

# Involving the Community Elderly in the Planning and Provision of Health Services: Predictors of Volunteerism and Leadership\*

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## RÉSUMÉ

La croissance rapide de la population âgée a engendré des changements en matière de soins de santé, y compris l'apparition d'un mouvement de santé communautaire qui met l'accent sur la collaboration, l'auto-assistance et le renforcement des capacités au sein de la collectivité. Cette recherche étudie les facteurs, dans la vie de personnes âgées, qui ont influencé leur aptitude et leur volonté de participer à un projet communautaire de renforcement des capacités en matière de santé, dans le but d'aider leurs voisins plus âgés à la santé fragile. Au moyen d'une étude transversale, nous avons comparé les résultats de 107 volontaires qui vivaient dans un complexe résidentiel à densité élevée pour personnes âgées réputé pour son niveau élevé d'utilisation des services de santé à ceux d'un échantillon aléatoire de 74 personnes non volontaires de la même collectivité. Parmi les facteurs liés à la participation volontaire, on compte l'âge, le niveau d'activité, l'aptitude à fonctionner, la satisfaction à l'égard de la vie ainsi que certaines caractéristiques relatives à la personnalité. Cette étude semble révéler que, au sein d'une collectivité, les personnes âgées les plus jeunes peuvent être en mesure de soutenir leurs voisins plus âgés à la santé fragile afin de leur permettre de continuer à vivre au sein de la collectivité.

## ABSTRACT

A rapidly growing older population has led to changes in health care, including a community health movement with an emphasis on community collaboration, self-help, and capacity building. This study examined factors in the lives of older individuals that influenced their ability and willingness to participate in a health-related community-capacity-building project to help their frailer, older neighbours. Using cross-sectional survey methodology, 107 volunteers who lived in a high density seniors' apartment complex known for its high health service utilization were compared with a random sample of 74 non-volunteers from the same community. Factors associated with volunteer involvement included age, activity level, functional ability, life satisfaction and certain personality characteristics. The study suggests that, within a community, the "younger-old" may be able to support their frailer, older neighbours so that they can remain living in the community.

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## Introduction

Responding to the health needs of an aging population is one of the most significant challenges facing the health care system and health care policy makers locally, nationally, and internationally (United Nations [UN], 2002; World Health Organization [WHO], 2002a). Demographic trends indicate a rapidly growing elderly population. In particular, a surge is expected in the number of individuals 75 years of age and over, who are among the heaviest consumers of health services (Health Canada, 1998; Hollander, 1997; UN, 2002; WHO, 2002a). This has put increased pressure on health care systems worldwide to come up with new, innovative, and cost-effective models of care for an aging population. Recent notable health care trends, in Canada and elsewhere, include a community health movement with responsibility for health being returned to the community and a focus on self-help models of care, with service recipients being encouraged to become more involved with local health systems (Chappell, 1999; Gordon & Neal, 1997; Health Services Restructuring Commission, 1997; Hollander, 1997; UN, 2002; WHO, 2002a). It has been suggested that care models that increase the participation of individuals in the health system may be the most effective approaches to responding to the needs of an aging population (WHO, 2002a). The purpose of this study was to examine intra- and interpersonal factors that constrain or enhance the volunteer involvement and leadership of older individuals within the health system, in a capacity-building context.

### *The Oldest-Old: A Unique Sub-Set of the Aging Population*

It is well known that very old individuals (the *oldest-old* subsection of our aging population) have the greatest health, functional, and economic needs (UN, 2002). While there is agreement on the anticipated increase in the aging population, there is currently inconclusive evidence and a lack of consensus regarding the health and care needs of older individuals in the future. Many argue that, with technological advances, with a focus on prevention, and with evidence-based practice, there will be declining disability trends, with more individuals

surviving into old age healthier, and that the health of future generations of older individuals will be much better than that of current seniors (Fries, 2003; Hébert, 2002; Manton, Stallard, & Corder, 1998; B.H. Singer & Manton, 1998; Vita, Terry, Hubert, & Fries, 1998).

Others suggest that there are limitations on successful and healthy aging (P.B. Baltes & J. Smith, 2003), particularly for those in advanced old age (P.B. Baltes, 1997; M.M. Baltes, 1998; P.B. Baltes & Mayer, 1999; Kirkwood, 2002; Klooseck, Crilly, & Misurak, 2002; J. Smith & P.B. Baltes, 1999). New and emerging evidence supports the complexity of health in advanced old age, confirming that even the healthiest *old-old* experience a dramatic increase in physical health problems, functional limitations, cognitive impairment, and chronic stress, and a dramatic reduction in quality of life (P.B. Baltes, 1997; M.M. Baltes, 1998; P.B. Baltes & Mayer, 1999; P.B. Baltes & J. Smith, 2003; T. Singer, Verhaeghen, Ghisletta, Lindenberger, & P.B. Baltes, 2002).

*Oldest-old* is defined as beginning at 80 to 85 years of age in developed countries (P.B. Baltes & J. Smith, 2003) and is characterized by instability, vulnerability, and dysfunction. The biologic inevitability of frailty and the complex interaction among and consequences of frailty, disability, and co-morbidities in advanced old age have received much attention (Bergman, Wolfson, Hogan, Beland, & Karunanathan, 2004; Fried, Ferrucci, Darer, Williamson, & Anderson, 2004; Fried, Tangen et al., 2001; Hogan, MacKnight, & Bergman, 2003; Rockwood, Hogan, & MacKnight, 2000). Even if there is a trend toward more healthy aging, there is evidence that, for years to come, people will be entering the oldest-old phase with a disease load. Fried, Ferrucci et al. (2004) found that 20 to 30 per cent of older adults 70 years of age and over living in the community had difficulty carrying out the activities of daily living and those essential for a quality life and that dependency rose steadily with age. The National Population Health Survey (Rosenberg & Moore, 1997) showed that one third of Canadians aged 65 to 74 had health problems that restricted their activities to some degree, a figure rising to over 50 per cent at age 75 and over. Similarly, at age 75 and over, approximately 40 per cent required help with heavier housework and over 25 per cent

help with routine housework and shopping (Rosenberg & Moore, 1997).

