SOCIAL SUPPORT, LONELINESS AND DEPRESSION IN THE ELDERLY

by

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Abstract

The purpose of this study was to explore specific types of informal social relationships-family or friends formed in nursing homes and to determine how each affected the health of the elderly, especially in the areas of loneliness and depression. A face-to-face interview using four structured questionnaires was adopted for this descriptive study design.

The main outcomes of depression and loneliness were measured by the Geriatric Depression Scale (GDS) and University of California Loneliness Scale (UCLA). The Duke Inventory Social Support Scale, measuring both family and friend support separately, measured predictor variables of family and friend support. Eighty-seven percent of participants completed the study.

The results indicate that friend support was a more reliable factor for predicting the levels of loneliness and depression after controlling for all other co-founding variables. The findings will help nurses and other health care personnel when assessing the social support networks, beliefs and preferences of older adults to plan and implement the best practices. This will also offer health care facilities suggested ways to reduce or combat loneliness and depression among the elderly people.

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Chapter 1

Introduction

There has been a global increase in the number of older adults over recent years (Population Reference Bureau, 2008). In Canada, the population of those 65 years old and over was 13.1% of the overall population in 2001. This number rose to 13.7% in 2006, representing an increase of 4.6%, and is projected to rise to 21.9% by 2026 (Statistic Canada, 2006). Currently, the number of people aged 55 to 64 years, many of whom are approaching retirement, has increased and it has never been so high in Canada at close to 3.7 million (Statistics Canada, 2006).

With this increase comes a concomitant increase in the numbers of people for whom issues relating to quality of life (QOL) becomes more salient. As the baby boomer cohort reaches retirement age, the population living in retirement and nursing homes, away from former homes and neighbourhoods and separated from extended families, will continue to increase (Adams, Sanders, & Auth 2004). Older adults living in facilities for the elderly will have to adjust to a changed living situation, and this adjustment can lead to serious psychosocial problems of loneliness and depression in the absence of positive social networks.

The importance of different types of social networks on health and functioning has been a significant theme in sociology, gerontology and epidemiology research. A substantial amount of evidence has accrued to affirm that the quantity and nature of social

relations have a noticeable influence on a variety of health outcomes. Studies conducted in the United States, Europe and Asia have generally, but not always, shown that social relationships have beneficial effects on survival in adults (Issacsson, Hanson, Ranstam, Rastam & Issacson 1995).

Social relationships are significant for health, and both social networks and social support influence mortality and morbidity (Cohen & Syme, 1985). Among the elderly, quantitative or qualitative aspects of social ties have been found to be related to mortality (Seeman et al. ,1993) and well-being (Berkman, Leo-Summers & Horwitz 1992). These researchers suggest that having more extensive social ties and interactions reduces the risk of developing activity of daily living (ADL) disability and increases recovery from ADL disability. They also found that the protective effect varied by the type of role specific relationships. Barnes, Patricia, Powell-Grinner, McFann and Richard (2004) found that quantity and quality of social networks and high social engagement reduced the rate of cognitive decline. Similarly, Zunzunegui, Gutierrez-Cuadra, Beland, Del Ser and Wolfson (2000) indicated that elderly men and women with few social ties, poor social integration, and social disengagement were at greater risk of cognitive decline.

All of these studies clearly indicate the importance of social relationships in overall health. Poor social support leads to decline in psychosocial and mental health, which brings about problems of loneliness and depressive symptoms. A number of factors have been hypothesized to contribute to loneliness such as retirement, demographic characteristics, living arrangements, change in living situations, social relationships,

decrease in social network with age, loss of a person's role in the community, and personality characteristics (Alpass & Neville 2003 ; Routasalo et al. 2006). Social relationships have been found to be inversely related to loneliness.

Depression is another major symptom of the lack of social support. In a cross-sectional study by Barg and colleagues (2006) it was found that in persons 65 years and older, the perceived adequacy of emotional and tangible support was clearly associated with depressive symptoms 3 years later. The greater the adequacy of social support, the lower the depressive scores. Using combined qualitative and quantitative methods to understand loneliness and depression in older adults, Barg and colleagues asked the elderly to describe a depressed person or themselves when depressed. Participants viewed loneliness as a precursor to depression, as self-imposed withdrawal, or as an expectation of aging. Other studies have substantiated this claim, making loneliness one of the strongest predictors of depressed effect. Based on these studies, it appears that older adults who do not have enough quantity and quality of social relations will become lonely and this will invariably lead to depression, which in turn can lead to various forms of health-related issues increased mortality in the elderly.

Research studies have also shown the importance of social support on the health of the elderly (Rodriguez-Laso, Zunzunegui & Otero, 2007). Different forms of social support exist in facilities where the elderly live. It can be in the form of informal and formal support. Formal support was defined by Litwak (1985) as formal medical services, physician advice and other forms of help from health care personnel, while informal was

defined as support given by family members, friends and other close associates. Social support can be in various forms. For this study, emphasis will be on the types of informal support and how it affects loneliness and depression.

There has been a growing interest in the role of informal support in older person's psychological well-being in both western and Asian societies (Antonucci & Akiyama, 1995; Sierbert, Mutran & Rietzes, 1999). Informal support generally refers to unpaid help given by family, friends, and neighbors (Novak, 1997). However, it is clear that informal support is extensive and can take many forms, including advice, affection, companionship, helping older family members with transportation and nursing care (Kane & Penrod, 1995). Informal support has been held to play a significant role in providing instrumental support (e.g. communications of affection) to older persons, which can involve increasing an older person's self-esteem, competency, and/or autonomy. The informal support networks of older persons are very important as these networks give residents a sense of belonging. These networks provide older persons with the opportunity to spend time and share activities, with others and the absence of these can contribute to loneliness and depression as previously stated.

Making friends in the nursing and retirement homes becomes important to elderly residents because they tend to see these people more often and can confide their fears and hopes about anything they are facing. The support of friends has been found to be important in contributing to older persons' well being (Adams & Blieiszner 1995; Sherman, De Vries & Lansford 2000). Friendship can provide instrumental support and

emotional support to older persons (Antonucci 1989, Reinhardt & Fisher, 1989), particularly, but not exclusively to cognitively impaired older persons (Roberto,1992). Furthermore, friendship can also contribute to an older person's self worth.

Apart from friendships, families play a key role in helping loved ones adjust to life in facilities where older adults live. One way to make the experience more positive and comfortable is, of course, to visit regularly and spend quality time together. As suggested by Smyer and Qualls (1999), families form an active and powerful interpersonal context for older persons. Older persons meet many of their social needs within the family, such as mutual support during times of stress. In most communities and cultures all over the world, it is common to find frail older adults being cared for by children.

These two forms of informal relationships, family and friends are very important in the overall health but the role of these forms of relationship to decrease the levels of loneliness and depression has not been ascertained. It is important to examine which of these informal relationships may be more important to decrease and to predict the level of loneliness and depression in older adults living in facilities for older adults.

1.1 Purpose

The purpose of this study was to explore specific types of social relationships- family or friends formed in nursing homes and to determine how each might affect the health of the elderly, especially in the area of loneliness and depression.

1.2 Research Questions

1. To what extent do the different types of social support mechanisms, "family or friends" serve to mitigate the presence of loneliness among the elderly in nursing homes?

2. To what extent do the different types of social support mechanisms, "family or friends" serve to mitigate the presence of depression among the elderly in nursing homes?

3. Which of these relationships "family or friends" predicts loneliness and depression better?

4. Which of these relationships "family or friends" predicts loneliness and depression after controlling for demographics and other variables?

5. Is there a relationship between loneliness and depression in this population?

1.3 Theoretical Framework

This study was based on a framework developed by Cohen-Mansfield and Parpura-Gill (2007) to address the need for a comprehensive and intervention-oriented theory of loneliness in old age. The framework is rooted in a cognitive- behavioral theory that conceptualizes behaviours as resulting from an interaction of cognitive processes and environmental events. The Model of Depression and Loneliness (MODEL) (Figure 1) utilizes this concept to clarify factors that are likely to precipitate loneliness and thus can facilitate the development of interventions for prevention and treatment. Many older adults have used their social skills throughout life around a relatively stable social network of family, friends and co-workers.

Furthermore, socio-emotional selectivity theory suggests that the reduction in social contact that occurs with age stems from the older person focusing on meaningful relationships rather than on the frequency and content of contacts (Carstensen, 1992). MODEL conceptualizes the events and circumstances that prevent the establishment of new relationships into four groups of factors: environmental, health, stressful life events, and psychosocial barriers. The four components of the model will be discussed in more detail in the following section and how each relates to the concept of loneliness and depression.

Environmental factors

Environmental factors and resources influence the extent to which an older person can re-establish social networks. Environmental factors include: lack of opportunities to meet people, living arrangements, and diminished financial resources. Financial limitations may make access to social contacts extremely difficult.

Health factors

Health factors, both physical and psychological, can present additional barriers to re-establishing of social ties. Physical health, which is compromised by disease, can result in fatigue, incontinence, or mobility difficulties, which can interfere with the development of new social relationships.

Psychological factors

Psychological factors are internal factors that can prevent older persons from re-establishing social connections. These include insufficient social skills due to long-standing reliance on established contacts and little need to initiate new contacts. In some cases, reliance on others (e.g. spouse, friends) to assume responsibility for most social skills can eventually result in lowered social self-efficacy, which in turn can affect the ability to make new friends.

Stressful life events

Stressful life events that are common among older persons, such as retirement, widowhood, death of friends, and relocation can cause people to lose long-standing social networks, thus inducing loneliness. The extent to which people are able to establish new

social networks after these events occur depends on the factors described previously (environmental, health, psychosocial), which can provide resources for, or act as barriers against re-integration into the social environment.

According to MODEL, the four types of barriers described above will influence loneliness, which, in turn, will affect depression. Prior research has found loneliness to be an important predictor of depression (Hagerty & Williams 1999). The type of social network is also important to combat the issue of loneliness and depression, the literature review will look further into how different forms of social network are related to the outcome variables (loneliness and depression).

