Mount Saint Vincent University

Department of Family Studies and Gerontology

Older Women's Knowledge and Attitudes Regarding Sexuality, Intimacy, and HIV/AIDS

by

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DEDICATION

I would like to dedicate this thesis to my family and friends who supported me in every step of this process. Your words of encouragement, confidence, and love have not gone unnoticed, thank you for everything. . .

Mom &Dad

Janice & Jennifer

Sean, Todd, & Malcolm

Abstract

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Sex is a natural, physiological, fundamental part of being human and is an experience that does not have to end as one ages. Yet, due to ageism and sexism, older women have not been socialized to believe this. Instead, through social scripting, women are often unassertive, not sexually aggressive, and dependent upon men with regard to sexual and intimate activities. Due to these constructs, women may partake in risky behaviors that could lead to STIs and diseases such as HIV/AIDS, something not fully recognized within the aging population. However, statistics indicate that HIV/AIDS is affecting both the aging population and women.

A postmodern feminist perspective was used in this exploratory quantitative study. Women who were 50 years and older from various Red Hatter groups throughout Nova Scotia and women from the Halifax Sexual Health Centre were questioned on their knowledge, attitudes, and behaviors about sexuality, intimacy, and HIV/AIDS. The questionnaire was created using questions from the *Aging Sexual Knowledge and Attitude Scale, Senior Adult Sexuality Scale*, *National Health Interview Survey*, and the *Brief Index of Sexual Functioning for Women*. One hundred and eighty-six questionnaires were used for the final analysis.

Results showed that women's behaviors indicated they were somewhat sexually active and had moderately liberal attitudes about sexuality and sexual activity in older adults. Their knowledge about sexual health and aging was moderately high; however,

their scores were lower regarding knowledge about HIV/AIDS. Furthermore, a regression analysis indicated that one’s general sexual knowledge, sexual attitudes, sexual behavior, as well as having some university or college education and working in healthcare were significant predictors of their knowledge about HIV/AIDS.

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Table of Contents

Chapter I: Introduction 1

Chapter II: Literature Review 4
  Human Sexuality 4
    Gender and sexuality 7
    Aging women and sexuality 12
  HIV/AIDS Among the Aging Population 14
    Disease characteristics 15
    Healthcare professionals 17
  Older Women, Sexuality, and Intimacy 20
    Knowledge. 21
    Physical changes. 23
    Interest and behavior 25
    Challenges 27
  Conclusion 28

Chapter III: Theoretical Framework: Postmodern Feminism 30

Chapter IV: Methodology 35
  Quantitative Research 35
  Procedure 37
  Dependent Variable 38
  Independent Variables 39
    Sexual knowledge and attitudes 39
    Senior adult sexuality 42
  Demographics 45
  Data Analysis 45
  Missing Data 46
  Ethical Considerations 48

Chapter V: Results 52
  Sample Description 52
  Knowledge about Sexuality 55
  Attitudes Regarding Sexuality 60
  Sexual Behavior 64
  Knowledge Regarding HIV/AIDS 69
  Factors Predicting HIV/AIDS Knowledge 74

Chapter VI: Discussion 77
  Knowledge of Physical Effects on Sexual Activity and Response 80
  Attitudes Concerning Sexuality and Sexuality Among Older Individuals 87
  HIV/AIDS Knowledge 91
  Factors Associated with HIV/AIDS Knowledge 98
  Limitations 99

Implications ... 102
Future research. ... 104
Information into practice ... 104

Chapter VII: Conclusion ... 108

REFERENCES ... 112

APPENDIX A ... 120

APPENDIX B ... 137

APPENDIX C ... 139

APPENDIX D ... 141

APPENDIX E ... 143

List of Tables

Table 1: Participant Characteristics 53

Table 2: Knowledge Regarding Sexuality and Aging 57

Table 3: Attitudes Regarding Sexuality and Aging 62

Table 4: Sexual Behaviors 66

Table 5: HIV/AIDS Comprehension 72

Table 6: Correlations Between Sexuality-Related Scales 74

Table 7: HIV/AIDS Knowledge Regressed onto Sexual Indexes and Demographic Factors 76

List of Figures

Figure 1: Range of Sexuality Knowledge Scores 57

Figure 2: Range of Sexual Attitude Scores 62

Figure 3: Sexual Behavior Distribution 66

Figure 4: Range of HIV/AIDS Knowledge Scores 71

Chapter I: Introduction

Looking at the different concepts and varied lives of older adults is a fascinating research area; more specifically, the development and life processes that older women experience. Women's life encounters are very interesting either to explore from a feminist perspective or simply to note their changes throughout history. There are many important topics focusing upon older women that have not been examined, one being women's attitudes and knowledge regarding sexuality, intimacy, and the Human Immunodeficiency Virus and Acquired Immunodeficiency Syndrome (HIV/AIDS). This topic is of great importance, as society ages and the risk of HIV/AIDS becomes greater. Yet, women who are 50 years of age and older are often neglected with regard to research focusing on their attitudes, behaviors, and knowledge about sexuality, sexual health issues, and HIV/AIDS.

