activity for increasing bone mass has been the subject of a number of studies (Blumenthal, et al., 1991; Dalsky, 1987; Dilsen, Berker, Oral & Varav, 1989; Schapira, 1988). Physical activity was first identified as one of the major determinants of peak bone mass in adults (Aloia, Vaswani, Yeh & Cohn, 1988). In addition, accelerated loss of bone has been partly attributed to a lack of physical activity, with trabecular bone being more sensitive than cortical bone (Donaldson, Hulley, Vogel, Hattner, Bayers & McMillan, 1970; Mazess & Whedon, 1983). These observations led a number of researchers to study the preventive and therapeutic potential of exercise. Recently, an exhaustive review of the literature has been performed with the objective of conducting a meta-analysis on the results currently available regarding the effectiveness of physical activity in the prevention and treatment of osteoporosis. Relevant documentation was identified through a Medline computer search and by scanning references in review articles. Only those prospective studies with a control group that were designed to evaluate the effectiveness of an exercise program for women were considered for the meta-analysis. Bone density was the primary outcome measure for the analysis. This step generated 177 documents, 147 of which were excluded: 115 did not report the results of a study, 28 involved cross-sectional studies, three were prospective studies with no control group, and one was an abstract presented at a scientific meeting (see Figure 1). Of the 30 articles that reported the results of a longitudinal study in which a control group was present, 15 more had to be rejected: 5 because the results are presented for both sexes combined; 4 because the article was a reanalysis of a study already retained for the meta-analysis; 3 because a co-intervention was received by the exercise group and 3 because the data needed for the meta-analysis were not reported.

Of the 15 studies retained for the meta-analysis, the majority were done with healthy women, which places these studies in the context of primary prevention. The results tend to indicate that an increase in regular exercise on the part of these women slowed down bone loss without increasing it to any significant extent (Block, Smith, Friedlander & Genant, 1989). The effect of physical activity in the treatment of osteoporosis is, however, less well documented. The evidence in this regard is based primarily on three studies. In a study reported by Krolner, Toft, Nielsen and Tondevold (1983), 31 women with previous Colles' fracture of the forearm were assigned to an exercise program or a control group according to the proximity of their home to the hospital where the program was conducted. After eight months' treatment consisting of one hour of exercises twice a week, the authors observed an insignificant increase in the bone mineral content of the lumbar spine in the experimental subjects. Over the same period, the bone mass of the controls decreased significantly. However, no effect could be detected on the bone mineral content of the previously fractured forearm. In a five-month study, Simkin, Ayalon and Leichter (1987) followed 14 osteoporotic women enrolled in an exercise program consisting of three one-hour sessions per week. Diagnosis of these patients was based on the criteria developed by Smith and Rizek (1966). They were matched for age, weight and height with a group of 26 controls. Initial bone density was not a criterion for matching and in pre-treatment, the two groups proved not to be equivalent with respect to this variable. At the end of the program, the authors observed a significant increase in the bone density of the distal radius of the exercisers as measured by the Compton scattering technique. Over the same period, the controls experienced a significant loss in bone density of about 1.9%. However, no change in the bone mineral content of the same site could be detected when measured by single-photon absorptiometry. The study conducted by Dilsen, Berker, Oral and Varav (1989) involved 24 women aged 39 to 80 who had been diagnosed osteoporotic by Quantitative Computed Tomography. Half of these women participated in one-hour exercise sessions twice a week for six months. The authors do not give details of the procedure used to assign the women to the two groups. They observed an

insignificant increase in the bone mineral content of the lumbar spine in the exercisers. As expected, the controls experienced a significant loss in spinal bone mass over the same period.

This brief review of the literature demonstrates how few studies have been conducted with an osteoporotic population, the small number of subjects involved in each study, the absence of random assignment to the experimental group, the absence of control for potential biases and the inconsistency of the results. In addition, the study of the impact of the exercise programs was limited in every instance to bone parameters. In a recent editorial, Gerber and Rey (1991) emphasized that, in light of the increased costs related to the treatment of osteoporosis and the potential benefits of exercise, researchers should be encouraged to expand the evaluation of the effectiveness of such programs to include variables that are more relevant from the point of view of osteoporotic women themselves. In particular, they suggest evaluating the impact of these programs on the well-being, physical fitness and quality of life of the women involved.

EVALUATION OF A SUPERVISED EXERCISE PROGRAM

With the objective of compensating for gaps in the earlier studies, we undertook a randomized controlled study to evaluate the effectiveness of a supervised physical activity program designed for women suffering from osteoporosis. The study was conducted with 142 postmenopausal women who were recruited through advertisement in the media. To be eligible, the women interested had first to be judged capable of participating in an exercise program without close medical supervision. In addition, they had to be judged osteoporotic following a dual- energy x-ray absorptiometric (DEXA) evaluation.

After stratification for age and the taking of estrogens and diphosphonates, eligible subjects were randomly assigned to the experimental or control group. Three times a week over the course of a year, the experimental group participated in exercise sessions based on walking and stepping up and down from benches. For the women in the control group, we asked only that they make no

changes in their usual exercise habits. In order to avoid a Hawthorne effect that would have threatened the internal validity of the study, all subjects were invited to attend bimonthly information sessions. These sessions were devoted to different themes related to osteoporosis, such as risk factors, fall prevention and the advantages and disadvantages of alternative therapies. The effect of the program was evaluated by its impact on a group of objective variables (bone mass, number of fractures and falls, recourse to health services, functional capacity) and subjective variables (psychological well-being, pain intensity, health perception). Potentially confounding variables, such as the number of years since menopause, nutritional factors and life habits, were also measured. The results of the study indicated a stabilization in bone loss in the lumbar spine of the exercisers when compared to the controls. However, no effect on the bone mass of the femoral neck was detected. This apparent inconsistency in the results could be explained both by the nature of the program, which was based on stimulating the axial skeleton, and by the type of bone that mainly constitute the two sites measured. Four of the five parameters measured to evaluate the functional capacity of the participants, namely flexibility, strength, agility and cardiorespiratory endurance, were positively affected by the exercise program. With regard to the subjective variables, the analyses tend to indicate that participation in an exercise program increases psychological well-being and favours a more positive perception of the participant's state of health. In addition, at the end of the program, pain intensity in the exercisers was lower than that in the controls. The results did not demonstrate a statistically significant effect of the program on the number of fractures and falls, which was predictable given the relatively low annual incidence among women in the age group studied. In addition, no effect on the number of times participants had recourse to health services was detected. It would require a study covering a longer period of time to show evidence of the positive impact of the program on these variables.

EVALUATION OF A HOME-BASED EXERCISE PROGRAM

The study described above demonstrates the positive impact that an exercise program can have on the physical and psychological health of women suffering from osteoporosis. It is important to note that the exercise sessions took place in groups. The importance of group dynamics in motivation and continued participation in an exercise program is well known (Chow, Harrison & Dorman, 1989). However, group programs are more costly to set up in the community and they lack flexibility in terms of the timetable they can offer possible participants. In light of the results obtained, it seemed interesting to study the potential of the exercise program developed within the framework of the first study, but in the context where it is executed at home, without the presence of physical educators or other women affected by the same disease. The effectiveness of such a program is obviously dependent on how assiduous the participants are in following the prescribed program and maintaining their participation. The literature gives few data on compliance and attrition rates for the programs already tested. Table 1, which was taken in part from Dalsky (1987) and completed following our review of the literature, shows the wide variability in the reported data. It also emphasizes how few studies have been done to evaluate the effectiveness of home-based programs.

The study reported by White, Martin, Yeater, Butcher and Radin (1984) involved 73 postmenopausal women assigned in a semi-random fashion to a walking program, an aerobic dance program or a control group. One session out of four took place in a group. Their results showed significantly lower bone demineralization of the lower extremity of the radius among the dance subjects as compared to the women assigned to the other two groups, and also a significant increase in the width of the bone. This latter variable was also significantly increased by the walking program. The program evaluated by Beverly, Rider, Evans and Smith (1989) consisted of squeezing a tennis ball for 30 seconds every day. After six weeks, bone mineral content had increased by 3.4% in the women who agreed to be remeasured. On the other

Table 1. Summary of available data on withdrawl and compliance rates

Reference	Age	Duration	Withdrawal	Compliance
Smith (1976)	69 - 95	3 yrs	28%	n/r
Aloia (1978)	53 ± 6	1 yr	n/r	n/r
Smith (1981)	69 - 95	3 yrs	36%	n/r
Krolner (1983)	61 ± 6	8 mos.	13%	73%
Smith (1984)	35 - 65	3 yrs	28%	n/r
White (1984)	**50 - 63**	**6 mos.**	**24%**	**88%**
Ayalon (1987)	53 - 74	5 mos.	n/r	n/r
Dalsky (1987)	62 ± 1	9 mos.	n/r	> 90%
Chow (1987)	50 - 62	1yr	17%	70%
Dalsky (1988)	55 - 70	9 mos.	0%	90%
Beverly (1989)	**62 ± 16** **53 ± 21**	**6 wks.**	**22%**	**n/r**
Chow (1989)	47 - 82	On-going	20%/YR	20% (home) 80% (group)
Dilsen (1989)	40 - 80	6 mos.	n/r	n/r
Sinaki (1989)	**50 - 65**	**2 yrs**	**4%**	**n/r**
Smith (1989)	$\bar{x} \approx 50$	4 yrs.	37%	74%
Blumenthal (1991)	60 - 83	14 MOS.	16%	72%

Note: *The three studies appearing in bold-face type evaluated the effectiveness of an exercise program carried out partially or exclusively at home.*

§ n/r = not reported

hand, the study done by Sinaki, Wahner and Hodgson (1989) showed no effect on the vertebral bone mass of 34 non-osteoporotic women who participated in a home exercise program. It should be noted, however, that their program consisted exclusively of nonloading exercises designed specifically to increase the strength of the back extensor muscles.

Although not specifically concerned with the osteoporotic population, the study performed by King, Haskell, Taylor, Kraemer and DeBusk (1991) gives some insights into the plausibility of subjects assigned to a home program showing a high level of compliance. The authors compared the effectiveness of group- vs home-based exercise training among healthy, sedentary older adults. 160 women aged 50 to 65 were part of their sample. After twelve months, the two exercise groups saw their physical performance improve significantly compared to the control group, indicating that the intensity with which the exercises were done was at a high enough level to improve the physical capacity of the subjects. In addition, the adherence rates of the subjects assigned to the home-based training condition was higher than that of the subjects assigned to the group-based training condition (76% ± 32% vs 53% ± 30%, $p < 0.0005$). Finally, more than 82% of the women assigned to the home-based program attended the measurement of their physical performance twelve months after the program started.

The cardiovascular literature, although it targets a different population from ours, is also worth examining. In a study of 204 patients referred to a supervised or unsupervised exercise program following coronary bypass surgery, Stevens and Hanson (1984) observed a significant increase ($p < 0.01$) in functional capacity and cardiovascular response in both groups four months after the programs started. The observed improvement was the same for both groups. The compliance of the patients assigned to the unsupervised exercises was 80% compared to 70% for the patients who participated in the supervised program. Similar results were obtained by DeBusk, Haskell, Miller, Berra and Taylor (1985) with 127 men (aged 53 ± 7) who had recently suffered a myocardial infarction without complications. These authors were also

interested in comparing the safety and effectiveness of home and group rehabilitation programs. After six months, they found a similar significant increase in the functional capacity of the two groups and withdrawal rates of less than 3%. The average compliance of the subjects assigned to the home program was 82%.

King et al. (1991) and Debusk et al. (1985) both explain the low attrition and high adherence rates of subjects assigned to the home program as a function of the flexibility this type of program offers. They also emphasize the importance of frequent telephone contacts by the research assistant to enquire about the participants' progress, answer their questions and provide the necessary individual attention. This strategy is in agreement with the work of Oldright (1982) and Oldright and Jones (1983) on the attrition and compliance of subjects assigned to a physical activity program. According to Oldright, the first six weeks of a program constitute the critical period during which the subjects will "adopt" the program if they feel some improvement in their state of health. Once the program has been adopted, maintaining their participation is a function of the support offered and the enjoyment they get in carrying out the program. Among the other factors associated with a high participation rate are the convenience of the program (flexibility, accessibility, etc.), a low frequency of supervised sessions and the encouragement of the subject's physician and spouse.

Identifying factors that are predictive of compliance suggests different strategies for promoting the effectiveness of physical activity programs. These factors were taken into account in developing a protocol for evaluating a home-based exercise program for osteoporotic women. In fact, this program is offered to the subjects that had been assigned to the control group in the study briefly described above. The program still involves three exercise sessions per week, each lasting about 60 minutes. However, the exercises are only performed in groups on a monthly basis. These group sessions are designed to familiarize participants with the suggested exercises and enable those responsible for the exercise sessions to identify the women who seem to have fallen behind in the prescribed program or are having special difficulties carrying it

out. Each session is followed by a one-hour discussion that is designed to encourage participants to persevere in the program in spite of the difficulties encountered. The themes of the discussions were based on the model proposed by Marlatt and Gordon (1985) for preventing relapses. This model recently generated a lot of interest in terms of its potential for improving compliance in physical activity (Bélisle, Roskies & Lévesque, 1987). Between the supervised sessions, the participants must do the exercises suggested in the program and keep notes in a program notebook on the parameters related to the activity performed. In the context of this new project, the variables chosen to measure the effectiveness of the program are the same as those measured in the earlier study. Thus, in addition to evaluating the impact of the home-based program, this second study will make it possible to compare its effectiveness to that of a completely supervised program.

WEAKNESSES IN THE EXISTING LITERATURE

A critical examination of the literature demonstrates a number of gaps to be filled. First, a meta-analysis brought out the lack of uniformity in the way the results of the prospective studies designed for evaluating physical activity programs are reported. Important variables such as the intensity of the exercises and the adherence rates of the participants become difficult to control for because this information is not reported.

The fact that the measure of effectiveness was strictly limited to bone parameters must also be noted. Although the relevance of having a positive effect on bone mass is undeniable, it is unlikely that this effect would be noticed by the participant. Furthermore, we know how important feeling short-term effects of well-being is on maintaining a new life habit (Chow, Harrison & Dornan, 1989). Hence the interest in measuring indicators of the participants' quality of life and regularly informing them of the improvements noted.

The profile of women involved in the evaluation of physical activity programs would also benefit from being widened. Studies

published to date have generally limited eligibility to sedentary women who are not taking any medication known to affect bone metabolism. This decision of the researchers is understandable in view of their desire to obtain a sample that is as homogeneous as possible. Homogeneity helps them to demonstrate the positive impact of an intervention using a smaller sample. However, from the public health point of view, this limits the population for whom this type of intervention can be recommended. Furthermore, community-based physical activity programs are not likely to attract sedentary osteoporotic women. Finally, a woman who is receiving treatment, but whose bone mass remains below the fracture threshold, is already aware of her condition. She might be interested in an exercise program as a complementary method of slowing down the progression of her disease. Excluding osteoporotic women currently receiving other treatments prevents generalizing the results of a study to this sub-group of the targeted population.

FUTURE RESEARCH PRIORITIES

To significantly reduce the consequences of osteoporosis, research is needed to identify the optimal exercise regimen for stimulating skeletal growth (Dalsky, 1987). The important role played by mechanical force in bone formation has long been recognized, but the frequency, intensity and duration of exercise may prove to be a critical factor in osteogenesis. Although some research has been conducted in that field (Dalsky et al. 1988; Editorial, 1983; Lanyon & Rubin, 1983), no answer is yet available as to whether exercise of moderate intensity and duration could have the desired bone-maintenance effect (Notelovitz, 1989).

The differential effect of exercise training on trabecular and cortical bone also needs further investigation since some results suggest that a gain in one comes at the expense of a loss in the other (Brewer, Meyer, Keele, Upton & Hagan, 1983; Jones, Priest, Hayes, Tchenor & Nagel, 1977). A related issue is the on-going debate as to whether training has a systemic or a local effect on bone, and whether the effects are related to the type of exercise performed. Although the results of recent studies tend to suggest

that the effect of exercise could be systemic (Black-Sandler, Cauley, Hom, Sashin & Kriska, 1987; Rikli & McManis, 1990) the localized effect on the site submitted to a mechanical force is much more documented (Sinaki, 1989; Smith, Gilligan, McAdam, Ensign & Smith, 1989).

An important area for research is the extent to which the response of bone tissue to mechanical stress is modulated by hormonal and nutritional factors. The available information to that effect is conflicting and mainly derived from cross-sectional studies, which are biased since the effect of exercise can not be isolated from hormonal and nutritional factors (Dalsky, 1989). Consequently, well designed randomized controlled trials are needed to confirm or further document the interaction effect of exercise training with exogenous estrogen and calcium supplements in osteoporotic women.

In addition to filling the gaps already identified, future studies of the therapeutic potential of physical activity for women suffering from osteoporosis should include cost-benefit analysis. To our knowledge, few researchers have shown interest in this aspect of evaluation. Faced with the increased health care required by the elderly, the savings generated by an intervention whose effectiveness has been demonstrated must be rigorously evaluated and the information passed on to those responsible for promoting healthy lifestyles among the elderly. The importance of doing an intent-to-treat analysis whenever possible must be emphasized. The fact that a significant proportion of elderly women who begin a physical activity program abandon it at some stage cannot be ignored. A withdrawal rate of 37% was observed in our first study. Ignoring these subjects when analyzing the data overestimates the true effectiveness of the proposed intervention and gives a distorted picture of the impact such an intervention would have if it were offered in the community. In our study, out of the 26 women who abandoned the exercise program for various reasons, 17 nevertheless agreed to be remeasured at the end of the program. This allowed us to include them in the analyses which gave us a more accurate evaluation of the real impact of the program.

Given the relatively low annual incidence of fractures among women over age 50, researchers should be encouraged to collaborate in multi-center trials designed to document the effectiveness of exercise in reducing the risk of fractures. The large sample size that is required for a rigorous study with adequate statsistical power is difficult for an isolated investigator to achieve. In addition, long-term studies should be designed and receive proper funding to test the hypothesis that the utilization of health services and the associated costs can be reduced through regular physical activity.

Finally, efforts must be undertaken to identify the most effective ways to motivate the sedentary elderly to start exercising and encourage those who are already active to maintain their good habits. The role of general practitioners and primary-care teams in detecting at risk patients and suggesting the most appropriate actions before the microarchitecture of the bone has been destroyed needs to be investigated. This information is required by authorities willing to launch national campaigns of action against osteoporosis. As suggested by Birge (1993), "with early detection, treatment can be initiated before the more debilitating complications of osteoporosis occur. Although the most frequent manifestation of osteoporosis is vertebral fracture, only a third of these fractures are symptomatic. Thus, a clinical diagnosis is frequently delayed until multiple fractures, height loss, and spinal deformity have occurred". Although multiple promising pharmacological agents for the treatment of osteoporosis are emerging, they remain largely experimental and are not without significant side effects. Exercise programs with their potential effect on well-being, functional autonomy, and prevention of falls and fractures, are promising interventions in reducing the consequences of osteoporosis.

Note: A detailed description of the results of the study described in the present document has been submitted for publication in the Journal of the American Geriatrics Society.

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CHAPTER 3

HEALTH PROMOTION AMONG OLDER PERSONS WITH DIRECT AND PERSONAL EXPERIENCE OF THE MENTAL HEALTH SYSTEM

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INTRODUCTION

In this chapter we will identify what we mean by mental health consumers and how their organization of supportive networks constitutes linked, community development health promotion projects. The networks are distinct from the particular research project underway by the authors.

In order to illustrate what we mean by health promotion, its relationship to the social determinants of health, and the reason why consumer networks exist, we will discuss our ongoing research and the relationship between researchers and members of the networks. Is this relationship collaborative and is the research participatory? Why has this type of research evolved and at what point does it begin to yield diminishing rewards? Finally, we will address the question of whether, and to what extent, the networks, and our research project, have a place in the mental health reform process presently under way in Ontario.

ELDERLY CONSUMERS AND GRASSROOTS COMMUNITY DEVELOPMENT

Our project is a grassroots community development initiative in a participatory partnership (Robottom & Colquhoun, 1992) with older persons who have been consumers of the mental health system. The goal of our project is to involve older persons who "have direct personal experience with the mental health system" (NNMH, 1993) in a community development project within which they can define and address their needs.

The project began with some discussions between the authors during Fall, 1993 in preparation for the Canadian Association on Gerontology health promotion workshop on which this volume is based. Each author has a connection to the Canadian Mental Health Association (CMHA). Dr. Tindale is a university researcher who volunteers time to the CMHA to facilitate gerontological research associated with mental health issues.

The CMHA is a national voluntary association that exists to promote the mental health of all people. Its activities and programs range from direct services, through public education and community action, to advocacy. There are divisions of CMHA in each province and territory, and branches in most cities of Canada (Pape, 1994).