Figure 1: MODEL-Model of Loneliness and Depression 1
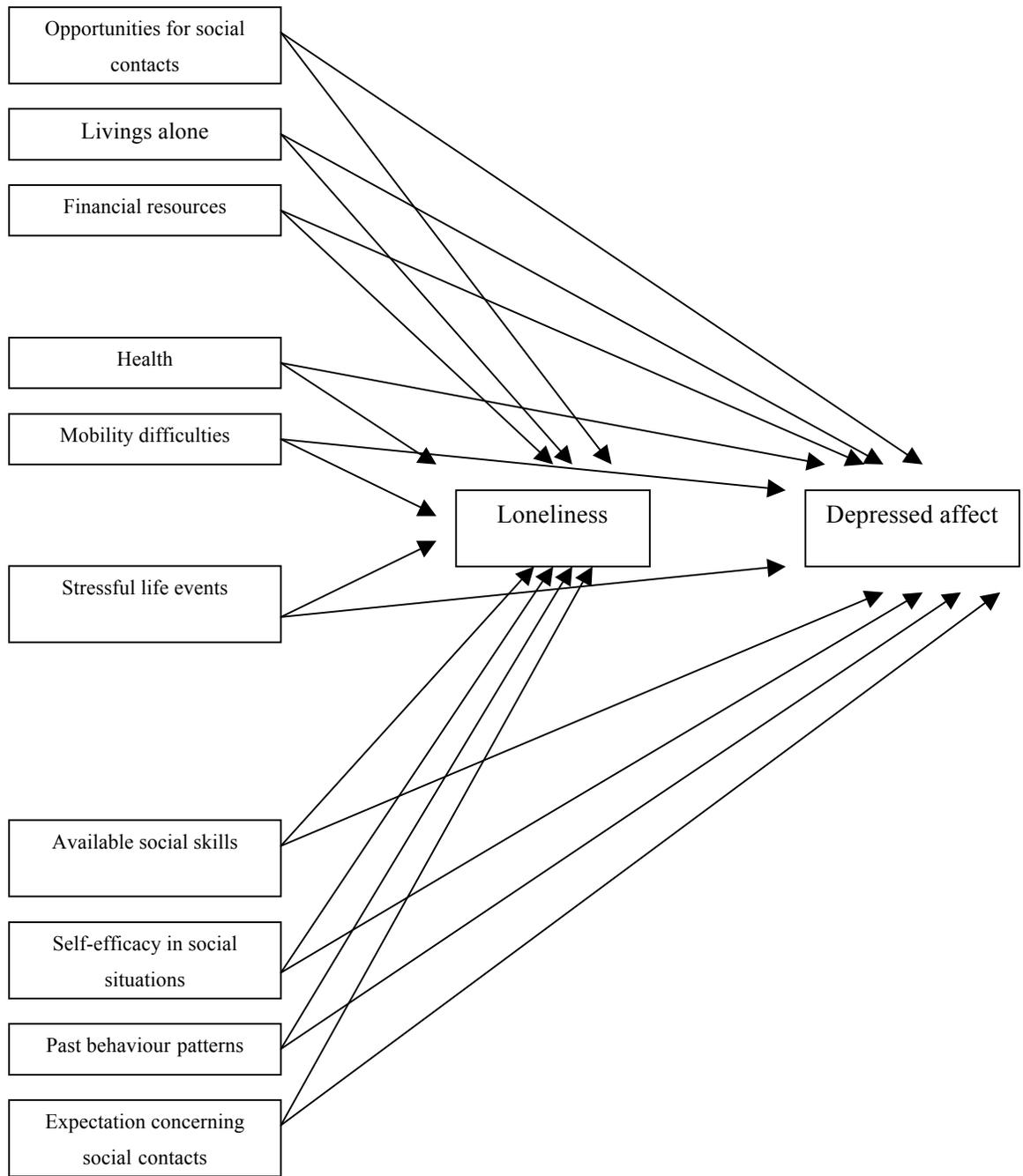
Cohen-Mansfield, J., & Parpura-Gill, A. (2007).

Chapter 2

Literature Review

This literature review will describe current evidence of our understanding of the relationships between the main outcome variables (loneliness and depression) and the predictor variables (family support and support from friends).

Method

The literature was searched through consulting research databases including MEDLINE, CINAHL and AGELINE. These databases were searched using the terms "social relationships", "social network", "social support", "loneliness" and "depression", limiting these five keywords to age 65 and over. Of the 250 articles recovered, 82 met the inclusion criteria of measuring loneliness, depression and social support and other factors related to lack of social support.

Most of the studies were conducted in the United States, while others were in the United Kingdom, Australia, Finland, China, Hong Kong and New Zealand. The articles were published between 1980 and 2009. The reference lists and bibliographies of retrieved papers were hand-searched to discover potentially relevant textbooks written by authors, who have written broadly on social support and variants. Recent journals were also hand searched to discover the state of present knowledge of research in this area. In addition to understanding the relationships between these variables, it is imperative to know the meaning of these variables. This literature review will make a link between the types of social support, loneliness and depression. Each section will start with an

introduction to each variable and how all the variables are related to each other. In addition, it will discuss the importance of the present study and state of knowledge on how each from of social relationships affects the health of the elderly.

2.1 Social Support

Social support is a concept that is generally understood by intuitive sense, as the help from other people in a difficult life situation. One of the first definitions put forward by Cobb (1976), defined social support as the individual belief that one is cared for and loved, esteemed and valued, and belongs to a network of communication and mutual obligations. This concept is strategic in understanding the maintenance of health and the development of mental and somatic health problems, as well as their prevention.

Types and sources of social support can vary. Four main categories of social support have been identified: emotional, appraisal, informational and instrumental support (Cobb, 1976). Social support is closely related to the concept of social network, the ties to family, friends, neighbours, and other significant persons. Within the concept of social network, social support is the potential of the network to provide help.

Social support has two separate domains, structural and functional (Cobb 1976). Structural social support is the actual physicality of the support such as frequency of contact with friends or family, voluntary organizations or associations, religious services and other community service. Functional social support includes happiness with such areas as verbal and physical appraisal, tangible help with tasks, communication of helpful information and guidance and social companionship (Cobb 1976; Cutrona 1990).

Social support theory suggests that structural social support is a necessary antecedent of functional support (Queenan, Feldman-Stewart, Brundage, Groome 2010). Evidence suggests, however, that the perception of social support (functional) is more predictive of positive health than received or available social support (Cohen, Doyle, Turner, Alper & Skoner 2003; Sherebourne & Stewart 1991). For decades researchers have been fascinated by the complexity of social networks and systems of social support.

There is now a wealth of research on the importance of social interaction for quality of life during old age. This diverse body of literature has been summarized and organized into three areas, each with a different focus (Chappell. 1992). There has been vast and frequently inconsistent literature on the importance of social support in the lives of elderly people, but less research on the form of support that is best. To bring order to this literature, Chappell, 1992, established three substantive foci.

Firstly, according to Chappell (1992), research on social support began largely by describing the extent, sources, and types of social relationships in the lives of North American elders. Secondly, as knowledge was gained and researchers became experienced, attention turned to empirically examining the relationship between social support and QOL in old age, and thirdly, it later focused on unraveling the complexities of the concept of social support and the concept of QOL, along with the processes linking the two concepts.

Social support is multidimensional: it can take many forms. Much of the support in old age that has received the attention of policy makers, practitioners and researchers is

directly related to caring and assistance. This type of support has been recognized by governments and policy makers because of concerns, about the increasing proportion of elderly in society. Assistance is of concern to families and friends because they are the most frequent providers of psychological care. Lack of specific types of social support lead to a decrease in life expectancy, and other forms of psychosocial problems.

2.3 Effects of Lack of Social Support

Social support is an important factor that may buffer the ill effects of stress on mental and physical health. In a cross-sectional study of 707 older adults, it was found that a positive association existed between social support and recovery from depression (Hay, Steffens, Flint Bosworth & George 2001). Social support has been shown to moderate the effects of health related strain on mental health in 410 elderly individuals (Hagerty & Williams 1999). Lack of social support affects the overall health of an individual. According to Rook (1985), absence of social support has been linked to decline in cognitive function.

Social support, social exchange and social network are related constructs, which may be powerful and potentially modifiable determinants of cognitive health and mortality in the elderly population (Jordan-Marsh & Harden 2005). Absence or disruption of contact with significant others, which frequently occurs when one ages or is ill, has been linked to a number of physical and mental health indices including increased mortality after myocardial infarction (Berkman, et al. ,1992). These same researchers found that those with little social support were at increased risk of institutionalization.

In a cross-sectional study by George Blazer, Hughes and Fowler (1989), a decrease in social support over a one-year interval was found to be associated with increased psychiatric symptoms, including depression, in a sample of old people. Furthermore, it was found that quality, not quantity, of the support was the most important factor. This makes it clearly important to further investigate the effect of quality of each type of social network in the elderly. In a study by Adams and colleague (2004), receiving fewer visits from friends, and having less extensive social network predicted loneliness.

In addition, individuals with less adequate social relationship possess reduced immunological functioning (Uchino, Caccioppo, & Kiecolt- Glaser, 1996). Wilmoth (2001) suggests that unbalanced social exchanges contribute to changes in living situations and "are a central part of the death process" for older adults.

In addition, older adults with low social engagement have increased glucocorticoid production, which has been shown to be associated with hippocampal damage resulting in decreased learning and memory function (Seeman, Singer, Rowe, Horwitz & McEven 1997). Mac-Arthur studies on successful aging have validated the linkage of social relationship to longevity (Rowe & Kahn 2002). Social support and its many variant forms, including exchange, have long been recognized as influencing immunological functioning (Jordan-Marsh & Harden. 2005). Lack of social support in nursing homes can lead to a decrement in psychosocial health.

Some experts suggest that social support provides a sense of connectedness to one's social group, which results in feelings of well being (Ryan. 1995). More social support

was related to positive cognitive functioning in old people and that quality, not quantity, of support was the most important factor (Ryan). Furthermore, disruptions in the make up of social network such as change of residence or death of close friends or family members, may lead to increased loneliness in this age group, especially when it has been found that older adults form new social connections less easily than younger persons. This may be a problem for those in age-segregated communities where individuals have left their traditional neighborhoods in order to obtain services and amenities. Social support, defined as both structural characteristics of a social network and perceived availability of resources, has been proposed to affect the onset, course and outcome of depression (Billings & Moos, 1984; Conyne & Downey 1991). It has been hypothesized that this occurs as a direct effect or as a buffering effect during stress conditions (Dooley, 1985). In summary, a lack of social relationship has been found to be related to loneliness, and loneliness can lead to a serious mental condition of depression.