In addition to the effects of disease, the process of senescence or frailty becomes increasingly important with age. Although progress has been made in preventing common diseases of aging (e.g., cardiovascular disease), there is as yet no way to prevent the onset or progression of frailty. The cumulative effects of aging produce frailty in individuals that rises rapidly after age 80. Whatever the impact of disease prevention may be, the process of dying which takes individuals from a state of wellness through frailty to their death will persist. Whatever progress basic science may make in modifying the process of aging, any benefits are many years away and will have had no significant impact by the time the current baby boomers reach old age. One could even argue that any progress that slows the aging process will lengthen the end-of-life period of frailty and its associated disability and not shorten it.

Fried, Tangen et al. (2001) and Fried, Ferrucci et al. (2004) found that 7 per cent of community-dwelling individuals aged 65 and over and approximately 30 per cent of community-dwelling individuals 80 years of age and over were considered frail and at high risk for falls, disability, hospitalization, and mortality. Even if people enter the age of frailty (sometimes called the fourth age) healthier, their greatly increasing numbers will prove a challenge to the system. A critical issue for the health system is to manage the period of disability at the end of life as individuals pass from being well through increasing frailty and dependency to death, a period that, although slightly different for women and men, currently averages approximately 6 years in developed countries and higher elsewhere (Murray & Lopez, 1997). A greater proportion of individuals is living longer. Innovative planning and policy reform are required to meet the health care needs of the oldest-old, the fastest growing sub-group of the aging population (UN, 2002; WHO, 2002a).

Assistance with activities of daily living such as personal care, housework, and meal preparation is increasingly required with advancing age. Support provided in these particular areas is not only necessary to protect the reserve of elderly individuals to allow them to engage in other activities on a day-to-day basis (M.M. Baltes, 1998; Baltes, Mayr, Borchelt, Maas, & Wilms, 1993) but has also been identified as potentially delaying or preventing premature institutionalization (Stuck, Egger, Hammer, & Minder, 2002). Hospitals, however, are discharging frail, older

patients "quicker and sicker", and communities are receiving sicker patients while at the same time losing peripheral supportive services. For example, following recent government reform of Community Care Access Centres (CCACs), the agencies responsible for the delivery of home care across Ontario greatly limited supportive services and directed elderly individuals to look to their own resources (which they often do not have) to fill these needs. If personal support resources are available, they are often quickly exhausted.

It has been suggested that younger age groups and societal resources may assist in supporting the oldest-old in future aging populations (P.B. Baltes & J. Smith, 2003). A reasonable approach would be to look at communities of older individuals and explore whether healthier and more active *younger-old* community members are willing and able to help their frailer neighbours. Building the capacity of these communities to provide mutual aid, that is friends and neighbours helping each other, may be a way to extend the "reach" of the health system and help the frailest members of society remain in their homes and communities for as long as possible (Kloseck, 1999; Kloseck et al., 2002). Although some researchers have examined the challenges faced by older adults who are caregivers (Chappell, 1999; Gallant & Connell, 1998; Sparks, Farran, Donner, & Keane-Hagerty, 1998) and the factors that help older adults cope (Mannell, Salmoni, & Martin, 2003), little research to date has investigated what older adults are willing and able to do for themselves (self-help) or for their friends and neighbours (mutual aid) or considered the feasibility of using these approaches with the oldest-old sub-group of the aging population. Likewise, more research is needed to identify factors that predict why older individuals become involved (Chappell, 1999; Kloseck et al., 2002) and to explore the potential of capacity building with older individuals to extend the "reach" of the health system (Chappell, 1999; Kloseck et al., 2002). That individuals experience declining health and increased dependency with advancing age presents unique challenges. It is well documented that advanced age is associated with losses that limit one's level of engagement in society and that individuals who have greater personal and self-care needs for everyday living will, out of necessity, be unable to participate fully in other community or societal activities (M.M. Baltes, 1988; Baltes et al., 1993; Pastalam, 1982). These factors significantly affect the ability of older individuals to remain in their own homes and their ability to volunteer (i.e., help their neighbours) (Cnaan & Cwikel, 1992; Kloseck et al., 2002).

### *Older Adults and Volunteering*

Little research to date has examined the unique characteristics associated with the advancing age, increasing dependency, and increasing health problems of elderly individuals and the impact of these factors on the volunteer involvement of elderly individuals. Existing volunteer literature focuses almost solely on formal volunteering; that is, volunteer work associated with a specific agency, usually organized and administered by paid professionals within hierarchical organizational structures using a volunteer management approach (Chappell, 1999; Fischer & Schaffer, 1993). The focus of these studies is typically on *young-* and *middle-old* volunteers (i.e., those 55–74 years of age). Much of what is known about informal volunteering (i.e., friends and neighbours helping each other) currently comes from the caregiving and social support literature and is limited in scope, focusing primarily on the unique issues faced by caregivers (Chappell, 1996, 1998, 1999). Little research has examined informal volunteer support in a non-caregiving context or the potential of capacity building using non-hierarchical governance structures with communities of older individuals (Chappell, 1999; Kloseck et al., 2002).