Initial consideration for this topic was brought forth while doing my undergraduate degree in sociology and gerontology. During this period, I was exposed to two unique research topics, one on older men and their romantic relationships, and the other on widows and their day-to-day journeyed processes. Interested in both ideas, I researched these areas, delving further into the topic of older women and their experiences with intimate relationships. Through this investigation, I noticed researchers commenting on a rise among aging women with sexually transmitted diseases and/or sexually transmitted infections (STDs or STIs) including HIV/AIDS. Furthermore, I found few Canadian studies on the topic of HIV/AIDS and even fewer studies included older women. Many studies commented on older women as having little knowledge regarding STDs/STIs or believing social and gender myths such that HIV/AIDS does not

affect people over the age of 50, and that HIV/AIDS is a disease primarily found in gay men.

Older women are often stigmatized as individuals who are no longer interested in sexuality and intimacy (Rice, 1989). Yet, this is not the case for many married, widowed, or divorced women who are often still interested in sex and/or intimacy (Cooney & Dunne, 2001). Furthermore, in comparison to when these women were younger, women are now noticing many societal changes surrounding sexual health issues such as sexually transmitted diseases when re-entering the dating scene (Cooney & Dunne, 2001). With the number of changes taking place, many women are left with little understanding of what safety measures to take, what to watch for, and what questions to ask. Without education and knowledge regarding the importance of safety and prevention surrounding sexual health issues, women are more apt to partake in high-risk behaviors, which could lead to HIV/AIDS (Strombeck & Levy, 1998).

An increasing number of individuals becoming infected with HIV/AIDS each year are older adults, which is why education and social recognition about sexual health issues in seniors are important (Public Health Agency of Canada, 2005). The need for research is also vital, especially with regard to older women. Sexuality is often thought of in traditional terms of reproduction and marriage, thus only examined in younger women (Deacon, Minichiello, & Plummer, 1995). For this reason and society's common misconceptions of older women, it is important to understand what older women know regarding sexuality, intimacy, and HIV/AIDS. Yet as previously stated this topic is rarely explored in relation to older Canadian women.

Aware of many societal myths, I questioned what older women thought of and knew about HIV/AIDS, which in turn led to this thesis, which explores older women's understanding and attitudes concerning sexuality, intimacy, and HIV/AIDS. Due to the need for research and education on the topic of older women and sexuality, this study looks at the physical, emotional, and psychological changes faced by older women within their sexual and intimate life. Additionally, issues facing older women including their interest toward sexuality, intimacy, and their knowledge about HIV/AIDS are examined.

There are a number of research questions for this study. First, what knowledge do older women have about the effects of aging on sexual activity and response? Second, what kind of attitudes do older women have regarding sexuality, and more specifically sexuality among older individuals? Third, what do older women know about HIV/AIDS? Fourth, what factors are associated with higher levels of knowledge concerning HIV/AIDS?

Chapter II: Literature Review

This review looks closely at different areas within human sexuality, HIV/AIDS, and older women. The development of one's sexuality will be examined, as it is fundamental in the development of all humans. I will define sex, gender, and social scripting and describe how they are important areas within sexual development. This literature review also examines HIV/AIDS within the aging population and focuses upon awareness and disease characteristics. The last area covered concentrates on older women, sexuality, and intimacy. This topic encompasses personal knowledge through the course of aging and sexuality and outlines physical changes, interests, behaviors, and challenges that occur for aging women.

Differences between societal myths and facts have emerged and explanations are given to demonstrate how assumptions are created concerning aging women's sexuality. Through this understanding, a focus on why society should not ignore aging women but rather educate the entire population about sexual health issues such as HIV/AIDS and safe sexual practices will emerge. Birth control methods, sexual development and boundaries, and communication are also addressed within this discussion. Social scripting is a fundamental concept of older women's lives as many ideologies surrounding sexuality are based upon society's preconceptions of gender.

Human Sexuality

Human sexuality cannot be ignored because everyone in society experiences sexual developmental stages throughout their life course. There is no set age or gender in the expression of human sexuality. Yet, human sexuality is often viewed apprehensively by women as it can be perceived as offensive, crude, and shameful despite the fact that

for many it can also be a source of pleasure, liberation, and euphoria (Jackson & Scott, 1996).