2.4 Social Support and Loneliness

Loneliness is defined in various ways, but all definitions share the same conceptualization that this is an unpleasant, anxiety inducing subjective experience that is the outcome of inadequate social relationships (Peplau & Perlman 1982). It results when a person's network of social relationships is deficient in some important ways, either qualitative or quantitatively. Quantitative aspects of the network include the number of people as well as the composition of the network (family, friends). Qualitative factors are related to the level of satisfaction with the number and composition of the network and

with what the network offers. Loneliness may be either a persistent, life-long phenomenon, or it may last for shorter periods and be tied with different situational factors that hamper the maintenance of social relationships.

Loneliness is a major issue relating to quality of life and well being facing the older adult. Older adults are often at risk for loneliness because of disruptions to social networks over time. For example, children may move to another city or country, and grandchildren may become independent. Retirement reduces social relationships that are related to work in this age group. Disability or illness may prevent them from participating in usual activities with others, or may mean a loss of independence that necessitates moving away from familiar people and communities (Alpass & Neville 2003).

Finally, friends and spouses may become ill or die. All of these situations can result in loneliness for the elderly. Researchers have identified a lack of confidential and close relations, absence of friends, spousal loss and limited social support networks as one of the major factors that increases loneliness in this age group (Tikkainen & Heikkinen 2004). Older people with access to more social support report less loneliness and depression (Kahn, Hessling, & Russell, 2003). Mullins and Mushel (1992), in turn, concluded that loneliness was associated with a sense of proximity and security, whereas the presence of a spouse or a close relationship with the spouse was not. Contacts with peers and friends are equally important to old people as is the presence of a close person one trusts (Gupta & Korte, 1994).

The quantitative and qualitative adequacy of the social network is important for satisfying various social needs, but it may also be a source of stress. Too frequent or too infrequent contacts, insufficient or excessive, as well as one-sided help all add to depressive symptoms (Ramos & Wilmoth, 2003). According to Weiss (1973), people have specific social needs. In his theoretical model of the provision of social relationships, he identifies six different social provisions (attachment, social integration, opportunity of nurturance, reassurance of worth, reliable alliance and guidance) that are related to mental well being in different life situations.

A number of factors have been hypothesized to contribute to loneliness such as demographic characteristics, living arrangements, social support and personality characteristics (Alpass & Neville 2003). Social support has been found to be inversely related to loneliness. Routasalo et al.(2006), carried out a study in Finland among the elderly in the community and concluded that a feeling of loneliness was prevalent among this population and was associated with the type and quality of social support.

The reduced social contacts that occur with age can stem from a variety of conditions, such as loss of a person's role in society, decrease of social network with age, barriers (e.g. , mobility problems) that block the ability to access society, and a decreased ability to engage in reciprocal relationships due to increased frailty associated with the aging process. All of these factors also increase the risk of being lonely in the elderly population. In a study by Cohen-Mansfield and Parpura-Gill (2007), social support was correlated inversely with loneliness.

In addition, Tiikkainen and Heikkinen (2004) found that social integration was related to loneliness, and this claim was further supported by Cacioppo, Hughes,Waite, Hawkey & Thisted 2006, who found an inverse association between social support and loneliness, which results because there are insufficient opportunities for older individuals to engage in social interactions. Depressive symptoms are a major effect of both lack of social relationships and loneliness as previously discussed, the next paragraphs will look into how both lack of social support and loneliness connects with depression using different literatures.

Effects of Lack of Social Support and Loneliness

Loneliness is associated with poor emotional well-being and with depression (Nolen-Hoeksema and Ahrens, 2002; Prince, Harwood, Blizard & Mann. (1997a). There is also evidence that loneliness is independently related to morbidity and mortality. In the Amsterdam Longitudinal Study of Ageing, loneliness predicted mortality over a 29-month period independently of age, the presence of chronic illness, functional limitations, self-rated health, alcohol consumption, and smoking (Penninx, Guralinik & Mendes de Leon. 1998). Russell, Cutrona, Dela and Wallace, (1997) reported that loneliness in a community-dwelling old age cohort predicted admission to nursing homes over a 4-year period independently of age, income, education, marital status, physical health, and social contact. Loneliness was found to be an independent predictor of post-operative mortality in a study of coronary artery bypass patients (Herlitz et al., 1998). It is also related to

illness behaviour, and to more frequent consultation with physicians independently of health status (Ellaway, Wood, & Macintyre, 1999).

As older persons lose their social networks through retirement, death of friends and neighbors, and relocation to a nursing home, they also lose forums for developing new contacts. These events predispose them to loneliness in institutions where the elderly live which can lead to depression. Loneliness has been associated with a number of negative outcomes such as poor health; increased utilization of health services, such as increase admission into nursing homes; and negative psychological effects such as depression (Cohen-Mansfield, & Parpura-Gill 2007).

Over the years, there has been a strong positive correlation between loneliness and depression in the elderly population. In one quasi-experimental, cross-sectional, pilot study in the United Kingdom, Minardi and Blanchard (2003), found that loneliness was a factor that might relate to aging and depression (n= 24). It was found that the levels of depression in the day centre setting were higher than in other community-based studies. There was a strong association between depression and loneliness (Minardi & Blanchard 2003).

Although the sample size was not representative of the population of the elderly in the United Kingdom, the result was similar to another study done by Alpass and Neville in Finland (2003). These researchers found that loneliness was strongly related to depression in older men (n= 217). The authors determined the extent to which loneliness was a unique risk factor for depressive symptoms in two population-based studies of

middle-aged to older adults. Possible casual links between loneliness and depressive symptoms were examined longitudinally in the second study, where it was again found that loneliness was associated with more depressive symptoms (Cacioppo et al. 2006).

Furthermore, using combined qualitative and quantitative methods to understand loneliness and depression in older adults, Barg et al. (2006) asked the elderly to describe a depressed person or themselves when depressed. Participants viewed loneliness as a precursor to depression, as self-imposed withdrawal, or as an expectation of aging. Using a structured interview, the same researchers found that, loneliness in the week prior to the interview was highly associated with depressive symptoms, anxiety and hopelessness. In summary, loneliness is the strongest predictor of depressed affect; thus, loneliness should be targeted in the treatment of depression.

2.5 Depression and its effect

Depression is an important public health problem among older adults in the all over the world. Indeed, the World Health Organization (WHO) has projected that major depression will be the second highest cause of disability after heart disease in all countries by 2020 (Murray & Lopez, 1996). Depression is a serious medical condition that affects thoughts, feelings and the ability to function in everyday life.

Loneliness is one of the factors that might relate to ageing and depression. Tijhuis, De Jong – Gierveld & Feskens (1999), in a study of men in the Netherlands, used a longitudinal and cross sectional design with participants with a mean age between 70.6 and 80.6 years, and found an increase in loneliness as people aged. They suggested that

this was due to situational factors, such as mobility problems, loss of a partner or failing physical health. As identified above, mobility problems have also been associated with depression, making a positive link between loneliness and depression. Prince, Harwood, Blizard & Mann (1997b), in their community survey of social support, loneliness and life events in relation to depression with people 65 years old and above, found that loneliness had a very strong association with pervasive depression.

However, an earlier study by Iliffe et al. (1992) found that older people living alone is not the same as the personal complaint of loneliness. Loneliness represents a wish for company generally or for specific people such as a lost husband or wife. 'Loneliness', as opposed to 'being alone', may be part of low morale, which Wenger, Davies & Shahtahmasebi (1995) found to correlate positively with depression.

Another correlate is social support, which has been shown to offer protection from developing or exacerbating depression (Brown & Harris 1978). In a study of people over the age of 65 years, Prince et al. (1997b) demonstrated a significant relationship between a decrease in social support and the development of depression. McCurren, Hall and Rowles (1993) found that lack of instrumental support was associated with depression in older people, especially those with higher levels of functional disability and therefore greater handicap (Prince et al. 1997a). Oxman, Berkman, Kas, Freeman and Barret (1992) found a significant association between depression and tangible (instrumental) support.

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Oxman et al. (1992) also found that adequate emotional support and a dense social network were clearly connected to reduction in depression, although this was restricted to contact with children rather than friends or other relatives. In a study by Hay et al. (2001) that tested whether social support protects against functional decline in the elderly who are depressed, it was found that instrumental social support protected against worsening performance of instrumental activities of daily living, which are primarily an effective indicator of severity of depression. Other social factors that have been associated with an increased risk of depression include the loss of a spouse, lack of a spouse, confidante, low frequency of social contacts and moving into nursing home (Routasalo, et al. 2006)

2.6 Rationale for Study

While most older adults reside in the community, a significant number require institutional care. The number of long- term care (LTC) beds in Canada is expected to triple over the next 30 years (CCSMH 2006). Studies suggest that 15% to 25% of LTC residents have symptoms of major depression, and another 25% have depressive symptoms of lesser severity (CCSMH, 2006). While a significant amount of research has been done on older adults, much of it has focused on community rather than institutional settings, and very little has focused specifically on people living in long-term care.

Commerford and Reznikoff (1996) in their study of nursing home residents found that perceived social support from family, health status, public religious activity and length of stay were correlated with depression in older adults. The authors found that, perceived social support from family was negatively correlated with depression, whereas

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a positive correlation was found between depression and a stay of five years or more, poorer health status and attendance at church less than once a week. Carpenter (2002) found that patients with perceived social support from other residents at their facility reported less depression, more positive affect, and a greater sense of happiness. These findings are supported by an earlier study by Fessman and Lester (2000), "who found that social relationships formed with other residents are a stronger predictor of less depression and loneliness than social relationships with friends and relatives from outside the institution (pg 140)".

All of these studies measured different types of social support, and there can be no consensus about which type of social support is better than the other. In a qualitative study by Dahle (2009), participants were asked to describe their relationships with family and friends as well as the nursing staff at the long-term care facility. All participants expressed a lack of close connection with family, friends and other residents, linking this with feelings of loneliness and sadness; one of them said, " You think you have friends but all you have to do is get tied up or move into a place like this and your friends are few and far. (pg 7)" They all explained how their friends outside the facility are old and could not come to visit them and how family members were busy and lived far away.

Given the lack of connection with friends and family outside of the residence, relationships with other residents might be particularly important. However in the Dahle (2009) study, all six participants experienced difficulty connecting with other residents. One participant said that she did not get close to others because she feared that nothing

would be kept private. Most participants said that it was hard to establish close and meaningful relationships with others because of the declining physical and cognitive abilities of other residents and themselves. Some participants also thought that unsuccessful attempts to establish relationships with other residents resulted in hurt feelings and withdrawal.