Much general information regarding volunteering is available through the 1987 Canadian National Survey on Volunteer Activity (NSVA) (Statistics Canada, 1987) and the 1997 National Survey on Giving, Volunteering, and Participation (NSGVP) (Statistics Canada, 1998). These surveys confirm that seniors (aged 65 years and over) provide more hours of volunteer work per year than any other age group (Statistics Canada, 1987; Statistics Canada, 1997; Statistics Canada, 1998). Fischer and Schaffer (1993) found that patterns of volunteer behaviour remained steady until approximately 75 years of age, at which point volunteering declined. Advanced age and health were identified as the greatest factors affecting volunteer behaviour. Major known variables repeatedly found to influence the formal volunteer involvement of individuals in general include age, education, health, social supports, and the environment in which the individuals live (Chavis & Wandersman, 1990; Pearce, 1993; Perkinson, 1992), as well as personality (Pearce, 1993; Perkinson, 1992) and recent life changes (Wan & Odell, 1983). It is generally agreed that individuals who are better off financially and those who have more education are more likely to volunteer (Pearce, 1993; Statistics Canada, 1998; Statistics Canada, 1987). It has also been found that individuals who volunteer when they are older have also volunteered when younger (Hertzog, Kahn, Morgan, Jackson, & Antonucci, 1989; Perkinson, 1992).

Reasons why individuals volunteer are complex and are often moderated by internal (e.g., personality) and external (e.g., situation) influences (Fischer & Schaffer, 1993; Smith, Van Til, Bernfeld, & Zeldin, 1983; D.H. Smith, 1994). Motives for volunteering include self-interest, the opportunity for social contact, a desire to help others, the perceived importance of agency or project goals, and the need to feel useful (Meneghetti, 1995; Pearce, 1983, 1993). In the majority of studies, humanitarian or altruistic motives have tended to outweigh other reasons given, particularly for older volunteers (Midlarsky & Kahana, 1994; Nemschoff, 1981; Pearce, 1993). Others (Prince & Chappell, 1994; Zenchuk, 1989), however, have found that volunteer behaviour is motivated more by a sense of obligation. It has also been suggested that self-interest may be under-reported due to a social-desirability bias in volunteers' self-reported reasons for volunteering and that an individual's "psychological state" (e.g., attitude; positive and negative feelings experienced; personality) may play an influential role (Pearce, 1993). Personality—in particular, high levels of self-confidence, self-assurance, and self-esteem, and a positive outlook—has also been demonstrated to influence volunteer involvement (Pearce, 1993; Perkinson, 1992). Volunteering has been found to benefit both the physical and psychological health (Caro & Bass, 1997; Fischer & Schaffer, 1993) and the life satisfaction (Aquino, Russell, Cutrona, & Altmaier, 1996) of older individuals. Conversely, health status has also been found to influence volunteer behaviour (Ishii-Kuntz, 1990; Ozawa & Morrow-Howell, 1988).

### *Older Adults and Community Capacity Building*

The WHO (2002b), after 2 years of reviewing models and best practices worldwide, developed a framework entitled *Innovative Care for Chronic Conditions: Building Blocks for Action*. This framework addresses the inability of current health systems to meet existing needs, the importance of involving service recipients in prevention programs, the benefits of partnering with consumer groups, the need for information and skill development and for optimizing community resources, and the potential of capacity building and community development to reduce the disease burden of future generations of older individuals through prevention and health-promoting lifestyles.

*Capacity building* is defined as sharing information, skills, and resources and mobilizing individuals within a community in volunteer and leadership roles (Chaskin, 2001; Ontario Healthy Communities Coalition, 1998; Shields, 1997; Shiell & Hawe, 1996). It is a process whereby individuals and communities

work—in this case, with the health system—in a collaborative, non-hierarchical structure, with shared decision making. It is a dynamic, evolving process responsive to changing needs over time.

There is much that well, older individuals and communities of older individuals (e.g., informal volunteerism) can do collectively to support frailer, at-risk individuals, and a growing number of community initiatives are now using capacity-building principles. Kloseck et al. (2002) found a clear role for community members and a comfort zone for what older community members were willing and able to do in supporting their frailer neighbours. In general, volunteers felt very comfortable providing health information, monitoring the health status of their neighbours over time, identifying community members at risk, building trust, linking at-risk community members with community health resources, leading or co-leading social and safety check programs, and advocating on behalf of their frailer neighbours. Community volunteers did not feel comfortable being directly involved in the health and medical issues of their sicker, and usually apartment-bound, neighbours.

A significant challenge for health professionals and policy makers is to determine how best to integrate and support the various types of care options, including self-care (individuals looking after themselves), informal support (care from family, friends, and neighbours), and formal care (system-provided health and social services) (WHO, 2002a). Many older people respond to declining capacity with an attempt to reduce the demands that life places on them, the so-called “environmental press” (Lawton & Nahemow, 1973). Moving to a supportive community is typically such a response and, indeed, reducing volunteer activity may also be such a response. Although “environmental press” may be a limiting factor for the oldest-old, it may be less of an issue for the community as a whole, where younger, healthier community members can share their spare energy with those who have greater health and support needs but fewer resources. One way to achieve this is through the development of community capacity.

Building community capacity using a peer-support model (neighbours helping neighbours) expands the potential pool of health and supportive services within a local setting and allows each community to determine both its needs and how much the health system, the community, the individual, and the individual's family are willing and able to contribute. The success and sustainability of community capacity-building initiatives depends on committed and

dedicated community leaders and on a stable pool of community volunteers over time.

