Older Adults and Sexuality: The relationship to Quality of life

Abstract

In this descriptive correlational study, the relationships among quality of life, sexuality, and intimacy in a sample of older adults were examined. Specifically, the importance of sex life and the predictors of sexuality and quality of life for older adults were explored.

The convenience sample included 430 community-dwelling older adults between the ages of 60 and 99. The sample consisted of 271 females and 99 males who considered themselves to be healthy. Forty-two percent were married and thirty-five percent had a university degree. The Quality of Life of Older Adults study (The WHOQOL-Old Group, 2000) was used to obtain the data for this study.

It was found that sex life was considered to have the lowest relative importance of various aspects of quality of life. The most important aspect of quality of life for the participants in this study was ability to perform activities of daily living. Men considered sex life to be more important than women. Partnered participants considered it more important than non-partnered participants, and younger participants found it more important than older participants. Satisfaction with personal relationships, health status, and sexual activity were found to be predictors of quality of life in this sample, explaining 31% of the variance. Satisfaction with personal relationships explained the highest portion of the variance of quality of life, 22%. Intimacy, marital status, gender, and age were found to be predictors of sexual
activity, explaining 76% of the variance. The portion of variance of sexual activity explained by intimacy was 67%.

Implications of my study findings include that nurses should assess the importance of sexuality, intimacy, and personal relationships for older adults. Ideally, this would lead to interventions based on the person's needs and requests. As nurses, we should be fostering and nurturing personal relationships for older adults. Policy makers should be working together to coordinate health and social services to ensure older adults are provided with adequate social support to maintain quality of life. Nurse educators are in the ideal position to include information on the relationships among personal relationships, sexuality, and quality of life of older adults in curricula and in informal teaching.

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Older Adults and Sexuality: The relationship to Quality of life

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Examiners:
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go. His smile and laughter sustained me during difficult times. The completion of my
thesis would not have been possible without his resources and sacrifice.
Dedication

In memory of my Grandparents, who gave me my first glimpse of the wisdom and love of older adults.

Doris Onlea Robinson (nee.) Parker [August 21, 1908 – June 18, 1982]

Walter “Skez” Arthur Robinson [May 19, 1907 – September 6, 1985]

Eileen Bullock (nee.) Wright [November 25, 1915 - January 13, 1996]

Charles Thaddeus “Tad” Godfrey Bullock [November 22, 1910 - June 12, 1996]

To my husband, Marco Berton, who always knew I could do it even if when I thought I could not. His faith in me never waned. His support for my journey never wavered.
Chapter I

Introduction

Quality of life has become a “buzz phrase” within the discipline of nursing. Nurses talk about improving or maintaining a person’s quality of life as the purpose or outcome of our practice, but what does this really mean? In an effort to better understand the nature of quality of life, I chose to study the relationships among a set of variables in relation to quality of life. My interest and experience in working with older adults led me to seek this population as research participants. I was also interested in knowing more about areas that are understudied in this population so chose to study the relationships among sexuality, intimacy, and quality of life for older adults.

Significance of the Study

There is a large body of literature on ‘normal’ changes with aging from the perspectives of a variety of disciplines. This ‘knowledge’ provides older adults with a context for understanding aging. The literature also provides a context for research with older adults. Within this research, the area of sexuality and aging is beginning to grow but there are gaps in the research pertaining to quality of life and older adults, particularly in relation to sexuality and intimacy.

The need for research about the relationships among age, gender, marital status, health status, sexual activity, satisfaction with level of intimacy and quality of life is supported through the literature. There are contradictory findings pertaining to the relationships among quality of life, health, sexual activity, age, and gender. There is also limited research published on quality of life, sexual activity, and intimacy. Deacon, Minichiello, and Plummer (1995), suggest an area of future research with older adults is
to examine the impact of maintaining a satisfying sex life on well-being. Studying the relationship between quality of life and sexual activity will contribute to this area of research.

A large amount of research has been conducted on quality of life of older adults (Farquhar, 1995; Fry, 2000; Grundy & Bowling, 1999; Keister & Blixen, 1998; Nilsson, Ekman & Sarvimaki, 1998; Raphael et al., 1997; Sarvimaki & Stenbock-Hult, 2000). There have also been studies of sexual behaviour and sexual satisfaction in older adults (Bertschneider, 1988; Johnson, 1996; Matthias, Lubben, Atchison & Schweitzer, 1997). However, there is limited published research examining the relationship between quality of life and sexuality in this population (Gott & Hinchliff, 2003; Leiblum, Baume & Croog, 1994).

Research into quality of life and sexuality for older adults is relevant to nursing not only because of the subject matter but also because of the participant population. Older adults make up a large proportion of our clients and the projected increases in the size of these population cohorts are staggering. The demographic characteristics of the Canadian population are changing. The over 65 age group is growing in number and potentially even higher growth will take place in the ‘old old’ (85 years old and older); Statistics Canada (2003) projections estimate the number of persons over the age of 85 years will double by 2016. Quality of life of this group will be a significant health and social policy issue. There is international interest in the area of quality of life. As the majority of industrialized societies are finding their populations aging, there are higher expectations of older adults around having a high quality of life in those societies and there is interest, through policy initiatives, to potentially reduce public expenditures for
health care (Bowling et al., 2003). Improving quality of life may indeed contribute to maintaining older adult’s health, which in turn may lead to less health care dollars being spent. This is rhetoric often heard in discussions of health care planning.

Studying the concepts of sexuality and intimacy in this population enhances our understanding of sexuality/intimacy and quality of life in older adults. With a growing population of older adults and recognition that quality of life is a key goal of nursing, research to uncover what is relevant to quality of life for older adults is important. Research that assists nurses in understanding what is important to this population group is relevant to nursing practice, nursing education, and nursing policy development.

**Motivation of Researcher**

My motivation for studying the relationships among quality of life, sexuality and intimacy in a group of older adults was multi-faceted. My primary motivation was an interest in this population group. I have always enjoyed my time with older adults and feel my life has been enriched through my relationships with them, personally beginning with my grandparents, and professionally in a variety of practice settings. In my nursing practice, I have the privilege of interacting with older adults on a regular basis. During my Masters of Nursing education, I worked as a research assistant on a study of Healthy Aging and Quality of Life. Participating in data collection for this study gave me the chance to talk to older adults from a different frame of reference, that of nurse researcher.

While entering the study data, I found that some questions regarding intimacy and sexuality were unanswered. Some participants had documented ‘not applicable’ beside these Likert scale items. This sparked questions for me regarding the relationships among intimacy, sexuality, and quality of life for older adults. Are intimacy and sexuality
important to the quality of life of older adults? How do sexuality and intimacy relate to older adults' perceptions of their quality of life?

Finding missing data and written comments from participants regarding the lack of importance of sexuality in their lives stimulated further reflection on my nursing practice. In my nursing practice, one of my responsibilities is to complete an assessment of older adults. The assessment tool utilized does not include any formalized questions regarding sexuality. Yet many of the older adults I speak with tell me of the importance of sexuality in their lives. Are we missing something in our practice? Are we making assumptions of what is important for older adults? Do we impose our beliefs on what are the components of quality of life? These questions and those generated from my data entry work allowed me to connect my research ideas, literature, and nursing practice experience.

Finally, I had been reading, writing, and reflecting on ageism. Are we overlooking sexuality because we believe in the asexual stereotype of older adults? Have older adults themselves taken up this social construct? There are many misconceptions about aging in our society and I have challenged myself to be anti-ageist. The more I thought about missing data and misconceptions, the more motivated I became to pursue this research. I recognize that one research study will not answer all of the questions I have posed here. I hope, however, that answering the research questions used in this study will contribute to nurses' understanding of quality of life for older adults.
Research Purpose

The purpose of this study is to explore relationships among quality of life, sexuality, and intimacy in a sample of people 60 years of age and older. Is sexuality important to older adults? Are intimacy and sexuality significant predictors of quality of life?

The data used in this research is from the Quality of Life of Older Adults study at the University of Victoria (Principal investigator, Dr. Anita Molzahn). The purpose of the study was to identify factors that are important predictors of quality of life in older adults. In addition to identifying the relationship of various factors with quality of life, the study also pilot tested a newly developed questionnaire designed specifically for older adults. The purpose of my study, to explore relationships among sexuality, intimacy, and quality of life in older adults, is consistent with the larger study’s purpose.

Research Questions

The research questions are:

1. How important do older adults consider sex life to be in relation to other facets of quality of life?

2. What are the relationships among age, gender, marital status, health status, education, satisfaction with personal relationships, sexual activity, satisfaction with intimacy, and quality of life?

3. To what degree do age, gender, marital status, health status, education, satisfaction with personal relationships, sexual activity, and satisfaction with intimacy explain older adults’ ratings of quality of life?
4. To what degree do age, gender, marital status, health status, education, satisfaction with personal relationships, satisfaction with intimacy, and quality of life explain older adults' ratings of sexual activity?

Summary

The relationships among sexuality, intimacy, and quality of life for older adults are not well reported in the nursing literature. These relationships are relevant to nursing as quality of life is tied closely to our practice and older adults are often the people we work with. In my work as a research assistant on a study on quality of life and healthy aging I found that questions regarding sexuality were not always answered by participants. This experience, in addition to my practice as a gerontological nurse, initial literature review, and my personal relationships with older adults led me to the research questions presented in this chapter.
Chapter II

Literature Review

Introduction

The literature review was conducted using searches of databases including CINAHL, Ageline, and MEDLINE, as well as bibliography and reference tracing from retrieved articles. In this chapter, I review the literature related to the definition and conceptualization of quality of life, measurement of quality of life, quality of life in older adults, sexuality in older adults, intimacy and sexuality in older adults, and quality of life and sexuality in older adults.

Quality of Life — Definitions and Conceptualizations

Quality of life is a complex concept. A standard definition has not been agreed upon, but there is some agreement on essential aspects of quality of life within the research literature. One aspect is the multi-dimensionality of quality of life. Most authors agreed that in order to evaluate quality of life you must use a multidimensional approach (Estwing-Ferrans, 1996; Fletcher, Dickinson & Philp, 1992; Lawton, 1991; Meeberg, 1993). Any conceptual structure for quality of life is necessarily multi-dimensional according to Lawton (1991) in order to know "the breadth and depth of life as a whole and, to maintain an appropriate focus on the individual" (p.22). Common dimensions identified in the literature include: global subjective ratings of life quality, physical functioning, perceived health, social relationships, and psychological well-being. These dimensions have been constructed as domains in some conceptual frameworks of quality of life (Estwing-Ferrans, 1996; Szabo, 1996) and as attributes in others (Meeberg, 1993).
The various dimensions of quality of life are not seen as mutually exclusive. The interrelatedness of quality of life domains is acknowledged by Stewart and King (1997). In order to ensure a clear definition of the domains, the components of the domain (content areas) and the response dimensions must be clearly defined (Stewart & King). The response dimensions should focus not only on the state or level of the participant’s quality of life, but should also ask for information on the values or preferences of the participant (Estwing Ferrans, 1996; Goodinson & Singleton, 1989; Stewart & King, 1997).

There is debate as to whether quality of life is subjective, that is, based on a person’s perception, or objective, based on observer judgments in relation to normative criteria (Berry & Holme, 1993; Meeberg, 1993). Proponents of the subjective nature of quality of life believe that each individual defines his/her quality of life differently. Fry (2000a) noted that, “In the purest sense, the term quality implies an evaluation or subjective rating by the individual…” (p. 252). Her definition of quality comes from an internal, subjective view. Those who approach quality of life in an objective manner use external criteria to make decisions about another person or group of persons’ quality of life. These external criteria may include socio-economic status, housing, or illness. Those who use these criteria believe that objective assessments provide a more accurate assessment of quality of life. But, do these objective indicators reflect quality of life or, in fact, living conditions (Meeberg, 1993)? Who is in the best position to assess a person’s quality of life? I would argue that in order to gain the most accurate assessment of a person’s quality of life you need to ask them to rate it, or talk about it.
An aspect of quality of life that is agreed upon in the literature is the positive and negative assessment or continuum of quality of life (Lawton, 1991; WHOQOL, 1995b). Lawton (1991) discussed the need to include the positive and negative aspects of life when conceptualizing quality of life as people frame their life experiences both positively and negatively.

Quality of life is often related to life satisfaction. Meeberg (1993) utilized concept analysis to clarify the definition of quality of life. In her review of the literature, Meeberg found that a feeling of satisfaction with one’s life in general was a critical attribute of quality of life. Her proposed definition of quality of life was, “a feeling of overall life satisfaction, as determined by the mentally alert individual whose life is being evaluated” (Meeberg, 1993, p.37). Estwing Ferrans (1996) also conceptualized quality of life in terms of satisfaction, as she found it to be the most congruent conceptualization with her own individualistic ideology. However, there is debate regarding the appropriateness of identifying quality of life with satisfaction. As early as 1980, McCall stated that, “the relative constancy of satisfaction indices over time, their tendency to become stabilized through the process of adaptation constitutes a serious objection to identifying satisfaction with QOL” (p. 8). The dynamic nature of many concepts related to quality of life (e.g., life satisfaction, well-being, health) and quality of life itself is addressed by a number of authors (Allison, Locker & Feine, 1997; Draper & Thompson, 2001; Hunt, 1997). As a person’s life experience unfolds they may perceive their quality of life as good or poor. This perception fluctuates based on any number of aspects of the person’s life.
In addition to being a dynamic concept, quality of life is also framed by the researcher or clinician’s discipline. In psychology, for example, quality of life is seen as an individual construct. This perspective also dominates health-related quality of life research which is prevalent in nursing literature (Ferrans & Powers, 1992). Health-related quality of life is defined as “...a concept representing individual responses to the physical, mental, and social effects of illness on daily living that influence the extent to which personal satisfaction with life circumstances can be achieved” (Bowling, 1991, cited in Raphael, 1996 p. 149). The primary difference between quality of life and health-related quality of life is the specific component of response to illness as an influence on life satisfaction or quality of life; people assess the effects of physical functioning on their evaluations of quality of life (Fry, 2000a). Health-related quality of life, similarly to quality of life, has been shown to have interrelated domains. Sousa and Chen (2002) were concerned about the relationship between the domains in health-related quality of life (HRQOL) instruments and used structural equation modeling to assess how specific variables were related in Wilson and Cleary’s HRQOL (1995) conceptual model. The four distinct dimensions representing overall HRQOL that Sousa and Chen’s analysis supported were: cognition, vitality, mental health, and disease worry. These dimensions differ from the common dimensions found in general conceptual frameworks of quality of life as they do not include a subjective rating of quality of life or psychosocial dimensions.