Mendes et al. (2001) further found that social interaction with friends was associated with a reduced risk of disability, but social interaction with children and relatives was not. It is unclear, however, if all forms of social relationships are equally beneficial to the health of the elderly, especially in the areas of loneliness and depression, or if specific types of relationships are more advantageous than others.

In summary, this study is important because there have been inconsistent research findings relating to the differential contributions of family support and friendship to the older person's well-being (Giles, Glonek, Luszcz, & Andrews, 2005). Studies in the United States have revealed that families still provide the majority of support for older persons (Giles et al. , 2005). Brody (1995) concluded that values of family care have not been eroded but have held firm in modern society. However, some researchers suggest that friendship is more important than family relations to the morale and well-being in old-age (O'Connor, 1995; Carpenter, 2002 ; Fessman & Lester, 2000). Specifically, the number of social contacts has been found to be related to successful aging (Siu & Philips 2002).

In addition, Adams et al . (2004) argue that there is a tendency for older persons to substitute friendship networks with family networks. This argument has been further supported by a recent study conducted by Newsom and Schulz (1996), who found that, among adults aged 55 and over, the frequency of contact with close friends was related to satisfaction with life, whereas contact with family was not. Another school of thought argues for the equal importance of both sources of social support. For instance, Siu and Philips (2002) found that both family quality and perceived importance of friendship are the most important predictors of positive affect among women in a district of Hong Kong.

Finally, social support has been defined in many ways. Many studies have used single variables that purport to measure social support, but do not capture its wider benefits (Giles, Glonek, Laszez & Andrew 2005). For example, a study by Fessman and Lester (2000) measured both quantity and perceived social support by asking an open-ended question. Assessing social support should receive renewed attention in health care because of its importance. Searches of nursing literature suggest that this area has been forgotten, and is in need of renewed attention. The vast majority of research on this area has been conducted among older persons resident in a community. In contrast, this current study is innovative as it examines the differential roles of family support, which includes family and friends outside the home, and friendship in the nursing homes on the psychological well-being of older persons in long-term care.

There is quite a lot of research on the associations between loneliness and depressiveness as well as the role of social relations in the community. However, just one study was found on the influence on different types of social support relative to the elderly patients in nursing homes. The study by Fessman and Lester (2000) was a good study but lacked some qualities, for example, social network was measured subjectively by asking people how many people came visiting and number of friends they had. This current study will use more effective tools for measuring variables, which was a major limitation of the Fessman and Lester (2000) study.

Taking into consideration the dearth of knowledge regarding the types of social support that are more important to the elderly, it would seem relevant for nursing practice to examine these, so as to know which one to promote in nursing homes. With declining extended families, it is believed that older adults will increasingly rely on emotional, instrumental, and informational support from friends, and that they will perceive friendship as important. Therefore, it is important to examine the relationships between family support, friendship, and psychological well being in older adults. The present study examined the differential relationships of family and friends' support in predicting loneliness and depression.

Chapter 3

Methods

This study was a descriptive design that investigated the association between each type of informal social support and the level of loneliness and depression in elderly residents in nursing and retirement homes. Face-to-face interview survey method using a structured questionnaire was adopted for this study. Demographic data (Appendix A) was collected from all participants who met the inclusion criteria. The data included age, gender, time of administering questionnaires, institution where the elderly lived, and length of stay in the home.

The nurse administrator or a health care personnel was contacted as an intermediate person who identified and approached patients to solicit approval for the researcher to speak with them. Depending upon their abilities, each resident completed the questionnaire by themselves or had the questions read aloud, with the researcher recording the response. The four tests administered were the Geriatric Depression Scale, appendix B (Yesavage et al 1983), UCLA Loneliness Scale, appendix C (Russell 1996) and the modified Duke Inventory Scale, appendix D & E (George, Blazer, Hughes and Fowler 1989) used to measure perceived support from family and friends. All tests were administered in the same order to make it consistent, and the time of the day when the tests were given was noted. Each interview lasted about 30 -45 minutes depending on the level of functioning of the participants.

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Participants were interviewed in the privacy of their room or a convenient place chosen by them. Participants in the retirement homes were recruited by posters, as well as identified by the director of care of the facility using the MMSE scale. A total of 96 participants were identified, but only 54 were included. The remainder (n-42) were excluded because of recent illness, loses, and other factors that were not disclosed. Each participant signed an the informed consent (Appendix G); and those who could not sign due to a disability gave verbal consent in the presence of an intermediate person and the researcher.

3.1 Sample

The study used convenience sampling. Power analysis was done using 95% confidence interval (alpha 0.05), margin of error of 5% and power of 80%. It was determined that 54 participants were needed for the study. Recruiting for this study was challenging specifically because of the numbers of questions they had to answer. Some of the participants could not continue as they became physically or emotionally exhausted; these participants were excluded. All participants were living in a nursing or retirement home. The following were the inclusion and exclusion

Inclusion Criteria

- Participants will aged 65 years and older
- Able to speak English
- Mini mental status exam score equal to or greater than 27 (Folstein, Folstein & Mcttugh 1993)

Exclusion Criteria

- Mini mental status Exam score of < 26

- Those adults with definitive diagnosis of dementia or non-depressive psychiatric illness, which may preclude accurate screening for depression.

3.2 Settings

The study was conducted in three facilities in Kingston; two retirements and one nursing home. These facilities have a variety of residents from low to high-income earner. There are about approximately eleven nursing and retirement homes in the Kingston area. The homes used in these study were: Rideaucrest Nursing Home, St. Lawrence, and Waterford Retirement Homes.

Nursing Home

Rideaucrest Home is an accredited municipally- operated long term care home with 170 beds that offers a secured unit for residents who require a protective environment, provides active social activities, is non-profit and open to mostly seniors and disabled adults 18+ deemed eligible by a case manager. It was established in 1886, and funded by Ontario Ministry of Health and Long Term Care (MOHLTC).

Retirement Homes

The St. Lawrence and Waterford facilities are privately owned retirement homes. According to the MOHLTC, Ontario retirement homes are privately owned rental accommodations for seniors who are able to manage and pay for their own care.

Generally, retirement homes are designed for seniors who need minimal to moderate

support with their daily living activities. These settings enable residents to live as

independently as possible, while providing certain services and social activities.

Retirement homes are also called "retirement residences". Anyone can apply to a

retirement home. A person does not need to provide medical evidence that they need a

minimum level of care. The retirement home, however, may assess an individual's needs

to ensure that it can provide them with appropriate support, or that the individual does not

need more support than can be provided.

3.3 Instruments

The following instruments were used to operationalized the study variables:

Geriatric Depression Scale (Appendix B)

This first instrument to measure depression in older adults, the Geriatric Depression

Scale (GDS), was created in 1983 by Yesavage et al (Appendix B). The instrument has

been tested and used extensively with the older population in many countries and

translated into many languages (Garrard et al. , 1998; Whooley, Stone & Soghikian,

2000). The target population for the GDS is healthy or medically ill and mild to

moderately cognitively impaired older adults. It has been used in research among older

adults in community, acute and long-term care settings (Garrard, 1998; Kurlowiez, 1999;

Whooley, Stone & Soghikian, 2000). In the United Kingdom, the GDS has been

endorsed as the appropriate instrument to screen for depression during statutory health

checks by visiting nurses among community-dwelling elderly patients in Britain (Snowdon & Lane, 1999).

In a cross- sectional study of 105 older adults aged 65 and over, Heisel, Fleet, Duberstein, Lyness (2005) found that GDS scores were positively associated with self-report and clinician-administered measures of suicidal ideation. The same result was true for six of the administered measures of suicidal ideation. In the long version of the GDS, 15 of the 30 GDS items distinguished groups high or low in self-reported suicidal ideation. The same result was true for six of the 15 items in the short version of the GDS. The authors concluded that both the long and short forms of the GDS might be used to screen older adults for potential suicide as well as depression. Five internally consistent GDS items were identified that were highly associated with suicidal ideation, hopelessness, worthlessness, emptiness, absence of happiness and absence of perception that it is "wonderful to be alive".

Although the GDS is targeted for use with older individuals, it is not used exclusively in research studies among older adults. Two screening tools, the Center for Epidemiology Study of Depression (CEDS-D) and the Beck Depression Inventory (BDI) have been used to screen for depression among older and mixed aged adults (Bell et al., 2005; Black, 1999; Hunkeler et al., 2000). However, in a study to validate both the GDS and BDI in adult cardiac patients (aged 39 to 92 years), Low and Hubley (2005) found that both tools demonstrated excellent sensitivity (detecting truly affected or diseased persons) for detecting major depression and dysthymia. The GDS was better able to

differentiate those who were depressed from those who were not depressed and was recommended as a better depression-screening tool for adult and older adult cardiac patients than the BDI.

The original GDS, a 30-item questionnaire, proved to be time consuming and challenging for patients and staff. The revised 15-item test has a sensitivity of 0.97, a specificity of 0.85, predictive value of 0.85, negative predictive value of 0.94, and accuracy of 0.90 for predicting depression (Hoyl, Harker, Josephson, Pietruszka & Koeflfgen 1999). The test is taken orally with Yes or No answers scored. The GDS has been interpreted as five points suggestive of depression, 10 points almost always indicative of depression, and 15 points warranting a follow-up comprehensive assessment. And this is how I have used the GDS for analysis in this study, 0-5 suggestive of no depressive symptoms, 5-10 little depressive symptoms and 10-15 mild to severe depression.

University of California Los Angeles (UCLA) Loneliness Scale (Appendix C)

The UCLA Loneliness Scale (Version 3) (Russell, 1996) was used to measure loneliness in this study. The scale, consists of 20 questions, and was designed to identify feelings of loneliness in large groups of respondents, including older adults. Respondents are asked to respond to each question on a 1-3 scale, from 'never' to 'often'. This three scale was modified for this study for easy interpretations. An item is worded to suggest a general, present-day experience that relates to both social and emotional dimensions of loneliness (e.g. I feel a part of a group of friends' No one really knows me well'). The

wording of the items and response format has been simplified to facilitate administration of the measure to less educated populations such as the elderly (Russell, 1996). Higher scores on this scale indicate more intense feelings of loneliness. According to Perry's (1990) loneliness classification scheme, a score of 50–60 indicates a moderately high degree of loneliness, a score of 35–49 indicates a moderate degree of loneliness, and a score of 20–34 indicates a low degree of loneliness.