### *The Context: The Cherryhill Healthy Ageing Program*

The Cherryhill Healthy Ageing Program (1996–present) (Kloseck et al., 2002) is a participatory action project that utilizes a community capacity-building process to foster long-term commitment from and partnerships among community members, health professionals, and local businesses to develop a collaborative model of community care for older individuals. The Cherryhill community, London, is a private apartment complex with a high concentration of seniors and high health service utilization. It consists of 13 apartment buildings housing over 2,500 seniors (mean age =  $79 \pm 9.53$  SD) and 64 local businesses. It is now estimated that 54 per cent of the population is 80 years of age and over. The overall goals of the Cherryhill Healthy Ageing Program include (a) helping older individuals remain active, independent, and in their own homes as long as possible; (b) creating a sustainable system of joint community and health system decision making; (c) optimizing seniors' involvement with the health system; and (d) building community capacity to strengthen existing, untapped community resources. Predictors of volunteering were examined in this context. As part of the capacity-building approach, the willingness of the volunteers to adopt a leadership role, such as volunteer coordinator, committee chair, or program leader was also explored. Volunteers for the Cherryhill Healthy Aging Program were recruited through word of mouth, community meetings, an in-house television channel advertisement, notices placed in all apartment buildings, and an information flyer delivered to all apartments in the complex.

## **Methods**

### *Procedures*

There was 100 per cent sampling ( $n=126$ ) of all community residents 55 years of age and over who volunteered with the Cherryhill Healthy Ageing Project. Of the 126 individuals in the volunteer pool, 5 refused, 2 were away on vacation, and 12 had moved out of the apartment complex, leaving a final volunteer sample of 107.

A comparative sample of non-volunteers was drawn from the remainder of the apartment complex. The property owners provided a master list containing apartment building and telephone numbers of all residents residing in the 13 apartment buildings in their complex. All residents who were volunteers could be identified by name, apartment building, unit,

and telephone number. The names of these residents were removed from the master list. A systematic random sample was then drawn from the revised list of all non-volunteers in the apartment complex. Based on an estimated 10 per cent refusal rate and anticipating that approximately 10 per cent of individuals contacted would not meet the study inclusion criterion (i.e., 55 years of age and over), 130 non-volunteers were sampled for the comparative group in order to give approximately equal sample sizes for group comparison. Ten telephone numbers were randomly selected from the master list for each of the 13 apartment buildings in the complex so that a comparative group of approximately equal size would be obtained. Of the potential non-volunteer sample ( $n=130$ ), 17 per cent ( $n=22$ ) contacted did not meet the age requirements, thus leaving a final non-volunteer sample of 108. Of the 108 non-volunteers contacted, 74 agreed to participate and 34 refused (response rate = 69%), leaving a final non-volunteer sample of 74. Of the 34 refusals, 31 per cent felt they were too busy and may have represented a more functional group; however, 11 per cent felt they were too old and 40 per cent felt their health was too poor. The total study sample was 181 (107 volunteers and 74 non-volunteers).

#### *Operationalization of Variables and Analyses*

To answer the primary question of whether individual differences existed among community members who volunteered with the Cherryhill Healthy Ageing Program, community members who did not, and community members who were willing to assume positions of leadership, six types of potentially *modifiable* variables (*health, functional ability, well-being, activity level, social resources, environmental conditions*) and six major *non-modifiable* variables (*age, socio-economic status, personality, life changes, gender, past volunteer behaviour*) were measured. Cross-sectional survey methodology was used and data were collected using a questionnaire containing 44 sets of items and scales. The questionnaire consisted of a variety of standardized scales designed to measure the variables of interest, along with a number of general questions specifically written for the study. In order to maximize the data completeness, the questionnaire was administered in a face-to-face interview format.

Standardized scales included the health perception scale taken from the Medical Outcomes Study (MOS) short-form General Health Survey (Stewart, Hays, & Ware, 1988); the Short Happiness and Affect Research Protocol (SHARP), composed of affective and dispositional items (Stones et al., 1996); the Activities Checklist (Arbuckle, Gold, Chaikelson, & Lapidus,

1994); and a six-item short version of the Social Support Questionnaire (Sarason, Levine, Basham, & Sarason, 1983). Both subjective and objective health were measured. Subjective health was measured using the five-item MOS health perception scale, along with a general question asking respondents whether they had been told by their doctor that they had any health conditions. Four of the five MOS health perception items ask respondents to answer questions about their health on a 5-point Likert-type scale, ranging from 1 (*definitely true*) to 5 (*definitely false*). The fifth item asks respondents to rate their health on a 5-point Likert-type scale ranging from 1 (*poor*) to 5 (*excellent*). A subjective health index was created by summing the five items of the MOS. Two of the five items were negatively worded and recoded to ensure consistency with the other three items (1 = *poor health* and 5 = *excellent health*). The internal consistency of the health index, as measured by Cronbach's alpha reliability coefficient, was 0.91. Cross-tabulation with  $\chi^2$  tests was used for categorical variables and *t* tests were used to examine mean differences for continuous health variables. Objective health was measured by the number of days in hospital and the number of physician visits during the past 12 months as well as by the number of times per week the participant had had to call someone for help.