During 1990, Tindale (1993), in concert with the CMHA and the Victorian Order of Nurses, engaged in a health promotion project with the well-elderly in the Tri-County area near Ottawa, Ontario. That experience was the precursor to the present project. The research presented in this chapter is based on a partnership involving a community mental health promotion project and people who have been consumers within the mental health system.

Ms. Hardie is the Co-ordinator of the National Network for Mental Health (NNMH). "The network is a non-profit, voluntary organization 'owned' and 'operated' by people with direct personal experience with the mental health system (i.e. consumers,

psychiatric survivors, ex-patients, clients, etc.)" (NNMH, 1993). The assumptions held in common in this network are "inclusion" and "informed choice". People in the network have varying views on mental illness/treatment and/or medication and so members work on the common ground. "All NNMH networks are 'grassroots' organizations at various stages of development. The membership is the driving force behind all networking activities whether it be at the community, provincial/territorial or national levels...". NNMHH has evolved from, and is now independent of the Consumer Participation Task Group of the Canadian Mental Health Association (NNMH, 1993).

WHY SHOULD RESEARCHERS WANT TO COLLABORATE WITH THE COMMUNITY?

Apart from respect for the situation and interests of others, researchers need to collaborate with consumers because, in community development work, collaboration with your respondents (Whyte, 1979) is:

- important in constructing research that is credible science and simultaneously, useful and interpretable by the consumers of the research (Robottom & Colquhoun, 1992);

- "a methodology for involving oppressed people in the analysis of and solutions to social problems" (Yeich & Levine, 1992, p.1895);

- the combination of social research and social action (Brown & Tandon, 1983).

As this appears rather straightforward, why is there such excitement in the qualitative methods literature about participatory research? These discussions are occurring, we feel, because participatory research is not often seriously considered by researchers planning their projects.

Saying it does not occur very often is not sufficient reason to support extensive discussions of why researchers should deal with their respondents as people who have something to contribute to the research process. Why not? Again, the answer is clear. It is because to not bring respondents into the research process in a way that ensures that the research questions are relevant and that the outcomes are understandable is to squander available human resources (Whyte, 1979) on both sides of the research equation -- that is, among both subjects and reseachers.

If the concept of participatory research is not problematic, why is this type of research not engaged in more often? Is it because it is difficult to undertake? Descriptions of the participatory research process by George(1993) and Le Boterf(1983) would suggest the answer to the question is "no". George (1993) suggests that there should be collaboration between researcher and respondents on all of the following research processes:

a) constructing the research questions
b) developing the research methods and/or instruments
c) data analysis and interpretation of results
d) outcome dissemination

Le Boterf (1983) recommends participation at the four stages of:

a) setting up the institutional and methodological framework
b) preliminary study of the population
c) critical analyses of the issues as defined by the community constituents, and
d) planning and implementing a plan of action.

The scenario as laid out by Le Boterf (1983) is somewhat more "applied" than is the case with George (1993). Nevertheless, each refers to a logical, continuous, start-to-finish involvement of the constituents in the research process. While collaboration can add time to the planning, and possibly to the execution of the project, there are counterbalancing benefits in terms of relevancy of results

(see Norris, Davey & Kuiack in this volume). Again, then, why does it not happen more often?

Participatory research remains relatively uncommon because, despite its benefits, the importance of relevancy is not recognized by all researchers. Thus, the fact that it may be simpler to work just with one's fellow researchers often carries the day. Why then, would researchers ever come out of the academic closet to engage in participatory research? The reason is that our constituents have sent us a "wake up call", although many researchers have simply pushed the slumber button and rolled over.

As early as the 1970's, Maggie Kuhn of the Gray Panthers was challenging gerontologists and others in North America (c.f. Jacobs & Hess, 1980). Her fundamental message was that if researchers refused to pay attention to the voices of older persons on what the important issues were, they would be doomed to irrelevancy by the very persons they purported to serve. We often forget Maggie Kuhn and cite Paulo Freire (1970) instead. Why is this? Maybe it is because Paulo wrote as a researcher himself, and yet was more exotic and exciting than most of his brethern. Whatever the reasons, Freire's message was similar to Kuhn's in the view that the community demanded relevancy from those who would research it. Were Paulo and Maggie making a synonymous point? We don't think so.

Freire (1970) called for researchers to work with their constituents to help raise critical awareness and then harness that raised consciousness to create social change. This view, while laudable in some respects, smacks of Leninist/Marcusian elitism. It suggests the people who daily experience the 'oppressed social determinants of health' do not, on their own, recognize that conditions are inequitable, nor have the means to see what needs to be done to make conditions more equitable.

The literature of those who have experience with the mental health system has a message that is akin to Kuhn's: "Ignore us at your peril!"

IF YOU ARE A CONSUMER, WHY COLLABORATE WITH RESEARCHERS?

Only recently have older consumers been involved in organizing to promote their own health. The National Network for Mental Health is less than two years old (NNMH, 1993). Networks for older persons with experience in the mental health system have up to now been essentially non-existent. The goal of our ongoing work is to facilitate the development of networks where needs and their solutions will be defined by elderly consumers (Tindale, Hardie & CMHA, 1994).

Work by Church and Capponi (1991) offers a succinct rationale for why consumers might wish to bring researchers and service providers into their networks. Service providers deliver programs and researchers evaluate them. Just as researchers need to collaborate with consumers to best understand which questions to ask, consumers benefit from collaboration with researchers in seeking means to demonstrate how well their networks are meeting needs identified by their members.

As mental health consumers have begun to seek collective identities for themselves, they have drawn on the experience of others in similar situations. In particular, they have borrowed and adapted the Independent Living concept first used by those with physical disabilities (Deegan, 1992). If we understand the relevance of Independent Living as a community development process that mental health consumers find useful, we can illustrate the view of Hardie and her colleagues in the NNMH community regarding how consumers 'fit' with researchers.

Placed in the context of people with psychiatric disabilities, Independent Living is, in the first instance, grassroots organizing with community members. Secondly, it is a philosophy that asserts that those with mental health system experience have the same rights to take risks, fail, and learn from those mistakes as are taken for granted by the non-disabled community. A third principle is that of 'consumer sovereignty' which means, simply, that consumers are best situated to understand their own interests and

needs (Deegan, 1992). The latter is the clearest point of conflict with the teachings of Freire. It is patronizing to suggest that the mental health consumer community requires researchers to identify their interests for them. Rather, it is methodological expertise the researcher brings to the table. A fourth principle in the Independent Living philosophy is that as a person with mental disabilities become more independent through a supportive environment, there should be a corresponding ability to demedicalize one's experience (Deegan, 1992, pp.8-16).

These four principles of Independent Living can be interpreted and expressed as each individual and community sees his or her/its 'fit'. It is interesting to note that in their abstract expression, and generally as they are played out in the community, these principles are consistent with health promotion as understood by the World Health Organization (WHO). They were reiterated and extended by Epp (1988), and by the Ottawa convention on health promotion in it's articulation of the social determinants of health (see Hall in this volume).

Independent Living principles are also consistent with participatory research methods as understood by authors such as Yeich and Levine (1992), who distinguish the collective character of participatory work from the individualistic orientation of action research. Grassroots movements are collective responses to systemic issues.

However, just as Maggie Kuhn should be recognized in tandem with Paulo Freire, Yeich and Levine would do well to acknowledge C. Wright Mills'(1959) public issues/private troubles distinction. According to Mills, public issues are systemic in nature and collective in their response. Private troubles are individualist in their source and solution. The grassroots movements of people involved in NNMH are participatory, public and collaborative and therefore require a collective response.

About the same time that networks of consumers and survivors, such as the NNMH, were beginning to organize, the provincial government in Ontario was beginning to translate words

into action with respect to reform of long term care (Ministries of Health, Community & Social Services & Citizenship, 1993).1 In a parallel yet distinct process, the provincial government moved ahead with reform within the mental health system (Ministry of Health, 1993)2. Where does the NNMH network and its health promotion community development work "fit" within the reform process?

DO COLLABORATIVE HEALTH PROMOTION NETWORKS HAVE A PLACE IN MENTAL HEALTH REFORM?

At the federal level there has been a focus on WHO definitions of health, mental health and health promotion (Epp, 1988). At the provincial level the drive for health care reform has dealt more specifically with issues of long term care, for older persons and those with disabilities (Ministries of Health, Community & Social Services and Citizenship, 1993). While, as noted above, there is an analogous reform process underway for mental health this division of responsibilities raises a number of questions for people in the NNMH.

Why are those with mental health disabilities not included in the long term care reform process? With the focus on physical disabilities, among those with mental disabilities, only older

1 While the government is now in the implementation phase, the planning process has gone through various formulations among multiple governments since the mid 1980's. See, for example: Secretariate for Social Development (1982); Ministries of Community and Social Services & Health Offices for Senior Citizens' Affairs & Disabled Persons (1990): Ministries for Community and Social Services, Health and Citizenship (1991).

2 The mental health reform process has also generated a series of reports. See, for example: The Provincial Community Mental Health Committee (1988), The Community Mental Health Legislation Sub-Committee (1991) and Implementation Strategy Sub-Committee of the Provincial Community Mental Health Committee (1991).

persons with dementias such as Alzheimer's Disease are given consideration. When the reform of mental health services document is examined, we note that it is authored only by the Ministry of Health (1993). If we are committed to the principles outlined by Epp (1988) and to more recent work on the social determinants of health (c.f. Hancock, 1993; Labonte, 1992; Labonte & Littles, 1992; Lefebvre, 1992), then we must ask why the Ministry of Community and Social Services is not included in the reform of mental health services. The apparent answer is that mental health services are viewed by the government of Ontario as medical services.

The document *Putting people first* (Ministry of Health, 1993) gives extensive coverage to the need for consumer input, more community health spending and improved coordination of planning, funding and the service delivery model. It does not give much coverage to the issue of what consumers might do other than participate more fully in the existing medical model. The Canadian Mental Health Association (1993) has analyzed the mental health reform processes underway in various parts of the country and some cost-benefit studies have compared monies spent on facility versus community-based care. Their general conclusion is that there is still too much money being spent in institutions and not enough in the community. More specifically, it is their understanding that many of the community-based programs are, in fact, community replications of facility programs. And perhaps most importantly, the report asserts that the real issue is not institutional as compared with community spending but whether the direction of reform facilitates consumers living independently in the community. At this point in time the CMHA has not had the resources to fully address this question.

Given these preliminary examinations of the mental health reform process, it is argued that there are serious questions that need to be asked: Why are mental health services for people with mental disabilities not part of the long term care reform process? Why is the reform of mental health services not more socially based? And why have consumers not been more directly involved in the reform process? While undoubtedly there have been good

intentions, to date, consumers have been identified as being part of the process without fundamentally inviting them to the table.

To the degree this is the case, it suggests a policy parallel to our earlier debate about the nature and value of collaborative research. In terms of relevancy, the mental health reform process has brought about improvements to the extent that consumers are now directly involved with one another in a collaborative way. However, organizations such as NNMH can be expected to take the social determinants of health perspective to heart. In the very near future we can expect them to say, 'we insist on the right to do more than give input'.

In the long term care reform process consumers have actively lobbied for their position during the consultation process (Senior Citizens' Consumer Alliance for LTC reform, 1993), and have achieved positions on the long term care planning committees of the District Health Councils in charge of local planning. Has this consumer involvement been fully effective? Recent work by Aronson (1993) would suggest it has not. She argues that there has been a real shift in government over the past ten years to obtain input from consumers. The input is then translated into "bureaucratese" and is subsequently siphoned into a protracted process of consultation and planning. There has not been a concerted effort to generate participation from consumers in the planning and implementation of policy. And it is involvement in these latter stages of the policy development process that make the difference between collaboration and consultation.

If they continue to be denied an opportunity for real collaboration, the consumers movements working on long term care and mental health reform are going to translate Maggie Kuhn's demand into action. This won't come in the form of protest marches outside the parliamentary buildings. Rather, the consumer movements have taken the social determinants argument to heart. They now form coalitions, hire researchers, present briefs, apply for monies and generally make their presence known in a manner government finds difficult to ignore precisely because the techniques are their own

CONCLUSION

In this chapter, we have noted that the mental health system consumers/survivors are engaged in a process of developing local grassroots organizations to make their interests known and felt within the mental health system as well as the larger community. They have sought further support for their efforts through forming a loose network of local groups working on the values and issues that they share, realizing that among groups there are many different experiences and viewpoints.

They collectively embrace the view that as consumers it is they who best know what their interests are and they demand a say in whatever care they might need. Generally, they are in favour of community development projects that improve their situation with respect to the social determinants of health (i.e. housing, nutrition, employment, education, etc.) in a fashion that shifts the emphasis away from medicalized treatments. The essence of what organizations like the NNMH are about is being part of the process rather than a product of it.

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CHAPTER 4

EVALUATING SELF-HELP AND MUTUAL AID PROGRAMS FOR OLDER CANADIANS: TRAPS AND TIPS

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INTRODUCTION

The support of an informal social network has long been recognized as important in helping individuals cope with change and stress (c.f. Gottlieb, 1985). We know, for example, that people of all ages turn first to their families and close friends when in need of assistance (Norris & Tindale, 1994). Those to whom we feel close, and with whom we have shared experiences, are often our most valuable resource.

Out of the recognition that such social support can facilitate coping, the mutual aid and self-help movement arose during the latter half of this century (Sanchez, 1987). Within this movement, like-minded individuals have gathered to provide help for one another with a specific issue or situation such as alcoholism, providing care for an elderly relative or coping with mental health problems (Schmall & Pratt, 1989; Tindale & Hardie, this volume). Members of mutual aid groups may strive for either personal or social change, and frequently both. Often, they feel that their needs are not being met adequately through existing formal supports and institutions (Katz & Bender, 1976).

Mutual aid groups often receive funding from other parties to facilitate their operation and programming. With this comes a need, usually of the funder, to determine the efficacy of the program. In this chapter, we discuss our experiences in evaluating community-based self-help and mutual aid programs which were designed to benefit older Canadians. The chapter has three main sections. In the first, we explore traps which can arise when dealing with the many stakeholders in the evaluation process, and

consider tips to minimize unnecessary conflict. Full consideration of the needs and perceptions of the stakeholders when conducting evaluation research is an issue which has been considered from two major perspectives. The theory-driven approach (e.g., Chen, 1990) suggests that the various stakeholders can be helpful in developing a researcher's insights into the program, determining the most valuable information to be obtained from an evaluation, and deciding upon appropriate outcome measures. Such an approach also tends to develop the various stakeholders' investment into the evaluation process, and is consistent with what is known in the literature as "**action research**" (Brown & Tandon, 1983; Rapoport, 1970).

Other researchers have suggested that the "outcome" of an evaluation can be defined as the consensus (or stalemate) achieved when the views of all stakeholders are integrated (e.g., Guba & Lincoln, 1989). This approach is consistent with that of "**participatory research**", where all parties are regarded as having power within the process (Freire, 1978; Brown & Tandon, 1983).

Both approaches make it clear that it is important to consider the perceptions of as many stakeholders as possible to produce a successful and useful evaluation. The first section of the chapter considers the needs and perceptions of the funding body, programmers and service providers, participants in the program, researchers, and students.

In the section on methodological challenges, we discuss a number of typical strategies for evaluating community programs. Common problems are identified as well as some possible solutions which we have found useful in previous evaluations.

In the final section of the chapter, we consider two models of involvement of the researcher in the evaluation process. The first represents the more traditional model of researcher as "evaluator". Within this paradigm, the researcher typically is recruited to perform an evaluation of a program already in existence. The difficulties which emerge as the evaluator struggles with his or her

own investment in the research process and outcome will also be discussed. An alternative model is then proposed where the researcher acts, not as an evaluator, but rather as a "consultant" to the service providers and/or participants in the program. The relative merits and drawbacks of this approach will be discussed with reference to the more traditional model of program evaluation.

NEEDS AND PERCEPTIONS OF STAKEHOLDERS

Community-based mutual-aid programs usually involve collaboration among service providers and residents of that community. Providers may encounter individuals whose needs are not being met by existing programs (Linsk, Osterbusch, Simon-Rusinowitz & Keigher, 1988). Together, they develop ideas for a new program to the point where it becomes necessary to seek funding either through existing resources within the agency itself or, more often, from external sources such as government funding bodies. The various "stakeholders" who emerge as a program takes shape (service providers, participants, funding agencies) may have different, and competing, agendas for the process, outcome, and evaluation of the particular program. For this reason, recent literature on evaluation has emphasized identifying and meeting the needs of multiple players involved in the research process (Guba & Lincoln, 1989). In this section, we consider the needs and perceptions of the key stakeholders in community-based self-help and mutual aid programs.

THE FUNDING BODY

The recent political and economic climate has been accompanied by a much stronger emphasis on the provision of community-based services. Consider, for example, the recent move in Ontario towards Multi-Service Agencies as a means of providing long-term care. Both in the development of these agencies and in their later operation, the emphasis is on input from local consumers and service providers (Government of Ontario, June, 1993; September, 1993). This approach can be contrasted with

previous models in which services were most often designed, implemented, and even evaluated by the government agency providing the service.

Despite local control over the development and implementation of programs, however, funding is often still controlled centrally, at the provincial or federal level. Such an approach brings with it novel constraints to the evaluation of a program's operations and efficacy. Community-based programs become responsible to both a separate funding body and to the local agency which has sponsored them. In this sense, the program must account to a group other than that which it was designed to serve.

While the funding agency can determine its evaluation goals in numerous ways, some of the most common revolve around determination of a program's efficacy. These can include measures of program outcomes: that is, the ways in which participation changes the characteristics of those in the program. This aspect of the evaluation concerns how participants are "different" after participation, and may extend for quite some time beyond the completion of the program.

An alternative paradigm might include an assessment of the strengths and weaknesses of an existing program in an effort to improve it. Funding agencies may also insist upon an examination of participants' own perceptions of a program's success, and the extent to which they feel that it meets their needs. A final consideration of a funding body is likely to include an analysis of the cost-effectiveness of a particular program within the community. In addressing this issue, programmers must be prepared to demonstrate the relative worth of their program compared with others already in the community. As well, they must be prepared to address the more difficult question of whether clients "improved" enough to justify the cost of program.

The involvement of the funding body presents several challenges for the other stakeholders in a particular program. The funders may wish to control the goals and methods of the evaluation in order to meet their own needs for accountability: for

example, to the taxpayer. An additional challenge also emerges because the funding agency is often completely removed from the program and its operation, as well as from the needs of other stakeholders. Sensitivity to the role of the funding body is clearly essential to performing a useful evaluation, and should likely extend to consideration of how the various stakeholders perceive the funding agency and its role in the program.

PROGRAMMERS AND SERVICE PROVIDERS

Under most circumstances, the service providers will be required to provide some evidence that their program is an effective way to meet the needs of those they serve. This requirement can often pose a significant challenge to other stakeholders. For example, programmers may not have an intrinsic interest in the evaluation process, and as a result may not be willing to back such an endeavour wholeheartedly. Further, as the programmers are often the ones who have developed a program or project, they are likely to have a strong belief in a program's efficacy a priori and can view the evaluation as unnecessary or even insulting.

From a researcher's perspective, programmers and service providers appear to have little knowledge of research and evaluation methods. They may view the entire research process as something of a mystery, a rather circumspect process to address issues which appear obvious. It is clear that if the service providers do not understand the need for careful, systematic investigation rather than relying upon purely anecdotal evidence, then they are likely to have little patience for the research process. Lack of patience may turn to active resentment at the involvement of uncommitted "outsiders" (i.e., funders and researchers) in the program's operation.

When evaluation research operates under a traditional model of researcher as "evaluator", it is easy for service providers and programmers to misconstrue the purpose of an evaluation. Under these circumstances, researchers may need to be sensitive

to the fact that the service providers may feel that they, rather than the program are being evaluated, and may have anxieties about job security issues around the evaluation of a program. These sentiments are likely to interfere with the evaluation process as well.

PROGRAM PARTICIPANTS

The move to community-based services and programs makes it increasingly likely that community members and program participants will be involved in the development and subsequent evaluation of a particular program. In the traditional model of program evaluation, the participants serve as the unit of analysis, and so their views, opinions, and characteristics usually find their way into the evaluation. (See, for example, Mohide et al.'s (1990) evaluation of a caregiver support program.) Rarely, however, are participants involved in formulating the questions to be addressed in the evaluation, or the methods used to pose the questions.

Participants' investment in, but lack of knowledge about, evaluation can pose a challenge for everyone. Perhaps even more so than service providers and programmers, participants may lack a clear understanding of basic research methods. At the same time, they are likely to feel an even greater need to get their time, effort, and money's worth out of the program. Participation may mean taking time off work, hiring babysitting or respite care, and marshalling the emotional resources to confront painful or problematic issues. Thus, participants may strongly endorse the evaluation process.