Russell (1996) also reported that alpha coefficients for the UCLA Loneliness Scale ranged from 0.89 to 0.94 (Adams et al. 2004). Factor analysis showed that it measures emotional, as well as social, loneliness, thereby offering a more complete measure of loneliness than other scales. The scale has a possible total score of 24 to 80 points, with no identified cut-off score that defines loneliness; mean scores for university student samples were 36.69 (n= 625) and 39.07 (n = 282) in a recent study (Adams et al. , 2004) .

Social Support-Duke Inventory Scale (Appendix D & E)

 The Social Support Scale (SSS) developed by George, Blazer, Hughes and Fowler (1989), and was used to measure older adult's social support and satisfaction. This is an 11- item scale. There are two subscales, the satisfaction with social support is a 4- item scale and the perceived social support is a 7- item scale. Internal consistency has been reported at 0.64 for social support and 0.80 for perceived social support. The social support scale has been used in studies on social support and depression in older adult (Buchanan.1993; George et al. ,1989) .

For the present study, the researcher split the abbreviated Social support scale -

Duke Inventory into two (Appendix D and E) because it measures both family relations

and friends as the same variable. Since the primary investigator was interested in

measuring them as separate variables it was necessary to separate the two variables to

measure the relative impacts of both.

Mini Mental Status Examination

This is a 11 item validated widely used screening tool of cognitive function. It is a

tool that can be used to systematically and thoroughly assess mental status. It measures

five areas of cognitive function: orientation, registration, attention and calculation, recall,

and language. The maximum score is 30. A score of 23 or lower is indicative of

cognitive impairment. The MMSE takes 5-10 minutes to administer and is therefore

practical to use repeatedly and routinely. MMSE has been validated and extensively used

in both clinical practice and research. Two studies that examined the internal consistency

of the MMSE obtained Cronbach's alphas of 0.82 and 0.84 in elderly patients admitted to

a medical service (N = 372) and elderly nursing home residents (N = 34), respectively

(Koenig et al.1993).

3.4 Ethics Approval

Queen's University Health Science Research and Ethics Review Board and all the

homes under study granted approval for this study. Consent was obtained from all

participants (Appendix F). All information obtained during the course of this study is

being stored in password computer files and available only to the researchers. No participants are being identified in any publication or reports.

3.5 Statistical Analysis

The Predictive Analytics SoftWare statistical program (PASW) (version 18; Chicago, Illinois) was used for the analysis and modeling of the data. The two tailed p value of < 0.05 was considered to be significant for multivariate level of analysis and < 0.2 was used as the cut-off for bivariate analysis for selection of variables in the multivariate analysis. Univariate analysis began with a descriptive analysis of demographic, independent, and dependent variables. Means, median and standard deviation were utilized for continuous variables, while frequencies and percentages were applied to categorical variables.

Bivariate analysis was conducted using t-test, ANOVA and Pearson correlation. The association between demographic variables and the predictor variables and UCLA and GDS scores were assessed. A t-test was used for demographic variables with two categories, ANOVA for those with three categories, such as age and length of stay, while Pearson correlation was used for the main predictor variables, DSIS family support and DSIS friends support. Also, the association between the two outcome variables (loneliness and depression) was assessed using the Pearson correlation. At the multivariate level, multiple linear regression was used to analyze the data. Six different models were used to determine the relative impact of each type of informal social support

on loneliness and depression. The correlation co-efficient and the p- value were obtained to interpret the results.

For the first three models, depression was used as the dependent variable. Family support and support of friends functioned separately as the independent variable in the first of these models in order to analyze their effects on depression. To further understand the effect of different types of support, these two forms of supports were added together into the model to determine the relative impact of each type of support. All other control variables were added to the third model to ascertain if they would mediate the influence of the main predictor variables.

The same three models were used for the second outcome in which "loneliness" functioned as the dependent variable to examine the relative impact of the two types of support on the individual's feeling of isolation, even after considering other demographic variables.

Chapter 4

Results

This chapter will explore specific types of social relationships, such as those with family and friends, in both nursing and retirement homes, and it will examine the relationship to loneliness and depression in the elderly. The association between demographic variables with feelings of isolation and depression will also be discussed.

4.1 Characteristics of Sample

Sixty-two eligible individuals volunteered and participated in this study. Of the 62, fifty-four of them answered all the questions for the survey and were thus included in this study. Demographic data were collected using the demographic guide (Appendix A) to determine the characteristics of the sample. These data were included because characteristics such as: time of the interview or facilities where the elderly live may be predictors of loneliness and depression in the older adult (Lester & Fessman, 2000).

The demographic characteristics of the sample are presented in Table 1. The mean age of the study sample was 85 years (SD= 7) with a range of 65-98 years. Twenty- three patients were from a nursing home (43%), while 31 (57%) were from retirement homes. Twenty (37%) of the residents were interviewed in the morning, while the majority (63%) were interviewed in the afternoon. 38 (70%) were female, while 16 (30%) were male. The length of stay varied with each resident; the mean duration at a home for all participants was 26 months (SD 17) with range of 3-66 months. Although continuous

variables, the age and length of stay were also categorized. Residents whose age group was 65- 79 made up 30% of the sample: 39% of the participants were 80-89 and 32% were 90-100. Twenty-four (44%) residents had a stay of less than 18 months, while 18 (33%) remained for 18-36 months and the other 12 (22%) for more than 36 months.

Table 1- Univariate Analysis of Demographic Variables

Variable	No of Residents (%)	Mean (SD)	Median	Mode	Range
Age (years) ≤ 79 80-89 ≥ 90	54 (100%) 14 (26%) 23 (43%) 17 (31%)	84(7)	86	88	65-98
Length of stay (months) ≤ 18 18-36 ≥ 36	 24 (44%) 18 (33%) 12 (22%)	26(17)	24	24	3- 66
Institution Nursing home Retirement	 23 (43%) 31 (57%)				
Time interview Morning Afternoon	 20(37%) 34(63%)				
Gender Male Female	 16 (30%) 38 (70%)				

4.2 Geriatric Depression Scale (Table 2)

The GDS scores in this study ranged from of 1-10 with a mean score of 4 (SD= 3). As noted in Table 2, 5 (9%) of the residents had no depression symptoms, while 35 (65%) had mild depressive symptoms. However, 14 (26%) had moderate to severe depressive symptoms. The GDS scores ranged from 1 to 10 with a mean score of 3.63 and a standard deviation of 2.47.

4.3 University of California Loneliness Scale (Table 2)

The UCLA scores in this study ranged from 20 to 54 with a mean score of 27 (SD= 16) and a median score of 30. 38 (70%) of the residents experienced a low degree of loneliness (20-34), 13 (24%) had a moderate degree of loneliness (35-49), and the remaining 3 (6%) had a moderately high degree of loneliness (50-64). Table 2 illustrates the distribution of the loneliness scores among the sample.

Table 2- Analysis of GDS and UCLA Score (Outcome variable Analysis)

Variables	No of Residents (%)	Mean	SD	Median	Mode	Range
GDS- Depression Scores No Depressive symptoms (0-5) Mild depressive symptoms (6-10) Moderate to severe depressive symptoms (11-15)	54 (100%) 5 (9%) 35 (65%) 14 (26%)	4	3	4	4	0-10
UCLA – Loneliness Scores Low degree loneliness(20-34) Moderate degree(35-49) Moderately high degree (50-64)	54 (100%) 38 (70%) 13 (24%) 3 (6%)	27	16	30	-	20-54

4.4 Duke Social Inventory Scale (Family support)

The DSIS family support scores ranged from 0-21. A lower score suggests higher satisfaction with family support, while a higher score suggests lower satisfaction with family support. The mean score was 5(SD= 5) and the median 3. Thirty-eight (70%) of the residents were very satisfied with their family support system, 12 (22%) are moderately satisfied, and the remaining 4 (7%) not satisfied. Table 3 illustrates the distribution of the family and friend support systems scores.

4.5 Duke Social Inventory Scale (Support from friends)

The DSIS support from friends ranged from 0-22. A lower score suggests higher satisfaction with support from friends, while a higher score suggests lower satisfaction of support from friends. The mean score was 7 (SD= 6) and the median 5. Twenty-eight (52%) of the residents were very satisfied with the support system they had with friends, 16 (30%) were moderately satisfied, and the remaining 10 (18%) not satisfied. Table 3 illustrates the degrees of satisfaction with family support systems and with the support systems of friends.

Table 3- Analysis of DSIS Scores for the support of both family and friends)

Variables	No of Residents(%)	Mean	SD	Median	Range
DSSI Family support	54 (100%)	5	5	3	0-21
Very satisfied (0-5)	38 (70%)				
Moderately satisfied (6-15)	12(22%)				
Not satisfied (16-22)	4 (7%)				
DSSI Friend support	54 (100%)	7	6	5	0-22
Very satisfied (0-5)	28 (52%)				
Moderately satisfied (6-15)	16 (30%)				
Not satisfied (16-22)	10 (18%)				

4.6 Bivariate Analysis

Loneliness and Demographic Variables

Bivariate analysis revealed that age, length of stay, institution and gender were all associated with the UCLA loneliness survey (Table 4); specifically those participants that were female, aged 90 and over, living in nursing homes and having stayed between 18 to 36 months in either a nursing or retirement home. All of these factors may have aggravated loneliness in the older adult. The t-test and ANOVA showed that there were no difference between the categorized demographic variables and the loneliness scores however, gender had a significant level of ($P = 0.08$). Other variables that were close to the significant level of < 0.2 were included in the multivariate level of analysis.

Table 4- Bivariate analysis of Loneliness

Variable	Means (SD) for UCLA	T-test/ ANOVA	P-value
Age (years)			
≤ 79	15 (6)	-0.52	0.604
80-89	13(6)	-1.72	0.092
≥ 90	16 (8)		
Length of stay (months)			
≤ 18	13(7)		
18-36	17 (6)	1.95	0.056
≥ 36	14 (7)	0.10	0.918
Institution Nursing	16 (7)	1.52	0.134
Retirement	13 (6)		
Time interview Morning	13.45 (6)	-0.73	0.469
Afternoon	14.38 (8)		
Gender Male	15 (7)		
Female	12 (6)	1.78	0.081

4.6.1 GDS- Depression and Demographic Variables

Some of the demographic factors were related to symptoms of depression (Table 5). According to the correlation co-efficient for the bivariate regression analysis, those individuals who were female, aged 80-89, living in nursing home and residents that were interviewed in the morning scored higher on the GDS suggesting depression. The t-test and ANOVA showed that there were no difference between categories of most demographic data and the depression scores however gender was significant with a $p = 0.038$. Other variables that were close to the significant level of < 0.2 were included in the multivariate level of analysis.