The concept of well-being or quality of life is a particularly complex construct. A quick and accurate measure designed and tested for use with an elderly population was desirable for this study. The SHARP was found to be the most suitable instrument. The SHARP is a short, 12-item measure of subjective well-being that includes short-term (affective) and long-term (dispositional) positive and negative components; a *yes-and-no* response format is used. The type and frequency of activity participation was measured with the Activities Checklist, which identifies 22 activities routinely engaged in by older individuals. Each activity is rated on a 5-point Likert-type scale ranging from 1 (*less than once a year*) to 5 (*daily*). Social resources were measured using a 6-item short version of the Social Support Questionnaire, a self-report measure consisting of 27 items. Each item requires a two-part answer. First individuals are asked to list people who they feel provide them with support in specific situations; then they are asked how satisfied they are with the support received in each of the areas described. Satisfaction is rated on a 6-point Likert-type scale ranging from 1 (*very unsatisfied*) to 6 (*very satisfied*). Environmental conditions were measured with one 6-part question addressing satisfaction with (a) the apartment buildings, (b) the grounds, (c) the health

services available, (d) other services and community resources available, (e) the landlords/property owners, and (f) the neighbours, and with one question addressing community attachment that asked respondents how likely it was, given the opportunity, that they would move to another community where the cost was the same. Respondents were asked to rate their level of satisfaction in each of these areas on a 6-point Likert-type scale ranging from 1 (*not at all satisfied*) to 6 (*very satisfied*) and 1 (*no, I like it here*) to 6 (*yes, I would move*), respectively. Personality was measured with five general questions measuring *extroversion*, *neuroticism*, *openness to experience*, *agreeableness*, and *conscientiousness*, based on definitions of the "Big 5" personality factors provided by McCrae and Costa (1987).

Prior to beginning data collection, the final draft of the survey was pilot tested with three community residents: Two were 80 years of age and over, in good health, and active; the other was also 80 years of age and over but was much frailer, with numerous medical conditions and mobility problems, and had experienced a number of recent traumatic life changes. Each of the three residents involved in the pilot testing reported that nothing should be changed on the survey and that the length of the survey was acceptable. Once pilot testing was completed, all potential study participants were contacted and provided with a letter of explanation, consent to participate was obtained, and an interview time was arranged. Interview times ranged from slightly less than 1 hour to 1 hour and 30 minutes.

Bivariate correlation and multivariate analyses were used to determine predictors of volunteer involvement and leadership. A series of hierarchical regression analyses was carried out to determine if non-modifiable variables modified or masked the influence of other variables on volunteer involvement and volunteer leadership. Descriptive analyses of participants in the total sample ( $n=181$ ) were performed using parametric and non-parametric procedures.

## Results

### Study Participants

Study participants were 181 residents, aged 55 years and over, who lived in the Cherryhill apartment complex. Twenty-one (12%) participants were aged 55 to 64 years, 51 (28%) 65 to 74 years, and 108 (60%) 75 years of age and over. Of the total sample, more than a third ( $n=56$ ; 31%) were 80 years of age and over. Eleven per cent of participants were male and 89 per cent female, with a mean age of 74 years

**Table 1: Socio-demographic differences for total, volunteer, and non-volunteer samples**

Characteristics	Total Sample (N = 181)	Volunteers (n = 107)	Non-volunteers (n = 74)
Mean Age	76	74	78
SD	8.45	8.40	8.12
Sex			
Male	11%	10%	12%
Female	89%	90%	88%
Mean No. Years Living in Cherryhill	9	8	10
Marital Status			
Single	11%	12%	10%
Widowed	54%	50%	59%
Separated	4%	6%	3%
Married	17%	15%	20%
Divorced	15%	17%	8%
Common-Law	—	—	—
Living Arrangements			
Alone	79%	79%	78%
With Spouse	16%	15%	19%
With Relatives	3%	3%	3%
With Friends	2%	3%	—
Education <sup>a</sup>			
Standard	79%	84%	73%
Higher	21%	16%	27%
Sufficient Income <sup>b</sup>			
Mean	3.9	3.9	4.0
SD	1.4	1.2	1.5

<sup>a</sup> Standard education was defined as public (Grades 1–8) and high school (Grades 9–12), while higher education was defined as college (diploma) or university-level education.

<sup>b</sup> Income was measured on a Likert-type scale ranging from 1 (*not enough income to do the things I want*) to 6 (*more than enough income to do the things I want*).

( $SD = \pm 9.53$  years). Seventy-nine per cent were women living alone. Characteristics of study participants are described in more detail in Table 1.

### Predictors of Volunteer Involvement

There were no differences between volunteers in the Cherryhill Healthy Ageing Program and

non-volunteers in demographic and socio-economic characteristics (*gender, marital status, length of time living in this community, education, occupational skill level, recent life changes*), health (subjective and objective), well-being (disposition), physical and social environmental satisfaction, past volunteer behaviour (pre-retirement), and social resources (*number of social supports and satisfaction with social supports*). Nor were there statistically significant differences between volunteers ( $m=2.96$ ,  $SD=5.95$ ) and non-volunteers ( $m=2.45$ ,  $SD=5.90$ ),  $t(175)=0.56$ ,  $p=0.58$  in the number of hours spent in other (non-Cherryhill Healthy Ageing Program) volunteer work. Likewise, there were no significant differences between volunteers ( $m=2.42$ ,  $SD=1.16$ ) and non-volunteers ( $m=2.67$ ,  $SD=1.33$ ),  $t(140)=-1.30$ ,  $p=0.19$  in past (pre-retirement) volunteer work or between volunteers ( $m=13.88$ ,  $SD=14.97$ ) and non-volunteers ( $m=11.27$ ,  $SD=14.28$ ),  $t(175)=1.15$ ,  $p=0.25$  in the number of years involved in these activities. On average, both volunteers and non-volunteers had participated weekly in pre-retirement volunteering, and the types of pre-retirement volunteer work were similar (e.g., volunteering with church, school, or special associations, such as the Arthritis Society, the Cancer Society, etc.). Of those who did not volunteer with the Cherryhill Healthy Ageing Program, 56 per cent reported that they currently did no volunteering elsewhere. This was similar to the figure for project volunteers, of whom 52 per cent reported doing no other volunteering. For those who did not volunteer with the Cherryhill program but volunteered elsewhere, 37 per cent of the total volunteering was in church related activities, while for project volunteers the figure was 17 per cent. We did not ask the degree of physical activity involved in this form of volunteering. There were, however, statistically significant differences between volunteers and non-volunteers in the potentially modifiable variables of functional ability, well-being (affect), social resources (support available when upset), and activity level, as well as in the non-modifiable variables of age and personality.