In summary, the quality of life literature provides reference to the concept as formed by interrelated domains. However, this may be the only consensus on the subject. Quality of life is often related to life satisfaction. The concept is interpreted in many
different ways and may be dependent on the discipline of the researcher studying it. Quality of life is not static. It is precisely this dynamic nature that presents a quandary for researchers interested in measuring it.

Measurement of Quality of Life

There is debate regarding how best to measure quality of life (Hunt, 1997). According to Hunt, measurement must be conducted in a meaningful way and an appropriate measurement tool used. One of the challenges is that quality of life is focused on the individual, and individuals view QOL differently. Using multidimensional instruments assists researchers in addressing this challenge by measuring various aspects of quality of life. However, multidimensional measurement is not without its limitations. Each dimension must be clearly defined and measurement tools need to include an opportunity for a person to report the state they are in at the time and the importance of the dimension or domain of quality of life for themselves (Estwing Ferrans, 1996; Goodinson & Singleton, 1989; Stewart & King, 1997).

In addition to incorporating participants’ weighting of the importance of the dimensions on the quality of life measurement tool, Goodinson and Singleton’s (1989) review of the concept and measurement of quality of life suggested criteria for use of quality of life measures in assessing treatment and therapeutic interventions. They proposed that the instrument be: subjective, multi-dimensional, provided in the context of the participants’ coping strategies and past experiences, useful at a variety of times, and useful in investigations to establish the influence of adaptation on quality of life. This set of criteria for quality of life measurement tools ensures that measurement actually captures the complexity of quality of life.
It has been suggested (Goodinson & Singleton, 1989; Testa & Simmonson, 1996) that there is a need to critically review quality of life measurement tools (Fletcher, Dickinson & Philp, 1992) before their use in research to ensure their validity in a specific study. The Medical Outcomes Trust, a group of academic researchers, public sector agencies, nonprofit organizations, and commercial firms developed standardized criteria by which quality of life instruments could be reviewed (Scientific Advisory Committee, 2002). The Scientific Advisory Committee provides information on the definitions of review criteria and what developers of instruments should use to meet the criteria.

Although the focus of the Scientific Advisory Committee criteria is on specific instrument development (content, scale development, reliability, and validity), the Committee makes the point that developers of a quality of life measurement tool should identify the dimensions the instrument is trying to measure. This includes identifying a conceptual model. The Scientific Advisory Committee defines a conceptual model as "...a rationale for and description of the concepts and the populations that a measure is intended to assess and the relationship between those concepts" (p. 198). Although not described as a theory, adding 'conceptual model' as a criteria of quality of life measurement tool development addresses Hunt’s (1997) criticism regarding the atheoretical approach taken by many researchers measuring quality of life.

There are a great number of instruments used to measure quality of life. They can be categorized as 'generic' (intended for general use), and 'disease-specific'. For the purposes of this literature review, I will comment only on the general use instruments. Two of the most commonly used generic instruments, often described as quality of life scales, are actually measures of health status: the Sickness Impact Profile (SIP) and the
Nottingham Health Profile (NHP) (Fayes & Machin, 2000). The SIP was developed by Bergner et. al in 1981 as a measure of perceived health status, assessed by the impact of disease on physical behaviour and the NHP was developed by Hunt et. al in 1980 and is a shorter measure than the SIP that focuses on the level of emotional, social, and physical distress that is caused by ill health (as cited in Fayes & Machin). Both the SIP and the NHP measurements more closely measure HRQOL than quality of life.

Another frequently used generic instrument, not specific to a disease state, is the Medical Outcomes Study 36-item Short Form (SF-36). Although this instrument focuses on more than physical symptoms and includes questions on the subjective aspects of quality of life, including social and emotional issues (Fayes & Machin, 2000), it is still primarily a health status measure. The EuroQol is considered another general purpose instrument and was developed by Brooks et. al in 1996 (as cited in Fayes & Machin). The EuroQol recognizes five dimensions of quality of life: mobility, usual activities, self-care, pain/discomfort, and depression/anxiety. It also includes a general question on health status. Due to its simplicity, the EuroQol is often used in conjunction with other tools. For example, any one of these measures of health-related quality of life (e.g., EuroQol, SF-36) might be combined with one of the many instruments available to measure functional ability, psychological well-being, social support, and/or life satisfaction in studies of quality of life. By using a combination of measurement tools, the researcher can describe quality of life from a multidimensional perspective.

The WHOQOL-100 (World Health Organization Quality of Life–100) developed by the WHOQOL Group in 1996 (The WHOQOL Group, 1998) is a quality of life measurement tool that asks questions regarding multiple dimensions of quality of life,
including general rating questions. The general quality of life questions allow the researcher to use an overall rating and measure the relationship between dimensions and the person’s rating of quality of life. There has recently been development of a measurement tool by the WHOQOL Group, an instrument that measures quality of life in older adults (The WHOQOL-Old Group, 2000). Although not HRQOL tools, researchers using these measurement instruments often include additional questions about perceived health status.

In summary, there is debate as to the best method of measuring quality of life. There are methods of evaluating the variety of quality of life measurement tools that exist. The number of measurement tools available provides researchers with a number of choices and often more than one instrument is used in a study.

**Quality of Life in Older Adults**

There is a large body of literature pertaining to definitions of quality of life in old age. As in the general population, the measurement of quality of life in older adults necessitates a multi-dimensional instrument (Fry, 2000a). Dimensions of quality of life for older adults that are commonly mentioned in the literature are: social relationships, health, personal qualities, activities, functional status, social climate, environment, and past and present lives.

Many of the conceptual issues raised in studies with a younger sample are similar to those noted in studies specific to older adults. One example is the individual nature of quality of life. In some qualitative studies, older adults provide definitions of quality of life (Fry, 2000b; Nilsson et al., 1998). Use of qualitative methodologies as an initial phase in the development of measurement tools is common and not limited to older adult
populations (Farquhar, 1995; Szabo, 1996). Farquhar’s (1995) qualitative inquiry into older adults’ definitions of quality of life has led her to suggest that instruments used to assess quality of life in older adults must include: “...measures of social contacts and activities, emotional wellbeing (including life satisfaction), adequacy of material circumstances, suitability of the environment, as well as health and functional ability” (p. 145). In Bowling et al.’s (2003) exploration of older people’s definitions of and priorities for a good quality of life, the two most frequently reported areas of importance were having good social relationships and having good health. Social support and social relationships have a positive relationship to quality of life (Estwing Ferrans, 1996; Lawton, 1991; Meeberg, 1993; Szabo, 1996).

A measurement concern with this population is that it is viewed as being constituted by ‘health optimists’. Therefore, older adults may subjectively rate their perceived health higher than what might be described with objective measurement (Kutner, et al., 1992; Stewart & King, 1997). There are conflicting reports about the relationship between health and quality of life in this population. In a review of nursing research literature (1987-1991) on self-perceived health of older adults and quality of life (Moore, Newsome, Payne & Tiansawad, 1993), 11 studies were found that demonstrated a strong positive relationship between these two variables. Participants who were healthy had a better quality of life. No relationship was found in six of the studies. Raphael et al. (1997) report a positive relationship between quality of life and health status.

In addition, there are conflicting reports about the relationship between age and quality of life. Hughes (1993) argues in her article on gerontological approaches to quality of life that people at different ages would define their quality of life differently
based on their life experiences (cohort effects). In a study of community dwelling elderly, age 65 and older, Farquhar (1995) used in-depth interviews to study quality of life. She found that the very old [85+ years] adults were more likely to describe quality of life in more negative terms than the young old [65 years < 85 years]. Conversely, no relationship between age and QOL was found by Sarvimaki and Stenbock-Hult (2000) in a population of community dwelling older adults. They also found no difference in the relationship between self-perceived health and age, gender, or marital status. Raphael et al. (1997) also found no relationship between age and quality of life in their pilot study of a new quality of life measure.

There is very little reported research on the relationship between gender and quality of life for older adults. In Haug and Folmer’s (1986) secondary analysis of data collected from 647 older adults who were interviewed using a measure of life quality, they found that women reported lower quality of life than men. In contrast, in their study of age, gender and quality of life with a sample of people with diagnoses of mental illnesses (mean age 40 years), the authors found no difference between men and women on quality of life (Mercier, Peladeau, & Tempier, 1998).

The relationship between level of education and quality of life is also infrequently reported in the literature. What is reported in the literature is the relationship between socioeconomic status and quality of life. In studies where a relationship is reported (Liao, McGee, Kaufman, Cao & Cooper, 1999; Ross & Willigan, 1997; Veenhoven, 1999), participants with higher socioeconomic status reported a higher quality of life.

Marital status, another objective socio-demographic variable, is even less frequently examined in the quality of life literature. In her study of Chinese Canadian
older women and the role of living arrangements in their quality of life, Gee (2000) reported lower quality of life for widows living alone versus living intergenerationally. She found it important to distinguish marital status from living arrangements and that age, health status, and social support were better predictors of quality of life for older Chinese Canadians.

In summary, according to the literature, measurement of quality of life for older adults should include: social relationships and activities, health status, functional abilities, environment, emotional well-being, and material circumstances. The literature on quality of life and older adults contains conflicting results with regards to the relationship between health and quality of life, age and quality of life, and gender and quality of life. Socioeconomic status is found to have a primarily positive relationship with quality of life.

*Sexuality in Older Adults – Definitions and Conceptualizations*

Sexuality in and of itself is a complex concept. The *Canadian Concise Dictionary* (Gage, 2002) provides the following three definitions of sexuality: “Sexual character, the fact of being a member of either sex; sexual aspects of human nature and behaviour and their social significance; attention to sexual matters, sex drive” (p. 787). Sexuality goes beyond the physical act of intercourse. It has been identified as an important component of health (Waxman, 1996) and as an integral part of self-expression (Deacon et al., 1995). Drench and Losee (1996) conceptualize sexuality as a combination of the sexual drive (a primary biological drive), sexual acts (behaviours involving the erogenous zones), and the psychological aspects of relationships, emotions, and attitudes. In their review article on sexuality and chronically ill older adults, Pangman and Seguire (2000) claim that,
“Sexuality is now identified as a fundamental and natural need within everyone’s life, regardless of age and physical state” (p. 51). Although these two researchers may have viewed sexuality as a need in everyone’s life, they also identified a common conceptualization of aging and sexuality: that of the asexual older adult.

The view of older adults as asexual human beings is rooted in history and sustained by a number of myths. Hotvedt (1983) described three themes from our myths of sexuality and aging; that in our later years we are not (1) sexually desirable, (2) sexually desirous, or (3) sexually capable. Older adults have internalized these societal views (Butler, 1975; Campbell & Huff, 1995; Deacon et al., 1995; DeLamater & Sill, 2003; Drench & Losee, 1996; Robinson, 1983). More recent authors go so far as to report that stereotypes of asexual aging shape not only the views of older adults, but research and policy agendas (Gott & Hinchliff, 2002; Pangman & Seguire, 2000). In contrast to these long standing ideas of older adults as asexual, research has demonstrated that older adults are indeed sexually active and sexually satisfied (Brecher, 1984; Bretschneider & McCoy, 1988; Gott & Hinchliff, 2002; Johnson, 1996; Leiblum et al., 1994; Matthias, et al., 1997). In their article examining the recent focus of active sexuality as a contributor to successful aging, Katz and Marshall (2003) challenge readers to reflect critically on how what may have been ‘sexual decline’ associated with aging (seen as a potentially ageist assumption) has now been taken up as ‘sexual dysfunction’. They argue that this definition fits with consumer discourse and provides for a market for older adults to improve their sexual function, much like physical fitness in general. It may be that by redressing ageist stereotypes about sexual activity we are setting older adults
up to be co-opted into a ‘fix it’ perspective rather than an individual life course perspective.

In addition to the literature on the beliefs and values held by older adults and society, there is also information published regarding the normal physiological changes related to sexual functioning as we age (Laflin, 1996; Weg, 1983; Zeiss & Kasl-Godley, 2001). Most textbooks on the topics of aging, nursing care of older adults, or staying healthy as we age contain a few pages, if not a chapter, on sexuality and changes with aging. The physiological changes that occur as part of normal aging may have either a positive or negative impact on sexual activity (Deacon et al., 1995). In their review of data on sexuality among older adults, Zeiss and Kasl-Godley (2001) suggested that, “…while older adults experience physiological changes that affect the sexual response cycle, these changes need not interfere with sexual activity because compensatory strategies are easily implemented” (p. 24). Zeiss and Kasl-Godley further suggested that health status, socio-cultural attitudes toward sexuality, relationship satisfaction, and psychological well-being are factors that affect sexual activity, interest and satisfaction. A higher level of satisfaction with personal relationships and having a sense of well-being were found to be associated with greater sexual interest, satisfaction, and activity (Zeiss & Kasl-Godley).