Despite their support in principle, participants may have little patience with providing the kind of feedback necessary for rigorous research: for example, completing a questionnaire both before and after a particular session, or agreeing to participate in a long-term follow-up of a program's effects. They may also feel some resentment at having to devote time to issues which seem unrelated to the program, their primary reason for being there. Further, participants may not want direct involvement by researchers who are perceived to be unnecessary or even an

impediment to the operation of the program. This can be an especially significant problem when a participant observer is included to observe group process, program content, and feedback.

RESEARCHERS

For some time, it has been understood that researchers do not simply play an "objective" role with respect to the research that they conduct (Reason & Rowan, 1981). Rather, they become stakeholders in the evaluation process. In many cases, a researcher's main goal is a publishable study at the end of the project. Both a desire for academic success and a desire to contribute to science may drive this goal, possibly at the expense of an evaluation which is useful to the service providers and program participants. "Rigorous" research -- i.e., studies using experimental or quasi-experimental designs -- may add considerably to the testing burden of program participants, a situation likely to be met with strong resistance.

Embedded in their need for a publishable study, researchers may appear insensitive to the situation and needs of other stakeholders. For example, they may be reluctant to accept direction from the funders, whom they regard as less expert in the research enterprise. This reluctance may suggest to service providers that researchers have little knowledge of the political and economic constraints under which they operate. The perception that researchers do not appreciate the "real world" can be compounded if they do not have adequate knowledge of the problems which brought clients to the program in the first place. Often, service providers will be reassured that researchers really have the interests of their clients at heart only if the they can demonstrate some first experience with the problem or setting to be studied.

STUDENTS

Researchers often introduce students into the evaluation setting, in order to provide them with experience in conducting

research in the field. Thus, students too become stakeholders with their own needs, in particular, to apply rigorous methods based upon their training and to produce materials for a course assignment or thesis. The students' unique role in the evaluation context can present several significant challenges for other stakeholders. A student may, for example need to rush the process because of the academic requirements of his or her program. Another concern is that students may lack sufficient experience to communicate successfully with other stakeholders in order to negotiate a desired outcome. They may also lack the skills necessary to manage the politics of dealing with funders, agencies, and support staff. While all of these issues are exactly why students are involved in the research process (i.e., for training purposes), they can present substantial difficulties for others who have an investment in the program.

METHODOLOGICAL CHALLENGES

TYPICAL STRATEGIES FOR EVALUATING COMMUNITY PROGRAMS

Although a wide variety can be found, two primary approaches to the evaluation of community-based programs are most common in the current political and economic climate. The first, and most often required by the funder, is **outcome evaluation**, where the research is driven largely by externally imposed criteria. Broadly, this approach to evaluation can focus on identifying aspects of a program which do or do not work, or the strengths and weaknesses of a particular program. This strategy often requires the researcher to rely upon archival data, which are usually based upon past program offerings. As well, other useful strategies can include obtaining feedback from past and present participants, or key informants (LeCompte & Goetz, 1982).

Alternatively, as funders become more concerned with enabling community agencies to develop effective programs, there is a push for **process evaluations** which document the development and / or operation of a program. This style of evaluation may be of greater interest to those who are currently

involved in the program, or to those who wish to develop a similar program of their own. A process evaluation usually focuses on the development of a program, and allows modification in response to ongoing feedback. The data sources which may be most useful in this type of evaluation include ongoing feedback from programmers and current participants, as well as the observations of researchers and other key informants. These latter strategies could also involve participant-observation methods, provided that the other stakeholders were willing to permit their use (Whyte, 1979).

PROBLEMS AND POSSIBLE SOLUTIONS TO METHODS ISSUES

This section has been organized around six prototypical problems drawn from our own experiences in evaluating self-help and mutual aid programs for older Canadians. Along with a description of each dilemma is one possible solution.

Poorly articulated program goals

As we have already noted, programmers and service providers are often unfamiliar with research methods. Thus, a researcher is likely to step into a situation where program goals are poorly articulated and cannot be easily translated into research questions. Operationalizing goals at this level can often be a frustrating and unproductive process. As a solution, it is useful to take a step back from methodological issues. From this perspective, the relevant constructs appear clearer. Because of this, we recommend working with providers to determine the sense of the original program goals and how they may have changed since the program's design and inception. Only once this has been accomplished does the researcher attempt to translate the current goals into operationalized variables. This process may be quite time- consuming, as LeBoterf (1983) has noted, but it results in a more valid and useful evaluation.

Lack of shared goals

One difficulty which is likely to recur is that various stakeholders perceive the program's goals in differing ways. Under these circumstances, the researchers' interpretations are very unlikely to be accepted. This may occur even when researchers and programmers have set aside the original goals of the program and attempted to construct its current objectives.

In such a situation, we recommend a process evaluation where achieving or failing to achieve consensus about the purposes of the program can be documented. It is possible for the researcher to be instrumental in the process by assisting the various stakeholders in exploring and articulating their understanding of the program's purpose. This approach is consistent with Guba and Lincoln's (1989) ideas about "fourth generation" evaluation. These researchers feel that the goal of the evaluation is to develop a consensus about what the program is and what it does.

Poor or non-existent records

When a researcher is called in to evaluate a program which has been running for some time, he or she is likely to find poorly kept or non-existent records. Dealing with missing, incomplete, inaccurate, or inadequate data sources can be a cause of enormous frustration to the researcher. This frustration can be exacerbated when the researcher must operate within tight deadlines created by those who did not keep good records in the first place!

In such a situation, it is necessary to be very creative and resourceful in filling gaps in the data. This can done in the spirit of Campbell and Stanley's (1963) suggestions about the design of quasi-experiments: i.e., methodologies which attempt to rule out competing hypotheses in as many ways as possible, even if the result is not always elegant. For example, to augment poorly kept archives, key informants with information about the program and participants can be interviewed; records kept for other reasons may be accessed; and service providers can be asked, to the best of their

ability, to reconstruct previous records. None of these methods yield perfect data on their own, but taken together may add to the overall profile of the program.

Researchers denied entry to group

Increasingly evaluators have regarded participant observation as an ideal method of collecting information about a self-help group. This strategy requires researchers and/or students to attend sessions in order to get a sense of program content, and how it is delivered and received. It is not always possible, however, to change the group's size, age, or gender composition, or include a member who is unfamiliar with the shared experiences of other participants. In these circumstances, a student or researcher may be denied access to the sessions.

When this is the case, members of the group, themselves, may be recruited as observers. Impressions solicited from the group's facilitator, for example, may have even greater validity than those of a researcher unfamiliar with the ongoing dynamics of the group. As well, participants can communicate their perceptions of the program through interviews at the end of the session(s) or by keeping a journal of their experience of the whole program. Occasionally, it may also be possible, with participants' permission, to video or audiotape the sessions in an unobtrusive fashion. All of these strategies are consistent with the philosophy of participatory research.

Sample

One recurrent difficulty in evaluating self-help and mutual aid programs for older adults is the issue of sample size and composition. In most cases, a critical mass of interested participants is necessary in order to keep a program operating, but the size of each group cannot become so large that cohesion and involvement are compromised. As well, it is typically the case that only one group will be meeting at any time. Thus, a researcher

asked to evaluate such a program may discover that traditional research and statistical strategies are impossible.

A second sampling issue arises when, as is often the case with support groups, the composition of the group changes over time. Individuals leave the program if it is not meeting their needs or if they can no longer afford the time; other individuals may join. This situation is very common in mutual aid groups for caregivers. Some leave the group because the needs of the care receiver have changed or the care receiver has died and others join as they begin to take on the caregiver role.

Because of these sample characteristics, an evaluator is likely to discover that traditional research and statistical strategies have questionable validity. This may make it extremely difficult to address the need of stakeholders to have "proof" that the program works for a wide variety of people and occasions. With small sample sizes and changing composition, it is not at all clear that the positive results from one evaluation will generalize to the same program at another time or to other similar programs. In one evaluation which we performed, the group composition was primarily female over the first three offerings. The fourth group had substantially more males, and as a result, different issues were raised. Examining all groups gave us valuable insights into the program and its ability to meet the needs of these individuals, but reminded us of the dangers of overgeneralization (Kuiack, Davey, & Norris, 1993).

The use of intensive qualitative methods may provide one solution when evaluating programs with small sample sizes. Participant observation, journals, lengthy interviews, or focus groups may provide a better indication of the lived experience of participants than answers to a few closed-ended questionnaire items. In many cases, it is also possible to compare other data sources (e.g., information from key informants or archives) to the information obtained from interviews in an attempt to triangulate the results (See Norris, 1993, and Patton, 1990, for discussions of triangulation).

Time constraints

A final difficulty encountered by evaluators is that of externally imposed time constraints. Funding agencies, service providers, researchers, and students all seem to operate on different, usually inflexible, timelines, making compromise impossible. In these situations, researchers must simply do what they can and try not to have unrealistic expectations of what is possible. In any type of applied research setting, the most useful goal to set is not "the best result possible", but rather, "the best result possible given the circumstances", and the circumstances are not always under the control of the researcher.

TWO MODELS OF RESEARCHER INVOLVEMENT IN PROGRAM EVALUATION

In this section, we present two models of researcher involvement in the evaluation process. These models represent a philosophical difference or distinction made by the researcher and other stakeholders, rather than a difference in methodology or the time at which researcher involvement begins.

The first model, with the researcher acting as **the evaluator**, is representative of the traditional framework: A funding body or service provider "brings in" a researcher from a university or other setting to conduct evaluation research. This approach to evaluation suggests that the researcher is responsible for operationalizing program goals, determining what kinds of methods will be used, and interpreting and conducting the research. Because of the distinction between those who created the program and those who furnish the evaluation, there is a chance that the evaluation will not meet the needs of the service provider or programmer, and thus will not be used. Cook and Shadish (1986) offer the researcher many helpful suggestions on

how to increase the likelihood that the evaluation will be used under this model.

Our alternative paradigm places the researcher in the role of **consultant** to the other stakeholders rather than as the only evaluator of a program. This is an important distinction as a consultant has the task of providing a set of alternatives and an explanation of their likely consequences or implications. The consultant, however, does not assume primary responsibility for the decision-making process or for operationalizing program goals and evaluation objectives. Control over decision-making remains in the hands of those who will use the results of the evaluation. The researcher acts only to inform and empower the service providers and program participants throughout the process.

The remainder of this chapter will be devoted to issues which stakeholders should consider when choosing a model for the evaluation of their programs.

CONSIDERATIONS WHEN A RESEARCHER ACTS AS AN EVALUATOR

The traditional model of researcher as evaluator can be very successful when the following set of considerations are observed. It is desirable for the researcher to make his or her role in the evaluation process as clear as possible. This should extend also to the desired research methods to be used. As with so many aspects of evaluation research, good communication will facilitate cooperation from the other stakeholders. We have consistently found that a commitment to openness and a desire to involve other stakeholders in the process will produce a higher quality evaluation.

Another important aspect to evaluation research is achieving a sense of agreement on the perceptions of the program's goals. In most cases, this will necessitate involvement of numerous stakeholders along the way. Similarly, knowing how to take off the "research hat" and listen to the concerns and ideas of other stakeholders is vital to the process.

An evaluation researcher, or indeed any applied social scientist, should develop the ability to see missing data and poor records more as a "challenge" rather than as a disaster. This makes it more likely that the evaluator will also be able to balance a need to strive for research ideals with the limitations imposed by the setting. Remaining open to providers' knowledge of the participants and the community regarding ability to provide feedback or participate in assessments, for example, may prevent disappointment later on. As well, such openness provides an opportunity for shared problem-solving among all stakeholders.

Working within this model of evaluation, researchers should carefully word their conclusions and recommendations. Under no circumstances should a researcher be required to soften the information, but considerable tact is necessary if the report is to be used rather than shelved. Along the same lines, care must be taken to ensure that the report is clear about how findings should be interpreted to avoid incorrect inferences and overgeneralizations. Finally, the model of researcher as evaluator necessitates a thorough discussion of issues of data and report ownership from the outset of the evaluation. Typically, the researcher takes responsibility for publishing the results, but other stakeholders may be included as co-authors.

CONSIDERATIONS WHEN A RESEARCHER ACTS AS CONSULTANT

The role of the researcher as consultant differs greatly from that of evaluator. The most obvious difference is that the researcher does not carry out the evaluation him or herself, but rather tries to pass on the necessary research skills to the service provider and program participants. As well, the consultant assists with the decision-making process by suggesting possible consequences of various decisions, and by assisting with the interpretation of results from the evaluation. In this way the role of the researcher is clarified as an "expert" in the methods of evaluation rather than in a particular program itself, where the

service provider and program participants are likely to possess the greatest expertise and most valuable insights.

As part of this goal, the researcher should be attempting to educate as many stakeholders as possible about what a program evaluation is and is not, and what it can and cannot achieve. The researcher should help other stakeholders to clarify goals and constraints in carrying out specific evaluations, and assist with interpreting the findings. Further to this, the researcher should help to make the findings more visible and useable to the other stakeholders, and suggest creative ways to modify the existing program to address suggested improvements.

Another potential benefit to a researcher acting as a consultant is the ability to assist programmers in developing an evaluation at any stage in the program's development. If a consultant is brought in early enough, then many potential problems, such as poorly kept archival data, may be avoided. For example, the researcher can help programmers with various decisions about the evaluation: the most useful records to collect; the most efficient or effective way to collect this information; the most beneficial means of using the accumulated data.

Students, too, should be trained as consultants as well as competent researchers. Working within this framework, students should acquire good communication skills, including the ability to negotiate with stakeholders before they enter the field. As well, students need to be briefed on the political context of the program in which they are becoming involved. This should include some information about the type and extent of power which groups of stakeholders may perceive in each other.

CONCLUSION

Because of current financial constraints, social and health care agencies are rarely able to fund expensive new programs which provide support for specific groups within a community. Thus, relatively low-budget mutual aid programs which rely heavily upon the investment of the participants themselves will

continue to be an attractive alternative. Also as a consequence of tight financial conditions, funders increasingly will demand evidence that their money is being well spend. Thus, regardless of how frugal service-providers and participants have managed to be, they will still be required to produce an evaluation of the program. Because research is not typically within the expertise of those involved in a mutual aid program, they will continue to look to professional researchers for assistance.

In this chapter, we have stressed the role of researchers as facilitators, rather than directors, of evaluation research. We have noted that there are many groups of stakeholders within an evaluation: funders, service-providers and programmers, participants, researchers and students. Each group has a unique perception of the program and specific needs which must be addressed within the evaluation. Ignoring any of these stakeholders is likely to produce an evaluation long on reliability perhaps, but short on validity (Robottom & Colquhoun, 1992). This concern has led to impassioned pleas within the literature on community organization for action research and participatory research (Brown & Tandon, 1983; Freire, 1978; Rapaport, 1970; Yeich & Levine, 1992).

To assist researchers in involving all stakeholders, we have considered two models of involvement in the evaluation process. The first represents the traditional model of the researcher as someone who plans, executes, and interprets the evaluation. Within this paradigm, the researcher typically is recruited to perform an evaluation of a program already in existence. Often, the evaluator in this situation must struggle with his or her own investment in the research process while attempting to remain true to the needs of other stakeholders. The alternative model is that of researcher as consultant. Ideally, within this framework, the researcher works with all stakeholders from the program's inception to the interpretation of findings from the evaluation.

Our own experience strongly suggests that researchers will most likely carry out high quality evaluations when acting as consultants rather than as directors of the enterprise. What is lost

in time in conducting a fully participatory evaluation is compensated for by the emergence of useful and valid data. Probably the most frustrating situation for a researcher is to produce an evaluation report that gathers dust on a shelf. Our final recommendation is to regard active involvement from all stakeholders as a gold standard for which evaluators of community programs should strive.

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CHAPTER 5

HEALTH PROMOTION RESEARCH FOR OLDER CANADIANS: PRIORITIES FROM A COMMUNITY HEALTH UNIT PERSPECTIVE

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INTRODUCTION

Canada has been a world leader in the field of health promotion beginning with the now famous document *A New Perspective on the Health of Canadians: A Working Document* (Lalonde, 1974) in the 1970s and subsequently with *Achieving Health for All* (Epp, 1986). While we have been strong in theory and policy development at the national level, only very recently, have we developed a national infrastructure to promote health promotion research. It is important that the individuals associated with the Health Promotion Research Centres that now span the country clearly recognize that "Health Promotion", as the term is used in the Canadian public health sector, is very much an applied activity. It involves:

- Working with legislatures and city councils in the development of healthy public policy;
- Developing community coalitions to review the community's health and plan joint action;
- Strengthening community capacity to provide a stronger support system for those most at risk of ill health;
- Strengthening community health services and programs so that they reflect the needs and wishes of the community as well as promote a more holistic approach to achieving health; and

- Supporting community members to develop the confidence and self esteem to create health in their lives and those of their family members.

Precisely because health promotion is such an applied activity, it must also be realized that the development of a successful research agenda will, of necessity, involve the bringing together of people who have very different perspectives: researchers, community members, health, social and recreation practitioners.

This chapter begins by acknowledging the differing perspectives of research producers and research consumers. The results of a meta-analysis of the published literature on health promotion and aging are then presented, highlighting the types of health promotion strategies that have been most commonly studied and the levels of research design (e.g. program description, pilot or prototype studies, efficacy and effectiveness trials, diffusion studies) that have been most commonly employed. At this point, as a research consumer, I will describe our situation in the community and the priorities we see from that perspective. I will describe the specific kinds of new knowledge that we need as well as specify the strategies required in order to achieve the goal of better health for older Canadians.

THE ISSUE OF PERSPECTIVE

There are several perspectives that can be applied to health promotion and aging research and none are better than others, although as will be seen, some may be more politically correct than others! For purposes of illustration, the reader is asked to answer the following questions, choosing only one of the alternatives presented.

1. Do you value research studies most highly:

   a. which contribute to a body of knowledge?
   or
   b. which tell you how to run a better program for older people?

2. Do you feel more comfortable:

   a. conducting original research where you can control the design and execution of the experiment?
   or
   b. when you are researching the effectiveness of a community program?

3. How do you frame research on older people?

   a. Do you see gerontology as a distinct discipline?
   or
   b. Do you see older adults as a part of the community whose needs are best addressed by borrowing freely from the disciplines of sociology, psychology, anthropology, adult education, political science and medicine?

4. What do you see as the most important measures of health?

   a. Measures of mortality and hospital use.
   or
   b. Measures of health behaviours such as exercise levels and smoking.
   or
   c. Measures of social support, power and control.

If you answered mostly "a" to the first three questions, you are likely to be a research producer; if you answered mostly "b" you are more likely to be a consumer of research findings (Cameron & Best, 1987). Your answer to the last question identifies your paradigm of health. People coming from a medical paradigm tend to measure health outcomes in terms of disease and death rates; people from a public health paradigm tend to use risk factors, and those with a community development perspective tend to look at indicators such as unemployment, loneliness and poverty (Labonte, 1988). Again, none of these perspectives is inherently right or wrong. They are just different views.

WHAT KINDS OF HEALTH PROMOTION STRATEGIES ARE BEING RESEARCHED?

An analysis of the published literature on Health Promotion and Aging was carried out, with titles searched from 1989 to June 1993, from Ageline and the Health Planning and Administration Database. A total of 152 abstracts were reviewed.

To determine the kinds of health promotion strategies being researched, the abstracts were categorized into the five basic strategies of the Ottawa Charter for Health Promotion (1986):

- building of healthy public policy
- strengthening community action
- creating supportive environments
- developing personal skills
- reorienting health services

As shown in Table 1, the largest number of articles focused on developing personal skills (34.2%). Reorienting health services (29.5%) was the second most frequent topic. Most articles in this category were concerned with attempts of American hospitals and health maintenance organizations to develop outpatient strategies for older people. Creating supportive environments was the third most common strategy (14.1%), followed respectively, by strengthening community action (13.4%), and building healthy public policy (8.7%).

Table 1. Categorization of Seniors Health Promotion Literature According to Ottawa Charter Strategies

Strategies	# Articles	%
Building healthy public policy	13	8.7
Strengthening community action	20	13.4
Creating supportive environments	21	14.1
Developing personal skills	51	34.2
Reorienting health services	44	29.5
Total	149	100.0

(3 articles could not be classified)

As a consumer of research findings who is frequently asked to develop programs, I need to know how, when and where to intervene to prevent disease and promote health. Currently, most of the interventions in public health are preoccupied with voluntary lifestyle changes at the individual level (McKinlay, 1993). The thinking is that by offering a special program to help seniors change an epidemiologically derived risk factor (eg. quit smoking or exercise more), their health will improve.