#### Potentially Modifiable Factors

A significant difference in the day-to-day functioning of volunteers and non-volunteers was found. Non-volunteers reported more limitations in their daily activities ( $m=2.60$ ,  $SD=1.21$ ) than did volunteers ( $m=2.12$ ,  $SD=1.21$ ),  $t(175)=-2.58$ ,  $p=0.01$ . Sixty-two per cent of non-volunteers reported being somewhat to extremely limited in their daily activities compared to 47 per cent of the volunteer sample. Non-volunteers also reported receiving a greater number of health services than

did volunteers ( $\chi^2=12.49$ ,  $p=0.002$ ,  $df=2$ ,  $n=181$ ). Forty-nine per cent of non-volunteers reported receiving health services, compared to 25 per cent of volunteers. As to the health services received, non-volunteers required significantly more assistance with light house-cleaning than did volunteers ( $\chi^2=7.68$ ,  $p=0.005$ ,  $df=1$ ,  $n=181$ ). A significant difference in the affect of volunteers and non-volunteers was found. Volunteers were more positive and more satisfied with their lives during the past month ( $m=11.11$ ,  $SD=1.26$ ) than non-volunteers ( $m=10.70$ ,  $SD=1.38$ ,  $p=0.05$ ). Also, while generally there were no differences between volunteers and non-volunteers in the social support they perceived they had available in different situations, an exception was the support available to console them when they became upset. Volunteers reported having a greater number of individuals available to support them when they were upset ( $m=2.14$ ,  $SD=1.23$ ) than non-volunteers ( $m=1.61$ ,  $SD=1.23$ ),  $t(178)=2.73$ ,  $p=0.01$ . Volunteers also scored higher on the Activity Checklist ( $m=72.53$ ,  $SD=9.36$ ) than non-volunteers ( $m=69.71$ ,  $SD=7.51$ ),  $t(155)=2.13$ ,  $p=0.03$ . Specifically, volunteers were more involved in arts and crafts, shopping, writing to friends and family, and participating in other community organizations, and spent less time napping ( $m=3.14$ ,  $SD=1.60$ ) than non-volunteers ( $m=3.82$ ,  $SD=1.43$ ),  $t(165)=-2.95$ ,  $p=0.004$ .

#### Non-Modifiable Factors

Volunteers were younger ( $m=74$  years,  $SD=8.39$ ) than non-volunteers ( $m=78$  years,  $SD=8.12$ ),  $t(180)=-2.82$ ,  $p=0.005$ . Statistically significant differences were also found for three of the five personality characteristics measured, specifically extroversion ( $t(179)=2.75$ ,  $p=0.01$ ), openness to experience ( $t(178)=2.55$ ,  $p=0.01$ ), and agreeableness ( $t(178)=1.96$ ,  $p=0.05$ ).

#### Predictors of Volunteer Leadership

Willingness to volunteer and serve in a leadership position was treated as a dependent variable and was measured using a 6-point Likert-type scale ranging from 1 (*not at all likely*) to 6 (*most definitely will*). The analysis suggests that the willingness of volunteers to accept a leadership position was low ( $m=2.01$ ,  $SD=1.44$ ). Sixty-eight per cent of volunteers reported they would not, 25 per cent were unsure, and 7 per cent reported they probably would volunteer for a leadership position. There were no significant relationships between any of the modifiable variables and a willingness to assume a leadership position, except for in the case of satisfaction with social supports ( $r=0.22$ ,  $p=0.03$ ).



Individuals experiencing greater satisfaction with their social support network were more willing to serve in this capacity. Significant relationships were also found between three of the non-modifiable variables and leadership. Age was significantly negatively correlated with volunteer leadership ( $r = -0.25$ ,  $p = 0.02$ ), suggesting that individuals who are younger are more willing to assume leadership positions. The personality trait dimensions of extroversion ( $r = 0.24$ ,  $p = 0.02$ ) and agreeableness ( $r = 0.28$ ,  $p = 0.01$ ) were both significantly and positively correlated with willingness to volunteer in a leadership capacity.

*The Moderating Effects of Non-Modifiable Variables on the Relationship between Modifiable Variables and Volunteer Involvement/Leadership*

To determine if the non-modifiable characteristics of study participants (e.g., age, socio-economic status, recent life changes, personality, etc.) modified or masked the influence of what we have called the modifiable factors of involvement and leadership, a series of hierarchical regression analyses were carried out. Exploratory factor analysis with a varimax rotation was used to reduce the number of modifiable variables. The exploratory factor analysis supported a 2-factor structure—*psychosocial/environmental* and *health/functional ability* (see Table 2). All factor loadings exceeded the 0.51 level for the first factor and the 0.65 for the second factor, both factors having eigenvalues greater than 1.00. These factors were then used for subsequent analyses.

First, bivariate correlational analyses were used to examine the relationship between the two modifiable factors and volunteer involvement and leadership (Table 3). No significant relationships were found.