There are multiple influences on how older adults view their sexuality. In order to fully understand the complex human need of sexuality, it is best to utilize a multi-dimensional view. This broader view has increased relevance for older adults, as it values their life experience and accounts for the multiple factors influencing their needs.
Johnson (1996) described one multi-dimensional perspective of sexuality of older adults. Using a community based sample of 164 persons 55 years of age or older, she addressed seven major variables including: selected demographics, interest in sexual activities, participation in sexual activities, satisfaction with sexual activities, self-esteem, sexual knowledge, sexual attitudes, and intimacy. Participants in Johnson's study completed Rosenberg's Self Esteem Scale (Rosenberg, 1965), Alford's Knowledge Regarding Sexuality in the Aged Scale (Alford, 1983), Weiss' Intimacy Ranking Scale (Weiss, 1977), and a questionnaire developed for the study used to measure sexual interest, participation, and satisfaction. The author found that men and women differed significantly in their sexual interest, satisfaction, and participation in types of sexual activities. Men scored significantly higher scores in interest, participation, and satisfaction with body caressing, sexual intercourse, masturbation, and erotic readings/movies whereas women scored significantly higher in interest, participation, satisfaction in hearing loving words, and making themselves attractive. These results indicate the need for specificity in measurement of what sexual activity is in order to ensure reliability and validity of the data collected from older adults on importance and relationship to quality of life. Johnson accounted for this specificity in the tool she developed by including a description of fifteen selected sexual behaviours to measure both genital and non-genital sexual participation, interest, and satisfaction.

The need to look at gender differences in sexuality and older adults is apparent in Johnson's work as well as that of others (Brecher, 1984). Brecher's synopsis of the findings of the Love, Sex and Aging study (human sexuality survey) in the United States in the late 1980's of people age 50 and older reported that there is a gender difference in
sexual activity among unmarried older adults. More unmarried men reported ongoing sexual partners, and casual sexual partners than unmarried women.

Other studies have reported on sexual activity and satisfaction in the older adult population. In a large survey of older adults ($M = 86$ years) and sexual interest and behaviour, Bretschneider and McCoy (1988) found that older women had a lower frequency of sexual activity than men. In the study by Matthias et al. (1997), participants were asked about sexual satisfaction and level of sexual activity. In the findings of this study with community dwelling persons 70 years and older, one third of the sample indicated they were sexually active. Two thirds of the sample indicated they were satisfied with their level of activity. These findings support the idea that sexual activity may not be important to all older adults but that a percentage of community dwelling older adults are sexually active and this may contribute to their quality of life. These findings also remind researchers into the area of sexuality and aging that older adults may be satisfied with a low level of sexual activity.

The American Association of Retired Persons (AARP) *Modern Maturity* Sexuality Survey was conducted in 1999. A sample of 1,384 adults aged 45 and older completed a mail survey after an initial telephone contact. The survey objective was to examine the role sexuality plays in quality of life for older adults. Men (66.8%) were more likely to indicate that a satisfying sexual relationship was important to their quality of life than women (56.7%) (AARP, 1999). Much of this gender difference seems to be related to presence or absence of a sexual partner as mid-life men and women with partners have relatively similar sexual attitudes and behaviours but older women (less likely to be partnered) had divergent attitudes and behaviours from older men. Sexuality
was also found to be more important to the younger participants than older participants and health, disease, and medication appeared to have very little impact on sexual attitudes and behaviours.

The AARP survey data was used by DeLamater and Sill (2003) to examine how levels of sexual desire are associated with biopsychosocial factors and more specifically, to determine if sexual desire declines with age and if so what factors influence this. They found that sexual desire decreased with age but did not begin decreasing until 75 years or older (DeLamater & Sill). They also found two other principal influences on sexual desire, the importance of sex to the person and the presence of a partner.

In summary, as with the literature on quality of life, the literature on sexuality presents us with a multiplicity of descriptions and conceptualizations. The research on sexuality and older adults is limited, but there remains one pervasive view, that of asexuality of older adults. This view is perpetuated by stereotypes in society. Research does defy this belief; older adults are sexually active. The small amount of research on sexual interest, participation, and satisfaction shows differences between genders. There is also research demonstrating that older adults who are married may be more likely to have a sexual partner.

*Intimacy and Sexuality in Older Adults*

There is a paucity of literature in the area of intimacy and older adults. What is found often combines intimacy with sexuality. Some authors include intimacy as a component of sexuality (Hadded & Benbow as cited in Deacon et al., 1996; Johnson, 1996). Other authors define sexuality as a part of intimacy (Zeiss & Kasl-Godley, 2001). Intimacy is conceptualized to include components of sexual desire, activity, attitudes,
body image and gender-role identity as components. McCabe (1997) used the *Personal Assessment of Intimacy in Relationship Scale* in his comparative study looking at the relationship between intimacy and quality of life in sexually dysfunctional men and women. This scale includes sexual intimacy as one of its domains.

Although sexuality and intimacy may be viewed as interrelated (Stewart & King, 1994), they can also be viewed as separate concepts. Kuhn (2002), in his work on self-expression of residents with dementia, defines intimacy and sexuality as separate needs. In a review of the literature, Kuhn provides a definition of intimacy (Moss & Schwebel, cited in Kuhn, 2002) that includes five related components, physical intimacy, affective intimacy, cognitive intimacy, commitment, and mutuality. It is within the physical intimacy component that sharing physical encounters is included. These physical encounters range from proximity to sexual intercourse. Goddard and Leviton (1980) define intimacy as implying, “...a very close, supportive, sharing relationship that may or may not include a sexual relationship” (p. 349). This conceptual definition showcases the relationship between intimacy and sexuality, but allows for the exclusion of sexual activity based on the individual’s definition.

Other authors offer conceptualizations of intimacy that do not include sexuality. Haight (2001) describes sharing one’s inner thoughts as “acts of intimacy” (p. 90) and Mitchell (1995) describes intimacy as the experience of the, “…in-between of two or more persons, in the messages given and taken at multidimensional realms, as persons hide and disclose their humanness” (p. 102). These definitions offer an alternative view of intimacy.
In summary, the concept of intimacy is closely tied with sexuality, but they are not synonymous. One may be viewed as a part of another, but one concept does not completely encompass the other. Older adults may have a number of intimate relationships but not consider themselves to be sexually active. For this reason, the meaning of intimacy for older adults may be better understood when sexuality and intimacy are examined as separate concepts.

Quality of Life and Sexuality in Older Adults

There are few quality of life frameworks developed for older adults that explicitly include sexuality. Sexuality is sometimes included in the realm of social relationships or physical functioning. In their conceptual framework of quality of life and older adults, Stewart and King (1994) acknowledge that quality of life domains are highly interrelated. They describe an example of this in relation to sexual functioning, “Sexual functioning and intimacy are closely related to social functioning. We retained this [social functioning] as a unique category, however, because individuals can be functioning well socially yet have little intimacy or sexual contact” (p. 35). The conceptualization of quality of life used in the World Health Organization’s quality of life instrument (WHOQOL-100) has sexual activity within the social relationships domain in the current instrument, but initially it was part of the physical domain (Szabo, 1996). This structure was supported by confirmatory factor analysis.

Sexuality is conceptualized as a part of quality of life in Estwing Ferrans’ (1996) quality of life framework. Although she was not looking at any specific population group during her study, the results are relevant as her model is one of the few that includes sexuality. Using factor analysis, Estwing Ferrans found that satisfaction with sex life was
most closely aligned with the health and functioning domain, not the family domain. She also found that satisfaction with spouse/significant other loaded on a different factor than satisfaction with sex life. Her conclusion was that conceptually this fit as “relationships with spouses entailed much more than sex life” (Estwing Ferrans, 1996, p. 298).

Measurements of quality of life and reports of sexual interest and activity were used in a study of older women with mild to moderate hypertension (Leiblum et al., 1994). These authors found that there were no differences in quality of life scale scores between women who were sexually active and those who were inactive. The study did find significant correlations between feelings of well-being and satisfaction with sex life ($r = .22$, $p < .05$), and it was noted that general well being was higher among sexually active participants and sleep difficulties were associated with dissatisfaction with sex life in the inactive participants (Leiblum et al.). It is difficult to draw definitive conclusions regarding the causal direction of relationships from this work, since a person’s well-being may indeed improve sexual satisfaction and the reverse may also be true. There is also no way to test any gender difference as the sample for this study was solely women.

The findings of Johnson’s (1996) study using a multi-dimensional perspective, described earlier in this thesis, were that age was significantly negatively correlated with intimacy and sexual attitudes, sexual interest, and sexual participation. Health has a significant positive correlation with intimacy, self-esteem, and sexual attitudes, sexual participation, and sexual satisfaction (Johnson, 1996). Due to the use of a convenience and predominantly Caucasian sample used in this study, generalizations are not able to be drawn from this study.
There is literature that demonstrates that sexuality is important to older adults. A recently published study by Gott and Hinchliff (2003) explored how older people value sex in later life. This exploration was conducted using the WHOQOL-100 and importance questionnaires and in-depth interview data. One of their findings was that all participants who had a partner attributed some importance to sex; those without a partner did not consider sex to be important. Older participants did rate sex as less important but this was not attributed to age exclusively but to physical and psychological barriers to sex such as erectile dysfunction, health problems, or lack of confidence (Gott & Hinchliff). Gott and Hinchliff also found that sex was re-prioritized as less important in later life. One explanation the authors offered for this finding is that a reduction or cessation of sexual activity was an expected aspect of normal aging.

In Loehr, Verma, and Seguin's (1997) exploratory research study into issues concerning sexuality and intimacy with a sample of older women (age 60-85), they found that participants felt sexuality was important to them and would continue to be. The study's small sample size \((n = 14)\) prevents the findings from being generalized but does add to the body of information. Loehr et al. reported the women in their study felt that sexuality and physical intimacy were important determinants of their quality of life.

In summary, a review of the literature on quality of life and older adults finds that very few conceptual frameworks explicitly include sexuality. Frameworks that include sexuality vary in where it fits; it may be seen as related to physical functioning or social functioning. There is limited literature on the relationship between quality of life and sexuality. Findings from one study show no difference in quality of life scores for women who were sexually active that those who were not. Persons with partners considered sex
important while those without a partner did not, but quality of life was not analyzed as a part of this study (Gott & Hinchliff, 2003).

Research Questions and Hypotheses

From reviewing the literature and my prior knowledge and experience, the following research questions and hypotheses are posed for this study.

The research questions are:

1. How important do older adults consider sex life to be in relation to other facets of quality of life?
2. What are the relationships among age, gender, marital status, health status, education, satisfaction with personal relationships, sexual activity, satisfaction with intimacy, and quality of life?
3. To what degree do age, gender, marital status, health status, education, satisfaction with personal relationships, sexual activity, and satisfaction with intimacy explain older adults' ratings of quality of life?
4. To what degree do age, gender, marital status, health status, education, satisfaction with intimacy, and quality of life explain older adults' ratings of sexual activity?

My research hypotheses are:

Sex life is important to older adults' quality of life.
Age is negatively related to quality of life.
Health status is positively related to quality of life.
Gender has no relationship to quality of life.
Education level is positively related to quality of life.
Marital Status is positively related to quality of life.

Sexual activity is positively related to quality of life.

Satisfaction with intimacy is positively related to quality of life.

Satisfaction with personal relationships is positively related to quality of life.

Marital status, health status, and sexual activity explain a degree of perceptions of quality of life when age and gender are controlled.

Marital status, health status, and quality of life explain a degree of perceptions of sexual activity when age and gender are controlled.

Summary

The quality of life literature showcases the complex nature of the concept. There is general agreement that the concept is multi-dimensional, the domains are interrelated and it is dynamic. However, this may be the only consensus on the subject. Quality of life is often related to life satisfaction, well-being, and health. The concept is interpreted in many different ways and may be dependent on the discipline of the researcher studying it. Due to the complexity of the concept there are multiple methods of measurement. The number of measurement tools available provides researchers with a number of choices and often greater than one measure is used in a study.

According to the literature, aspects of quality of life for older adults include: social relationships and activities, health status, functional abilities, environment, emotional well-being, and material circumstances. There are conflicting results with regards to the relationship between health and quality of life, age and quality of life, and gender and quality of life in this population. Socioeconomic status is found to have a
primarily positive relationship with quality of life and marital status is positively related with quality of life based on the one published study found.

The literature on sexuality presents us with a multiplicity of descriptions and conceptualizations. The research on sexuality and older adults is limited, but there remains one pervasive view, that of asexuality of older adults. Research findings challenge this assumption, older adults are sexually active. The small amount of research on sexual interest, participation, and satisfaction shows differences between genders. Studies also show older adults who are married may be more likely to have a sexual partner. Intimacy is closely tied with sexuality, but they are not the same thing. One may be viewed as a part of another, but one concept does not completely encompass the other. Older adults may have a number of intimate relationships but not consider themselves to be sexually active. Few quality of life frameworks for older adults explicitly include sexuality and there is limited literature on the relationship between quality of life and sexuality.
Chapter III

Research Methods

Introduction

The focus of this research was on the nature and magnitude of the relationships among: specific socio-demographic variables, participants’ feelings of satisfaction with intimacy, satisfaction with personal relationships, sexual activity, and quality of life. Using a reliable and valid quality of life instrument, data were collected and analyzed using descriptive and inferential statistics.

Study design

This exploratory study involved the secondary analysis of data collected for the World Health Organization’s study entitled “The measurement of quality of life in older adults and its relationship to healthy ageing” (WHOQOL-Old, 2000). Specifically, the source of the data was the Quality of Life of Older Adults pilot study conducted at the University of Victoria. The principal investigator for this pilot study was Dr. Anita Molzahn. Data for this cross sectional survey were collected in the fall of 2002. The purpose of the pilot study was to collect information on factors that are important in assessing quality of life for older adults and to test a new quality of life measure. I chose to use the pilot study data due to its availability. Also, it was a project I had worked on as a research assistant and had found interesting.