There may be at least four reasons why this is not the most effective single strategy to pursue. First, individual risk factor studies are only half of the story; social system contributions represent the other half. System contributions include government policies; organizational priorities; community, family, and peer environments; and professional behaviours. If we don't examine system issues, we may be unfairly assigning blame to older adults. For example, a British study of post-cardiac patients found that seniors were less likely to receive counselling to stop smoking and change their diet following a heart attack (Cohen & Fowlie, 1992). A second concern with the individual approach is that the causal connection of individual risk factors to health outcomes is unclear. For example, Hopkins and Williams (1981) have compiled a list of 246 risk factors for coronary heart disease. Research on the causes of death in British civil servants shows that a good part of the gradient in disease and death rates is explained by differences in psychosocial work conditions and cannot be explained by carefully measured differences in smoking or other modifiers for common disease (Marmot & Theorell, 1988). The authors conclude by saying that if biomedical risk factors do not contribute, or if their influence turns out to be much less than originally thought, then much of the effort and many of the resources may not be optimally invested. A final concern, apparent in a significant number of studies, is that the people who participate in these programs are consistently more advantaged and usually healthier than their neighbours who don't join the activity (Carter et al 1991; Wagner et al. 1991). Programmers tend to interpret this as a recruitment problem but, however labeled, it is clear that older adults most at risk do not participate in personal skills programs.

McKinlay (1993) suggests that we might be more effective in our interventions if we move "upstream" in our efforts. The continuum of intervention is described in Figure 1. It shows how social policy initiatives can be seen as more "upstream" than group programs or surgical treatment. By moving "upstream", community health planners and programmers would initiate different activities. For example, last year in our North Shore Health District the cost of older people falling was 3.5 million dollars and that figure only reflects hospital costs. Programmers might do more to prevent falls by changing the government's Pharmacare reimbursement policies for one drug (Haladol), than by enrolling community seniors in group exercise programs to improve muscle strength and bone density (McKinlay, 1993).

An additional concern, emerging from analysis of the personal skills studies reported in the literature, is with who is carrying out the interventions. One of the key mechanisms suggested in *Achieving Health for All* (Epp, 1986) is to strengthen self-care and mutual aid. Yet as shown in Table 2, only 2.2% of the studies researching personal skills involved an intervention led by a volunteer.

From the research priorities perspective, it appears that it is mainly downstream strategies that are being studied. More emphasis needs to be placed on the conduct of policy and community-based studies. As a research consumer, I also have a concern with the professionalization of who is carrying out the interventions that are described in the current research literature.

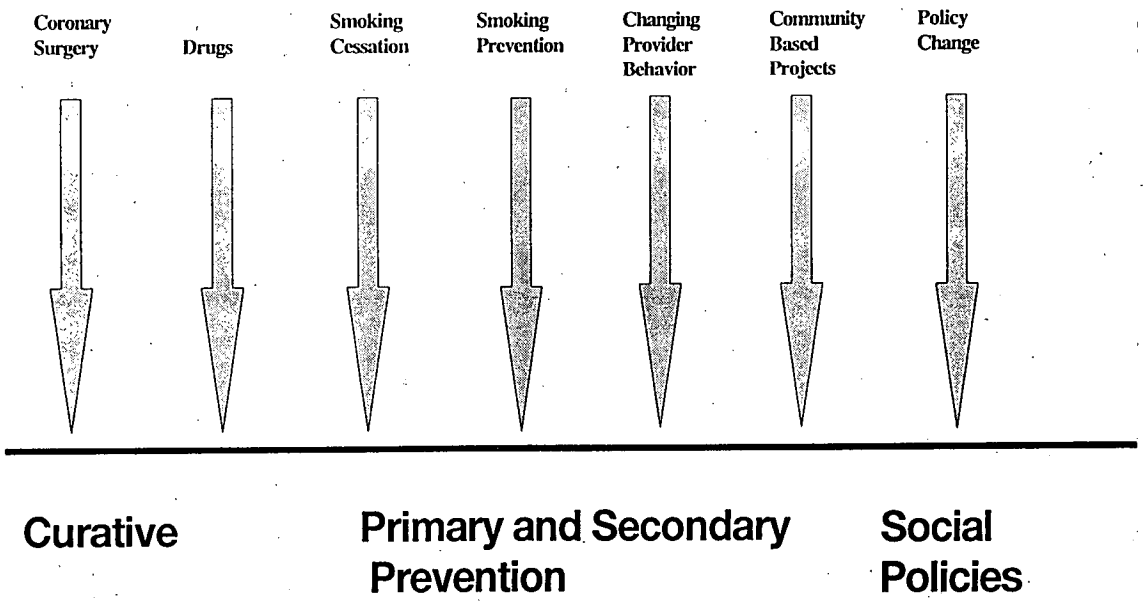
Table 2. Articles on Personal Skills Development, by Level of Assistance

Level of Assistance	# Articles	%
No Assistance - information only	17	37.8
Group lead by volunteer	1	2.2
Group lead by professional	17	37.8
One to one with a professional	10	22.2
Total	45	100.0

(5 articles could not be classified)

FIGURE 1

THE CONTINUUM OF INTERVENTION



After McKinlay (1993)

WHAT KINDS OF RESEARCH DESIGNS ARE EVIDENT IN THE LITERATURE?

A key question is whether work on seniors' health promotion is being developed within a specific knowledge development framework where, over time, studies will contribute to developing a coherent body of knowledge. At least two divisions of the American National Institute of Health (The National Heart, Lung and Blood Institute and the National Cancer Institute) suggest a sequence of research phases for the development of health education/promotion programs (Greenwald & Cullen, 1984). Recently, in Canada, the National Cancer Institute has also adopted this approach (Best, 1993). Flay (1986) suggests the stage model of research for the development of health promotion programs shown in Table 3.

Table 3. Suggested Research Phases for the Development of Health Promotion Programs

I	**Basic Research**: discipline specific research on basic mechanisms
II	**Hypothesis Development:** based on accumulated research, a testable hypothesis is developed about the effectiveness of an intervention on a specific problem.
III	**Pilot Applied Research:** preliminary tests of new approaches toward basic research results to achieve specific immediate effects related to specific health promotion goals.
IV	**Prototype Studies:** small scale tests of refined programming components suggest Phase III research.
V	**Efficacy Trials:** designed to evaluate what an intervention achieves under optimum conditions.
VI	**Effectiveness Trials:** concerned with testing whether a treatment is efficacious and acceptable when delivered to a broader population.
VII	**Diffusion Studies:** to determine the effectiveness and acceptability under real working conditions of delivery/implementation.

after Flay (1986)

Table 4 shows the result when the 152 abstracts from the literature review on health promotion for seniors were categorized in terms of Flay's model. As can be seen, the bulk of the research is at the level of program description and hypothesis development. After Stage II there are fewer and fewer studies.

Table 4. Categorization of Seniors Health Promotion Literature, by Research Stage

Stage	# Articles	%
0. Program descriptions	36	23.8
1. Basic research	23	15.2
2. Hypothesis development	46	30.5
3. Pilot applied research	19	12.6
4. Prototype studies	9	6.0
5. Efficacy Studies	13	8.6
6. Effectiveness studies	3	2.0
7. Diffusion	2	1.3
Total	151	100.0

Table 5 shows the abstracts cross-classified according to their stage of research and dominant Ottawa Charter health promotion strategy. The results of this analysis indicate that there is considerable Stage III (i.e. pilot study) research on supportive environments; Stage IV (i.e. prototype studies) are to be found mainly in research concerned with community action and personal skills; Stage V and VI (i.e. efficacy and effectiveness studies) are concentrated in the areas of personal skills development and reorienting health services. Generally, however, there is a dearth of outcome and diffusion research. Programmers, who really need Stages V to VII studies, are being forced to leap from problem definition to program solution with sparse research data to assist them.

Table 5. Categorization of Seniors Health Promotion Literature, by Research Stage and Health Promotion Strategy

Stages of Research	Health Promotion Strategies				
	Policy	Community Action	Supportive Environment	Personal Skills	Reorient Health Services
0. Program Description	3	5	1	20	4
1. Basic Research	3	0	2	6	10
2. Hypothesis Development	6	7	2	10	19
3. Pilot Studies	0	2	8	4	5
4. Prototype Studies	0	3	2	3	1
5. Efficacy Studies	0	3	1	5	4
6. Effectiveness Studies	1	0	0	2	0
7. Diffusion Studies	0	0	1	0	1
Total	13	20	17	50	44

The concepts of efficacy and effectiveness (Stages V and VI) come from medical clinical trials but can be readily applied to community change. Efficacy trials are designed to study what an intervention achieves under optimum conditions. In drug trials, the researcher would closely monitor to ensure that the medications were taken as prescribed and regular medical or nursing checks would be conducted where the individuals, if necessary, were followed at home. Our study of the effect of a health promotion program for frail elders was essentially an efficacy study (Hall et al. 1991). Using a randomized clinical trial design, we followed a group of approximately 300 frail elders living at home, to determine if an intensive case management program that focussed on aspects of

health ranging from housing to stress would decrease the rate of facility placement. While the elders in the enhanced care program fared better at all points in time, in our conclusions, we recommended an effectiveness trial that would examine how this intervention (which only required approximately 14 hours of additional nursing time per person per year) would fare in a less controlled situation. We also suggested a methods study to examine the effect of peer support for individuals coping with their health concerns.

An effectiveness study would examine whether different field staff in perhaps four experimental health units could administer the program within the existing requirements of the Continuing Care Program. Presumably, if the results of the effectiveness study were positive, the Ministry of Health would mount a diffusion study in which the program would be implemented province wide, and the focus of research would be a process evaluation rather than establishing the program's effectiveness in achieving improved health outcomes. In a process evaluation, the researchers would examine whether the program was being implemented and identify and describe the barriers to change if it was not.

THE COMMUNITY PERSPECTIVE

The health unit in which I work provides basic public health services to the community. For older adults, this may involve the Continuing Care Program which delivers services that range from Home Care Nursing and Rehabilitation to Home Support or Facility Care for frail elders. We also have a Preventive Nursing Program which has some involvement with a seniors' wellness program and a Volunteer Program which co-ordinates a friendly visiting program for isolated seniors. Through our Community Partnership Program we fund the North Shore Community Services Program to provide a Seniors "One Stop" telephone information line. We also provide funding to support the Seniors' Keep Well program with mutual aid wellness activities in five

settings, the Seniors' Hub (a frail elders outreach program) and a Caregivers' Support Association.

Our Health Unit is somewhat unique in British Columbia, in having a Community Health Promotion Program. Our job is to bring the community together around critical health issues and to provide information on the health status of the community. As manager of the program, I am also responsible for advising on strategic planning and program evaluation.

The Program has five staff members who work with Community groups, each directed towards a particular strategic direction:

- Heart Health
- Violence in the Community
- Falls Prevention among Seniors
- Tobacco Use Reduction
- Lower Lonsdale Community Project (a high risk community)

Our community is also immersed in a significant provincial health reform initiative which purports to give more emphasis to health promotion and disease prevention. The health care system in British Columbia, like most of Canada, has recently been through a review process. This began with a Royal Commission report entitled *Closer to Home* (B.C. Ministry of Health, 1992). The government responded to the report with a document entitled *New Directions* (B.C. Ministry of Health, 1993), which describes five major themes for the future:

- Better Health
- Greater Public Participation
- Health Services Closer to Home
- Respect for the Care Providers
- Effective Management

Central to *New Directions* is helping the community to be more aware of health issues and to increase disease prevention and health promotion strategies to address these issues. However, it

seems to have been assumed that we would know exactly how to do this.

From the perspective of a community health unit, there are a number of research priorities in the area of health promotion for older adults. For example, we need more information about the health issues that influence the well-being and health care utilization of large numbers of seniors and about problem solutions that can be applied in realistic settings. We need support to understand and apply strategies that derive from various theoretical perspectives. Because health promotion is multi-sectoral, we need process evaluation studies which tell us how to enhance partnerships and participation. Process evaluation studies will also help us to monitor diffusion of innovations. We also require research on health promotion strategies that rely on minimum intervention and that focus on strengthening self-care and mutual aid.

PRIORITY ISSUES

LEADING CAUSES OF DEATH, HOSPITALIZATION AND DISABILITY

It seems reasonable that knowledge producers' choice of topics to research should be determined in partnership with the consumers of that knowledge. Increasingly, we are seeing this take place, perhaps most strongly in the fields of HIV/AIDS and breast cancer research. The leading causes of death and hence, the priority health problems that we face with older adults on the North Shore, are shown in Table 6. These include: heart disease, breast cancer and prostate cancer. Table 7 shows that after circulatory diseases and cancer, injury or falls stand out as a major cause of extended hospitalization (and even death and disability) among older women. Although we have no local data on prevalence of disability, we can estimate from national surveys that arthritis is a significant problem for 35% of our seniors population (Minister of Supply & Services, 1981). In the Survey on Ageing and Independence (1993) approximately one in three respondents aged

65 and over reported activity limitations. It is important that we develop interventions that support coping with chronic degenerative disease.

Table 6. Leading Cause of Death of the 65+ Population on the Northshore, by Gender

MALE	# of deaths	% all deaths	FEMALE	# of deaths	% of all deaths
Heart Disease	136	33	Heart Disease	141	28
Cancer	103	25	Cancer	121	24
All other diseases	39	10	Stroke	72	14
Stroke	37	9	All other diseases	59	12
Chronic Obstructive Pulmonary Disease	19	5	Pneumonia and Influenza	39	8

Source: Ministry of Health, Health Planning Database, 1993

Table 7. Leading Acute/Rehab Hospitalizations of the 65+ Population on the North Shore, by Gender: 1991/92

MALE	DAYS	FEMALE	DAYS
Circulatory System	7239	Circulatory System	8540
Neoplasms	4950	Neoplasms	4819
Digestive System	2170	Injury and Poisoning	4014
Respiratory System	2014	Digestive System	2952
Musculo-skeletal & Connective Tissue	1599	Respiratory System	2476

Source: Ministry of Health, Health Planning Database 1993

Relevant Sampling

These problems need especially to be addressed and studied in neighbourhoods where poverty and isolation are concentrated. Convenience samples do not provide useful information to apply with the "at risk" groups we need most to support.

Collaboration

Priority issues at the community level need to be addressed in concert with such organizations as the Heart and Stroke Foundation and the Canadian Cancer Society. Neither we, nor they, have sufficient resources to continue to operate in isolation.

Realistic Settings

Because community and environmental characteristics often frame strategy selection, realistic settings should be selected in which to conduct research as well as to deliver service. For example, in the North Shore falls project, subcommittees are working in four different settings: in care facilities, the local acute care hospital, the homes of frail elders who receive home support assistance and, in the community at large. Partnerships would be welcomed with researchers who will come and work with us in these settings.

Capacity Development

During the past 15 years, there has been enormous progress in knowledge development with regards to health promotion. However, most of the dialogue has taken place at the national level (cf. Ottawa Charter, 1986 and Epp, 1986). At the local level, there has been limited opportunity to transfer this learning. For example, within the field of smoking cessation, there are now state of the art programs that can boost one year cessation rates from 1% to 30% (Prochaska, 1994), but most community practitioners have not been exposed to the Transtheoretical Model of Change on which these programs are based. This particular theory has evolved within the discipline of clinical psychology, a field that is

often perceived as inaccessible by community health practitioners, the vast majority of whom are nurses. We need to research more effective ways to transfer learning so that proven strategies can be correctly implemented. Practitioners do not necessarily want to become theoreticians but we do want to be more effective in supporting our clients and our community to be well.

Research on Strategies that Enhance Partnerships and Participation

Health promotion practice at the community level can involve community based programming and community development programming (Labonte, 1993). The critical difference between the two is who decides the agenda. In the Community Health Unit setting, group work has traditionally been community based programming, although increasingly both forms of practice take place. For example, due to cost and disability issues, the Unit has taken leadership with regard to falls among seniors but in another initiative, we have chosen to work in organizing community seniors via a community kitchen. Process research is needed to help us refine our strategies in both kinds of programming.

Currently, we have a process evaluation grant from the Heart and Stroke Foundation to study the key capacities and processes in maintaining a healthy community project. We also need research concerning key aspects of community development skills. Increasingly, practitioners are recognizing that health can be improved by community development strategies that involve organizing and/or supporting community groups in identifying their issues, planning and acting upon their strategies for social action/social change and gaining increased self-reliance and decision making power as a result of these activities (Labonte, 1993; Minkler, 1990). Some suggest that in vulnerable communities, beginning "where people are at", is the only place to start (Minkler, 1985). For example, the Tenderloin Seniors Organizing Project addresses poor health, social isolation and powerlessness by fostering social support and social action among

elderly residents of San Francisco's Tenderloin hotels (Minkler, 1985). More of this type of research is required.

Research on Strategies that Strengthen Self-Care and Mutual Aid

As indicated previously, most of the helping strategies used in the articles that were reviewed involved professional helpers teaching about personal lifestyle change. Rogers (1987) notes that while epidemiological studies have shown significantly higher mortality and morbidity rates in people with less social support and fewer social ties even after adjusting for health behaviors, we do not know the efficacy of natural versus artificially provided social ties and support. However, results of the small number of studies that have been conducted to date suggest that those with low social support may derive the most benefit from mutual aid programs (eg. Vachon et al, 1980).

Mutual aid is a form of social support which consists of practical and psychological help between people with a common problem or issue who relate to one another as equals, focusing on emotional support, through the sharing of personal experiences, information and ways of coping (Romeder, 1990). Mutual aid can take place in self-help groups, in ordinary life, in voluntary action organizations, in support groups led by professionals and/or in education programs (Romeder, 1993).

Currently, in community settings across the province health workers and citizens are engaged in a health reform process. One objective is to rebalance the use of health care resources and shift the focus "Closer to Home". Rebalancing could be interpreted, as Romeder (1993) suggests, as shifting the focus from institutional/professional care to selfcare and family/community care and support. Another objective in British Columbia, is to make better use of health care resources. When academics design interventions without partnering with the community, the tendency has been to extend the reach of the health care system. An example of this is "provider counselling" for smoking cessation or dietary modification (Evans & Stoddard, 1990). We lack

sufficient resources at the local level to continue to engage in professionally directed programs and increasingly, many practitioners believe that the agenda of strengthening support systems is a more powerful intervention strategy. More research is required in this area as well.

HOW CAN RESEARCHERS AND COMMUNITY MEMBERS WORK TOGETHER?

Producing rigorous research that can be used in the field is no small task but clearly, the current situation is not helping to improve the health of older Canadians. We need more productive partnerships between researchers and community programmers. Productive partnerships would move beyond communication of what each other is doing or even mutual coordination of activities to a true collaborative relationship in which each partner works side by side and each contributes resources towards the joint solving of a problem. Most likely, this means researchers will need to move out of the university setting and join with practitioners and seniors in community settings to address the priority health issues that are unique to that community. The Health Promotion Research Units that are affiliated with the Public Health Units in North York and Ottawa Carleton are examples of research producer/consumer partnerships in action.

There is an opportunity to create further collaboration with seniors in the community. In some cases, traditional research methods may have to be abandoned in favour of an action research paradigm. In other cases, qualitative studies may help to set the direction of knowledge development. Whatever the research strategy, it must be conducted in true partnership with the community. To do otherwise would be to ignore the significant progress to date.

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CHAPTER 6

EVALUATION OF THE "LIVING WELL" HEALTH PROMOTION PROGRAM FOR OLDER ADULTS

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INTRODUCTION

The older adult population in Metropolitan Toronto is increasing and is expected to represent 20% of the total population by the year 2000 (City of Toronto, 1989). In Scarborough, the metropolitan area where this study was completed, the elderly population has increased 145.6% in the past decade, and socio-demographic projections indicate that the increase will likely continue. Currently, the elderly represent approximately 10% of the total population of the study area (City of Scarborough, 1990).

The prevalence of chronic disease increases with age, and it is estimated that 85% of the Canadian population aged 65+ is affected with some form of chronic disease (Buchner & Pearson, 1989). With aging, activities of daily living also become increasingly difficult to perform, which increases the probability of dependency on others. As the number of people who live beyond their seventh and eighth decade rises, the demand for formal health services and the resultant health care costs escalate.

In view of these patterns, the shift in focus from disease treatment to health promotion and disease prevention for the elderly is timely. The paramount concern is how to minimize the effects of chronic illness and to promote and maintain healthy aging. Two main concerns among the well elderly are first, finding ways to manage chronic conditions that increase with age and secondly, to function independently with reduced stress. With these concerns in mind, it is important that health promotion

programs address the needs of the elderly in coping with physical, emotional and social losses as well as factors in their environment that may be hindering their adaptation to the aging process. One approach to promoting wellness is to encourage older adults to join groups where concerns can be shared in a mutually supportive climate and where there is an emphasis on preserving and enhancing physical and emotional strengths.

The "Living Well" program, which is the focus of this chapter, is a health promotion program that is offered by public health nurses. Older adults are invited to attend through advertisements in local papers, flyers and through their contacts with public health nurses. The goal of the program, which consists of eight weekly two hour sessions, is to support individuals in healthy lifestyle decision making. The key concepts are self-care and mutual support.

The chapter begins with a description of the program's content and format. This is followed by a brief literature review which highlights key concepts and findings from evaluation studies of other health promotion programs targeted to seniors. This sets the stage for a description of the conceptual framework, specific study questions and methodology of the Living Well study. The results of the study form the remainder of the chapter.