Table 5- Bivariate Analysis of Depression

Variable	Means (SD) for GDS	T-test and ANOVA	P-value
Age(years)			
≤ 79	3 (2)	-1.17	0.248
80-89	4 (2)	0.22	0.823
≥ 90 (RC)	4 (2)		
Length of stay (months)			
≤ 18(RC)	3 (3)		
18-36	4 (1)	1.49	0.142
≥ 36	4 (3)	1.18	0.243
Institution			
Nursing	4 (2)	1.29	0.202
Retirement (RC)	3 (2)		
Time interview			
Morning (RC)			
Afternoon	3 (2)		
	4 (3)	-0.73	0.469
Gender			
Male (RC)	3 (1)	-2.13	0.038
Female	4 (3)		

4.7 Correlational analyses between main predictor variables and outcome variables

Pearson correlation revealed that the support of both family and friends was related to depression. The results in Table 6 show family support and the two outcome variables (loneliness and depression) as well as the support of friends and also the two outcome variables (loneliness and depression). Table 6 further shows that loneliness and depression are strongly related. Family support was related to loneliness at a significance level of P= 0.033, whereas support from friends was associated with loneliness at a level of P= 0.002. Family support was also related to depression at P= 0.001, while support from friends was linked to depression at a level of 0.009 (Table 6).

Loneliness and depression (Table 7) were strongly correlated with each other r = 0.001. This means that residents with family support and the support of friends are less likely to feel lonely and depressed compared to residents without these support systems.

Table 6- Correlation co-efficient of the main predictor variables and outcome variable.

Variables	DSSI (family support)		DSSI (Support of friends)	
	R	P-value	R	P-value
Loneliness	0.405	0.002	0.291	0.033
Depression	0.430	0.001	0.350	0.009

$P = < 0.05$

Table 7- Correlation co-efficient between loneliness and depression.

Variable	Depression	
	R	P-value
Loneliness	0.647	0.000

$P = < 0.05$

4.8 Multivariate Analysis

A series of multiple regression analyses (Cohen & Cohen, 1983) were conducted to ascertain the predictors of both loneliness and depression. To determine which demographic variables needed to be controlled in the regressions, a series of tests, including t-test and ANOVA, were performed at the bivariate level of analysis. All demographic variables that were significant at an alpha level of 0.05 were added to the regression model. With depression as a dependent variable, three different models were conducted to test the relative importance of the two types of informal support (from both family and friends). Family support was entered first and in the second model, support from friends was added. For the third model, all other demographic variables were added (Table 8).

Family support and support of friends had a significant relationship with depression at P= 0.001 and P= 0.009 respectively; for model 2, when "friends' support and family support" were added together into the model (Table 9), there was still a significant relationship between family support and depression at 0.009 and however, the support of friend became non-significant at P= 0.073. After controlling for family impact on support from friends, it was concluded that when a resident had family support, then friends support became less significant in predicting loneliness and depression. However, when other variables were added in model 3, the significant relationship between family support and depression dropped to 0.020; while, the p-value between support from friends and depression rose from 0.073 in the first model to 0.015 in the third model.

This analysis indicated that lack of support from friends seemed to be more significant in predicting depression than family support. Nevertheless, a significant relationship between family support and depression still existed, even after controlling for all demographic variables. This showed that when residents had family support they tended to feel less depressed even when they enjoy strong support from friends. However, when other factors, such as living in a nursing home, being of advanced age, and having stayed in an institution for more than 36 months, were considered, support from friends was more important than family support in predicting the level of depression.

Table 8- Multivariate Analysis for Depression

Variable	Model 1 Co-efficient	P-value	Model 1b Co-efficient	P-value
DSSI Family support	0.197	0.001		
DSSI Support from Friends			0.136	0.009
Constant	0.000		0.000	
R-squared	0.1848		0.1227	
Number of observation	54		54	
95% confidence interval	13.539		13.632	

Table 9- Multivariate Analysis of Depression

Variable	Model 2		Model 3
	Co-efficient P-value		P-value
DSSI Family support	0.162	0.009	0.020
DSSI Support from Friends	0.091	0.073	0.015
Gender Male (RC) Female			1.754 0.009
Loneliness			0.000
Constant	0.000		1.743
R-squared	0.439		0.641
Number of observation	54		54
95% confidence	11.292		13.771

Models 4,5, and 6 (Table 9 &10): The same three models were repeated with loneliness as the dependent variable. Model 4 shows that there is a significant relationship between family support, friend support and loneliness at 0.033 and 0.002 respectively. When support from friends and family were added together into Model 5 (Table 10), it was discovered that the level of significance between family support and loneliness dropped from 0.033 to 0.183; however, the significance of support from friends also dropped from 0.002 to 0.012. This observation indicates that support from friends is the strongest predictor for loneliness.

When other demographic variables were added to the model it was discovered that there was no significant relationship between family support and loneliness. Yet, the relationship between the support of friends and loneliness rose significantly to 0.003, making this type of support system once the strongest predictor of loneliness after controlling for other variables.

According to the correlation co-efficient for this model, it was found that people in retirement homes are less likely to report loneliness, and people who have just arrived in nursing and retirement homes within 3-18 months are less likely to be lonely than the rest of the categories. Females are also more likely to be lonely than their male counterparts, and people between the ages of 90-100 are more likely to be lonely than people in other age groups.

Table 10- Multivariate Analysis of Loneliness

Variable	Model 4a Co-efficient P-value	Model 4b Co-efficient P-value
DSSI Family support	0.376 0.033	
DSSI Support from Friends		0.441 0.002
Constant	0.000	0.000
R-squared	0.0847	0.1640
Number of observation	54	54
95% confidence interval	15.049	13.880

Table 11- Multivariate Analysis for Loneliness

Variable	Model 5		Model 6
	Co-efficient	P-value	P-value
DSSI Family support	0.378	0.012	0. 156
DSSI Support from Friends	0.231	0.183	0.003
Gender Male (RC) Female			0.035
Depression			0.000
Constant	0.000		0.068
R-squared	0.1928		0.3967
Number of observation	54		54
95% confidence	13.4021		11.506

In summary, at the bivariate level of analysis, a significant relationship exists between the outcome variables (Loneliness and Depression). There is also a significant relationship between the main predictor variable (DSIS family support and friend support) and the outcome variable of loneliness and depression. Furthermore, the multivariate analysis also demonstrates these relationships, and, moreover, suggests that support from friends tends to have more impact on loneliness and depression compared to family support.

Chapter 5

Discussion

   In this study, the association between loneliness and depressive symptoms was explored in 54 elderly residents living in both nursing and retirement homes. In agreement with the literature (Heikkinen & Kauppinen, Minardi & Blancard 2003, Cohen Mansfield & Parpura-Gill 2007, Alpass & Neville (2003)), the findings demonstrate that loneliness remained a significant risk factor for depressive symptoms, even after controlling other demographic variables in Model 3 and 6. Loneliness, which Weiss (1973) describes as a gnawing, chronic disease without redeeming features, has long been recognized as a strong correlative of depressive symptoms, and this study shows that, regardless of where the elderly live, loneliness is one of the strongest predictors of depression P= 0.000.

   Although the sample size was small compared to other population studies (Cacioppo et al., 2006), the inclusion of demographic variables such as age, gender, length of stay, time of interview and institution as covariates had no effect on the association between loneliness and symptoms of depression. This might be due to the exclusion of other demographic factors such as marital status, education and income that have been associated with depressive symptoms and loneliness. (Adams & Blieszner 1995; Cacioppo et al. 2006). This finding is consistent with a qualitative study by Barg et al. (2006), which suggests that loneliness in older adults is closely tied to depression. In

the study, the author found that loneliness is easily mapped onto standard assessments of depression and hopelessness in the population, thus upholding strong correlation between loneliness and depression demonstrated in this study. However, the present study shows that the two constructs (loneliness and depression) are themselves influenced by factors, such as age, gender, length of stay, and support from both family and friends. Despite the clear relationship of these two constructs, differences in the regression analyses of both depression and loneliness point to some differences. For instance, depression, as measured by the GDS, was strongly associated with individuals aged 90 and over, whereas loneliness was associated with older adults between the ages of 80-89. This finding is supported by a 10 year longitudinal study by Tiikkainen & Heikkinen (2004) on Dutch men born between 1910 and 1920, which suggested that the number of those reporting experiences of loneliness increased between the ages of 80-89. This finding is also supported by another study (Tijhuis et al. (1999) & Hoeymans,, Feskens, Kromhout, &Van Den Bos. 1999), however, studies among older adults in Sweden, for instance, have reported opposite results (Holmen & Furukawa 2002). Also, longitudinal studies indicate that depression does not necessarily increase with advancing age, nor is it a problem for the majority of older adults (Haynie, Zarit, Berg, & Gatz 2000), although women over 80 in particular and the oldest men may be at increased risk (Hekkinien& Kauppinen 2004).

Another finding in this study is that women were found to be the most susceptible to both depression and loneliness. The sample size, though small, provided enough

statistical evidence to investigate the extent to which the association between loneliness and depressive symptoms differed among men and women. The results, which were observed, were supported by Cacciopo, et al (2006) who investigated differences in the association between loneliness and depressive symptoms. Cacioppo et al. (2006) examined the association between loneliness and symptoms of depression in both sexes and found that they were comparably strong in men and women. Likewise, the present study found the association between loneliness and depressive symptoms was significant for both men and women but went further and found that women were more susceptible to loneliness and depression than men. This gender difference is supported by statistics provided by the Federal Interagency Forum on Aging (2004) and Heikkinen and Kauppinen (2004); however, with regard to study 1 of Cacioppo, et al (2006) found no association was found between men and depressive symptoms. These contradictory findings may be due to the age of the participants in study 1 of Cacioppo, et al (2006) which were between approximately 45 and 55 years of age.

5.1 Relationship between Outcome and Predictor Variables

Gerontological research has consistently documented the importance of support from family and friends in providing social and instrumental support for older persons. Not only did this present study examine how these two forms of support can mitigate loneliness and depression in the elderly but it also found that they are equally important in predicting the levels of loneliness and depression as shown in the bivariate regression analysis of the loneliness and depression.