Sample and Setting

Participants for the pilot study were recruited via convenience sampling. The centre (Victoria) was to collect data from a minimum of 300 participants with equal numbers of male and female respondents and equal numbers of respondents who self-
reported as healthy and unhealthy within three age groups: 60-69, 70-79, and 80+. The goals for the sampling frame were not met; a higher proportion of women and healthy participants responded. People with terminal illnesses, dementia or other significant cognitive impairment were excluded from the study; these exclusion criteria were included in the information package. Most of the participants lived in the greater Victoria, BC area. Characteristics of the total sample of 430 participants are described in Chapter IV.

Data Collection

Respondents heard about the pilot study through advertisements in local papers, letters to seniors’ agencies, and through visits by the researcher and research assistants to local senior centers. Most of the participants completed the questionnaires independently and returned them to the researcher via mail. A small number (n = 5) completed the questionnaires in an interview format. The interview was conducted by one of two research assistants.

Instrumentation

Data were collected from the participants in the pilot study using the following survey instruments: the WHOQOL-100, the WHOQOL-Old (Older Adults module), Importance Rating questions, co-morbid conditions list, and socio-demographic questionnaire. For the purpose of my thesis research, I used data from the WHOQOL-100, the WHOQOL-Old, Importance rating questions, and socio-demographics questionnaire.
**WHOQOL-100**

The WHOQOL-100 was developed by a working group of the World Health Organization (WHO). The history of this development is well documented in published works (Skevington, Sartorius, Amir & The WHOQOL Group, 2003; Szabo, 1996; The WHOQOL Group, 1994, 1995b). The first stage of instrument development was concept clarification. This was completed through international expert review and literature review. Quality of life was defined as multi-dimensional, subjective, and including negative and positive facets (The WHOQOL Group, 1995b). The domains of quality of life were also provisionally identified and used in the next step of the development, the qualitative pilot. These domains included physical, psychological, social relationships, level of independence, environment, and spirituality/religion/personal beliefs.

An iterative methodology was used in the development of this measurement tool, which included input from health professionals and lay groups. Focus groups of healthy individuals, individuals with diseases, and health professionals, were used to generate ideas about important aspects of elements of quality of life. The process of using focus groups to question the comprehensiveness and face validity of the proposed WHOQOL facets assisted in ensuring that the underlying dimensions of quality of life were clearly defined, had high face validity, and had a core meaning that could be applied cross culturally (WHOQOL Group, 1994). The focus group information was complemented by expert review. Expert and lay question writing panels were used to complete definitions of domains and facets and to develop the global question pool. Five response scales were developed, based on the difference in the content of the questions. The scales address importance, evaluation, capacity, frequency, and intensity.
Initial testing of the first WHOQOL-100 instrument was completed in 15 field centres with a total sample size of 4,500. The questionnaire was mainly self-administered and the instructions, administration, and formatting were standardized across centres. Data from this initial study were analyzed through a series of frequency, reliability, correlation and multi-trait multi-method analyses. A number of items were dropped at this stage. Facet and domain inter-correlations were used to examine the relationships between facets and domains. The results of these correlation statistics and frequency problems led to the elimination of five facets and the formation of the current WHOQOL-100.

The current WHOQOL-100 quality of life measurement tool includes 25 facets, measured by four questions per facet. Facets describe behaviours, states of being, capacities or subjective perceptions of experiences (Szabo, 1996). The items use a 5-point Likert scale, with 1 representing the low score and 5 being the high score on the item. Some of the questions are reverse coded but then recoded after data entry in order to have consistency in meaning and calculation. The facets are grouped into 6 domains: Physical health, Psychological, Level of independence, Social relationships, Environment, and Spirituality/Religion/Personal beliefs (see Table 1). In addition to the aggregate total quality of life score, the WHOQOL-100 produces a profile of scores across each domain and each facet.
Table 1

Domains and Facets (F) of the WHOQOL-100

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<tr>
<th>Domain 1</th>
<th>Physical Health</th>
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<tr>
<td>F1</td>
<td>Pain and Discomfort</td>
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<td>F2</td>
<td>Energy and Fatigue</td>
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<td>F3</td>
<td>Sleep and Rest</td>
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<th>Domain 2</th>
<th>Psychological</th>
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<tr>
<td>F4</td>
<td>Positive Feelings</td>
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<tr>
<td>F5</td>
<td>Thinking, memory, learning and concentration</td>
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<td>F6</td>
<td>Self-esteem</td>
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<td>F7</td>
<td>Bodily image and Appearance</td>
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<td>F8</td>
<td>Negative Feelings</td>
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<th>Domain 3</th>
<th>Levels of Independence</th>
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<td>F9</td>
<td>Mobility</td>
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<td>F10</td>
<td>Activities of Daily Living</td>
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<td>F11</td>
<td>Dependence on Medication and Treatment</td>
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<td>F12</td>
<td>Work Capacity</td>
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<tr>
<th>Domain 4</th>
<th>Social Relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>F13</td>
<td>Personal relationships</td>
</tr>
<tr>
<td>F14</td>
<td>Practical Social Support</td>
</tr>
<tr>
<td>F15</td>
<td>Sex</td>
</tr>
<tr>
<td>Domain 5</td>
<td>Environmental</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>F16</td>
<td>Physical Safety and Security</td>
</tr>
<tr>
<td>F17</td>
<td>Home Environment</td>
</tr>
<tr>
<td>F18</td>
<td>Financial Resources</td>
</tr>
<tr>
<td>F19</td>
<td>Health and Social Care: availability and quality</td>
</tr>
<tr>
<td>F20</td>
<td>Opportunity for Acquiring new information and skills</td>
</tr>
<tr>
<td>F21</td>
<td>Participation in and new opportunities for Recreation and Leisure</td>
</tr>
<tr>
<td>F22</td>
<td>Physical Environment</td>
</tr>
<tr>
<td>F23</td>
<td>Transport</td>
</tr>
<tr>
<td>Domain 6/F24</td>
<td>Spirituality, Religion and Personal Beliefs</td>
</tr>
<tr>
<td>General QOL/F25</td>
<td>Overall QOL and general health perceptions</td>
</tr>
</tbody>
</table>

Note: QOL = Quality of life

The psychometric properties of the WHOQOL-100 have been reported and it has been found to be a reliable and valid quality of life measurement tool (The WHOQOL-Old Group, 2003, The WHOQOL Group, 1998). Preliminary analyses of the pilot study data (referenced above) included item response distributions, item-facet reliability analyses, and examination of item correlations with other facets. The pilot study data was analyzed using the pooled dataset (including data from all 22 countries) and again with only the sample or centre data (the data set used in this study). The facet alpha for sex was .73 (pooled data set), personal relationships .67 (pooled data set), and the correlation between the overall quality of life facet and the sexuality facet was .43 (pooled data set) (WHOQOL-Old, 2003). In my sample data set, the facet alpha for sex was .75, facet alpha for personal relationships was .70, and social domain alpha was .74. The overall quality of life facet was not used in my study.

The pooled data were examined for discrimination between healthy and unhealthy samples and for overlapping items (The WHOQOL-Old Group, 2003). The construct validity of the WHOQOL-100 has been supported with structural equation modeling (The WHOQOL Group, 1998) and through Rasch analysis (Leplege, cited in The WHOQOL-Old Group, 2003). The WHOQOL-100 has been used in a number of studies in a variety of countries (Great Britain, the Netherlands, United States) and with a variety of disease specific populations (Sarcoidosis, Diabetes, Depression) (Angermeyer, 2002; De Vries, 1999; Hasanah, 2002; Van Heck; 2002).

**WHOQOL-Old**

The WHOQOL-Old is a module that is intended to supplement the WHOQOL-100 and WHOQOL-Bref (a short form of the WHOQOL-100 measure) instruments. It
has been developed as a module for a specific population, adults 60 years and older. The basic steps in development of the WHOQOL-Old were similar to the WHOQOL-100 development. Twenty-two centres participated in the development of this instrument. A steering committee was formed of members of the participating centers. A review of the current WHOQOL-100 was completed by all centers and agreement was found on key gaps in the instrument relevant to quality of life in older adult. A review of literature on quality of life in older adults and content of existing measures, in addition to expert review, provided initial content for focus group discussion. Focus groups were held at each of the participating centres and included a group of professionals, a group of older adults, and a group of lay caregivers. An iterative methodology was used by the steering committee to develop a set of core facets and definitions of facets for the older adults' module. Item generation followed steps previously used by the WHOQOL Group (The WHOQOL-Old Group, 2000).

The WHOQOL-Old survey instrument was developed contained 6 facets with 6 items measuring each facet (see Table 2). The WHOQOL-Old and importance (old) rating questionnaires were used for the first time in the pilot study. Twenty-two centres participated in the pilot study ($n = 7401$), including Victoria, BC (referenced above). Items in the WHOQOL-Old (pooled data set) were examined for reliability and subjected to multi-method multi-trait analysis. Structural equation modeling was used to assess validity (The WHOQOL-Old Group, 2003). Preliminary analysis of the pooled data set identified 10 WHOQOL-Old items with frequency problems. These items had very little variability and most were negatively skewed. Scale reliability analyses were carried out, followed by facet reliability analyses (exploratory factor analyses, correlations, and
multiple regressions) which resulted in a new module structure of 30 items in 5 facets (The WHOQOL-Old Group, 2003). Ten items were dropped after pilot data analysis (The WHOQOL-Old Group, 2003). My research uses data from the original version (pilot study) of the WHOQOL-Old. None of the subsequently dropped items are included in my research.

Table 2

Facets (F) of the WHOQOL-Old

<table>
<thead>
<tr>
<th>F25</th>
<th>Sensory Abilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>F26</td>
<td>Autonomy</td>
</tr>
<tr>
<td>F27</td>
<td>Past, Present and Future Abilities</td>
</tr>
<tr>
<td>F28</td>
<td>Use of Time</td>
</tr>
<tr>
<td>F29</td>
<td>Participation/Isolation</td>
</tr>
<tr>
<td>F30</td>
<td>Spirituality</td>
</tr>
</tbody>
</table>

Consistency reliability analyses (Cronbach’s alphas) were completed with all items on the WHOQOL-Old (pooled data set). The alpha level for the facet including questions related to intimacy was .78. There were no noted problems with the variability or skewness of the responses to the questions “Are you satisfied with your opportunities for physical contact and closeness?” and “Are you satisfied with the level of intimacy in your life?” In my sample, the alpha level for the facet including the intimacy questions was .83.
Importance Rating of WHOQOL-Old facets

The importance rating questionnaire parallels the facet areas. The importance rating questionnaire includes 38 items. In the pilot study, with the pooled data set, there was a negative skew to the distributions of 28 importance items. This perhaps reflects the participants' difficulty in discriminating between items of importance as the participants rated most of the questions with high levels of importance. The participants may have felt that all areas of quality of life were important.

Socio-demographic Data

Socio-demographic data collected included age, gender, marital status, education, living arrangements, employment status, and volunteer work. Information was also collected from participants on self-reported health status, medical conditions, prescription and non-prescription medications, smoking history, and alcohol consumption. In this study, I used age, gender, marital status, education level, satisfaction with personal relationships, satisfaction with intimacy, sexual activity, and self-reported health status as independent variables to test relationships with quality of life. Age, gender, education level, health status, and personal relationships were selected based on findings from the literature in relation to quality of life and aging. Satisfaction with intimacy and sexual activity were chosen to be included in the analyses because they are less frequently studied in the literature and yet have been identified as having potential relationships with quality of life. Marital status was chosen as it has been found to be potentially related to sexual activity.
Conceptual and Operational Definitions

Quality of Life

Quality of life was defined as “the individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns” (The WHOQOL Group, 1995a, p. 1405). It was measured by the WHOQOL 100. The concept was operationalized using the score of the general quality of life question “How would you rate your quality of life?” Responses ranged from 1 (poor) to 5 (excellent). This question was chosen to measure quality of life versus the total WHOQOL-100 score to avoid collinearity among variables.

Sexuality

Sexuality is defined by the individual and includes multiple dimensions such as sexual activity, satisfaction, and self-concept (Johnson, 1996). The sexuality facet definition of the WHOQOL-100 concerns, “A person’s urge and desire for sex, and the extent to which the person is able to express and enjoy his/her sexual desire appropriately” (The WHOQOL group, 1995a, p. 17). The questions included in the facet address sexual drive, sexual expression, sexual opportunity, and sexual fulfillment (satisfaction). The concept of sexuality was operationalized in my research using the combined mean scores of responses to the four questions of the sexuality facet: “How would you rate your sex life?”, “How well are your sexual needs fulfilled?”, “How satisfied are you with your sex life?”, and “Are you bothered by any difficulties in your sex life?”(Reverse coded). Responses to each question ranged from 1 (low) to 5 (high).
Intimacy

For this study, intimacy was defined using the facet definition from the WHOQOL – Old group, “...the individual’s opportunities for physical and emotional closeness with a partner, or one other close person” (K. Quinn, personal communication, January 12, 2004). This facet examines the notion that although older adults may not be involved in a sexual relationship, a close (intimate) relationship may still be considered an important aspect of quality of life. A variable [Intimacy] was constructed that reflects the mean score of responses to two questions: “How satisfied are you with the level of intimacy in your life?” and “Are you satisfied with your opportunities for physical contact and closeness?” The items were combined and the mean score was calculated. The range was from 1 (low) to 5 (high).

Personal Relationships

For this study, satisfaction with personal relationship was defined as “…the extent to which people feel the companionship, love and support they desire from the intimate relationship(s) in their life” (WHOQOL Group, 1995, p. 15). Satisfaction is measured using responses to the question “How satisfied are you with your personal relationships?” Scores ranged from 1 (low) to 5 (high).

Importance of Sex life

For this study importance of sex life was operationalized using the score from the question “How important is your sex life?” Responses to this question ranged from 1 (not important) to 5 (extremely important).
Health status

The notion of being healthy was defined by the participant in the study. Participants were asked whether they considered themselves to be Healthy or Unhealthy.

Gender

Gender was coded as (1) Male or (2) Female.