CONTENT AND FORMAT OF THE LIVING WELL PROGRAM

The eight weekly session that comprise the Living Well program focus on nutrition, stress management, physical exercise and communication. All of the sessions include some content on all four areas as program participants preferred to have a small amount of new material on each area each week rather than one session on each topic. The format encourages problem solving and sharing of ideas as participants encounter difficulties or successes in trying out behaviours or responses at home. As well, some sessions include small group work so that participants become better acquainted with one another and are able to provide

personal support. Group sharing often leads to friendship formation, which in some cases continues post-program.

Many teaching and learning techniques are used in the program. These include pencil and paper exercises, presentation of situations for discussion, physical activities geared to the groups' abilities and social activities. The nurse leaders provide new information and resources at a pace that is appropriate to the group and act as facilitators so that much of the learning that occurs comes from participants' sharing their knowledge and experience.

The program has been highly registered for two years. The nurses involved in the program feel that it is meeting participants needs. Informal feedback from participants has been generally favourable. However, no formal evaluation had heretofore been undertaken.

BACKGROUND LITERATURE REVIEW

The literature review undertaken prior to commencing the Living Well evaluation revealed that the assumption that aging people are unable to prevent or to minimize the effects of poor health is untrue. Despite the presence of chronic disease, many older people perceive themselves as healthy, and strive to maintain a functional and independent level of health. Older people who have access to health education information are motivated to make healthy lifestyle choices and to adopt healthier lifestyle behaviours (Schank & Lough, 1989).

Health promotion programs encourage older adults to adopt behaviours that will help them maintain or improve their functional capacity, cope with life changes and live fully each day. The content of such programs is designed to address self-management health skills and self-responsibility in making lifestyle choices. In addition, the promotion of good health includes helping the elderly to utilize community resources in such a way as to support their optimal independent functioning in the community. In essence, health promotion programs encourage the elderly to

assume responsibility for decisions concerning their personal health needs and care. It is argued by some researchers that encouraging self-responsibility for a healthier and more satisfying life is the most cost-effective strategy of providing health care of the elderly (Minkler & Pasick, 1986).

There is general agreement in the literature that physical factors do not account for all the variation in health status found among the elderly. Social factors also have been found to have a significant impact on health status (Weinberger, Hiner & Tierney, 1987). Social support systems are the relationships that provide for individuals' emotional, tangible and information needs. These systems could include the availability of others, the exchange of material goods and assistance or involvement in the community. Mitchell's (1983) findings suggest that the maintenance of personal and social functioning is difficult in the absence of a social milieu. In fact, she suggests that social support helps an individual to cope with stress and reduces the risk of illness. One of the goals of wellness programs for the elderly is, indeed, to maximize social functioning and to minimize or prevent, if possible, physical and psychological deterioration.

Counte and Glandon (1991) showed a positive relationship between life stress exposure and utilization of health care services. Elderly with higher levels of exposure to stressful life events used increasing amounts of health services. Results such as these suggest that wellness programs may have a strong role to play in mitigating the negative health consequences of stress.

Oswald, Weiss-Farnan and Monson (1990) examined the impact of a health education program on women aged 60 to 85 years. Seventy-eight women who volunteered to participate in a four week educational program were randomly assigned to a teacher-directed group intervention, a learner-paced group, or a control group that did not receive an intervention. A significant decrease in stress was found in both intervention groups. In a study by Griffin, Ling and Staley (1985), participants met once weekly to practice relaxation techniques for a period of ten weeks after which, they rated their general tension level as lower. At one year

follow up, the majority of participants felt they were better able to handle stress than they had been one year previously.

The Staying Healthy After Fifty (SHAF) program (Simmons et al., 1989) addresses three content areas: health concerns, emergency situations, lifestyle and consumer planning. An evaluation of the program shows that participants score significantly higher than comparison group members on health actions and ability to perform specific health skills. However, few efforts have been directed towards evaluating a broader set of outcomes of wellness programs for older adults. Consequently, the program evaluation for the Living Well Program focused on evaluating the outcomes of established objectives, as well as changes in perceived health, happiness, life satisfaction, self-concept and ability to manage stress and cope with life.

CONCEPTUAL FRAMEWORK FOR THE LIVING WELL EVALUATION

The Neuman Systems Model was selected as the conceptual framework for this study due to its ability to integrate physical and psycho-social elements. Neuman (1989) proposes five domains of variables that affect people's health and well-being: physiological, psychological, developmental, socio-cultural and spiritual. The person is viewed as a system with a basic structure or core that is essential to the life and basic function of the system. Health is seen as a state of equilibrium or harmony. As well, energy is available to cope with the stressors that disrupt or have the potential to disrupt the system's steady state. A person's appraisal of situations as challenging or threatening determines whether they are stressed or not.

Neuman proposes that persons develop protective buffers (called the flexible line of defence) against stressors that have the potential to disturb their steady state. The elements of the flexible lines of defence are functional components of the five person variables. These include coping patterns and lifestyle factors. Neuman also describes internal resources (lines of resistance) that are activated when a stressor disrupts the equilibrium of the

person (penetrates the normal line of defence). These internal factors protect the system's integrity and include spiritual strength.

Three types of preventive interventions are described by Neuman: primary prevention, secondary prevention or tertiary prevention. Primary prevention attempts to strengthen the flexible line of defence or to prevent the stressor from reaching its target. The aim of secondary prevention is to regain an optimal health state by assisting the client to conserve energy and utilize internal and external resources. Tertiary prevention facilitates the maintenance of an optimal level of health in spite of limitations imposed by stressors such as illness or disability.

This study examines the objectives established by the older adults attending the Living Well Program. It is expected that these would coincide with lifestyle behaviours related to increasing or maintaining the defence system or coping with stressors that have the potential to upset the individuals equilibrium. The older adults' perceptions of health is also studied to determine if there is change after attending the health promotion classes. It is expected that clients who participate in health promotion activities would themselves as better able to manage stressors. It is also expected that self-concept and perception of happiness will be higher after involvement in the program.

RESEARCH QUESTIONS

Five questions guided the Living Well evaluation.

1. In what areas of their lives do program participants identify need for change?

2. In what areas of their lives do older adults report success/non-success in meeting the objectives that they feel will help them to live well?

3. Is there an increase in perceived health that can be attributed to the program?

4. Is there an increase in major lifestyle activities that can be attributed to the program?

5. Are there increases in perceptions of life satisfaction, self esteem, happiness, coping with life and stress management due to the program?

METHOD

SUBJECT RECRUITMENT AND STUDY DESIGN

Older adults (n=76) who attended a series of health promotion classes in 1993 were invited to participate in the study. Each were given an individual assessment when they registered for the program, using a specialized assessment form developed by the public health nurses who offered the program (T1). At the end of the assessment, they were provided with a description of the study. The study design called for reassessment at the end of the health promotion series (T2), with follow-up telephone interviews at three months (T3) and again at six months post series (T4). As well as the regular interview, participants were also asked, at the 3- and 6-month follow-up if they had been able to maintain the objectives they had established at the program or if they had established new objectives. They were also asked if they would like any assistance from the health department and if they did, a public health nurse visited them.

Seventy-five older adults initially agreed to participate in the study. However, one did not complete the program sessions. At the three month follow-up only 66 could be contacted. At six months 64 were interviewed. A total of 61 participants completed all interviews and constitute the study sample.

INSTRUMENTATION

The assessment forms used in this study have not been used previously as data collection instruments, therfore no reliability or validity test information was available. However, the nurses who

worked in the program felt that the assessment schedule accurately captured the information that the older adults discussed with them during the interviews. The nurses were provided an orientation program on the documentation process.

Information was obtained from the assessment form about the following areas:

- Social support
- Lifestyle practices
- Stressors
- Life Satisfaction
- Happiness
- Self-Esteem
- Coping with Life
- Health
- Managing Stress
- Specific Objectives

STUDY PARTICIPANTS AT BASELINE

SOCIO-DEMOGRAPHIC CHARACTERISTICS

As shown in Table 1, study participants (15 males; 46 females) range in age from 56 to 93 (mean age= 70.8; s.d.=8.26) with the majority (70%) under age 75. Approximately half (48%) were married and 41% were widowed. Approximately half (47%) were born in Canada and 21% in England or Scotland. Thirteen countries were reported as the birthplaces of the remainder. Three had limited English language skills but attended the program regularly. One participant reported that she hoped her attendance would help with her use of English.

Just over half of the respondents (56%) lived alone. However, 87% reported they had someone they could call on if they needed help and 78% reported that they felt satisfied with the visits they had from friends and relatives.

Table I - Sociodemographic Characteristics of Living Well Participants (n = 61)

Age	Frequency	%
56 - 64	16	26.0
65-74	27	44.0
75-84	15	25.0
85 +	3	5.0
Mean	70.8	
Standard Deviation	8.26	
Range	56-93	

Gender		
Male	15	254.6
Female	46	75..4

Marital Status		
Married	29	47.5
Widowed	25	41.0
Divorced	4	6.6
Single	2	3.3
No report	1	1.6

Current/Previous Occupation		
Professional	20	32.8
Service Worker	19	31.1
Clerical	15	24.6
Homemaker	5	8.2
No Report	2	3.3

Table I - Sociodemographic Characteristics of Living Well Participants (n = 61)

Birth Place	f	x
Canada	28	45.9
England	8	13.1
Scotland	5	8.2
Finland	3	4.9
Guyana	2	3.3
Hong Kong	3	5
Ireland	2	3
Borneo	1	1.6
Brazil	1	1.6
Czechoslovakia	1	1.6
Germany	1	1.6
Poland	1	1.6
Ukraine	1	1.6
Italy	1	1.6
Trinidad	1	1.6
Japan	1	1.6
No report	1	1.6

Just over half (52%) of the older adults had experienced a significant life event. These included losses through death, changes in personal health status, financial losses and loss of friends and family through moves to new places of residence.

SELF-REPORTED HEALTH AND USE OF MEDICATION

As shown in Table 2, only 11% of respondents reported no health problems. Most experienced two or three health problems but one person reported 6 problems (mean = 2.27; s.d. = 1.14). Table 3 shows that the health problems most frequently reported were: hypertension (42%), arthritis (36%) and cardiac (20%).

Table 2. Health Problems Reported by Older Adults Attending Living Well Program (n = 61)

Health Problem	Frequency	%
None	7	11.5
Hypertension	26	42.6
Arthritis	22	36.1
Cardiac	12	19.7
Diabetes	11	18.0
High Cholesterol	10	16.3
Vision	8	13.1
Bone and Joint	7	11.5
Mental Health (anxiety depression)	5	8.2
Hiatus Hernia	5	8.2
Varicose Veins	4	6.6
Digestive Problems	3	4.9
Back Problems	3	4.9
Cancer	3	4.9
Thyroid	3	4.9
Asthma	3	4.9
Osteoporosis	2	3.3
Other	22	36.1

Note: *Columns cannot be summed as more than one health problem could be reported.*

Table 3 - Number of Health Problems Reported by Older Adults Attending the Living Well Program (n = 61)

Number	Frequency	%
0	7	11.5
1	6	9.8
2	16	26.2
3	23	37.7
4	3	4.9
5	5	8.2
6	1	1.6
Total	61	100

As shown in Table 4, 79% of the older adults reported taking medication on a regular basis with most taking from one to three (mean=3.47; s.d.=2.24). A significant negative correlation was found between the number of health problems reported by older adults and their perceived health rating (r=-0.384; p=.005). However, no statistically significant correlations were found between age or number of medications and perceived health.

Table 4 Number of Regular Medications Used by Older Adults Attending the Living Well Program (n = 61)

Number	Frequency	%
0	13	21.3
1	7	11.5
2	11	18.0
3	14	23.0
4	6	9.8
5	2	3.3
6	2	3.3
7	1	1.6
8	3	4.9
9	1	1.6
10	1	1.6
Total	61	100

EXERCISE AND WEIGHT CONTROL

At T1, 90% of the older adults reported that they engaged in exercise but only 72% were satisfied with the level of their activity. At T1 only 43% were satisfied with their weight. Two persons reported feeling that they were too thin and the remainder, that they were too heavy. Ten persons (16.3%) reported that they had recently experienced a gain in weight and 12 (19.7%) a loss in weight.

EATING HABITS AND TOBACCO AND ALCOHOL CONSUMPTION

Most older adults (84%) reported eating three meals per day and one or two snacks (62%). Twenty-nine persons (48%) had been advised by their physicians to make dietary changes, however, 7 (11%) had been unable to initiate these changes. Only a minority (9%) of the older adults smoked and 38% reported moderate use of alcohol.

HEALTH, LIFE-SATISFACTION, HAPPINESS, SELF-ESTEEM, COPING, AND STRESS MANAGEMENT SELF-RATINGS

The participants were asked to rate their health, life satisfaction, happiness, self-esteem, ability to cope and ability to manage stress on a scale of 1 to 10. Higher scores indicated positive perceptions. On entry into the program (T1), 55% of the older adults rated their health as good or excellent (mean=7.35;s.d.=1.87); 83% rated their satisfaction with life and happiness as very or extremely good (mean=8.06; s.d.=2.24 and mean=8.15; s.d.=1.94, respectively) (see Table 5).

Table 5 - Self-Related Health, Life Satisfaction and Happiness of Older Adults Before Attendance at the Living Well Program (n = 61)

	Health		Life Satisfaction		Happiness	
Ratings	Time 1		Time 1		Time 1	
	f	%	f	%	f	%
None	2	3	2	3	2	3.3
1-2	0	0	0	0	2	3.3
3-4	3	4.9	2	3.3	0	0
5-6	18	29.5	6	9.8	7	11.4
7-8	21	34.4	21	34.4	22	36.1
9-10	17	27.9	28	45.9	28	45.9
Total	61	100	61	100	61	100
Missing	0	0	2	3.3	0	0

Mean	7.35	8.06	8.15
S.D.	1.87	2.24	1.94

When asked to rate how well they liked themselves (self-esteem), 77% reported liking themselves well or very well at T_1 (mean=7.49; s.d.=2.08. Also at T1, 82% of the older adults rated their ability to cope as very good or excellent (mean=8.20; s.d.=1.57) and 63% reported that they managed their stress well or very well (mean=7.25; s.d.=2.00) (see Table 6).

Table 6. Self-Related Esteem, Coping and Stress Management of Older Adults Before Attendance at the Living Well Program (n = 61)

	Self Esteem		Coping		Stress Management	
Ratings	Time 1		Time 1		Time 1	
	f	%	f	%	f	%
1-2	3	4.9	0	0	1	1.6
3-4	1	1.6	0	0	2	3.3
5-6	11	18.0	10	16.4	19	31.1
7-8	27	44.3	23	37.7	20	32.8
9-10	16	26.2	26	42.6	17	27.9
None	3	4.9	2	3.3	2	3.3
Total	61	100	61	100	61	100

Mean	7.49	8.20	7.25
S.D.	2.08	1.57	2.00

PROGRAM IMPACT

When analyses of variance (ANOVA) was used to test for changes between baseline and the three post-program interviews, no significant differences were found in the older adults' health, life satisfaction, happiness, self esteem and ability to cope ratings. However, the ANOVA did show a significant change in stress management ratings ($F=3.035; p=.031$). Post-hoc analyses using Tukey's procedure also demonstrated a significant change from T1 to T4 ($p=0.030$)

Table 7. Older Adults' Perception of Health Ratings by Time of Measure (n=47)

	T1	T2	T3	T4
MEAN	7.51	7.59	7.48	7.44
S.D.	1.87	1.72	1.38	1.67
F = 0.155 P = 0.9264				

Table 8. Older Adults' Perceptions of Life Satisfaction by Time of Measure (n = 49)

	T1	T2	T3	T4
MEAN	7.97	8.07	7.76	8.05
S.D.	2.32	1.69	1.95	1.44
F = 0.702 P = 0.5521				

Table 9. Older Adults' Perception of Happiness by Time of Measure (n = 50)

	T1	T2	T3	T4
MEAN	8.13	8.15	8.02	8.10
S.D.	2.02	1.78	1.74	1.69
F = 0.171 P = 0.9161				

Table 10. Older Adults' Perceptions of Self Esteem Ratings by Time of Measure (n = 52)

	T1	T2	T3	T4
MEAN	7.50	7.75	7.82	7.88
S.D.	1.87	1.63	1.98	1.81
F = 1.292 P = 0.2792				

Table 11. Older Adults' Perceptions of Abilities to cope with Life by Time of Measure (n = 52)

	T1	T2	T3	T4
MEAN	8.16	8.35	8.33	8.30
S.D.	1.62	1.33	1.54	1.51
F = 0.485 P = 0.6934				

Table 12. Older Adults Perceptions of Abilities to Manage Stress by Time of Measure (n = 52)

	T1	T2	T3	T4
MEAN	7.09	7.57	7.61	7.73
S.D.	1.98	1.72	1.52	1.47
F = 3.035 P = 0.0312				

Table 13 reportst the activities that participants used to manage stress in their lives. From T1 to T4, there was a marked increase in the number of older adults who were keeping attune to reducing their stress and a reduction in the number who used hobbies or lone activities such as reading, music and crafts as stress reducing strategies. As shown in Table 14, 20 (32.8%) of the participants reported increasing their activity and remaining more active even six months after attending the program.

Table 13. Activities Reported by Older Adults Attending the Living Well Program to Manage Stress at Pre-Program and Six Months Post-Program (n = 61)

Activities	Pre-Program		Six Months Post-Program	
	f	%	f	%
Exercise	24	39.3	21	34.4
Hobbies (lone)	14	23.0	8	13.I
Positive Attitude	15	24.6	11	19.7
Having Faith	9	14.8	10	16.4
Talks to Someone	11	18.0	10	16.4
Support	3	4.9	5	8.2
Recreation	5	8.2	10	16.4
Relaxation	7	1.5	6	9.8
Keeps Active	3	4.9	18	29.5
Eat	4	6.6	0	0
Attack Problem	5	8.2	0	0

Table 14. Objectives Established, Met, and Continued by Older Adults Attending the Living Well Program (n = 61)

Objectives	Initial Objectives	Objectives Maintained
Lose/Control Weight	24	5
Increase Exercise/Activity	20	20
Better Nutrition	14	12
Increase Self Confidence	7	7
Increase Socialization	5	5
Decrease Depression/Anxiety	3	3
Increase Energy	2	2
Stop Smoking	3	1
Control Illness Symptoms	2	2
No objectives	6	6

DISCUSSION

The older adults who participated in the evaluation of the Living Well program were mostly female and under 75 years of age. Fifty-five percent of the participants were alone through widowhood, divorce or never having married. All but 11% of participants reported health problems and 79% reported taking regular medication.

Since 52% of the participants reported that they had experienced a recent loss in their lives, this may have precipitated their decision to enrol in the program. As the initial rating of coping with their daily lives revealed, they may be older adults who are able to reach out and find resources in their communities to assist them to problem solve and to reduce the impact of significant losses in their lives.

The older adults' perception of their health was only slightly poorer than older adults interviewed in the 1990 Canada Health Promotion Survey (HPS) (Health and Welfare Canada, 1990). Sixty-four percent of older adults in the study rated their health as good or excellent compared to 76% of those aged 60 to 69 and 74% of those aged 70 and over in the HPS. The data from this study thus add to the growing evidence that health is a separate concept from illness and supports the definition of health as a resource for everyday living (Epp, 1986).

Most of the older adults reported positive lifestyle behaviours. At their initial assessment interview before entering the program, 90% of the older adults reported that they engaged in regular exercise, compared to 55% of all adults and 30-35% of adults over age 60 who exercise daily (Health and Welfare Canada, 1990). However, in spite of being active, 72% of the participants were not satisfied with their level of activity. Increasing their exercise levels was the most frequently reported objective of study participants, which is consistent with findings from other studies (Craig, 1991).

Eighty-four percent of older adults reported eating three meals a day and 62% reported having one or two snacks. However, 48% of the participants had been advised by their physician to

improve their eating patterns to influence their weight, reduce fat in their diet, increase fibre content or reduce salt intake. Seven participants (11%) admitted that they had not been able to initiate the suggested changes. As well, many participants set objectives for themselves related to increasing their knowledge of good nutrition and their practices in relation to healthy eating behaviours. Twenty-nine (39%) of participants set losing weight as one of their objectives. In the HPS, one-third of those over 70 reported that they were overweight and one-half of those 50-59 stated that they were overweight. Thus, assistance in the area of nutrition may have been a strong motivator to enter the Living Well program. On completion of the program many participants reported that they had learned a great deal about nutrition and at six month follow-up, about one-fifth (19.7%) reported that they had met their objectives and were maintaining these.