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Several studies have reported related findings regarding the role of friendship and family in contributing to the degree of satisfaction with life in older adults (Siebert, Mutran, Reitzes. 1999). Social support, which includes both support from friends and family in particular, has been shown to moderate the effects of health-related issues on the mental health of the elderly. A study by Wilson, Motram, and Sixsmith (2007) found that one of the most prevalent symptoms of depression correlated dissatisfaction with the quality of one's relationships with family and friends. Furthermore, a study by Mansfield and Parpura-Gill (2007) found that loneliness and depression was associated with a poor social network, and noted that both types of relationships (friends and family) were found to be generally important to older adults. These present findings are supported by research on human relationships, such as the MacArthur studies of aging (Rowe & Kahn, 1998), which validated the link of social relationships to loneliness and depression. Those who have a great deal of social support, such as quality relationships, financial resources, and a network of supportive family members, tend to be healthier than individuals who lack such support (Bosworth & Schaie,1997). This current study also confirms and extends the findings of previous studies which suggest that the unfulfilled expectations of social relationships are important predictors of loneliness and depression (Holmen , Andersson, Ericsson, Rydberg, Winblad 1992). A study of elderly black people observed that frequent contact with family and friend relieved loneliness, and watching television reinforced loneliness (Creecy , Berg, & Roosevelt,1985). In a study by Keele-Card, Foxall & Barron (2007), Pearson product-moment correlation co-efficients were used to

determine the relationship among the variables, all positive types of support satisfaction showed negative associations with loneliness. The negative associations indicate that the greater the satisfaction with one's networks of social support, the less the feeling of loneliness and depression. Different studies have demonstrated this association by using different measures of loneliness and depression. All have come to a consensus that the various types of social support are directly associated with loneliness and depression.

The social networks of older people are related to health in several different ways. Social networks have been found to influence the health of individuals on several occasions (Yasuda et al. 1997). Prince et al. (1997b) demonstrated a significant relationship between a decrease in social support and the development of depression. Oxman et al. (1992) found a significant association between depression and tangible support. However, a study by Lund, Modvig, Due & Holstein (2002) failed to show a concrete relationship between social network and depression, which is noteworthy.

Another major finding of this study is that, overall, support from friends was more important in predicting the level of loneliness and depression than family support. However, in model 2, family support predicted depression better than support from friends; for this model, no other co-variates were controlled for, and it can be inferred that, when an older person is healthy and has both forms of support, lack of family support tends to predict depression.

A study done by Bolger and Amarel 2007 supports the present findings, the authors examined how acute and chronic stress, associated with functional declines in

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seniors and their spouses, are moderated by their informal and formal support contexts underwrites this later finding. It was found that family caregiving contexts were important determinants of depression. This is specifically true for cognitively intact seniors. The study also found that those who were receiving help with daily activities from friends or a non-spousal partner had lower rates of depression than those without such help. For the present study, elderly residents in the retirement home had less loneliness and depressive symptoms, this might be due to the fact that they are usually more cognitively intact which, encourages their making more friends in the facility. On the other hand, spousal help, was marginally associated with higher depression, consistent with other literature (Krause 1993). Also, a study by Minardi and Blanchard (2003) used a quasi-experimental design to describe associations depression may have with perceptions of handicap, loneliness, and social support networks. It was found that emotional support and a dense social network, which was restricted to children rather than friends, were clearly connected to a reduction in depression. The subjects interviewed for this present study might have a large network of children and grandchildren, and this may explain the significant relationship between loneliness, depression and family support in model 2. This might be a one of the co-variables that should be gathered for future research.

Other findings from previous literature have consistently documented the importance of family, especially adult children, in providing social and instrumental support for older persons. In support of this present finding, Brody (1995) concludes that

values related to the care of elderly family members have not been eroded but have firmly taken root in modern society. While Antonucci & Akiyama's (1994) study concluded that, family members still occupy a larger portion of the social network of the elderly and are more emotionally invested than others, which makes them better able to care for the older adults.

However, in support of the main findings, most studies suggest that friends are more important than family to morale and well-being of the elderly (O'Conner, 1995). Although it has been well documented in studies that individuals who supported the elderly relied almost exclusively on their families, it is also not uncommon to find elderly family members occupying important roles such as making major decisions and being a caregiver. Furthermore, during my interviews with the residents, I noticed that they talked more about their family and the position each occupies in their lives. However, the result of this present study contradicted this view and suggests that the main predictor of loneliness and depression is the lack of support from friends. This might be so because of rapid industrialization and modernization: the familial networks are shrinking and they may not be enough to provide all the support needed by older adults. Now, it is common to find people transferring familial obligations to voluntary organizations, neighbors, and friends. Therefore, friends might be expected to play an increasingly significant role in providing emotional and instrumental support to older persons. Other findings have suggested that lack of family support significantly increases loneliness among men, but no statistically significant differences are observed among women (Koropeckyl and Cox,

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1998). The current findings indicate that persistent beliefs linking family with high levels of loneliness and depression are not supported empirically, at least not for the population as a whole.

Researchers over the last decade have gathered an increasing body of data to support the observation that networks of friends are more important in predicting the overall health of the elderly. For instance, Fiori, Antonucci and Cortina (2006) found that those in networks with friendship ties enjoyed higher morale than those in networks without friends. Adams and Blieszner (1995) found that interaction with friends boosted self-esteem more than interaction with family. Those in diverse social networks and those with many friends had higher morale than those with networks composed mostly of family or neighbours (Litwin, 2001). Also, researchers found that relatives and friend-based network variables were associated with reduced disability and enhanced recovery, but children-based network variables were not (Mendes de Leon et al., 2001). Piquart and Sorensen's (2000) meta-analysis supports that contact and quality of friendship ties are strongly related to life satisfaction. Raats, Grunert & Lumbers (2009), using hierarchical multiple regression analysis (n=3200), showed that older people's variety of food intake depended on support from friends and neighbors, while family was not associated with food intake. All these studies support that friendship ties are very important and should be promoted in the community and facilities where the elderly reside. More health education should be done among the elderly ones who are always unhappy because the families are not always there for various reasons especially when they live very far away,

The importance of elective relationships formed with friends, are key ingredient in promoting health of the elderly ones, these relationships promotes social engagement and helps the elderly divert their energy into some healthy activities which can be a cure for loneliness and depressive symptoms, a study by Golden, Conroy, Lawlor (2009), examined the dimensions underlying the Wenger social support network type assessment associated with mental and physical health in 1334 community-dwelling participants over 65 years of age, and it was found that family domain was not significantly associated with any health outcome. The results suggest that elective relationships, such as those one cultivates with friends, and social engagement are the active ingredients, which promote health in later life. However, in a randomized control trial (n=193) by Kumanyika et al. (2009), the participation of family and friends or other group members had no effect on weight loss in a 2 years trial of a culturally specific weight loss program for older adults. It also shows that friend-based networks do not differ from family networks in subjective well-being, which contradicted this present study. (Fiori, Smith & Antonucci. 2007). Interestingly, in the study of older adults in Japan, Fiori, Antonucci & Akiyama (2008) found that the networks of friends and family were indistinguishable in terms of depressive symptoms and morbidity.

Most western scholars and researchers suggests that despite the family being the preferred support provider (Cantor, 1979; Roberto, Allen & Blieszner, 2001) support from friends was found to be more important for successful ageing than family support. Family interaction tends to revolve around mundane activities that are rarely emotionally

uplifting, whereas activities with friends involve mutual interests and pleasure (Larson, Mannell & Zuzanek, 1988) . However, this may not be the case for all societies. In Chinese society, for example, social engagement in the form of family activities is a major source of pleasure (Cheng, Lee, Chan, Leung & Lee 2009). Family, as an inseparable and cohesive unit, is still deeply valued in Chinese and other Asian societies, despite the growing number of nuclear families and the diminishing sense of filial piety (Cheng & Chan 2006).

In conclusion, support from friends is a more reliable factor for predicting the level of loneliness and depression in the elderly. A similar study done by Fessman and Lester (2000) also had the same findings and concluded that people who have stayed longer in the facilities report less loneliness and depression; in contrast to this present study, older adults who have stayed longer report more loneliness and depression. This outcome may be the result of variations in sample characteristics, but, overall, Fessman and Lester's (2000) research agrees with the findings of this study, which suggests that residents need more support from friends to decrease the level of loneliness, and depression that is so prevalent among this segment of the population.

5.2 Limitations of Study

There are limitations in this study that may have altered the outcomes found. One is that the primary investigator did not have control over the participants chosen for the interviews as the intermediate person chose participants using the MMSE scale and also through their knowledge of the residents. Although, a limitation, this can also be perceived as strength for the study since the intermediate person has more knowledge of the participants than the primary investigator. A potential bias within the study was identified as those residents who lack social support may have lacked motivation to engage in this study. Likewise, those who participated may have done so because it was an avenue to talk to someone which can also serve as a form of bias.

Further limitations include the use of four different questionnaires which had a total of 67 questions. This number of questions might have been overwhelming for the residents and sometimes they got tired in between the interviews, which can serve as some form of bias for the study. To resolve this issue, the study subject could be schedule for two interviews of about 15- 20 minutes each over a two-day period, which was not feasible for this present study because of time constraint and some policy issues of the homes under study.

Another limitation of this study is the short time of data collection process and resource constraints, which limits this study to a cross-sectional study instead of a longitudinal study which prohibits cause-effect relationship to be determined. A final limitation is that, the study has a small sample size and may not reflect a representative of

older adults living in facilities; thus, the findings should be used with caution in a larger population.

5.3 Implications for Clinical Practice

The persistent belief linking lack of family support with high level of loneliness and depression is very common with older adults, care givers and their family; this belief is not supported by these present findings. According to the results of this study, family support predicts loneliness and depression less than friend support and these findings would be useful and will help guide health personnel in promoting the activities among the elderly, so as to promote social relations between the residents.

In addition, by knowing the type of social support that is beneficial to the elderly in the nursing and retirement homes, it will be possible to promote the best form of social contacts that potentially improve the health of the elderly. If the friends formed in the homes are shown to reduce loneliness, nursing to improve resident interactions can be strengthened. Likewise if it is family, nurses will encourage family and friends from outside to visit at least once a week according to the recommendation of this study.