Age

Age referred to the self-reported number of years that the participant has lived. It was a continuous variable ranging from 60 to 99.

Education

Education was the self-reported highest level of formal schooling received. Participants choose Primary school, High school, Trade or technical certificate, College diploma or degree, University degree, or other.

Marital status

Marital status referred to the marriage or close union with a spouse or common-law partner and was operationalized by a question asking respondents to chose their current marital status from 5 options; Single (never married), Married, Partnered (other than married), Separated or Divorced (not currently partnered) or Widowed. For the purposes of analysis, marital status was collapsed into two categories; Married/Partnered and not partnered (Single, Separated or Divorced, and Widowed).

Missing Data

Missing data levels were assessed for each of the items (variables) used in the analyses. Each case was also checked and if there were greater than twenty percent total missing values, the case was removed from analyses. There were eight cases removed.
These cases were not compared to the others as there were such a small number of them. With respect to the variables, the four questions that made up the sexuality facet had a higher than average (2-3%) number of missing values. How would you rate your sex life had 11.6 percent missing values. How well are your sexual needs fulfilled had 10.6 percent missing values. How satisfied are you with your sex life had 11.4 percent missing values and are you bothered by any difficulties in your sex life had 11.1 percent missing values. The highest percentage of missing values was for the overall sexuality facet, at fifteen percent. Importance of sex life had 5.5% missing values and satisfaction with personal relationship had 2.3% missing values.

The two questions used in the analyses from the WHOQOL-Old “Are you satisfied with your opportunities for physical contact and closeness?” and “Are you satisfied with the level of intimacy in your life?” were missing only 2% of the values.

Frequently, mean substitution is used to replace missing values. However for this study, mean substitution was not used because of the relatively high percentage of missing data on some variables of interest. Since the sexual activity facet had the highest proportion of missing values, it was used as the variable to assess whether the missing data influenced the dependent variables. A new variable, ‘response group’ was constructed and coded “0” for no response to any item in the sexual activity facet and “1” for at least one response to the facet questions. This variable was included in both regression equations.

The decision to include this variable in the analyses was made to determine whether there were significant differences between groups and whether the differences had any impact on quality of life or sexual activity. Multiple regression analyses were run
including the response group variable. The variable was found to have a significant positive relationship with sexual activity ($\beta = .365, p < .001$) and explained 9.6% of the variance of this dependent variable. These results demonstrate that there are differences between responders and non-responders on the sexual activity facet. The proportion of explained variance from the other significant independent variables did not change with the addition of the response variable.

There was a change in the regression model with sexual activity as the dependent variable and including the response variable. There was an increase in the number of significant independent variables. Quality of life was found to have a positive, significant relationship with sexual activity, explaining .05% of the variance. Quality of life was not found to be significantly related to sexual activity when the response variable was removed.

When the regression model with sexual activity as the dependent variable, response variable excluded, was run with a sub-sample of only those participants who responded to the sexual activity facet, there was only a 2.4% decrease in total explained variance and the same independent variables were found to be significant as with the total larger sample.

The response variable was also found to have a significant relationship with quality of life but when it was excluded from the equation, there was only a small reduction in explained variance (1.2%), and the significant independent variables did not change in nature or in magnitude. There was also no difference in the relationships between dependent variables and quality of life when the regression analysis was completed using a sub-sample of only those participants who had responded to the sexual
activity facet. When the regression equation included only the sample participants who responded to the sexual activity facet, the significant relationships were almost identical to when the regression equation was run using the total sample and excluding the response group variable. As a result of using both of these methods to check for differences in sub-samples related to missing values, I chose to report results from the total sample, excluding the response group variable. I report on the significant relationships between quality of life and sexual activity later in this thesis.

Data Analysis

Preparation of the data set occurred prior to analyses. Out of range values were checked and corrected. Variables were reverse coded where necessary. SPSS Version 11.5 was used for all statistical analyses. Statistical significance was set at .05.

Frequencies for age, gender, marital status, self-reported health status, and education level were used to provide a description of the sample. Descriptive statistics (mean, standard deviation) were calculated for satisfaction regarding sexuality, satisfaction with level of intimacy, satisfaction with personal relationships, and quality of life. Frequency distributions were examined for each variable and facet used in the analyses to check for skewness.

Inter-item reliability (Cronbach’s alpha) was assessed for the quality of life, sex, and personal relationships facet and the social domain of the WHOQOL-100 (WHOQOL-Old questions on intimacy were included in the WHOQOL-100 sexual activity facet) in order to determine internal consistency.

To answer the research question regarding importance of sexuality, mean scores for each of the importance questions were calculated. The means were reported in rank
order of importance. Tests of difference were completed for the importance question. T-tests were used to compare levels of importance for men and women and partnered/not partnered. ANOVA was used to examine differences among levels of importance in three age groups; 60-69, 70-79, and 80+.

To address the other research questions, bivariate and multivariate analyses were conducted. Socio-demographic variables were dummy coded as follows: Gender (Male = 0 Female = 1), Marital status was collapsed into two categories Married/Partnered = 1, Not Married/Partnered (Single, Separated/Divorced, and Widowed) = 0, and Health status was re-coded as 1 = Healthy, 0 = Unhealthy. Age was left as a continuous variable and Education was left as an ordinal variable.

Correlational analyses were completed to provide an assessment of the relationships among age, health status, marital status, education level, sexuality, satisfaction with intimacy, satisfaction with personal relationships, and quality of life. Pearson r’s were calculated to analyze the correlations between interval level variables and Spearman’s rhos were calculated to analyze the correlations for ordinal level variables. Pairwise deletion was used.

Forward entry multiple regression analyses were used to examine the relationships between quality of life and eight independent variables: age, gender, marital status, health status, education level, satisfaction with personal relationships, intimacy, and sexual activity. It was also used to examine relationships between sexual activity and eight independent variables: age, gender, marital status, health status, education level, satisfaction with personal relationships, intimacy, and quality of life. Again, pairwise deletion was used. Forward entry regression was used in order to demonstrate the
relationship among variables regardless of the strength. Forward entry regression allows the researcher to proceed with the addition of variables based on theory or previously documented relationships in the literature. Hierarchical regression was not used as the previously documented relationships in the literature were not consistent or strong enough.

The data were checked to ensure they met the assumptions for multiple regression. Histograms were constructed for each of the interval variables used in the analyses and examined for normality. While there was only a slight negative skew to the means for most variables, the quality of life item had a significant negative skew. Residual scatterplots were examined for linearity. Most of the variables in this study were found to form predominantly horizontal bands, indicating relative freedom from abnormalities. Scatterplots were also utilized to test for heteroscedasticity – or constant error variance. The plots for this study sample did not show any patterns to the residuals, they formed a horizontal band that indicates constant variance. Because of the robust nature of multivariate regression no manipulations were made to the variables.

Multicollinearity is a potential problem with independent variables that are highly correlated with each other. The highest correlation was $r = .82$, between the sexual activity facet and intimacy. This was expected as the concepts are closely related and will be noted in the study’s limitations. No other correlations exceeded $r = .60$.

**Ethical Considerations**

The human rights of individuals participating in the study were protected in a number of ways. The data used in this study were collected between September 2002 and December 2002, after approval from the Ethical review of human research (project
number 283-02) was given. The study was given a waiver of ethical clearance by the
Human Ethics Review Committee at the University of Victoria in May 2003 - Project
protocol no.147-04 (Appendix A). Use of data in this secondary analysis is consistent
with the purpose and objectives of the previous research. Permission to use the Canadian
data was provided by the principal investigator of the Canadian centre of the pilot study,
Dr. Anita Molzahn.

A detailed written description of the study was provided to all participants in the
form of an information sheet outlining the details of the study. Participation was
voluntary and informed consent (Appendix B) was received. The anonymity and
confidentiality of the participants was and continues to be protected. There were no
names on the questionnaires and the data cannot be linked to any individual. The
questionnaires continue to be stored in a separate locked room from the consent forms.
All data files are kept in a computer file without identifying information. There was no
identifying information about participants included in this thesis.

Potential risks to participants are negligible. The aims of the pilot study were
outlined in the consent process (Appendix B) and included an examination of factors
related to quality of life in older adults.

Summary

This descriptive correlational study used survey data collected for an international
World Health Organization study. The sample of community dwelling people over the
age of 60 was recruited via convenience sampling. Data were collected using five survey
instruments. Two quality of life measurement tools; the WHOQOL-100 and the
WHOQOL-Old module were used in addition to an importance rating instrument, socio-
demographic data, and information on co-morbid conditions. In this chapter, instrument
development and psychometric properties were summarized and definitions of the
concepts and how they were operationalized were outlined. The process for dealing with
missing data was discussed, an overview of data analyses that were performed was
provided, and ethical considerations were documented.
Chapter IV

Results

The purpose of this chapter is to present the findings of the study. These results are described in the order of the research questions. A description of the study sample is provided first. This is followed by ratings of importance of participants' sexual lives. Next, the relationships between quality of life and a number of dependent variables are reviewed. Finally, the factors that explain participants' ratings of sexuality and participants' ratings of quality of life are presented.

Description of the Sample

The sample included 430 community-dwelling participants between the ages of 60 and 99 ($M = 74.4$ years; $SD = 8.6$). Seventy-two percent of the sample was female and 88% perceived themselves to be healthy. More females and more people who described themselves as healthy responded than were intended to fit the sampling frame. Because convenience sampling was used, it was difficult to restrict respondents to specific categories; the same situation occurred in other countries that participated in the larger study. Forty-two percent of the sample was married and thirty-five percent had a university degree. Seventy-five percent did voluntary work. Table 3 includes a description of the sample.
Table 3

*Characteristics of sample*

<table>
<thead>
<tr>
<th></th>
<th>Frequency ($n$)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>116</td>
<td>27.0</td>
</tr>
<tr>
<td>Female</td>
<td>314</td>
<td>73.0</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-69</td>
<td>132</td>
<td>30.9</td>
</tr>
<tr>
<td>70-79</td>
<td>168</td>
<td>39.0</td>
</tr>
<tr>
<td>80 and older</td>
<td>130</td>
<td>30.2</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single (never married)</td>
<td>19</td>
<td>4.5</td>
</tr>
<tr>
<td>Married</td>
<td>182</td>
<td>42.3</td>
</tr>
<tr>
<td>Partnered</td>
<td>16</td>
<td>3.8</td>
</tr>
<tr>
<td>Separated/divorced</td>
<td>76</td>
<td>17.6</td>
</tr>
<tr>
<td>Widowed</td>
<td>131</td>
<td>30.8</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary school</td>
<td>16</td>
<td>3.8</td>
</tr>
<tr>
<td>High school</td>
<td>97</td>
<td>22.6</td>
</tr>
<tr>
<td>Trade/technical certificate</td>
<td>46</td>
<td>10.8</td>
</tr>
<tr>
<td>College diploma or degree</td>
<td>82</td>
<td>18.9</td>
</tr>
<tr>
<td>University degree</td>
<td>151</td>
<td>35.1</td>
</tr>
</tbody>
</table>
Other 38 8.7

Current health status

Healthy 384 89.3
Unhealthy 46 10.7

Note: Adjusted statistics used

For purposes of analysis, I removed eight cases that contained >20 percent missing values. The following analyses have been completed with a sample size of 422. Mean age was 74.2 (SD = 8.6). Mean score on the satisfaction with personal relationships variable was 3.99 (SD = .79, range 1-5) and 3.67 on Intimacy (SD = .86, range 1-5). The sexual activity facet (range 0-26) had a mean score of 17.06 and a standard deviation of 4.16.

Importance of Sex Life

The first research question was, "How important do older adults consider sex life to be in relation to other facets of quality of life"? Sex life was found to have the lowest relative importance of all of the 35 importance questions asked of the sample, but the largest standard deviation (M = 2.28, SD = 1.26). Ability to take care of one's own activities of daily living, freedom and independence, and access to adequate health care were found to have the highest relative importance in this sample. Table 4 outlines, in descending order, the mean and standard deviations of all the importance questions.
Table 4