There was a statistically significant increase found in the participants' perception of their ability to manage stress between the pre-program interview and the six month follow-up. At both the three- and six-month post-program interviews, participants reported that they were practising the techniques learned for stress management. Thus, as they practised and learned to use these techniques, they appear to have a better ability to manage stress. As stress has been related to high resource utilization, particularly in older adults with lower support (Counte & Glandon, 1991), the outcome of the program on stress management is an important finding. The participants reported becoming more involved in activities in their apartment buildings, joining line dance and exercise groups and renewing friendships as effective strategies in helping them to manage their stress. Six months after their enrolment in the Living Well program, most of the older adults reported that they had met their goals and were continuing to engage in their changed behaviour patterns or were actively seeking new life experiences. One-third (32.8%) of the participants met their objectives related to exercise and others reported that they were more active even though this had not been an objective.

The lack of support for changes in perceived health, life satisfaction, happiness, self-esteem and ability to cope, are

consistent with many other studies. Demonstrating that individual subjective factors are affected by health promotion individual subjective factors are affected by health promotion programs may be hampered by the lack of sensitivity of measures and design.

Some participants described how they were reaching out to join new activities in the community and stay involved with friends they had made at the Living Well program. They described feelings of "peace of mind", "contentment with life", "satisfied with life" and those who had initially reported being depressed, felt they could "go day by day", "worry less" and recognized that they were "doing okay". Only a small number of older adults felt that they did not reach their goals.

The conceptual framework for this study was based on Neuman System's Model. According to the model, the older adults who participated in the study had strong lines of defence as they practiced healthy lifestyle behaviours and felt they were able to cope with their life. However, the lines of defence against stressors were compromised by the chronic illness that they reported. It would appear that the Living Well program assisted participants to manage the stress more effectively and to increase healthy lifestyle behaviours, thus strengthening lines of defence against stressors. The increase in group activities that was reported after participation in the program also has the potential to increase the degree of social support and decrease loneliness. Since loneliness has been closely linked with depression in the elderly, the long term benefits of involvement in community activities may be substantial. As well, Ploeg and Faux (1989) note that older adults who report higher levels of social support also perceive their health as better.

The results from this study must be viewed with caution because of the small sample size, the absence of a control group and the lack of reliability and validity tests of the data collection instruments. However, the findings suggest that health promotion programs for older adults have the potential to have a positive impact on participants. The search for measures that are more sensitive to the types of changes often associated with health

promotion programs is vital if we are to demonstrate that these programs impact older adults. Glor (1991) also notes the difficulties in measuring the outcomes of small scale health promotion programs and concludes that evaluations should perhaps be satisfied with demonstrating that the programs are wanted by the community and that they are of high quality. Clearly, further research with qualitative measures could lead to the development of a broader and more effective set of evaluation tools.

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CHAPTER 7

USING LARGE DATA SETS TO STUDY HEALTH PROMOTION FOR OLDER ADULTS

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INTRODUCTION

The study of health promotion can range from the examination of determinants of specific health behaviours and health outcomes to participatory research and investigation into the process of empowerment at the community and individual level. A variety of both qualitative and quantitative data are needed to adequately deal with the research questions that have arisen in this field. The use of large data sets to study health promotion patterns will be addressed in this paper. We will focus specifically on three national data sets: the 1991 Survey on Ageing and Independence, the 1985 and 1990 Health Promotion Surveys and the Canadian Study of Health and Aging.

It should be recognized that there are other types of secondary analyses of sample surveys, such as meta-analysis of quantitative outcome measures across all available studies (see Liang & Lawrence,1989 for discussion). There also have been several other national surveys over the last ten years that have provided information on the health of older Canadians. These include the Canadian Health and Disability Survey (Statistics Canada, 1986), the 1985 General Social Survey (Statistics Canada, 1987) and the Health and Activity Limitation Surveys of 1986 and 1991 (Statistics Canada, 1990 & 1992).

THE 1991 SURVEY ON AGEING AND INDEPENDENCE

One way to use large cross-sectional data sets is to describe a population. Another is to analyze explanatory variables at one point in time. The 1991 Survey on Ageing and Independence (SAI) is a recent Statistics Canada survey based on over 20,000 adults 45 years of age and over. The purpose of the survey was to obtain information that would clarify why some older people are better able to maintain independent lifestyles. "Independent living" is defined in the survey documentation (Government of Canada, 1993) as: "people's ability to maintain control over their lifestyle as they age" (p. 2). The conceptual model upon which this survey was built was developed by the Canadian Aging Research Network (CARNET). The model incorporates demographic variables, life-course experiences and determinants of well-being for the purpose of examining independent living outcomes (Government of Canada, 1993). Information is available on work, pre-retirement and retirement; physical and social activities; health; social support; housing; use of technology, accidents and safety; transportation; income and demographics. The emphasis on independence parallels many concepts arising in the health promotion literature, such as empowerment, self-efficacy, and control over one's health.

One example of how this data could be used is to examine the determinants of participation in self-help groups by older adults suffering from one or more chronic conditions (see question G7 in the SAI). This area of inquiry is particularly relevant given the increasing attention that researchers are giving to alternative styles of health care. One research question is whether, and to what extent, involvement in self-help groups supplements or substitutes use of formal health services. Other important questions pertain to gender and socioeconomic differences in patterns of participation in self-help groups. In fact, there has been a proliferation of explanatory analyses in the health promotion literature based on quantitative analysis of large data sets similar to the SAI (cf. *Health Promotion International*).

A less common approach is to use more than one cross-sectional data set to undertake cohort and/or trend analyses. This

style of health promotion research is relevant for documentation of change in health behaviours over time.

THE BENEFITS AND LIMITS OF TIME SERIES ANALYSIS

It is not always possible to conduct program evaluations using primary data analysis and a classical experimental design. Time series analysis is one method of documenting change in health behaviours over time using cross-sectional data that has often been collected for another purpose. One of its greatest assets is the savings associated with cost, time and personnel (Liang & Lawrence, 1989). Simple time series or trend analysis uses secondary data; with only one before measure and one after measure (Babbie, 1992). However, measurement of the effect of the program or intervention can only be made if a linear pattern exists. A superior design is to use more than two points in time. This allows for investigation into non-linear patterns, such as a curvilinear relationship or one that oscillates. In fact, most social trends follow non-linear patterns over extended periods.

Using multiple points also provides an opportunity to examine the length of a program's effect, for example, to answer such questions as: Do changes in seat belt laws lower rates of automobile deaths and keep them low? An even stronger design would include a non-equivalent control group for comparison with the trend data. An example would be to compare rates of institutionalization for two provinces, one that has introduced a home care program and one that has not, using several data points before and after the start of the program to ascertain whether the introduction of home care affects rates of facility use. If enough data points exist multivariate analyses can be undertaken using aggregate data.

THE 1985 AND 1990 NATIONAL HEALTH PROMOTION SURVEYS

The 1985 and 1990 national Health Promotion Surveys (HPS) provide extensive information on the health promoting

activities of Canadians. Planning for the surveys began in 1982, at which time the federal Health Promotion Directorate established a new mandate to implement a national health promotion program. The primary purpose of the surveys was to collect information that could be used for the development of this new program. An integrative conceptual framework underlies the surveys based on several health behaviour models found in the literature. These include: the Precede Model (Green, 1980), the Information Processing Model (Flay, DiTecco, and Schlegel, 1980) the Health Belief Model (Rosenstock, 1974), the Canada Health Survey Model (Health and Welfare Canada & Statistics Canada, 1981), and the Canada Fitness Survey Model (Stephens, 1983). Several substantive areas within health promotion are covered in both surveys, including: exercise, nutrition, smoking, alcohol use, drug use, safety, mental health, and sexual behaviour. In addition to information on actual behaviour, there are both general and specific questions dealing with health knowledge, beliefs, attitudes and intentions.

The target population of both HPSs is persons 15 years of age and over. The samples were drawn from the Canadian Labour Force Surveys and resulted in 11,181 completed interviews for the 1985 HPS and 13,793 for the 1990 HPS. Response rates were over 80% for both surveys. Telephone survey techniques were used to collect the information.

COMPARABILITY OF THE SURVEYS

The 1985 and the 1990 HPSs are intended to provide researchers with detailed health promotion information that can be used for comparative trend analyses. Unfortunately, there are numerous differences between the data sets that make such analyses challenging. The reasons for the changes in the surveys are too extensive and complicated to elaborate upon in this chapter, however, two of these should be mentioned. One obvious reason is that the field of health promotion is undergoing rapid change, which has consequently affected the substantive issues examined. A second is the introduction of the Statistics Act, a recent piece of federal legislation that protects the privacy of survey participants

by limiting researcher's access to sensitive information on a particular individual that may be derived by disaggregating a data file.

The principal differences in the content of the two surveys are that the 1990 survey reduced the number of questions regarding exercise and substantially increased the number of questions regarding sexual behaviour. There are also more questions on health in the workplace, women's health, and dental health in the 1990 survey. The limitations imposed by the Statistics Act restrict analyses by age and income because they are grouped in the 1990 but not in the 1985 data file. Age is categorized into five year age groups until age 69; persons 70 years of age and over are collapsed. There are ten categories for income.

Several identical questions regarding exercise are available in the two data sets. For several of these, exercise is presented as one of several health behaviours. Exercise is defined as vigorous activities such as aerobics, jogging, racquet sports, team sports, dance classes, or brisk walking. The comparable questions for the 1985 and 1990 HPSs are: exercise level (daily, 5-6 times per week, 3-4 times per week, 1-2 times per week, less than once a week, never); exercise as the most important health change over the past year (for those who had made a change and selected from a list of several health behaviours); intention to change exercise over the next year (yes/no); exercise as much as needed (as much as needed/less than needed). There is also a question asking whether the respondent believes that exercise would improve his or her health. However, the 1985 survey offered four responses while the 1990 survey only allowed a yes/no response.

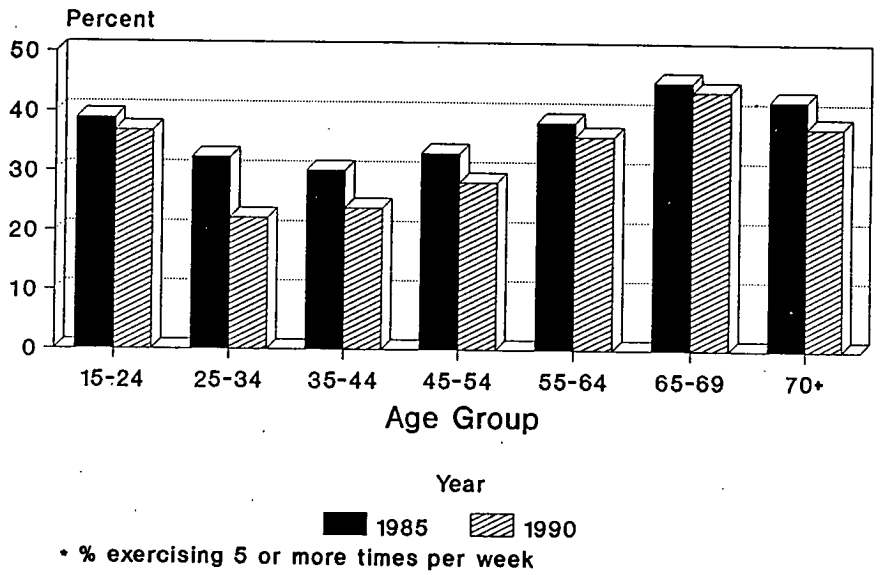
There are a number of questions that were dissimilar between the two surveys. The 1985 HPS examined two health norms: asking whether exercise (from a list of health behaviours) is the most important health change that a person should undertake and whether it is the most important health change for them personally. For each of these questions, respondents were subsequently asked whether there was anything stopping them from making this improvement and was termed "perceived

constraints". A respondent was allowed to select as many constraints as deemed relevant. Based on these data, the most common constraints were "lack of time" and "lack of self discipline/energy". The other categories were selected infrequently. In all likelihood, the 1990 survey focused on reasons for past increases in exercise because of the apparent weakness in the constraint question. Respondents who increased their level of exercise over the last year were asked to list the reason(s) for this change in exercise behaviour. In addition, the 1990 HPS queried respondents as to the duration of their present exercise level (less than 15 minutes, between 15 and 30 minutes, and more than 30 minutes).

The following figures provide illustrations of comparative analyses using the 1985 and the 1990 HPSs. They are not intended to be exhaustive and represent a small proportion of the analyses comprising this research. Five year age groups were used until age 64 at which point it was necessary to use the 1990 HPS groupings (65-69 and 70+) so that comparisons could be made across the two surveys. The percentages are based on weighted and scaled data.

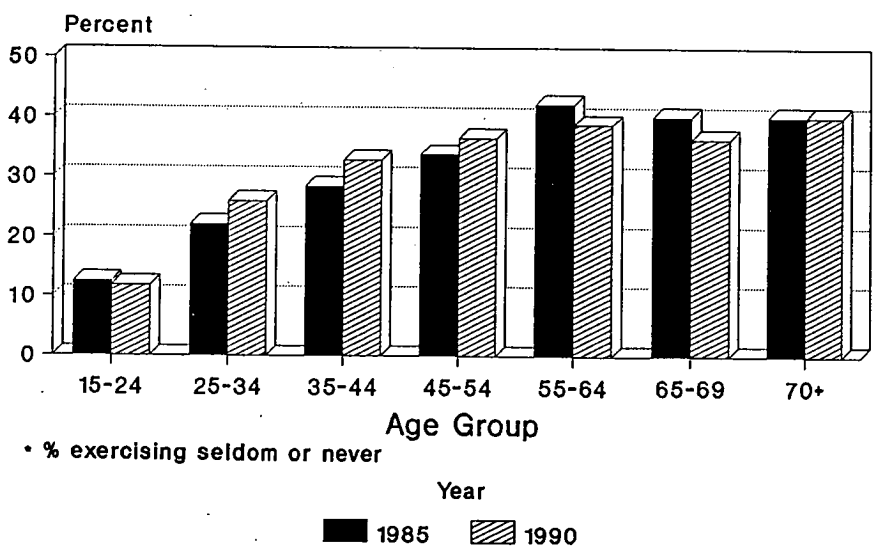
Figure 1 shows changes in percentages of frequent exercisers (five or more times per week) between the two dates and across life stages. It is interesting that the proportion of frequent exercisers has dropped for each age group between 1985 and 1990, but especially for ages 25 to 54. For example, the 25-34 age group reported a 10.1% drop in frequent exercise. A second observation is that the proportion of frequent exercisers is higher for the older age groups than the younger and middle age groups. Retirement provides greater time to engage in vigorous activities. Figure 2 shows that the proportion of persons who are sedentary (exercise less than once per week) has only changed for the middle age groups over the five-year period, where a slight increase is observed. Also shown in Figure 2, the percentage of infrequent exercisers is very low for the 15-24 age group (about 10%), rises to about 30% for the 35-54 ages, and remains around 40% for the three older age groups (55-64, 65-69, and 70 and over). Thus, older people appear to fall into either the frequent (5 or more times per week) or infrequent

Fig. 1: Frequent Exercisers* by Age, Canada, 1985, 1990



* % exercising 5 or more times per week

Fig. 2: Infrequent Exercisers* by Age, Canada, 1985, 1990



* % exercising seldom or never

Fig. 3: Intend to Improve Exercise,* by Age, Canada, 1985, 1990

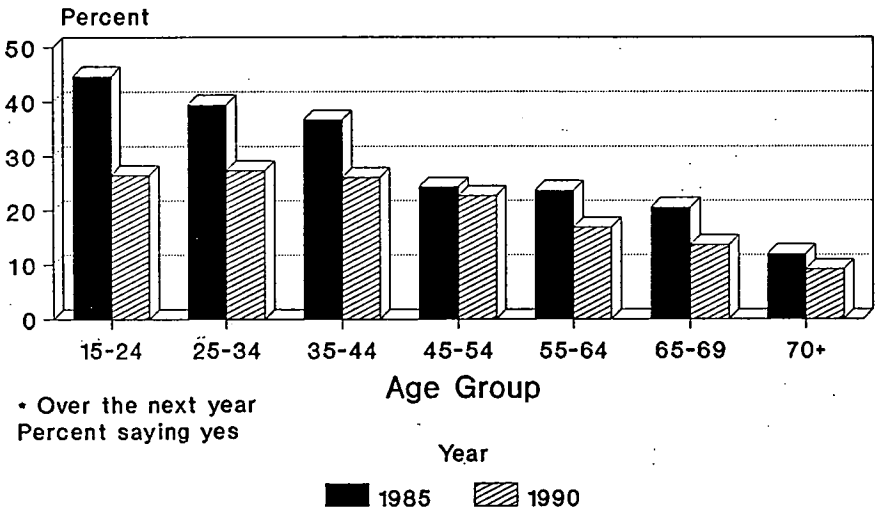
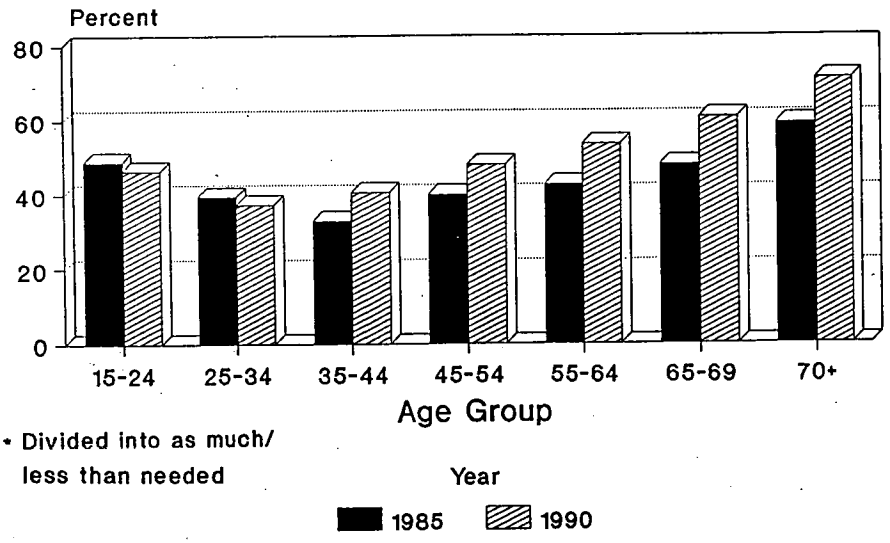


Fig. 4: Exercise as Much As Needed,* by Age, Canada, 1985, 1990



(seldom or never) categories rather than between the extremes. Comparisons across the time periods suggest that the momentum of the exercise promotion movement is waning for mainly the middle aged groups. This conclusion is reinforced using intentions to increase exercise. Figure 3 shows intentions to increase exercise across the same age groups for 1985 and 1990. As can be seen, there appears to be a lower percentage of people articulating an intention to improve their exercise in 1990, especially for people aged 15 to 34. Conversely, Figure 4 demonstrates that there is a tendency for people to state that they exercise as much as they need, but this is more pronounced for persons aged 35 and over. One explanation is that exercise levels tapered off between 1985 and 1990 because some people had over-exercised. It is also possible that the economic recession inhibited exercise during the 1990 period (Shephard, 1992).

There are several limitations associated with this type of analysis. In particular, the age-period-cohort problem convolutes the interpretations, suggesting that an increase in data points would greatly assist future research. There is also loss of information when combining large numbers of people, even when examining sub-groups, such as those with low income. Clearly, there is a need for a 1995 Health Promotion Survey so that more definitive answers can be provided to these research questions. This would provide an opportunity to look for non-linear trends in health behaviour and outcomes and to link these to various social trends such as educational programming. The authors are also currently engaging in logistic analyses of the 1985 and 1990 HPS in an effort to make comparisons both across time and age-groups.

THE CANADIAN STUDY OF HEALTH AND AGING

For many research questions, the design of choice in conducting aging research is the longitudinal design. This design, in which the same group of people are followed over time, makes it possible, for example, to ascertain both the prevalence and the incidence of particular health outcomes. The Canadian Study of Health and Aging (CSHA), which took place between February,

1991 and May, 1992, while currently a prevalence study, has the potential to become a longitudinal study. This is explicitly recognized in the objectives of the study (see Canadian Study of Health and Aging Working Group, 1994) which were to:

1) estimate the prevalence of dementia among elderly Canadians using a common research protocol;

2) determine the risk factors for Alzheimer's Disease and other forms of dementia;

3) describe the current patterns of caring for persons with dementia, assess caregiver burden, and identify caregivers' support service needs;

4) establish a uniform data-base for subsequent studies of the natural history of dementia, and for planning and evaluation of interventions.

While the CSHA was originally conceived of as a study of the epidemiology of dementia, over time it has become increasingly apparent that the dataset is a valuable resource for research on a broad range of health-related topics, including health promotion and aging. The large and representative nature of the sample is one major reason for this.

SAMPLING FRAME

Coordinated by a team of researchers from the Department of Epidemiology and Community Medicine at the University of Ottawa and the federal Laboratory Centre for Disease Control, the CSHA was implemented through 18 study centres in five regions of Canada. In each region, age stratified random samples were drawn for both community-dwelling and institutionalized older persons. The age strata used were 65-74, 75-84 and 85 and over. The 85+ age group was deliberately over-sampled.