Nurses must be skilled in assessing the social support networks, beliefs, and preferences of older adults to plan and implement the best nursing practices. This will also give health care facilities awareness of what they can do to reduce or combat loneliness and depression in the elderly. Such action as this can also reduce suicide ideation in the elderly, as lack of social support may bring about suicidal thought. Finally, for purposes of developing effective social interventions, it is important to learn more

about how these phenomena are related to each other and about what kind of social support is beneficial to lonely and depressed older people.

5.4 Future Recommendations

Future research should focus on a larger representative sample of Canadian older adults which would allow more definite conclusions and give precise estimates of the distribution of different network types. Secondly, besides the perceived informal aspect of social support network, more attention needs to be paid to other relation qualities, such as communication patterns and conflicts (Mancini & Blieszner 1989) in future research. Adding these variables may further differentiate network types along these lines (Flori et al. , 2008) and reveal further how relationship quality contributes to well-being within specific support structures.

Thirdly, aspects of friend's network that are healthy should be examined and more longitudinal studies are needed to understand more aspect of friend's network. As discussed previously, our findings may not be specific to Canadians alone. More research is needed to examine the protective effects offered by friends in other cultures. Fourthly, future research might also explore whether changes in older adults, emotional and psychological state can be affected by developing relationships with other older adults in the home, a long-term follow up.

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Appendix A

Demographic Data

Institution	
Age	
Gender	
Length of stay	
Time of testing	

Appendix B

Geriatric Depression Scale

Choose the best answer for how you have felt over the past week:

1. Are you basically satisfied with your life? YES / **NO**

2. Have you dropped many of your activities and interests? **YES** / NO

3. Do you feel that your life is empty? **YES** / NO

4. Do you often get bored? **YES** / NO

5. Are you in good spirits most of the time? YES / **NO**

6. Are you afraid that something bad is going to happen to you? **YES** / NO

7. Do you feel happy most of the time? YES / **NO**

8. Do you often feel helpless? **YES** / NO

9. Do you prefer to stay at home, rather than going out and doing new things? **YES** / NO

10. Do you feel you have more problems with memory than most? **YES** / NO

11. Do you think it is wonderful to be alive now? YES / **NO**

12. Do you feel pretty worthless the way you are now? **YES** / NO

13. Do you feel full of energy? YES / **NO**

14. Do you feel that your situation is hopeless? **YES** / NO

15. Do you think that most people are better off than you are? **YES** / NO

Answers in **bold** indicate depression. Score 1 point for each bolded answer.

A score > 5 points is suggestive of depression.

A score > 10 points is almost always indicative of depression.

A score > 5 points should warrant a follow-up comprehensive assessment.

Yesavage, J., Brink, T., Rose, T., Lum, O. , Huang, V., Adey, M. , & Leirer, V. (1983).

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Appendix C
UCLA Loneliness Scale

For each statement, please indicate how often you feel the way described by choosing a number.

1. How often do you feel that you are in tune with the people around you?

   1. Never
   2. Sometimes
   3. Often

2. How often do you feel that you lack companionship?

   1. Never
   2. Sometimes
   3. Often

3. How often do you feel that there is no one you can turn to?

   1. Never
   2. Sometimes
   3. Often

4. How often do you feel alone?

   1. Never
   2. Sometimes
   3. Often

5. How often do you feel part of a group of friends?

   1. Never
   2. Sometimes
   3. Often

6. How often do you feel that you have a lot in common with the people around you?

1. Never
2. Sometimes
3. Often

7. How often do you feel that you are no longer close to anyone?

1. Never
2. Sometimes
3. Often

8. How often do you feel that your interests and ideas are not shared by those around you?

1. Never
2. Sometimes
3. Often

9. How often do you feel outgoing and friendly?

1. Never
2. Sometimes
3. Often

10. How often do you feel close to people?

1. Never
2. Sometimes
3. Often

11. How often do you feel left out?

1. Never
2. Sometimes
3. Often

12. How often do you feel that your relationships with others are not meaningful?

1. Never
2. Sometimes

3. Often

13. How often do you feel that no one really knows you well?

    1. Never
    2. Sometimes
    3. Often

14. How often do you feel isolated from others?

    1. Never
    2. Sometimes
    3. Often

15. How often do you feel you can find companionship when you want it?

    1. Never
    2. Sometimes
    3. Often

16. How often do you feel that there are people who really understand you?

    1. Never
    2. Sometimes
    3. Often

17. How often do you feel shy?

    1. Never
    2. Sometimes
    3. Often

18. How often do you feel that people are around you but not with you?

    1. Never
    2. Sometimes
    3. Often

19. How often do you feel that there are people you can talk to?

    1. Never

    2. Sometimes

    3. Often

20. How often do you feel that there are people you can turn to?

    1. Never

    2. Sometimes

    3. Often

Higher scores indicate greater degrees of loneliness.

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Russell, D. W. (1996). UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. Journal of Personality Assessment, 66, 20-40.

Appendix D

Social Support Duke Inventory (Modified for study)

1. Are you satisfied with how often you see your relatives; that is, do you see them often as you want to?

    1. Very satisfied

    2. Somewhat satisfied

    3. Satisfied

2. In times of trouble, can you count on at least some of your family?

    1. Hardly ever

    2. Some of the time

    3. Most of the time

3. How satisfied are you with the kinds of relationships you have with your family?

    1. Very dissatisfied

    2. Somewhat dissatisfied

    3. Satisfied

4. Do you wish that your family would give you more help?

    1. Yes

    2. No

5. When you are with your family how often do you feel lonely?

    1. Most of the time

    2. Some of the time

    3. Hardly ever

6. Does it seem that your family understand you?

1. Hardly ever

2. Some of the time

 3. Most of the time

7. Do you feel useful to your family?

    1. Hardly ever

    2. Some of the time

    3. Most of the time

8. Do you know what is going on with your family?

    1. Hardly ever

    2. Some of the time

    3. Most of the time

9. When you are talking with your family, do you feel you feel you are being listened to?

    1. Hardly ever

    2. Some of the time

    3. Most of the time

10. Do you feel that you have a definite role in your family?

    1. Hardly ever

    2. Some of the time

    3. Most of the time

11. Can you talk about your deepest problems with at least some of your family?

    1. Hardly ever

    2. Some of the time

    3. Most of the time

Appendix E

Social Support Duke Inventory (Modified for Study)

Social Support Inventory (Modified for Study)

1. Are you satisfied with how often you see your friends; that is, do you see them often as you want to?

    1. Very satisfied

    2. Somewhat satisfied

    3. Satisfied

2. In times of trouble, can you count on at least some of your friends?

    1. Hardly ever

    2. Some of the time

    3. Most of the time

3. How satisfied are you with the kinds of relationships you have with your friends?

    1. Very dissatisfied

    2. Somewhat dissatisfied

    3. Satisfied

4. Do you wish that your friends would give you more help?

    1. Yes

    2. No

5. When you are with your friends how often do you feel lonely?

      1. Most of the time

      2. Some of the time

      3. Hardly ever

6. Does it seem that your friends understand you?

      1. Hardly ever

      2. Some of the time

      3. Most of the time

7. Do you feel useful to your friends?

      1. Hardly ever

      2. Some of the time

      3. Most of the time

8. Do you know what is going on with your friends?

      1. Hardly ever

      2. Some of the time

      3. Most of the time

9. When you are talking with your friends, do you feel you feel you are being listened to?

      1. Hardly ever

      2. Some of the time

      3. Most of the time

10. Do you feel that you have a definite role among your friends?

      1. Hardly ever

      2. Some of the time

      3. Most of the time

11. Can you talk about your deepest problems with at least some of your family and friends?

      1. Hardly ever

      2. Some of the time

      3. Most of the time

George, L. K., Blazer, D.G., Hughes, D. C., & Fowler, N. (1989). Social support and the

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Appendix F

Informed Consent

Informed Consent

Title: Social Support, loneliness and depression in the elderly.

You are invited to participate in a research study directed by Busola Oni to know what extent do the different types of social support mechanisms serve to mitigate the presence of loneliness and depression among the elderly in nursing homes. Busola Oni will read through this consent form with you and describe procedures in detail and answer any questions you may have. This study has been reviewed for ethical compliance by the <u>Queen's University Health Sciences and Affiliated Teaching Hospitals Research Ethics Board.</u>

The purpose of this study is to explore specific types of social relationships- family or friends formed in the nursing homes and how it affects the health of the elderly especially in the area of loneliness and mood. You will be considered for the study if you are 65 years or older and live in a nursing home at the time of the study.

There are no known risks associated with participation in this study. If a health issue is discovered, referral will be made to a health professional. All information obtained during the course of this study is strictly confidential and your anonymity will be protected at all times. Data will be stored in password computer files and will be available only to Busola Oni and her faculty supervisor. You will not be identified in any publication or reports. Your participation is voluntary. You may withdraw from this study any time, participation or your withdrawal will not affect your care.

Statement of Participant

I have read and understand the consent form for this study. I have had the purposes, procedures and technical language of this study explained to me. I have been given sufficient time to consider the above information and to seek advice if I choose to do so. I have had an opportunity to ask questions which have been answered to my satisfaction. I am voluntarily signing this form. I will receive a copy of this consent form for my information. If at any time I have further questions, problems or adverse effects, I can contact Busola Oni or Dr. Diane Buchanan at 613-533-6000 ext 78907.

I have received a copy of this information sheet and agree to participate in this study to explore the relationship between social support, loneliness and mood. I have been assured that my participation is entirely voluntary, and that my identify will not be revealed during presentation or publication of the study results.I have read and understand the consent form for this study. I have been given sufficient time to consider the above information
and to seek advice if I chose to do so. I have had the opportunity to ask questions which have been answered to my satisfaction. I am voluntarily signing this form.
 If I have questions regarding my rights as a research subject I can contact
 Dr. Albert Clark, Chair, Queen's University Health Sciences and Affiliated Teaching Hospitals Research Ethics Board at 533-6081

 By signing this consent form, I am indicating that I agree to participate in this study.

_____ _____
Signature of Patient   Date

_____ _____
Signature of Witness   Date

STATEMENT OF INVESTIGATOR:

I, or one of my colleagues, have carefully explained to the subject the nature of the above research study. I certify that, to the best of my knowledge, the subject understands clearly the nature of the study and demands, benefits, and risks involved to participants in this study.

_____ _____
Signature of Principal Investigator   Date