*Ratings of Importance of Aspects of Quality of life*

<table>
<thead>
<tr>
<th>Importance Question</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imp - Able to take care of ADL</td>
<td>4.56</td>
<td>0.54</td>
</tr>
<tr>
<td>Imp – Freedom and independence</td>
<td>4.49</td>
<td>0.61</td>
</tr>
<tr>
<td>Imp - Being able to get adequate health care</td>
<td>4.46</td>
<td>0.58</td>
</tr>
<tr>
<td>Imp - Able to move around</td>
<td>4.45</td>
<td>0.54</td>
</tr>
<tr>
<td>Imp - Sensory abilities</td>
<td>4.29</td>
<td>0.59</td>
</tr>
<tr>
<td>Imp - Able to think through everyday problems/make decisions</td>
<td>4.25</td>
<td>0.61</td>
</tr>
<tr>
<td>Imp – Energy</td>
<td>4.24</td>
<td>0.58</td>
</tr>
<tr>
<td>Imp - Home environment</td>
<td>4.21</td>
<td>0.61</td>
</tr>
<tr>
<td>Imp - Being able to concentrate</td>
<td>4.14</td>
<td>0.64</td>
</tr>
<tr>
<td>Imp – Environment</td>
<td>4.14</td>
<td>0.71</td>
</tr>
<tr>
<td>Imp - Feel positive about self</td>
<td>4.13</td>
<td>0.65</td>
</tr>
<tr>
<td>Imp - Adequate transport in everyday life</td>
<td>4.11</td>
<td>0.80</td>
</tr>
<tr>
<td>Imp - Feel happiness/enjoyment of life</td>
<td>4.08</td>
<td>0.66</td>
</tr>
<tr>
<td>Imp - Relationships with other people</td>
<td>4.07</td>
<td>0.71</td>
</tr>
<tr>
<td>Imp - Financial resources</td>
<td>4.07</td>
<td>0.70</td>
</tr>
<tr>
<td>Imp - Able to learn and remember important info</td>
<td>4.03</td>
<td>0.68</td>
</tr>
<tr>
<td>Imp - Feel content</td>
<td>4.02</td>
<td>0.68</td>
</tr>
<tr>
<td>Imp - Restful sleep</td>
<td>4.02</td>
<td>0.69</td>
</tr>
<tr>
<td>Imp - Feeling physically safe and secure</td>
<td>4.01</td>
<td>0.78</td>
</tr>
<tr>
<td>Imp - Feel hopeful</td>
<td>3.98</td>
<td>0.70</td>
</tr>
<tr>
<td>-------------------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Imp - Personal beliefs</td>
<td>3.90</td>
<td>0.92</td>
</tr>
<tr>
<td>Imp - Free of negative feelings</td>
<td>3.89</td>
<td>0.77</td>
</tr>
<tr>
<td>Imp - Positive attitude towards death and dying</td>
<td>3.84</td>
<td>0.90</td>
</tr>
<tr>
<td>Imp - Chances for new information or knowledge</td>
<td>3.80</td>
<td>0.84</td>
</tr>
<tr>
<td>Imp - Relaxation/leisure</td>
<td>3.79</td>
<td>0.76</td>
</tr>
<tr>
<td>Imp - Able to organize time</td>
<td>3.70</td>
<td>0.84</td>
</tr>
<tr>
<td>Imp - Free of dependence on medicines/treatments</td>
<td>3.67</td>
<td>1.10</td>
</tr>
<tr>
<td>Imp - Body image and appearance</td>
<td>3.60</td>
<td>0.78</td>
</tr>
<tr>
<td>Imp - Achievements</td>
<td>3.57</td>
<td>0.82</td>
</tr>
<tr>
<td>Imp - Support from others</td>
<td>3.43</td>
<td>0.82</td>
</tr>
<tr>
<td>Imp - Being able to get adequate social help</td>
<td>3.42</td>
<td>1.09</td>
</tr>
<tr>
<td>Imp - Able to work</td>
<td>3.38</td>
<td>1.16</td>
</tr>
<tr>
<td>Imp - Able to participate in community</td>
<td>3.33</td>
<td>0.90</td>
</tr>
<tr>
<td>Imp - Chances to learn new skills</td>
<td>3.16</td>
<td>1.01</td>
</tr>
<tr>
<td>Imp - Sexual life</td>
<td>2.28</td>
<td>1.26</td>
</tr>
</tbody>
</table>
My research hypothesis was not supported with this result. There were significant differences in the importance of sex life between males and females, between partnered and non-partnered and among age groups in the sample. Men rated the importance of sex life higher than women, partnered participants rated importance of sex life higher than non-partnered participants, and younger participants rated importance of sex life higher than older participants (60-69 $M = 2.96$, 70-79 $M = 2.25$, and 80+ $M = 1.55$). These differences are outlined in Tables 5 and 6.

Table 5

*Mean Differences in Importance of Sex life by Gender and Marital Status*

<table>
<thead>
<tr>
<th>Question</th>
<th>Men</th>
<th>Women</th>
<th>$t$</th>
<th>$df$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imp – sexual life</td>
<td>2.90</td>
<td>2.04</td>
<td>33.536***</td>
<td>419</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Married/Partnered</th>
<th>Non-partnered</th>
<th>$t$</th>
<th>$df$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imp – sexual life</td>
<td>2.84</td>
<td>1.76</td>
<td>19.156***</td>
<td>414</td>
</tr>
</tbody>
</table>

***$p < .001$
Table 6

Analysis of Variance in Importance of Sex Life by Age Groups

<table>
<thead>
<tr>
<th>Question Age Groups</th>
<th>Imp – sexual life</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>ANOVA</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>2</td>
<td>119.851</td>
<td>59.926</td>
</tr>
<tr>
<td>Residual</td>
<td>393</td>
<td>507.330</td>
<td>1.291</td>
</tr>
</tbody>
</table>

F = 46.421 p = .000

Correlations with Quality of life

Research question two asked “What are the relationships among age, gender, marital status, health status, education, satisfaction with personal relationships, sexual activity, satisfaction with intimacy, and quality of life”? Bivariate correlational analyses demonstrated that there were no significant relationships between age and quality of life, and between education and quality of life. Of the variables that were found to have significant positive correlations with quality of life, satisfaction with personal relationships was the strongest correlate (r = .469, p < .01). Correlational analyses support my hypotheses that health status is positively related to quality of life, that intimacy is positively related to quality of life, and that satisfaction with personal relationships is positively related to quality of life. Correlational analyses also support my hypothesis that sexual activity is positively correlated to quality of life. My correlation analyses do not support my hypotheses that age is negatively related to quality
of life and that education is positively related to quality of life. Marital status was found
to be positively related to quality of life which supports my hypotheses.

Correlations between independent variables were also examined. There were no
significant relationships found between health status and age, health status and education,
and health status and marital status. Intimacy was found to be significantly correlated to
not only quality of life but also to the sexuality facet ($r = .82, p < .01$), satisfaction with
personal relationships ($r = .59, p < .01$), health status ($r = .18, p < .01$), marital status ($r = .25, p < .01$), and age ($r = -.10, p < .05$). Table 7 provides a complete correlation matrix
for all variables used in the analyses.
Table 7

Correlations between Age, Education, Gender, Marital Status, Intimacy, Satisfaction with Personal Relationships, Health Status, Sexual Activity, and Quality of Life

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Education</td>
<td>-0.16**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Gender</td>
<td>0.03</td>
<td>-0.08†</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Marital Status</td>
<td>-0.25**</td>
<td>0.091†</td>
<td>-0.35**†</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Intimacy</td>
<td>-0.10*</td>
<td>0.05</td>
<td>-0.08</td>
<td>0.26</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Satisfaction with personal relationships</td>
<td>-0.01</td>
<td>0.08</td>
<td>-0.04</td>
<td>0.21**</td>
<td>0.60**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Health status</td>
<td>0.02</td>
<td>0.001†</td>
<td>-0.09</td>
<td>0.065†</td>
<td>0.18**</td>
<td>0.15**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Sexual activity</td>
<td>-0.24**</td>
<td>0.10*</td>
<td>-0.22**</td>
<td>0.46**</td>
<td>0.82**</td>
<td>0.53**</td>
<td>0.17**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>9. Quality of life</td>
<td>-0.08</td>
<td>0.08</td>
<td>-0.07</td>
<td>0.22**</td>
<td>0.42**</td>
<td>0.47**</td>
<td>0.30**</td>
<td>0.42**</td>
<td>1</td>
</tr>
</tbody>
</table>

*p < .05 [two-tailed]
**p < .01 [two-tailed]
† Spearman’s rho
Explanations of Quality of Life

The third research question in my study asked, "To what degree do age, gender, marital status, health status, education, satisfaction with personal relationships, sexual activity, and satisfaction with intimacy explain older adults' ratings of quality of life"? In the analysis of the relationships between quality of life and these independent variables, using forward entry regression with pair wise deletion, only three variables were found to be statistically significant. These were: satisfaction with personal relationships, health status, and sexual activity. These variables explained 31% of the variance evident in quality of life. In Table 8, detailed results of the regression analysis are presented.

Table 8

Summary of Forward Entry Regression Analysis for variables explaining quality of life

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>standard error</th>
<th>standardized b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>2.385</td>
<td>.164</td>
<td></td>
</tr>
<tr>
<td>Satisfied with personal</td>
<td>.262***</td>
<td>.042</td>
<td>.321</td>
</tr>
<tr>
<td>Relationships</td>
<td>.465***</td>
<td>.094</td>
<td>.219</td>
</tr>
<tr>
<td>Health Status</td>
<td>3.379E-02***</td>
<td>.008</td>
<td>.217</td>
</tr>
<tr>
<td>Sexual Activity</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$r^2 = .309$

ANOVA
df SS MS

<table>
<thead>
<tr>
<th>Regression</th>
<th>3</th>
<th>46.578</th>
<th>15.526</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residual</td>
<td>356</td>
<td>104.211</td>
<td>.293</td>
</tr>
</tbody>
</table>

F = 53.039 p = .000

*p < .05  
**p < .01  
***p < .001
Satisfaction with personal relationships accounted for the largest amount of variability in quality of life scores, twenty-two percent (health status and sexual activity controlled). A one unit increase in the personal relationship variable resulted in a .26 unit increase in predicted quality of life scores when health status and sexual activity were controlled for. Being healthy resulted in a .465 increase in predicted quality of life scores when satisfaction with personal relationships and sexual activity were controlled. A one unit increase in the sexual activity facet resulted in a very small but significant .003 unit increase in predicted quality of life scores when health status and satisfaction with personal relationships are controlled.

This analysis supports my hypotheses that health status and sexual activity explain perceptions of quality of life. Age and gender were not found to be significant and therefore not included in the final model. Further, my hypothesis that marital status explains perceptions of quality of life was not supported.

Explanations of Sexual Activity

The fourth research question in my study was, "To what degree do age, gender, marital status, health status, education, satisfaction with personal relationships, satisfaction with intimacy, and quality of life explain older adults' ratings of sexual activity?" Using forward entry regression analysis and pair wise deletion, with sexual activity as the dependent variable, 76% of the variance was explained by intimacy, marital status, age, and gender. All of these independent variables were found to be statistically significant at p < .001, with the exception of gender, significance p < .01. In Table 9, detailed results of the regression analysis are presented.
Table 9

Summary of Forward Entry Regression Analysis for variables explaining sexual activity

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>standard error</th>
<th>standardized b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>7.480</td>
<td>1.159</td>
<td></td>
</tr>
<tr>
<td>Intimacy</td>
<td>3.613***</td>
<td>.131</td>
<td>.748</td>
</tr>
<tr>
<td>Marital Status</td>
<td>1.813***</td>
<td>.247</td>
<td>.218</td>
</tr>
<tr>
<td>Age</td>
<td>-5.401E-02***</td>
<td>.013</td>
<td>-.111</td>
</tr>
<tr>
<td>Gender</td>
<td>-.743 **</td>
<td>.261</td>
<td>-.079</td>
</tr>
</tbody>
</table>

\[ r^2 = .758 \]

ANOVA

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>SS</th>
<th>MS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>4</td>
<td>4715.186</td>
<td>1178.796</td>
</tr>
<tr>
<td>Residual</td>
<td>355</td>
<td>1507.380</td>
<td>4.246</td>
</tr>
</tbody>
</table>

\[ F = 277.616 \]
\[ p = .000 \]

*p < .05

**p < .01

***p < .001

A one unit increase in the intimacy measure resulted in a 3.61 unit predicted increase in scores on the sexuality facet when marital status, age, and gender were controlled. Intimacy accounted for 67% of the explained variance in sexual activity when age, gender, and marital status are controlled for. If a participant was married there was a 1.81 unit increase in predicted scores on the sexuality facet when intimacy, age, and gender were controlled. Older participants had slightly lower predicted scores on the sexuality facet when marital status, intimacy, and gender were controlled than did those who were younger. Similarly, there was a .743 decrease for every increase of one unit on the predicted sexuality facet score among women when intimacy, marital status, and age were controlled. This analysis supports my hypothesis that marital status will explain
perceptions of sexual activity if age and gender are controlled, but does not support my hypotheses that health status and quality of life explain perceptions of sexual activity when age and gender are controlled.

Summary

In this chapter, the results of descriptive and inferential analyses were reported. Sexual life was found to be the least important component of quality of life, while ability to take care of your activities of daily living was the most important. Significant predictors of quality of life included: satisfaction with personal relationships, health status, and sexual activity. The model explained 31% of the variance in quality of life, with satisfaction with personal relationships accounting for the largest portion of the variance, 22%. Significant predictors of sexual activity included: intimacy, marital status, age, and gender. The model explained 76% of the variance in sexual activity, with intimacy accounting for the largest portion of variance, 67%.
Chapter V
Discussion of Results

Introduction

In the following chapter, I discuss the results of my study examining the relationships among a number of socio-demographic variables, intimacy, sexual activity, personal relationships, and quality of life. In addition to discussing findings in relation to the research questions, I discuss findings from the analyses used to address missing values.

Importance of Sex Life

It was anticipated that sex life would be an important aspect of quality of life in this sample but sex life was ranked by participants as the least important facet of quality of life. It may be that the low importance scores for the sex life facet in my study were due to re-prioritization of sex as less important in later life; this finding is consistent with the findings of Hinchiff and Gott (2003) who found that sex life was considered to be less important to older adults. Participants may believe that sex life is not ‘supposed’ to be important as they get older because of the stereotype that the older adult is asexual. However, large variability on this facet suggests that the importance of a person’s sex life is extremely individual. It would also be useful to have retrospective data here to see if sex life was important to participants when they were younger.

Comparing differences in importance of sex life among sub-groups in my sample, I again found results similar to those of Hinchiff and Gott (2003), where partnered people attributed more importance to sex than people without partners. I also looked at gender differences related to importance of sex life. Men rated importance of sex life
significantly higher than women. This finding supports the AARP Sexuality survey completed in 1999. While one explanation is that most men value sexual activity more than women, it is also possible that this difference may be explained by the fact that it is socially desirable for men to see sex as important. Men may feel greater permission to be sexual beings and therefore may be more likely to answer questions about sexual activity on a survey and report higher importance. Men may also feel their sex life should be important to them. Gender differences in sexual interest, participation and satisfaction are reported in the very limited research done in this area (Bretschneider & McCoy, 1988; Johnson, 1996). In Hinchliff and Gott’s (2003) study, it was noted that three times as many women rated sex as not important as men. In the AARP (1999) survey they found that sexuality was more important to men than women and the difference was greater in the older participants. In contrast, Loehr et al.’s (1997) qualitative study found older women reporting that sexuality was important to them and contributed to their quality of life. These conflicting results may be due to the use of different research methods.