The study areas were defined by postal codes and samples were drawn from 36 urban centres and adjacent areas. Except in

Ontario where the Enumeration Composite Record was used, the sampling frame for the community sample was the computerized list of the provincial health insurance plan with institutional addresses excluded. The institutional sampling frame was developed from a comprehensive list of institutions. The institutions in each region were grouped by size (6-25 beds, 26-99 beds, and 100+ beds) and random samples were drawn from each size strata. Within institutions, residents aged 65+ were randomly sampled.

In total, of the 10,263 older adults who took part in the CSHA, 9,008 were living in the community and 1,255 in institutions. Table 1 shows selected socio-demographic characteristics of the community sample, including its age and sex distribution. As can be seen, the 85+ age group consisted of 1,307 persons. This is a particularly tantalizing aspect of the CSHA as it is rare for researchers to have access to such a large random sample of very elderly community-dwelling individuals. Furthermore, among the 65-74 age group, 8% of men are widowed and 13% of men live alone compared to 35.1% and 36.1% respectively for women. For the 85 and over age group, 40.1% of men are widowed and 59.4% of men live alone, whereas 76% of women are widowed and 59.4% live alone.

Analyses focussing on the identification of predictor variables for "successful" aging are one obvious type of study that might be conducted using data from this sub-group.

DATA COLLECTED

All community-dwelling CSHA participants received a screening interview. Additionally, a sub-sample received a clinical assessment. The screening interview was conducted in the respondent's home. It included a series of questions on general health, level of performance of both Activities of Daily Living (ADLs) and

TABLE 1. CSHA Community Screening Study
Selected Demgraphic Characteristics by Age and Sex

		65-74		75-84		85+		Total	
		m	f	m	f	m	f	m	f
		n=1773	n=2162	n=1457	n=2249	n=397	n=910	n=3627	n=5321
Widowed	#	142	759	283	1350	159	692	584	2801
	%	8.0	35.1	19.4	60.0	40.1	76.0	16.1	52.6
Lives Alone	#	230	781	310	1227	134	541	674	2549
	%	13.0	36.1	21.3	54.6	33.8	59.4	18.6	47.9

Instrumental Activities of Daily Living (IADLs), questions on demographics and on social support. The Modified Mini-Mental State (3MS) Examination (Teng & Chui, 1987) was also administered as part of the screening interview.

The clinical assessments were conducted in three parts. The first part included screening for vision and hearing problems by a registered nurse who also recorded vital signs, height and weight, asked about medications used and obtained the subject's medical and family history from a relative. Part 2 consisted of a physical and neurological examination by a physician. In part 3, a psychometrist administered neuropsychological tests.

HEALTH PROBLEMS BY AGE AND SEX

Table 2 shows some interesting sex differences that have emerged in preliminary analyses of the health and functional status data from the screening questionnaire. As can be seen, in all three age groupings there were more females than males who reported having high blood pressure, arthritis, eye trouble, some loss of bladder control, trouble with their feet or ankles and trouble with their nerves. The ability to cross-tabulate categorical variables by age and sex and still have reasonable cell sizes is a major advantage of large national data sets such as the CSHA. There is also the ability in the CSHA dataset, for the sub-group of the community sample who received clinical assessments (n=1,165), to cross-validate and elaborate self-report data with the assessments made by the nurse, the physician and the psychometrician and to add in laboratory test results.

In Table 3, a selection of activities of daily living by age and sex are presented. As one might expect based on the results for health problems, women require more assistance with ADLs than men. Interestingly, the differences between older men and women become more striking for the older age groups. For example, the percentage of people reporting that they can take a bath or shower

Table 2. CSHA Community Screening Study
Health Problems by Age and Sex

		65-74		75-84		85+		Total	
		m	f	m	f	m	f	m	f
		n=1773	n=2162	n=1457	n=2249	n=397	n=910	n=3627	n=5321
High B.P.	#	498	821	384	890	88	330	970	2041
	%	28.1	38.0	26.4	39.6	22.2	36.3	26.7	38.4
Arthritis or Rheumatism	#	789	1293	704	1462	201	588	1694	3343
	%	44.5	59.8	48.3	65.0	50.6	64.6	46.7	62.9
Eye Trouble	#	284	498	429	898	158	464	871	1860
	%	16.0	23.0	29.4	39.9	39.8	51.0	24.0	35.0
Loss of Bladder Control	#	118	324	142	485	66	231	326	1040
	%	6.7	15.0	9.7	21.6	16.6	25.4	9.0	19.6
Trouble with feet/ankles	#	392	704	388	926	120	405	900	2035
	%	22.1	32.6	26.6	41.2	30.2	44.5	24.8	38.3
Nerves	#	224	469	192	577	53	199	469	1245
	%	2.6	21.7	13.2	25.7	13.4	21.9	12.9	23.4

Table 3. CSHS Community Screening Study
Activities of Dailiy Living by Age and Sex

		65-74		75-84		85+		Total	
		m	f	m	f	m	f	m	f
Unassisted		n=1773	n=2162	n=1457	n=2249	n=397	n=910	n=3627	n=5321
Take a bath/Shower	#	1706	2024	1314	1860	312	560	3332	4444
	%	96.2	93.6	90.2	82.7	78.6	61.5	91.9	83.5
Walking	#	1740	2096	1400	2072	366	728	3506	4896
	%	98.1	96.9	96.1	92.1	92.2	79.9	96.7	92.0
Go to a place out of walking distance	#	1722	1995	1344	1837	300	524	3366	4356
	%	97.1	92.3	92.2	81.7	75.6	57.6	92.8	81.9

unassisted for the 65-74 age group is 96.2% for men and 93.6% for women, a difference of only approximately 3%. However, the percentages are 78.6% and 61.5 (17% difference) for the 85 and over age group. Similar patterns are shown for walking and going to a place beyond walking distance in Table 3.

A detailed analysis by gender and age of CSHA and other data on health and functional status is currently being undertaken by the authors and Dr. B. Lynn Beattie in which multivariate analyses will be performed.

SUMMARY AND CONCLUSION

This chapter has described three Canadian national data sets that can be used for health promotion and aging research. The three differ in the age range surveyed, in the methods used to obtain the data and in the research questions they address. The Survey on Ageing and Independence (SAI) sampled 20,000 adults aged 45 and over; the 1985 and 1990 Health Promotion Surveys (HPS) sampled, respectively, 11,181 and 13,793 persons aged 15 and over all of whom had previously participated in the Canadian Labour Force Surveys; the Canadian Study of Health and Aging (CSHA) consisted of a sample of 10,263 persons aged 65 and over and included both persons living in the community (n=9,008) and a sub-sample living in institutions (n=1,255).

The SAI and the HPSs were conducted by telephone and relied exclusively on self-report data. The CSHA, in contrast, involved face-to-face interviews with all members of the community sample and clinical assessments and interviews with family members for a sub-sample of the community sample and all members of the institutional sample.

The SAI was designed to provide a comprehensive "snap-shot" or profile of community-dwelling middle-aged and older adults with particular emphasis on their work and retirement history. The two HPS were designed to examine a number of

lifestyle variables that are thought to impact health as well as health knowledge, beliefs, attitudes and intentions. The CSHA was designed to ascertain the prevalence of Alzheimer's Disease and related dementias both in the community and in institutions, risk factors for dementia, the burden and needs of caregivers of persons with dementia, and to set the stage for an incidence study.

A number of ways in which the data from these studies can and is being used for research on health promotion and aging have been detailed. These include: description and comparative analyses of the incidence and prevalence of health status and health behaviours; explanatory research into determinants of participation in self-help groups, as well as involvement in mutual aid and self-care; studying patterns of exercise behaviour (and other lifestyle behaviour) over time and across age groups; and examination of gender differences in health status and functioning for sub-groups of elderly.

Additional uses of the data to promote health among older adults include:

1) using them in media campaigns and educational programs to developing greater awareness among seniors and the general public regarding the wellness and independence of older Canadians, as well as their functional limitations;

2) using them as a focal point around which collaborative partnerships and networks between university, hospital and government researchers can be built;

3) using them to assist communities in understanding the determinants of health and independent living and how they can support these;

4) using them to assist governments and community groups in planning future programs and services;

5) as Craig (this volume) has done with data from the SAI, using them as a gold standard against which to assess the representativeness of ones sample

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CHAPTER 8

PRIORITIES FOR HEALTH PROMOTION AND AGING RESEARCH IN CANADA: DISCUSSION AND RECOMMENDATIONS

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The workshop upon which this volume is based provided a forum for the identification of knowledge and research gaps in the area of health promotion and aging. The issues and recommendations listed below were either identified by the speakers or were articulated by the workshop participants during the open discussion that followed the formal paper presentations. The issues and recommendations have been organized into ten thematic groupings. These reflect the principal concerns of the workshop participants rather than representing an exhaustive and mutually exclusive set of problem areas.

1. DEVELOPING DEFINITIONS FOR NEW TERMS AND CONCEPTS

The development of the health promotion field generally, has resulted in a proliferation of new language used to describe health in broader terms. However, many of the new terms and concepts lack definitional specificity both at the conceptual and at the operational level. The application of these terms to older adults and their communities requires further specification.

i) There is a need to develop working definitions for many of the terms currently in use in the health promotion literature (e.g. quality of life; poverty; empowerment; mutual aid; self-help; self-care; participatory research; etc.).

ii) There is a need to define, and describe in detail, the continuum of empowerment, reflecting its progression from taking responsibility for one's own health to collective action and advocacy.

iii) Generally, conceptual models of health promotion require elaboration to specify the linkages and/or means of transition between variables or stages.

2. EXPANSION AND SPECIFICATION OF THE HEALTH PROMOTION CONTINUUM

There is agreement among most researchers and community workers that health promotion approaches are necessarily diverse. However, specification and elaboration of the range of activities, strategies and concepts that legitimately fall within the purview of health promotion is needed to guide research in the field.

iv) Specifically, the continuum of health promotion needs explicitly to be seen as including disease prevention (e.g., breast or prostate cancer screening).

v) Elaboration of participatory and action research is required.

vi) Of particular importance, there is a need to examine relationships between different health promotion activities, actors and sectors (e.g., to what extent does self-help substitute or compliment professional health services for older adults?).

3. DELINEATION OF OUTCOME MEASURES

Another key theme reiterated during the workshop, and in the chapters that comprise this volume, is the need in program evaluation for researchers to execute more care in the selection of outcome measures. These should be sufficiently broad and sensitive to reflect both intended and unintended consequences of a program.

vii) Specifically, program outcome measures need to be selected/developed that reflect comprehensive definitions of success and which cover longer periods of time (i.e., that measure the length of a program's effect).

viii) Individual outcomes should be evaluated both separately and in conjunction with other relevant measures. Their interpretation requires consideration of connections between program design and outcome, and recommendations for redesign should be made if appropriate.

4. QUALITATIVE AND QUANTITATIVE APPROACHES AND THEIR INTEGRATION

Both Gerontology and Health Promotion are multidisciplinary fields. Their intersection underscores the necessity for application of differing methodological perspectives to health promotion research, as well as acceptance of their varying epistimological roots.

ix) Both qualitative and quantitative approaches are needed in order to move the knowledge base forward.

x) Implementation strategies and organizational approaches need to be evaluated using both process and outcome evaluation strategies.

xi) Multidisciplinary teams for health promotion research need to be encouraged and supported.

xii) Workshops and other intensive educational activities need to be organized which focus on skills development on the various methodologies that may be applied to study health promotion in applied settings.

5. COMMUNITY-UNIVERSITY RESEARCH PARTNERSHIPS

For health promotion to be maximally effective, both community and academic resources should be applied to the solution of identified problems. However, there have been, and continue to be, a variety of barriers that inhibit collaborative efforts.

xiii) The process (and ethics) of community-university research partnerships need to be investigated and facilitated.

xiv) Attention to issues involving control and the use of research information would assist the formation of partnerships.

xv) The process would also be assisted if the expertise and experiential knowledge of community workers were routinely acknowledged and utilized by academics in their research on health promotion for older adults.

xvi) In some research, the involvement of the persons for whom the health promoting activity is intended needs to be increased.

6. THE NEED FOR EVALUATION OF PROGRAMS AND POLICY

There has been a proliferation of health promotion programs targeting older adults in Canada. As indicated in the meta-analyses undertaken in conjunction with this book, there is a dearth of rigorous evaluation studies that can be used for the development and refining of health promotion activities. Moreover, linkages between research and policy need to be made to provide direction to current and future policy decisions.

xvii) There should be mandatory evaluation of new programs, devices, etc.

xviii) Evaluation of policy decisions is needed, including analysis of both intended and unintended consequences of programs.

xix) There is a need to develop organizational approaches to implement policy recommendations more efficiently and effectively (i.e., bring together community workers, health professionals, and academics).

xx) Regardless of epistemological or methodological roots, health promotion research must be of high quality (e.g., adequate sample size, good design, sensitive measures, contextual rigor, etc.).

xxix) The existing health promotion and gerontology research centres across the country should to be utilized in meeting the above recommendations.

xxx) In turn, the health promotion and gerontology research centres should be strongly encouraged to engage in community outreach and to support community health promotion.

A CONCEPTUAL AND ANALYTICAL FRAMEWORK FOR HEALTH PROMOTION PROGRAMS

In response to the recommendations described above, it is clear that more work is required to develop models that can be used to describe and analyze existing health promotion programs. A conceptual and analytical framework is offered in Figure 1. It begins by distinguishing five broad approaches by which health promotion programs can be classified: 1) mandated, 2) professionally driven, 3) traditionally voluntary, 4) participatory action at the group level, and 5) participatory action at the community level.

Mandated health promotion programs are formulated by organizations that have identified a specific health problem or group to be targeted (e.g. Heart and Stroke Foundation's media campaigns). Professionally driven programs (e.g. skin, prostate, or breast cancer screening) are usually designed and implemented by physicians or other health professionals. Programs taking the approach of a traditional voluntary model rely heavily on volunteer workers to deliver the service and tend to be less medically-oriented (e.g. Meals on Wheels). Participatory action approaches are health promotion initiatives that actively involve the individuals for whom the intervention is intended. Although there are many types and degrees of participatory approaches to health promotion (see chapters by Tindale & Hardie and by Norris, Davey & Kuiack, this volume), Figure 1 distinguishes between two broad types. The first has groups of people as its target, such as the country-wide Connecting Seniors Program or pain self-care management programs for arthritis

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Approach	Priority Action	Degree and Type of Professional Involvement	Characteristics of Community/Target Group	Research Activity
MANDATED (e.g. Heart & Stroke media campaign) PROFESSIONALLY DRIVEN (e.g. skin cancer screening) TRADITIONAL VOLUNTARY (e.g. Meals on Wheels) PARTICIPATORY ACTION - GROUP (e.g. Connecting Seniors, Pain self-care management) PARTICIPATORY ACTION -COMMUNITY (e.g. Native community nation building)	PREVENTION COPING COMMUNITY ACTION/ EMPOWERMENT EDUCATION/ MEDIA	MEDICAL PROFESSIONAL HEALTH PROFESSIONAL TEAM PROFESSIONAL CO-ORDINATOR NON-PROFESSIONAL CO-ORDINATOR LEADERSHIP TRAINING RESEARCH CONSULTATION	AGE: 50-64, 65-79, 80+ SEX ETHNIC/CULTURAL HOMO/HETEROGENIETY LOCATION & DENSITY - urban concentrated - urban dispersed - non-urban concentrated - non-urban dispersed COMMUNITY RESOURCES - Political organizations - Primary health (hospital, adult day care, homecare) - Secondary health/social organizations (seniors centres wellness centres) - Self help/support groups INDIVIDUAL RESOURCES - Degree of health knowledge - Education - Income - Family and peer support	PROGRAM DEVELOPMENT PROGRAM IMPLEMENTATION DEVELOPMENT OF TOOLS (EMPOWER, needs surveys) PROCESS EVALUATION OUTCOME EVALUATION COMMUNITY ACTION

NOTES: Participatory action refers to health promotion strategies that actively involve the individuals for whom the action is intended. EMPOWER is a computerized program which has been developed by the Institute of Health Promotion Research at the University of British Columbia to assist communities to identify health concepts and associated health promotion strategies.

xxix) The existing health promotion and gerontology research centres across the country should to be utilized in meeting the above recommendations.

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sufferers. The second is aimed at the community level, such as the famous Tenderloin project in San Francisco or "nation building" that is taking place within First Nations' communities.

Health promotion programs can also be described in terms of their priority action. These include: prevention, coping, community action/empowerment, and education/media. In addition, programs can be distinguished in terms of the degree and type of professional involvement. Figure 1 suggests the categories: medical professional, health professional team, professional coordinator, non-professional coordinator, leadership training and research consultant. Of course, self-care involves little or no professional involvement.

The characteristics of the community or target group represent yet another dimension that can be used to contrast health promotion initiatives. Age; sex; ethnic or cultural homogeneity or heterogeneity; location and density; and community and individual resources are a selection of key characteristics (see Figure 1 for sub-categories).

Finally, health promotion programming can be analyzed in terms of the research activity being undertaken. This includes: program development, program implementation, development of tools, process evaluation, outcome evaluation and community action.

While this framework has not integrated all possible components of health promotion programs that are worthy of critical examination, it does offer a starting point for future work. At minimum, it demonstrates the conceptual complexity of the field and underlines the need for further theoretical and conceptual work.

CONCLUSION

It should be clear from the discussion of the priorities for health promotion research that there are considerable knowledge

gaps and research needs that require attention. The rapid development of health promotion as a distinct field of study has generated a new language. This has led to a need for developing clear definitions at both the conceptual and operational levels. Although theory building and the development of conceptual frames has been undertaken in other disciplines, often their application to the area of health promotion and aging requires modification and elaboration. Utilization of both qualitative and quantitative methodologies and their triangulation is another research requirement. Partnerships forged between disciplines, professions, research centres, and especially between community and academic worlds, are fundamental to the building of a strong foundation for health promotion research in Canada. Widespread and effective information dissemination, policy evaluation, and program diffusion are beginning to be recognized as important elements of health promotion research. And finally, there is an urgent need to train and retrain health promotion researchers to carry out the agenda outlined above.

The purpose of the workshop and this volume has been to identify the principal issues and to carve a path for future health promotion activities. Our success in meeting the recommendations that have been offered is dependent on the commitment of health professionals, community workers, and academics to transcend professional boundaries and join together in an effort to improve and maintain the health of older Canadians that will be carried forth into the next century.

AUTHORS' BIOGRAPHIES

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Andrew Wister, Ph.D., is an Associate Professor in the Gerontology Program at Simon Fraser University, Vancouver, B.C. He is a co-investigator on the British Columbia Health Promotion Research Consortium funded by NHRDP and SSHRC. Dr. Wister has conducted research and written numerous articles on exercise behaviour across the life-cycle; living arrangements and processes of environmental adaptation among older adults; gender differences in mortality due to ischemic heart disease; and health promotion and program evaluation.

LES RÉSUMÉS EN FRANÇAIS

FRENCH ABSTRACTS

LES POSSIBILITÉS ET LES DIFFICULTÉS DE L'ÉVALUATION DE L'ÉTAT NUTRITIONNEL ET DES INTERVENTIONS EN NUTRITION CHES LES PERSONNES AGÉES

Hélène Payette, Ph.D

RÉSUMÉ

Des résultats de recherche récents mettent en lumière le rôle crucial joué par la nutrition dans la promotion et le maintien de la santé et de l'autonomie chez les personnes âgées. Le maintien d'un état nutritionnal optimal et la prévention de carences faibles. Les méthodes diététiques (rapel de 24 heures, questionnaire de fréquence et journal ailmentaires) et anthropométriques (dimension et composition corporelles) pour évaluer l'état nutritionnel sont discutées. Chacune des étapes du processus d'évaluation (la mesure, le calcul des indices et leur interprétation) est abordée en regard de ses possibilités et de ses limites d'application parmi la population âgée. Les limites concernant les mesures et les calcul des indices sont généralment liées aux changements associés au vieillissement, alors que les difficultés d'interprétation ont trait à l'hétérogénéité de la population vieillissante. D'autre part, les ressources communautaires en alimentation visent à faciliter l'accès à des repas nutritifs aux personnes âgées ayant des difficultés à s'approvisionner ou à préparer leurs ailments. Les études recenesées ont porté sur les services de livraison de repas à domicile et les repas communautaires et ce, presqu'uniquement auz États-Unis. Elles visaient à évaluer l'apport nutritionnel des participants, la contribution des repas offerts à l'apport quotidien total, de même que l'impact du service sur les apports nutritionnels. La revue de ces travaux révèle diverses lacunes méthodologiques en regard de la slection et la description des participants, le choix du groupe témoin, la taille de l'échantillon

et la méthode d'évaluation des apports diététiques. Toutefois, un constat semble se dégager, soit l'insuffisance de ces ressources pour combler les besoins nutritionnels de la population visée. Les besoins en recherche sont soulignés particulièrement en ce qui concerne les outils d'évaluation nutritionnelle, la définition des besoins nutritionnels des personnes vieillissantes ainsi que l'effcacité des programmes de soutien nutritionnel pour promouvoir, maintenir ou améliorer la santé nutritionnelle des Canadiens.