A series of hierarchical regression analyses was then carried out to examine the potential interactions between modifiable factors (psychosocial/environmental factor, health/functional ability factor) and the non-modifiable independent variables. Of the interaction effects examined, only one was found to be significant at the  $p = 0.02$  level. Although the amount of the variance explained by the interaction is small, this interaction suggested that elderly individuals with *little past volunteer involvement* were more likely to volunteer when they were in good rather than in poor health and when their functional ability was good. For elderly individuals with *high past volunteer involvement*, the state of their health and functional ability did not seem to matter; they were equally involved whether their health and functional ability were good or poor. Table 4 provides a summary of the hierarchical regression analysis for the interaction effect of past volunteer involvement and health/functional ability on volunteer involvement.

## Discussion

Many older individuals, once retired, volunteer their time and skills and many do not. The findings of this study compare closely with those of the NSGVP

**Table 2: Factor analysis of potentially modifiable variables (N = 181)<sup>a</sup>**

Measure and Potentially Modifiable Variables	Factor 1 (Psychosocial/ Environmental)	Factor 2 (Health/ Functional Ability)	Communality
<b>Psychosocial/Environmental</b>			
General Well-Being	0.76	0.55	0.88
Affective Well-Being	0.68	0.50	0.71
Dispositional Well-Being	0.73	0.52	0.80
Activity Level	0.51	0.31	0.36
Social Supports	0.65	-0.11	0.43
Social Support Satisfaction	0.70	0.30	0.59
Environmental Satisfaction	0.69	0.02	0.48
<b>Health/Functional Ability</b>			
Subjective Health	0.19	0.83	0.73
Physician Visits	-0.07	-0.65	0.43
Functional Ability	-0.10	-0.85	0.74

<sup>a</sup> Hospital visits did not load on either factor and was dropped from further analyses.

**Table 3: Correlations between the two factors of potentially modifiable variables and volunteer involvement and leadership (N = 181)**

	Psychosocial/ Environmental Factors (Factor 1)	Health/Functional Ability (Factor 2)
Volunteer Involvement	0.10	0.13
Volunteer Leadership	0.07	0.15

**Table 4: Summary of hierarchical regression analysis for the interaction effect of past volunteer involvement by health/functional ability on volunteer involvement (N = 168)**

Variable	B	SE B	$\beta$
<b>Step 1<sup>a</sup></b>			
Past Volunteer Involvement	-0.04	0.03	-0.10
Health/Functional Ability	0.02	0.02	0.12
<b>Step 2<sup>b</sup></b>			
Past Volunteer Involvement (PV)	-0.05	0.03	-0.12
Health/Functional Ability (HF)	0.10	0.04	0.51*
PV $\times$ HF	-0.03	0.01	-0.43**

**a**  $R^2 = 0.03$

**b**  $\Delta R^2 = 0.03$  for Step 2 ( $p = 0.02$ )

\*  $p = 0.01$

\*\*  $p = 0.02$

(Statistics Canada, 1998), which found that 23 per cent of Canadians aged 65 or over volunteered to work with charitable and non-profit organizations and that those who volunteered tended to be the younger seniors. While this was the lowest per cent of all age groups volunteering, seniors in the National Survey contributed the highest number of volunteer hours of all age groups.

The findings suggest that individuals who are older, are in poorer health, have more difficulties with and limitations on carrying out their day-to-day activities, use a greater number of health services, and generally have lower levels of well-being are less likely voluntarily to become involved in health system initiatives. This presents a major challenge for health professionals and community planners. The shift of health care resources to community settings and the effort to involve individuals and communities as collaborative partners in the sharing of responsibility for health planning raises many questions about working with communities of elderly individuals. The finding that functional ability, in particular, is

significantly associated with involvement seems to support the selective dependency theory described by M.M. Baltes (1988) that individuals with greater personal and self-care needs for everyday living are unable to participate in other activities such as volunteering. However, our non-volunteers did volunteer elsewhere, notably with church-related activities. Whether this represented a less physically demanding level of involvement compatible with their greater functional limitations or perhaps reflected a different focus of interest is not clear.

The support most needed by individuals to remain living in the community appears to be informal health support, such as assistance with homemaking (e.g., housecleaning, meal preparation, etc.). This support with day-to-day functioning has also been identified as an important factor in preventing premature institutionalization of the elderly (Stuck, Egger, Hammer, Minder, 2002; National Advisory Council on Aging, 1993). The provision of this support, however, is being seriously affected by current health care restructuring and reforms, as evidenced by the limitations on supportive services of many health care agencies. If volunteering is highly dependent upon functional ability and functional ability within a given community is variable and limited overall, the collective functional ability of the community, which in a way reflects the community's reserve, is a critical concept. Individuals can only do so much, and if their function or health is limited, they focus very much on matters of necessity (M.M. Baltes, 1988). They become recipients rather than providers. Within a community, the younger-old may be able to share their reserve with the oldest-old, thereby increasing the function and independence of the community as a whole. In this respect, the anticipated improvement in health of the aging population, at least up to the onset of frailty, is encouraging, as it will produce a pool of fitter younger-old capable of helping the frailer older-old. However, if the community is predominantly older and frailer, there may not be enough reserve to go around, or at least nothing left over after basic needs are attended to. An outside injection of energy and resources is required and this must come from the formal health system.