In my study, I found that the younger participants rated importance with sex life significantly higher than the older participants. This finding supports Hinchliff and Gott’s (2003) study, where older participants rated sex as less important than younger participants and Johnson’s (1996) findings that age was significantly negatively correlated with sexual interest. These results support the prevailing societal view that older people are not interested in sex and may be due to the fact that older people do not feel that their sex life should be important any longer. Another contributing factor to the lower importance of sex life scores for older adults may be marital status. As we age, we
have an increased likelihood of becoming widowed. If we do not have a partner we may become less sexually active and therefore adapt our lives to not see sex life as important.

**Participants’ perceptions of Quality of Life**

Overall, objective economic and socio-demographic indicators are less powerful in explaining the quality of life variances than subjective ratings of well-being and health for older adults (Bowling et al., 2003). This may provide an explanation for why there is limited reported research on these relationships. It also interesting to note that my findings are consistent with those reported in the literature as neither age, gender, nor education level were found to explain any portion of the variance in quality of life.

In my study, age was not found to have a significant relationship with quality of life, which lends support to the findings of Sarvimaki and Stenbock-Hult (2000) and Raphael et al. (1997), and contradicts the reported findings of Farquhar (1995) and Hughes (1993). My hypothesis that age is negatively related to quality of life was not supported by my study’s finding. It appears that age alone is not a significant predictor of quality of life.

Many of the participants in my study described themselves as healthy and my findings showed that health status has a positive, significant relationship with quality of life. In the regression model, health was found to explain 5.5% of the variance of participants’ quality of life when satisfaction with personal relationships and sexual activity were controlled for. My findings lend support to eleven studies on the relationship between self-perceived health of older adults and quality of life reviewed by Moore, Newsome, Payne & Tiansawad (1993) and to Raphael et al. (1997). Bowling et al., in a (2003) study of community dwelling older adults, found that 37% of participants
indicated that having good health was the single most important area of quality of life and 44% indicated health was important for a ‘good’ quality of life. My findings support this research in that quality of life and health have a positive relationship for older adults. In promoting health we are improving quality of life for older adults.

In my study, no significant relationship was found between gender and quality of life. This finding supports my research hypothesis. The limited reported research on this relationship demonstrates conflicting findings. Some research finds older women report a lower quality of life than older men (Haug & Folmer, 1986, Sprangers et al., 2000). Other research on older adults found no difference in quality of life between men and women (Mercier et al., 1998). It may be that the difference in the samples used in these studies explains the conflicting results.

My research hypothesis that education and quality of life are significantly related was not supported by my findings. In the literature, level of income is often used as an indicator of socio-economic status and viewed as an objective indicator of quality of life. I did not have information on level of income, so education level is used as an indicator of socio-economic status. My findings are different from the majority of literature which demonstrates a positive relationship between level of education/higher socioeconomic status and quality of life (Liao, McGee, Kaufman, Cao & Cooper, 1999; Ross & Willigan, 1997; Veenhoven, 1999). These studies looked primarily at health-related quality of life and used a variety of different conceptualizations of quality of life (lack of distress, life satisfaction, and objective indicators of disability) that make it difficult to compare findings, but socio-economic status is commonly thought to have a positive relationship with quality of life. It may have been that if the dataset included information
regarding income I may have discovered a relationship. It may also be that the limited variation in education level in my sample decreased the likelihood a relationship would be found.

Being partnered was found to have a significant positive relationship with quality of life in my study, supporting my hypothesis, but was not found to explain any portion of the variance in quality of life scores when other variables are controlled for. This likely reflects the fact that although being married or having a partner does have a significant relationship with quality of life, other variables are more important. Marital status is another objective socio-demographic variable that is not frequently examined in the quality of life literature. One study showed a significant reduction in quality of life for widows (non-partnered) living alone than living with family, but with this group of Chinese Canadians, social support was a better predictor of quality of life than living arrangements (Gee, 2000). Marital status was empirically distinguished from living arrangements in this study.

Social support and social relationships are widely seen as important to quality of life for older adults (Estwing Ferrans, 1996; Gee, 2000; Lawton, 1991; Meeberg, 1993; Szabo, 1996). Satisfaction with personal relationships had the highest correlation with quality of life and explained the largest portion of variance in the quality of life score (22%) in the analyses completed in this study when sexual activity and health were controlled for. This finding supports the qualitative work of Bowling et al. (2003), who report that one of the most important areas of quality of life was having good social relationships, which tied with health at 37%. Good social relationships were the most commonly mentioned variable that gave respondents' lives quality – mentioned by 81%
Personal relationships may provide social support to older adults and I would argue are seen as social relationships, which are seen as predictive of quality of life.

Intimacy was also found to have a significant positive relationship with quality of life. It did not, however, explain any portion of the variance in the quality of life scores. Although there has been little previous research regarding intimacy and quality of life, this variable is closely related, conceptually, to social relationships. My findings support the importance of intimacy and social relationships to quality of life.

It is interesting to note that the participants in this study described sex life as being of low importance yet the sexual activity facet had a positive, significant relationship with quality of life and explained 3.4% of the variance in predicted quality of life scores. One possible explanation for this is that participants responded to the importance questions based on what was socially desirable in society. There was a strong correlation ($r = .82$) between intimacy and sexual activity and there may be conceptual overlaps between these two variables that make it difficult to ascertain independent effects.

The finding in this study, that sexual activity explains perceptions of quality of life lends support to the inclusion of sexuality in conceptual frameworks of quality of life for older adults (Estwing Ferran, 1996; Stewart & King, 1994). It is an aspect of life that is often not included in studies of quality of life. In Leiblum, et al.'s (1994) study, no differences were found in quality of life scores between women who were sexually active and those who were inactive. These authors did report that general well-being was higher among the sexually active participants. It is difficult to draw comparisons with this work
and my study's findings due to differences in samples and the use of different quality of life measurements. The one other study that measured quality of life using the WHOQOL-100 did not report any research findings regarding the relationship with quality of life and sexuality (Gott & Hinchliff, 2003).

Participants' Perceptions of Sexual Activity

In my study, 76% of the variance in sexual activity was explained by intimacy, marital status, age, and gender. Health status did not explain any significant portion of the variance in sexual activity. These findings did not support my hypothesis. Sexual satisfaction was one component of the sexuality facet used in my study. In the extremely limited research in this area, health status was found to be significantly positively related to sexual participation and sexual satisfaction (Johnson, 1996).

I would argue that one of the primary reasons for the lack of literature in this area is that sexuality is not seen as important for older adults, or is perceived that it should not be important to older adults. If sexuality and older adults is studied and reported on, it is frequently in the area of sexuality in nursing homes and is described as a problem to be solved. It is rarely discussed in relation to quality of life. One reason may be that components of sexuality, such as sexual participation, interest, and satisfaction may be subsumed into the physical functioning or social relationships dimensions of quality of life (Estwing Ferrans, 1996) and not brought into focus in reported results of studies. It may also be that, as in Bowling et al.'s (2003) survey of definitions of quality of life for older adults, sexuality is not included as a variable.

Johnson's (1996) study of sexuality in older adults from a multi-dimensional perspective is an exception. Although she does not address quality of life, the findings
from my study are consistent with her work in a number of areas. For example, gender explains a small, albeit significant, portion of the variance (0.6%) in sexual activity when age, intimacy, and marital status are controlled for. Men were more likely to score higher on the sexuality facet. Johnson found that men scored significantly higher in scores on sexual interest and participation in specific sexual activities, including sexual intercourse. The WHOQOL-100 sexuality facet does not specify sexual activities but addresses sexual activity in general. It would be valuable to provide participants with opportunities to address specific sexual behaviours so researchers are clearer as to what they are measuring when 'sexual activity' is reported. It is possible that participants think primarily of sexual intercourse when asked about 'sexual activity' or 'sex life'. If that was the case in my study my findings may support Johnson's. If participants were given options to respond to questions about various specific sexual practices, I may have found that women reported higher scores than men on different activities. As women may identify more closely to intimate activities, those may have been important to their quality of life.

In my study, I found that older participants had significantly lower scores on the sexuality facet than younger participants. This finding is also consistent with Johnson's (1996) work and with DeLamater & Sill's (2003) exploration of factors influencing sexual desire. It also supports the prevailing societal view that as we age, we become less interested in sex. This finding holds when marital status, gender and intimacy are controlled for. Marital status also explained participant's perceptions of sexual activity, accounting for 7% of the variance when age, gender, and intimacy were controlled for. This finding supports the AARP (1999) study on sexuality which found that the gender
differences in importance of sexuality appeared to be related to the presence of absence of a sexual partner. Having a partner increases the likelihood of having a sexual relationship and therefore may lead to an increase in sexual activity.

Intimacy explained the highest proportion of the variance in sexual activity, 67%. The intimacy facet used in my study included questions on satisfaction with level of intimacy and satisfaction with opportunities for physical contact and closeness. These questions are conceptually related to those from the sexuality facet and therefore it is expected that there would be some relationship between the two. The correlation between these two variables was $r = .82$ and there is likely overlap between the concepts. My findings are consistent with McCabe's (1997) study of participants with sexual dysfunction. She found that intimacy was strongly associated with sexual (activity) dysfunction.

Quality of life did not explain any portion of the variance of sexual activity in my study, disproving my hypothesis. For my sample, quality of life did not predict sexual activity. Cultural factors or socioeconomic status indicators (income, housing) may have also had effects on either sexual activity or quality of life scores in this sample but these data were not available in the data set.

The Response Difference

There was a statistically significant but negligible difference in the explained variance of sexual activity when the response variable (response to any item on the sexuality facet) was added to the regression equations. The difference was that quality of life became significant, explaining a portion of the variance, albeit a very small portion - .05%. Given social desirability theory, it seems reasonable to think that those who
responded to the sexuality facet would be more likely to rate it highly. However, this small difference was not seen as clinically important.

The response variable was found to have a significant relationship with quality of life and explained a small portion of the variance, 1.2%. There may have been a difference between the participants who responded to the sexuality facet from those who did not. The younger participants were more likely to complete the questions on sexuality, 39% of those participants 80 years and older did not complete the questions versus only 1% of those aged 70-79. Those who felt the questions were not applicable to their situation may be un-partnered (29% of all un-partnered participants did not answer questions on sexuality). This supports literature that reports not having a partner as a primary reason older adults are not sexually active (AARP, 1999; DeLamater & Sill, 2003).

The intimacy questions, written more specifically for older adults, were much more likely to be answered (only 2% of values were missing, versus 15% for the sexual activity facet). The clinical significance of this should be noted. When talking to older adults about sexuality it may be worthwhile using intimacy as our frame of reference in order to encourage discussion. It may be that using language about intimacy is safer for some older adults and may be less offensive, depending on their lived experience.

My analyses of missing values showed that the independent variables that explained the variance of quality of life did not change when the response variable was excluded from the equation. Responding and non-responding participants showed limited variation in their perceptions of quality of life.
Limitations of the Study

One of the measurements of quality of life used in this study was a new instrument, the WHOQOL-Old. Although there has been preliminary support for the reliability and validity of the measure, and there was an examination of internal consistency reliability of facets, the limited testing of this instrument is a limitation of this study. However, only the intimacy item came from the new instrument, and it seems to perform satisfactorily. Further testing of the entire instrument is continuing in all participating countries.

The use of convenience sampling limits the ability to generalize from this study's findings. The sample may not represent the population and therefore the inference of the results is limited and there is an increased chance of sampling error. Participants who choose to complete the survey may feel quality of life is important and therefore will answer the questions based on their previously held beliefs. Because the study participants were mostly healthy, community dwelling older adults, there was a greater likelihood of participant bias; it is possible that self-selected participants would respond differently and possibly more positively about their QOL than people who would not or could not participate. It is also reported in the literature (Kutner, et al., 1992; Stewart & King, 1997) that older adults are viewed as ‘health optimists’ and therefore they may, in general, rate their perceived health higher than it would be scored on an objective health measure. This may be why age was not found to be a predictor of quality of life in this sample. There were also a large percentage of female participants in my sample which may have led to sampling bias as the literature demonstrates that women are less likely to rate sexuality as important as men.
There was a lower response rate on the questions related to sexuality. It may be that people are reluctant to address sexual matters on a questionnaire. It may be that older adults are more reticent to discuss sexuality or that some participants thought that the question was not applicable to their situation due to sampling bias.

A limitation of the study was that a secondary analysis of existing data was conducted. I was unable to select other variables that may have been of interest (e.g., quality of marital relationship) or that have been shown in the literature to have a relationship with sexual activity, such as past sexual activity which is known to be the best predictor of sexual patterns in old age (Laflin, 1996). Other measures of intimacy that could be more easily distinguished from sexual activity or personal relationships were not available. Intimacy explained a large portion of the variance of sexuality and that may be partially due to the fact that the measures are closely related. The data set did not contain a variable pertaining to level of income. This objective economic indicator is often considered as significant to this population and by not measuring it we are not provided accurate information as to its relationship to quality of life for this group. The data set also did not include information on culture, language, or immigration status so I was unable to complete analyses of relationships with quality of life and these variables.

Use of a global measure of quality of life challenges the notion of quality of life as multidimensional, but it is possible to measure quality of life with a global question such as was used in my study. In my study, it was chosen because it was not possible to use the total WHOQOL-100 score as some independent variables used in the analyses would have been part of the total score. This would have lead to an increased likelihood
of multicollinearity. Global measures are often and accurately used to measure quality of life.

Summary

Findings of this study support past research findings. Male, partnered, and younger participants found sex life to be significantly more important than female, non-partnered, and older participants. This may be that men are more likely to value sexual activity than women and that older adults may not feel their sex life is supposed to be important.