PROGRAMME D'EXERCIECES POUR FEMMES OSTÉOPOROTIQUES

Gina Bravo, Ph.D.

Résumé

La communication débutera par un résumé de l'état actuel des connaissances relatives à l'ostéoporpse et à l'efficacite de l'activité physique comme moyen pour raletir l'évolution de cette condition. Le résumé mettra en évidence la prévalence élevée de l'ostéoporose ches les femmes âgées, ses conséquences sur l'autonomie et la qualité de vie et de la personne atteinte ainsi que les coûts que cette condition entraîne pour l'ensemble de la societé. Nous documenterons ensuit la nécessité d'etudier l'effet thérapeutique de programmes d'activité physique conçus spécifiquement pour les femmes ostéoprotiques en faisant ressortir l'incohérence des résultats, l'étroitesse de la mesure de l'efficaité et les lacunes methodologiques des quelques études réalisées à ce jour sur le sujet.

Nous enchaînerons en présentant les principaux résultats d'une étude que nous avons réalisée dont l'objectif était précisément d'évaluer un programme d'exercices en groupe destiné à des femmes ostéoporotiques âgées de 50 ans à 70 ans. Cette étude se caractérise par un suoci de pallier les lacunes des études antétudes antérieures et d'élargir la mesure de l'efficacité du programme en y incluant plusieurs indicateurs de la santé physique et psychologique des particpantes. S'appuyant sur les résultats positifs observé dans le cadre de cette étude et reconnaissant l'importance de la dynamique de groupe dans la motivation et le maintien de la participation à un programme d'exercices, nous justifierons ensuit la pertinence d'étudier le potentiel du programme d'exercices dans le contexte où il se

déroule à domicile, donc sans la présence d'éducateurs physiques ni de consoeurs affectéducateurs physiques ni de consoeurs affectées par la même maladie. Pour ce, nous mettrons en évidence la rareté des études visant l'évaluation d'un programme à domicile pour femmes ostéoporotiques et exploiterons les résultats des études réalisées auprès d'autres populations qui confirment l'assiduité des sujets assignés à des programmes à domicile et révèlent les facteurs qiu favorisent cette assiduité.

La communication se poursuivra par un retour sur trois faiblesses de la littérature qui nous semblent particulièrement importsntes à combler, à savoir le manque d'uniformité dans la façon de rapporter les résultats d'études prospectives de l'évaluation de programmes d'activité physique, la nature étroite de la mesure de cette efficacité limitée à des paramètres osseux et enfin les caratéristiques particulières des femmes admissibles aux études antérieures qui restreignent la généralisabilité des résultats à l'ensemble des femmes concernées.

Nous terminerons en proposant quelques besoins d'information qui mériteraient l'intérêt des chercheurs dans le domaine. Ces besoins ont trait à l'ajout d'un composante coût-bénéfice à l'évaluation de tout programme d'intervention et à la nécessité d'élaborer des études multicentriques et de longue durée si l'on veut être en mesure de documenter l'impact de l'exercice sur le risque de chute et de fracture ainsi que sur l'utilisation des services de santé et des coûts qui s'y rattachent.

PROMOTION DE LA SANTÉ AUPR_S DES CONSOMMATEURS_GÉS AU SEIN DU SYST_ME DE SANTÉ MENTALE

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Présentation à l'atelier préparatoire à la conférence de l'Association canadienne de gérontologie, intitulé **Promotion de la santé chez les aîné-e-s au Canada : lacunes dans les connaissances et besoins en matière de recherche**. Octobre, Montréal.

Introduction

On m'a demandé de préparer une présentation pour le présent atelier en raison de l'article que j'ai publié dans la *Revue canadienne du vieillissement* (Tindale, 1993). Dans cet article, j'ai fait état d'un projet de promotion de la santé auprès des aîné-e-s vivant dans la collectivité, que j'ai aidé à diriger et à évaluer. Je parlerai plus longuement du projet dans quelques minutes mais, pour le moment, je vais me fonder sur cette expérience pour vous parler de l'élaboration d'un nouveau projet proposé et d'un nouveau plan faisant appel à plusieurs méthodes d'évaluation des résultats.

La proposition vise la mise au point d'un projet de promotion de la santé chez les consommateurs aîné-e-s des services du système de santé mentale. Le projet sera dirigé par les consommateurs concernés et l'Association canadienne pour la

santé mentale (ACSM), que je représenterai. Nous faisons également appel au Réseau national pour la santé mentale (RNSM), à titre consultatif. Les membres du réseau sont des consommateurs/réchappés/clients faisant partie du système de santé mentale. Ils travaillent à promouvoir les organisations de soutien populaire à l'échelle du pays.

Objectif du projet

Ce n'est que récemment que les consommateurs ont commencé à s'organiser pour assurer leur propre bien-être. Le Réseau national pour la santé mentale a moins de deux ans. Bien que des progrès aient été réalisés, il reste encore beaucoup à faire (et ce, en cette période de restrictions budgétaires). En outre, les projets visant à répondre spécifiquement aux besoins des consommateurs aîné-e-s vivant dans la collectivité sont presque inexistants.

Lorsque Epp (1988, p. 6) a publié *La Santé mentale des Canadiens*, il a souligné clairement que contribuent tous à la santé mentale. Il s'agit là d'une interprétation interactive de la santé mentale, interprétation qui s'accorde parfaitement avec les projets de développement communautaire en général, et les activités locales du Réseau national, en particulier, en sont un bon exemple.

En outre, certaines provinces (l'Ontario, par exemple) procèdent actuellement à une réforme du système de santé mentale et tous les résultats utiles issus de ce projet de développement communautaire pourraient très bien s'appliquer au processus de réforme continu.

Expériences passées

Dans le cadre du projet initial de l'ACSM, les infirmières de l'Ordre de Victoria du Canada chargées du projet de promotion de la santé et les aîné-e-s vivant dans la collectivité des comtés de Lanark, Leeds et Grenville ont conjugué leurs efforts. Ces trois groupes ont rassemblé un échantillon représentatif des personnes âgées et des dispensateurs de soins des trois comtés. C'est à dessein que les aîné-e-s étaient trois fois plus nombreux que les fournisseurs de services. Certains des aîné-e-s étaient des consommateurs des services, d'autres pas, et certains étaient à la fois des consommateurs et des fournisseurs.

Trois questions à l'étude étaient associées au projet, soit :

1) Des gens dont les antécédents et les intérêts diffèrent peuvent-ils soulever des questions communes quant aux besoins de services sociaux et relatifs à la santé communautaire?

2) Le cas échéant, peuvent-ils élaborer des stratégies visant à aborder ces questions, qui seraient valables pour toutes les personnes concernées?

3) Et enfin, les observations des participants seraient-elles pertinentes comme méthode d'évaluation du processus de développement communautaire (Tindale, 1993)?

ENSUITE : Brève analyse de la conférence d'investigation (), du processus de recrutement représentatif des délégués et de l'évaluation du recrutement fondée sur les observations des participants, de la conférence et du suivi.

Étape suivante :

Le projet proposé actuellement se fonde sur le projet implanté dans les trois comtés, qu'il utilise uniquement à titre d'exemple de la façon dont les personnes vivant dans la collectivité peuvent participer au processus de définition des problèmes importants et, par la suite, gérer ce processus et décider des solutions à apporter aux problèmes.

> Il se peut que le(s) projet(s) susceptible(s) de résulter des efforts que nous déployons actuellement ressemble(nt) à celui qui a été implanté dans les trois comtés; il se peut également qu'il(s) soi(en)t entièrement différent(s). L'objectif de ce nouveau projet est de permettre aux aîné-e-s bénéficiaires de services de santé mentale de décider des questions à régler, et de travailler ensuite avec eux pour répondre de façon coopérative aux besoins qu'ils ont définis.

Trop souvent, les consommateurs sont des clients non consultés au sein du système de services communautaires qui est sensé répondre à leurs besoins (Pape et Trainor, 1993). De même, au sein de l'ACSM, il n'y a pas toujours eu une bonne communication entre les professionnels et les consommateurs. Ce projet a pour but de s'attaquer de front à ces deux problèmes.

Dans le cadre de ce projet, les consommateurs, leurs organisations et l'ACSM travailleront de concert aux fins suivantes :

_ tenter une expérience qui sera enrichissante pour les personnes âgées vivant dans la collectivité qui sont ou ont été des clients du système de santé mentale;

_ réunir les ressources de tous les intéressés pour faciliter l'élaboration d'un projet communautaire visant à aborder les besoins définis par les consommateurs;

_ créer un modèle souple qui pourrait être utilisé dans les autres collectivités pour faciliter la tâche de répondre aux besoins des consommateurs aîné-e-s dans d'autres paramètres de lieu;

_ évaluer le processus du début à la fin afin d'analyser des façons d'améliorer le modèle. L'évaluation comprendra :

_ les observations des participants relativement au processus de travail en groupe, comme cela s'est fait pour le projet de 1990;

_ des auto-évaluations, par les consommateurs aîné-e-s qui auront participé au projet et par moi-même, des changements survenus quant au degré de satisfaction de leurs besoins, aux niveaux individuel et organisationnel.

Structure organisationnelle provisoire :

_ Les discussions initiales en cours facilitent mon analyse de la portée du projet à l'atelier de l'ACG tenu à Montréal.

_ Rédiger une proposition concertée ACSM/consommateurs en vue d'un financement par le Programme de recherches

pour l'autonomie des aîné-e-s ou un autre organisme de financement approprié.

- Remanier en prévision d'une discussion avec des consommateurs et d'autres personnes intéressées (par ex. le Conseil de l'ACSM en vue d'obtenir son accord de principe) lors de la réunion annuelle qui se tiendra à Québec en novembre. Tenir d'autres discussions du même genre avec les groupes de consommateurs intéressés au projet, à la faveur de communications avec le Réseau national.

- Apporter les dernières modifications à la proposition et soumettre cette dernière en vue d'un financement.

- Mener le(s) projet(s) à terme.

- Déterminer si les services communautaires mis au point dans le cadre du(des) projet(s) peuvent subsister par leurs propres moyens une fois le financement du projet parvenu à échéance.

Résumé

ÉVALUATION DES PROGRAMMES D'ENTRAIDE L'INTENTION DES AÎNÉ-E-S DU CANADA: PRONOSTICS ET PIÈGES

Joan E. Norris, Ph.D.
et
Adam Davey et Stephanie Kuiack, étudiants en maîtrise ès sciences Department of Family Studies University of Guelph Guelph (Ontario)

Les programmes d'aide mutuelle à l'intention des aîné-e-s ont gagné en popularité en conséquence du mouvement vers une prestation plus importante de soins communautaires pour ce groupe d'âge. Dans de nombreux cas, des groupes de soutien ou d'éducation sont créés par les organismes communautaires pour les personnes ayant des besoins particuliers, par exemple un soutien au cours d'une relation visant à dispenser des soins.

De plus en plus souvent, ces programmes sont subventionnés par un organisme gouvernemental qui demande, en retour, que l'on fasse la preuve de l'efficacité du programme. Lorsque le personnel de l'organisme communautaire et les bénéficiaires du programme sont d'avis qu'ils ne disposent pas des ressources nécessaires pour effectuer l'évaluation demandée, il arrive qu'ils fassent appel à des chercheurs professionnels. Souvent, ces chercheurs recrutent à leur tour des étudiants pour les aider à mener l'évaluation à bien.

Engager la participation de cinq groupes d'intéressés pour les fins d'une évaluation est un processus difficile. Chacun a des besoins et des objectifs particuliers en ce qui concerne l'évaluation et ces besoins et objectifs ne sont pas nécessairement

partagés par les autres. Par exemple, l'organisme gouvernemental peut être intéressé au rapport coût-efficacité, tandis que les responsables de programmes se préoccupent d'obtenir d'autres subventions, les participants cherchent à tirer le maximum d'avantages du programme, les chercheurs visent à concevoir une étude rigoureuse et les étudiants, à acquérir des données pour leur thèse. Le résultat de ces besoins potentiellement concurrents est trop souvent un compte rendu écrit contenant des constatations qui ne sont jamais publiées et des recommandations qui ne sont jamais mises en oeuvre.

Dans le cadre du présent atelier, nous analyserons certaines méthodes qui pourraient être utilisées pour éviter les conflits d'objectifs entre les intéressés qui participent à l'évaluation des programmes communautaires. Nous présenterons deux modèles. Le premier est le modèle d'évaluation traditionnel, celui où le chercheur conçoit et met en oeuvre l'évaluation avec l'aide des autres parties. Le succès de cette méthode repose sur des communications claires et un accord quant aux objectifs de l'étude. Selon le second modèle, le chercheur n'agit qu'à titre d'expert-conseil au cours du processus d'évaluation. L'étude même est conçue et réalisée par les fournisseurs de services et les participants au programme. Ce modèle est rarement utilisé mais il est plus susceptible que le premier de produire des constatations utiles pour les personnes touchées le plus directement par le programme.

ÉTUDE DE LA PROMOTION DE LA SANTÉ CHEZ LES A NÉ-E-S AU CANADA : PRIORITÉS, DU POINT DE VUE D'UN SERVICE DE SANTÉ COMMUNAUTAIRE

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Ce document expose les différentes perspectives des chercheurs et des praticiens oeuvrant dans la collectivité. Il reconnaît que les chercheurs appartiennent au secteur de la production de connaissances, tandis que les concepteurs de programmes communautaires, au nombre desquels s'inscrit l'auteure, oeuvrent dans le secteur de la consommation des connaissances/prestation des programmes.

Vient ensuite une analyse de la documentation sur la promotion de la santé et le vieillissement produite au cours des quatre dernières années, selon la stratégie de la Charte d'Ottawa (1986) qui a été utilisée. Les études de stratégies visant à *acquérir des compétences personnelles étaient les plus courantes (35,6 pour 100). La réorientation des services de santé était la deuxième stratégie envisagée le plus souvent (28,8 pour 100).*

Une méthode d'organisation de la recherche, allant des recherches de base aux études de l'efficacité et de la diffusion (Flay, 1986) est présentée. Le même ensemble de documents a été analysé en vue d'examiner quelle étape de la conception d'études a été utilisée. Les constatations sont à l'effet que le gros de la recherche se situe au niveau de la théorie, les recherches de base et l'élaboration d'hypothèses comptant pour

46,3 pour 100 des articles analysés. Un pourcentage de 24,2 pour 100 des extraits qui ont été examinés consistaient, en fait, en descriptions de programmes qui étaient passés directement de la théorie à la mise en oeuvre dans la collectivité. Les concepteurs de programmes communautaires se voient dans l'obligation de des études de production d'hypothèses (définition des problèmes) à la conception de leurs propres solutions aux problèmes. Nous n'envisageons pas encore de divorce mais notre partenariat avec les chercheurs a certainement besoin d'un conseiller matrimonial!

La perspective de la directrice d'un service de santé publique est ensuite décrite. Cette perspective touche aux problèmes de santé, aux ressources, aux responsabilités qui nous incombent en matière de santé communautaire en général et relativement à la santé des aîné-e-s en particulier. Le type de problèmes auxquels nous devons faire face lorsque nous voulons promouvoir la santé des aîné-e-s est analysé relativement à un projet communautaire de santé cardio-vasculaire auquel participe notre service de santé et relativement au projet de Lower Lonsdale. Le premier est un exemple de projet de mobilisation communautaire et le second est un exemple de projet de développement communautaire.

Des suggestions sont faites quant au type de recherches que les praticiens souhaiteraient voir réaliser en plus grand nombre au niveau communautaire. Plus particulièrement, les praticiens aimeraient que l'on fasse moins d'études de stratégies visant à acquérir des compétences personnelles et que l'on s'affaire davantage à des études de stratégies ayant pour objectif de renforcer l'action communautaire et les politiques publiques saines. En outre, ils demandent davantage d'engagements sur trois à cinq ans ayant pour but d'analyser à fond les questions

de santé des aîné-e-s vivant dans la collectivité, la gamme des recherches en question allant des études de l'efficacité (Le programme donne-t-il de bons résultats?) aux études de la pertinence (Donne-t-il de bons résultats dans ?) et aux études de la diffusion (Peut-il être reproduit sur une grande échelle, dans différents contextes et au moyen de ressources financières restreintes?).

Un processus d'établissement de partenariats plus efficaces entre les consommateurs des recherches et les producteurs d'études est recommandé. Ce processus fait appel à une collaboration accrue aux fins de la prestation d'une formation de même que d'études au niveau communautaire. Pour que l'union fonctionne, encore faut-que nous cohabitions!

ÉVALUATION DU PROGRAMME POUR PROMOUVOIR UNE SANTE DU "BIEN VIVRE" POUR LES ADULTES PLUS AGÉS

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RÉSUMÉ

Dans cet article on étudie l'évaluation du Programme "du Bien Vivre", qui est un programme de promotion de la santé offert par les infirmières de la santé publique. Un des buts principaux de ce programme, qui comprend huit sessions informelles hebdomadaires de deux heures, est d'aider les personnes âgées à savoir prendre des décisions pour mener une vie en bonne santé. Au départ 61 personnes particpaient à l'étude, puis on leur fit passer des entrevues téléphoniques après trois mois et après six mois. L'analyse des mesures résultantes mettait en évidence seulement un changement dans la façon de traiter le stress. Cependant, les données qualititaves montraient d'autres effets positifs de ce programme sur les participants. On traite ici des défis que posent les études d'évaluation de tels programmes pour la promotion de la santé.

UTILISATION D'ENSEMBLES DE VASTES DONNEES POUR L'ÉTUDE DE LA PROMOTION DE LAS SANTÉ CHEZ LES ADULTES AGES

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RÉSUMÉ

Dans cet article on étudie les advantages et les désavantages de l'utilisation de vastes ensembles de données pour l'étude des modèles de promotion de la santé. Par exemple, les auteurs mettent spécialement l'accent sur trois ensembles de données: l'Enquiête de 1991 sur "Age et Indépendance", les Enquêtes de 1985 et 1990 sur la Promotion de la Santé et l'Etude Canadienne sur la Santé et la Vieillesse. Une manière d'utiliser de vastes ensembles de données à un moment donné est de décrire une population. Une autre manière est d'analyser des variables explicatives à un moment donné. Mieux encore, une autre manière serait d'utiliser une analyse de séries chronologiques pour documenter le changement dans les comportements de la santé, en utilisant plus d'un esemble de données à un moment donné. On utilse des exemples spécifiques pour illustrer le potential et les pièges qu'entraine l'analyse d'ensembles de vastes données, comme moyens d'entreprendre une recherche sur la promotion de la santé. On incluera: des analyses explicaticatives sur la participation de groupes d'auto-assistance; des analyses de séries chronologiques sur les changements du comportement vis-à-vis de l'exercice physique; changements d'attitudes et d'intentions; et des analyses à un moment donné des différences de genres chez les personnes trés âgées par rapport à leur potentiel physique et fonctionnel. On offre des recommandations qui seriront à élaborer des élaborer des études ultérueures pour recueillir des informations sur la promotion de la santé à l'échelle nationale.

PRIORITES POUR LA PROMOTION DE LA SANTE ET POUR LA RECHERCHE SUR LA VIELLESSE AU CANADA: DISCUSSION ET RECOMMANDATIONS

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RÉSUMÉ

L'atelier sur lequel se base ce volume a fourni l'occasion d'un forum pour indentifer les écarts entre la connaissance et la recherche dans le domaine de la promotion de la santé et la viellesse. Les questions et les recommandations discutées furent identifiées par les présentateurs ou bien elles furent soulevées pars les participants à l'atelier pendant la discussion ouverte quil a suivi la présentation formelle de l'article. On les a organisées en dix thèmes différents. Ils reflètent plus les pràoccupations pricipales des participants à l'atelier qu'un ensemble exhaustif et muteullement exclusif de problémes spécifiques. Pour répondre aux recommandations, on a présént à un cadre conceptuel et analytique qui catégorise les progammes de promotion de la santé de la manière suivante: 1) approche; 2) mesure prioritaire; 3) niveau et type de la participation des professionnels; 4) carctéristiques de groupe ou de la communauté qu'on veut atteindre; et 5) activité de recherche. Pour conclure, on argumente que le succès des recommandations acceptées dépendra de l'engagement du milieu professionel de la santé, du milieu des travailleurs de la commanauté, et du milieu académique qui transcendront les frontiéres professionelles et uniront leurs efforts afin d'améliorer et de maintenir la bonne sànté des Canadiens âgés pur se poursuivre jusqu'au siécle prochain.