Other studies (Ishii-Kuntz, 1990; Ozawa & Morrow-Howell, 1988) have found that health influenced the involvement in volunteering of elderly individuals. The present study did not find this but found function to be important. The type of volunteer opportunity individuals were asked to participate in may have had something to do with this finding. Thus, the focus of the present study was a capacity-building health project. Asking older individuals to volunteer in the

development of an initiative that may help them remain in the community longer may be very appealing to those who, under other circumstances, would not normally become involved. This reasoning is consistent with the findings of the Hollander (1997) report, where seniors identified remaining independent (making their own decisions) as one of their two most important priorities. This notion is further supported by the results of a study conducted by Mack, Salmoni, Viverais-Dressler, Porter, and Garg (1997) that examined the perceived risks of independent living for elderly individuals living in the community. These authors found that, among other things, elderly individuals frequently strive to remain living in the community. In contrast to the findings of others (Chavis & Wandersman, 1990; Golant, 1984; Heshka, 1983; D.H. Smith et al., 1983), the present study did not find differences in volunteering according to social and physical environmental factors, such as sense of community, social relationships, or satisfaction with social and physical environmental factors, a finding which may, in part, reflect the fact that the study was performed within a single community.

For the most part, what we called non-modifiable variables (e.g., age, socio-economic status, personality, life changes, gender) did not moderate the relationships of health, functional ability, well-being, activity level, social resources, or environmental satisfaction to volunteer involvement and leadership. This information is useful because it suggests that the effects of the potentially modifiable variables are relatively direct. The one interesting exception is that older adults with a history of volunteering were less likely to be influenced by poor functional ability than those individuals with no such history. This finding suggests that functional ability may not be an absolute physical or objective barrier to involvement, although the moderating influence of prior volunteering was very weak. A history of volunteering is probably reflective of an attitude and an ingrained pattern of behaviour that, in turn, reflect a subjective state of openness or receptiveness to getting involved regardless of physical limitations. This attitudinal orientation is also suggested by the findings that those older adults who reported themselves as more outgoing (extroversion) and trusting and altruistic (agreeableness) were more willing to volunteer in a leadership capacity. While this information is useful for targeting potential volunteers, volunteer history and enduring personality characteristics and attitudes are not particularly amenable to change through community development interventions. Although we labelled some of the variables potentially modifiable, there is no evidence that modification would increase

volunteering. More realistically, such so-called modifiable factors may be better viewed as helpful in targeting in recruitment efforts.

In addition to these types of challenges, the majority of volunteers in the present study (68%) stated they would not volunteer for a position where they would be required to assume a leadership role. On the other hand, within a community capacity-building context, a wide variety of volunteers, including general helpers, committee members, community representatives, and chairs of community action teams are necessary for successful sharing of power and decision making to occur. Not everyone needs to be a leader. The present study is unique in that the average age of study participants was 74 years and the study included participants of up to 86 years of age. The fact that very few, if any, older individuals appeared to be willing to take on leadership positions suggests that current community capacity-building approaches may not work with very old individuals with multiple and complex health conditions. However, communities containing a mixture of younger and older old may be more responsive. Research is needed to examine, in detail, the circumstances under which elderly individuals will volunteer for positions requiring leadership, the constraints and facilitators of volunteer leadership, and the strategies that might be employed to encourage elderly volunteers to assume such positions.

This study has some limitations. It was conducted within a uniform community of seniors, a fact that could affect generalizability. The overall concept of community members' sharing resources may only be applicable to a community of seniors living closely together. Indeed, the concept of community capacity building rests upon the ability to identify the community. This does not *need* to be geographically defined, but given the limited mobility of some older individuals, a geographical definition may indeed be one of the major characteristics. We also have not explored the evolution over time of the model. Thus, those who volunteer when in the younger-old category may age in place and eventually may become recipients. The time course of this may be short, and the need continually to renew the volunteer pool may be an ongoing challenge. It is also important to note that our ability in the present study to discover factors related to willingness to take on a leadership role was limited because of the one-item measure used to measure this construct. The relationship between positive personality factors and general satisfaction with life and volunteering can, of course, work both ways. Volunteering may be good for you. However, personality traits tend to be stable across

time, suggesting that the enthusiasm and agreeableness noted in the volunteers is more likely to be primary and not secondary. Nonetheless, it has to be noted that the experience of volunteering can be seen as positive (Chappell, 1999).

#### *Implications for Practice*

A major challenge exists for health professionals and community planners. Canada is faced with a rapidly growing older population at a time when health care budgets are under restraint. Demographic trends support a significant increase in the number of elderly Canadians during the next few years, particularly those aged 75 years and over. It is improbable that improvements in the health of aging individuals such as might result from lifestyle changes and evidence-based medicine will produce such benefits that the growing number of older people will not have a major impact on the health care system. In addition, we have no means to modify the onset and progression of frailty, which will afflict individuals as they age even if they remain healthy up to old age. The problems of frailty, be they in relation to cognitive or physical dysfunction are likely the types of problems amenable to community-based support and programming. These trends, coupled with communities becoming an integral part of health care reform in Canada, suggest that in the very near future many old community members will be asked to share responsibility for their health needs and those of their neighbours. The present study suggests that older individuals are able and willing to become involved. What is uncertain is how long some older individuals can remain involved, as volunteer retention was not examined as part of the present study. Neither were recruitment strategies nor the effects of different types of recruitment strategies on volunteers' involvement examined. Recruitment and retention of older volunteers are important areas that require further examination. Participants in the present study displayed an unwillingness to assume leadership positions. The reasons for this are not completely clear and also require further investigation but, in part, this reluctance seems to reflect the personality of the individual and appears to be age-related. Building collaborative partnerships requires the involvement of community members with a variety of skills taking on different roles and responsibilities. At least some of the community members must have the interest, ability, and skills to be trained to take on positions of leadership. Without community leaders, community capacity-building initiatives are severely compromised and the sustainability of these initiatives is questionable. Using this approach in communities where leaders are unlikely to be

found may simply take away valuable time and resources from an already stretched health system.

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