Social support and social relationships are frequently cited in the literature as being important to quality of life. Findings of my study lend support to this literature. Satisfaction with personal relationships, health status, and sexual activity explained 30% of the variance evident in quality of life. Sexual activity and its relationship to quality of life is rarely reported in the literature but there are studies that indicate increased well-being with sexual health. Health is also associated with higher levels of quality of life in a number of studies, including my study. Findings of my study showed relationships between other socio-demographic variables and quality of life but none explained any of the variance, this is also found in the literature.

There were a greater number of variables found to predict sexual activity than quality of life. Intimacy is closely related to sexuality and that may be why it explained such a high portion of the variance. Partnered, male, and younger participants were more likely to score highly on the sexual activity facet, which fits with the results of the importance of sex life and the limited research in this area.
Limitations of the study include the use of a new measurement tool for some items, secondary analysis, convenience sampling, low response rate, and use of one measure of quality of life.
Chapter VI

Summary and Conclusions

Research Summary

In this descriptive correlational study, the relationships among quality of life, sexuality, and intimacy in a sample of older adults were examined. Specifically, the importance of sex life and the predictors of sexuality and quality of life for older adults were explored.

The convenience sample included 430 community-dwelling older adults between the ages of 60 and 99. The sample consisted of 271 females and 99 males who considered themselves to be healthy. Forty-two percent were married and thirty-five percent had a university degree. The WHOQOL-100, WHOQOL- Old and Importance rating questionnaire were used to collect the data for this study.

It was found that sex life was considered to have the lowest relative importance of various aspects of quality of life. The most important aspect of quality of life for the participants in this study was ability to perform activities of daily living. Men considered sex life to be more important than women. Partnered participants considered it more important than non-partnered participants, and younger participants found it more important than older participants. Satisfaction with personal relationships, health status, and sexual activity were found to be predictors of quality of life in this sample, explaining 31% of the variance. Satisfaction with personal relationships explained the highest portion of the variance of quality of life, 22%. Intimacy, marital status, gender, and age were found to be predictors of sexual activity, explaining 76% of the variance. The proportion of variance of sexual activity explained by intimacy was 67%.
Implications for Nursing Policy, Practice, and Education

Understanding what is important to a person's quality of life has many implications for nursing policy, practice, and research (Draper, 1997; Draper & Thompson, 2001; Phillips, 1995), particularly since the work of nurses is concerned with promoting quality of life (Draper, 1997). Providing a description of the relationships among quality of life, sexuality, and intimacy in an older adult population enhances our understanding of what is important to the quality of life of people in this group. The results of my study provide support for the inclusion of sexuality and/or intimacy in a conceptual framework of quality of life for older adults, and also reinforce the key importance of personal relationships to the quality of life for older adults. The results also support the findings of Bowling et al. (2003) who espoused the need for a multidimensional, integrated model of quality of life in older age.

A goal of nursing is to enhance quality of life. Nursing as a discipline may not 'own' quality of life, but the concept has been found to have the potential to inform health care research and practice (Draper & Thompson, 2001; Meeberg, 1993; Phillips, 1995). Nurses working with older adults often provide information aimed at improving or maintaining quality of life. As an academic discipline and practice profession, we must consider what quality of life means to the population groups we work with. It is also important that we ask the person (our client in nursing practice) to identify what quality of life means to them and how we can support them to maintain quality of life within our scope of practice.

There is a need to develop policies that are directed towards increasing quality of life for older adults (Farquhar, 1995), specifically related to the areas of sexuality
(Pangman & Seguire, 2000) and personal relationships as well as health. Because sexual activity was found to be a significant predictor of quality of life, albeit not the most important one, this study provides support for the need to assess the sexual health and sexuality of older adults (Albaugh & Kellogg-Spadt, 2003; Davidson, 1995; Eckland & McBride, 1997; Evans, 1999; Laflin, 1996), in addition to health and social relationships.

In order to ensure that older adults are asked about the importance of sexuality and intimacy to their quality of life, nurses need to have policies that include sexual health as part of assessment. This may include addressing sexuality in formal assessment policies and procedures, or in talking with clients about this area as part of a holistic assessment of their health and well-being. As nurses, we are in an ideal position to provide education to older adults to promote their sexual health and manage sexual dysfunction (McCracken, 1988). This would seem to be a part of health promotion. However, as Henry and McNab (2003) point out, “The absence of attention in the literature to sexuality as a quality of life issue for seniors, seems to contradict the growing emphasis in health promotion on viewing health from a wellness perspective across the life span” (p. 58). In order to ensure we are providing holistic health promotion, we need to provide nursing students (and practitioners) with information regarding sexuality, aging, and sexual health. Studies have demonstrated that although nurses believe that sexuality is important and that they have generally good attitudes towards sexuality and aging, it may still be overlooked in practice (Furman Luketich, 1991; Matocha & Waterhouse, 1993).

It is worthwhile to critically reflect on the assumptions and attitudes present in nursing policy and practice regarding sexual relationships. If older adults are perceived as
asexual by nurses, we may be practicing using an ageist philosophy. Practicing from an ageist perspective may lead nurses to deny or exclude sexuality and intimacy as components of quality of life. This may prevent nurses from providing holistic care to older adults (Evans, 1999; Laflin, 1996). It may also be that individual nurses have differing perceptions of the need for sexual health in their own lives, which influences their practice. Also important is to practice from a critical perspective and be aware of how successful aging and sexual health are being socially constructed (Katz & Marshall, 2003). Reflecting in our nursing practice and policy development from a critical perspective provides opportunity for growth as a practice discipline and as individual practitioners.

It is also important to recognize the conceptual links between personal relationships, intimacy, and sexuality. These concepts were correlated in my study. Intimacy may be included in a definition of sexuality or there may be a variety of types of intimacy described, including physical intimacy which may encompass sexual activity (Kuhn, 2002). When providing nursing care to an older adult, it is important to clarify what is meant by terms such as sexuality and intimacy, to ensure that older adults’ needs are understood. For some people, the need for intimacy may be met through close friendships and close contact rather through sexual relationships (Davidson, 1995). An intimate relationship would most likely be personal but not all personal relationships are viewed as intimate.

Older people have as varied views of themselves as sexual beings as young people. We need to recognize human individuality and uniqueness at all times. It is important to recognize that the results of my study do not indicate that all older people
are sexually active. It is equally important to not assume an older person is not sexually active in some form. By not addressing concerns they have related to their sexual health and personal relationships may diminish their quality of life (Peate, 2004).

My study highlights the need to foster the growth and maintenance of personal relationships for older adults, since this was the strongest predictor of QOL in this sample. This is important work for nurses in community health positions and may be overlooked. The need for social connectedness and relationship is maintained throughout the life span and may become more important as a person’s social network becomes smaller due to death of friends, distance of family, and physical isolation. This is not only required at a direct care level but also in the larger health and social care arena where public policy makers from a variety of ministries and health authorities could be working together to develop policies that support the maintenance of personal relationships.

There were differences in the importance of sex life in my sample, depending on age. Younger participants rated sex life as more important. The baby boomers are aging and what is important to them at age 80+ may be different than the present cohort of older adults. There is likely to be a continuing and perhaps growing need for knowledge among nurses regarding sexuality and sexual health in older adults. It may also be that the differences in importance in sex life related to age and gender in my sample may have been due to sampling bias.

Nurse educators can assist in dispelling myths about the asexual older adults and the influence of ageism on other areas of nursing practice. They are in an ideal position to include information on the important connections among personal relationships, sexuality, and quality of life of older adults in curricula and in informal teaching.
Directions for Future Research

The data for this study were collected at a specific point in time, and there would be merit in conducting a longitudinal study of aging, examining the relationships among sexual activity, personal relationships, health status, and QOL over time. The data for this study were collected from a community dwelling population, and it would be worthwhile conducting a similar study using a population of older adults living in assisted living or residential care and comparing the results.

To look more closely at different types of relationships, future research could study different types of intimate relationships (sexual vs. friendship), or the quality of the relationship and quality of life. A study examining components of sexual activity such as participation, interest, frequency (perhaps using Johnson’s 1996 tool) and how they related to quality of life may provide a better understanding as to what parts of sexual activity and/or sex life may be most relevant to quality of life for older adults.

Qualitative inquiry into the reasons for the lack of responses to questions pertaining to sexuality would provide nurses with information regarding potential barriers for older adults in responding to questions regarding their perceptions and experiences regarding sexual matters. It may also expand on the conceptualizations of domains of quality of life.

Inductive research into the relationship between intimacy and quality of life with older adults would provide information in an area that is understudied. It would be informative to ask older adults about intimacy, sexuality, and quality of life using specific measures and examine differences in importance and strength of relationships between these variables. Further, qualitative research could assist us to develop deeper
understandings of how these variables are related. Including culture and other indicators of socioeconomic status to investigations in the area of sexuality and aging is an area that requires expanded research.

Mixed-methods research would provide for the collection of quantitative and qualitative data in the area of sexuality/intimacy and quality of life. By using survey instruments that collect present and retrospective information and then following up with qualitative explorations into the participants initial answers we would be provided a rich data set to analysis that would be participant focused.

Summary

This chapter included a summary of this research, implications for nursing practice, policy and education, and suggestions for future research. In practice, nurses should assess the importance of sexuality, intimacy, and personal relationships for older adults. Ideally, this would lead to interventions based on the person’s needs and requests. We should be fostering and nurturing personal relationships for older adults. Policy makers should be working together to coordinate health and social services to ensure older adults are provided with adequate social support to maintain quality of life. Further research in this area would develop the ideas generated from these quantitative analyses that have developed a broader understanding of quality of life for older adults.

Nursing educators can assist in dispelling the myths of the older adult as asexual and include information regarding the relationships among personal relationships, sexuality, and quality of life in their curricula.
References


*Sexuality in the later years: Roles and behavior* (pp. 13-37). New York:

Academic Press.


www.statcan.ca/english/Pgdb/demo23b.htm


*roles and social participation* (pp. 412-414). Minneapolis: University of Minnesota Press.


Appendix A

Ethics Waiver Approval
Human Research Ethics Committee  
Certificate of Approval

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<th>Principal Investigator</th>
<th>Department/School</th>
<th>Supervisor</th>
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<td>Janice Robinson</td>
<td>NURS</td>
<td>Dr. Anita Molzahn</td>
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Graduate Student

Co-Investigator(s):

Project Title: Older Adults and Sexuality: The relationship to quality of life

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Certification

This certifies that the UVic Human Research Ethics Committee has examined this research protocol and concludes that, in all respects, the proposed research meets appropriate standards of ethics as outlined by the University of Victoria Research Regulations Involving Human Subjects.

Dr. Martin Taylor  
Vice-President, Research

This Certificate of Approval is valid for the above term provided there is no change in the procedures. Extensions or minor amendments may be granted upon receipt of "Request for Continuing Review or Amendment of an Approved Project" form.
Appendix B

Letter of Consent to Study Participants
You are being invited to participate in a study entitled Quality of Life in Older Adults that is being conducted by Drs. Anita Molzahn, Elaine Gallagher, Valerie Kuehne, and Herb Northcott. Drs. Molzahn and Gallagher are professors in the School of Nursing at the University of Victoria, Dr. Valerie Kuehne is an Associate Professor in the School of Child and Youth Care at the University of Victoria and Dr. Herb Northcott is a Professor in the Department of Sociology at the University of Alberta. You may contact them if you have further questions by calling (250)721-8050 or by e-mail at amolzahn@uvic.ca. This study is part of a larger study that involves the World Health Organization and teams of researchers from 22 countries worldwide.

The purpose of this research project is to collect information that will help us decide which factors are important in assessing quality of life in older adults and to develop a more concise assessment tool.

Research of this type is important because it will help us develop a questionnaire that can be used in various places around the world to make cross cultural comparisons about quality of life and will increase the opportunities to generate knowledge about healthy aging.

You are being asked to participate in this study because you are over 60 years of age and you have knowledge of what aspects of life are important to older adults.

If you agree to voluntarily participate in this research, your participation will include completion of a group of questions that are related to your quality of life, what factors are important to you and to test our recently developed module for older adults.

Participation in this study will take approximately an hour of your time. There are no known or anticipated risks to you by participating in this research, but if you become tired during completion of the questionnaire, please take a break and complete it at another time. For some people, some questions may elicit some emotions about aspects of their lives. If you have concerns that you would like to discuss further, please call Dr. Molzahn and she will provide an appropriate referral.

The potential benefits of your participation in this research include enabling researchers to determine which aspects of quality of life are important to older adults and to more accurately study quality of life.

Your participation in this research must be completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or any explanation.
Your present or future treatment will not be affected in any way if you choose not to participate. If you do withdraw from the study, please discard the questionnaire and your data will not be used. It will not be possible to retrieve the questionnaire after it has been submitted because your name will not be on it.

All the information you give will be kept in the strictest confidence and will only be viewed by members of the research team. All responses will be kept anonymous and the data will be analyzed without reference to any personal information. Consent forms with your name will be kept locked up apart from the questionnaire.

Your confidentiality and the confidentiality of the data will be protected. Do not include your name on the questionnaire. Your name will not appear in any reports and will not be mentioned in any presentation.

The data (but not your name) will be shared with the international research team. There are no other planned uses of these data.

Data from this study will be disposed of after seven years. The computer files will be erased and the consent forms and questionnaires will be shredded.

It is anticipated that the results of this study will be shared with others through papers, publications, and discussion in classrooms. Your name or any identifying information will not be mentioned.

In addition to being able to contact the researcher at the above phone numbers, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Associate Vice-President, Research at the University of Victoria (250-472-4362).

Your signature below indicates that you understand the above conditions of participation in this study and that you have had the opportunity to have your questions answered by the researchers.

__________________________  ______________________  ________________
Name of Participant           Signature                  Date

A copy of this consent will be left with you, and a copy will be taken by the researcher.
Appendix C

Contact for the WHOQOL Instruments

For information on WHOQOL instruments please refer to the following websites:

http://www.who.int/evidence/assessment-instruments/qol

http://www.euro.who.int/ageing/Quality/20020611_2