Human sexuality is important to understand as it relates to different health concerns and population control. Many sexual health concerns are often recognized as STDs or STIs. These diseases and infections can be transmitted through sexual acts that pose health concerns for individuals and their partners. However, individuals who are educated in sexual health have a better comprehension of the risks associated with sexual activity, including disease and unwanted pregnancy. In addition, learning and participating in open communication can be central factors in the development of an individual's sexuality. Communication is important in that both partners know each other's limitations and have an understanding of what is appropriate and expected behavior within the relationship.

Researchers such as Deacon et al. (1995) note that sexual expression is not and should not be limited to only intercourse. Sexual expression should include a range of different physical and emotional acts. These acts include masturbation, fondling, kissing, hugging, and fantasies, not to mention the warmth and tenderness of emotions and sensations that mesh with emotional intimacy (Malatesta, 2007).

The first researcher to study sexual behavior in older adults was Alfred Kinsey in 1948. He was also the first to break down many of the stereotypes that viewed sexual activity ending with old age (Kaye, 1993; Kinsey, Pomeroy, Martin, & Gerhard, 1953; Wiley & Bortz, 1996). Kinsey et al. (1953) emphasized that "declines in the incidences and frequencies of marital coitus, and of coitus to the point of orgasm, do not provide any evidence that the female ages in her sexual capacities" (p. 353). His research helped lead

in the future work of Masters and Johnson (1966) in their biological approach to sexuality. Masters and Johnson provided evidence that physiological changes occur with age and described a model for one's sexual response. This response system included four stages termed excitement, plateau, orgasmic, and resolution (Masters & Johnson, 1966). Following that, the Starr-Weiner report took an in-depth look at how older adults felt concerning the amount of sex and/or intimacy in which they participated (Starr & Weiner, 1981). These few researchers found the topic of sexuality and intimacy among older adults intriguing but rarely focused on it. Moreover, studies focusing on older women are not as frequent as younger individuals, as I will demonstrate.

As one's sexuality matures over the lifespan, an acknowledgement of one's body, values, mind-set, and feelings toward the topic are shaped, often leading to one's future perception of intimacy and sexuality (Deacon et al., 1995). Francoeur and Hendrixson (1999) discussed the idea of sexual maturity as being somewhat comfortable with and having the ability to communicate with their partner(s) regarding topics of sexuality and intimacy. If a person had the ability to socialize with others and maintain a healthy sexual and intimate lifestyle, sexual maturity is likely to develop quicker. Individuals are therefore capable of self-fulfillment and other enriching intimacies as sexual development is something that has shaped people throughout their lifespan. However, there can be unique phases, barriers, and social influences that affect the choices one makes, all of which help form and influence sexuality. Concerning sexual development, the following sections show how gender and aging influence sexual development and identify gaps in knowledge.

Gender and sexuality. Through the discussion of human sexuality and development, it is important to understand the differences between sex and gender. There are different definitions and applied meanings used for both terms. A number of researchers have noted the definition of sex as a physical and erotic type of behavior related to a relationship and often resulting in orgasm, attraction, stability, and equity between two individuals (Christopher & Sprecher, 2000; Deacon et al., 1995; Francoeur & Hendrixson, 1999; Jackson & Scott, 1996). Sex also refers to an individual's organs, reproductive system, and/or functions. Some researchers even stated that sex referred to touching or one's body image (Deacon et al., 1995). Gender, however, is defined as "one's personal, social, and/or legal status as a male or a female or as a person of mixed gender" (Francoeur & Hendrixson, 1999, p. 734). Gender, when used by feminist theorists, recognizes not so much biological differences but cultural differences of femininity and masculinity (Jackson & Scott, 1996). The word gender creates labels for men and women resulting in the social construction of particular roles throughout one's life. Sex and gender demonstrate multiple meanings through discussing and researching the development of sexuality. Given that both words are capable of similar meanings, it is important to recognize the multiple concepts and variations that they encompass.

Common expectations develop from birth with regard to sexual orientation, behavior, and knowledge. Any behavior or act deviating from societal norms have often been taught to children as incorrect. This taught behavior could be discovered at a young age, which could possibly impair one's ability to enjoy sexual activity later in life (Deacon et al., 1995). For example, many older women were brought up with the common conception that a proper woman is to be unassertive, not sexually aggressive,

and dependent upon a man (Deacon et al., 1995; Fox, 1977). Sexual enjoyment may later be hindered through these learned behaviors of social scripting.

Ideas, messages, and attitudes that society feels men and women must adhere to are labeled as *social scripting* (Francoeur & Hendrixson, 1999). Social scripting is often formed through expressive female and male behavior traits, which have been passed down over many years (Christopher & Sprecher, 2000; Jackson & Scott, 1996). These traits can be expressed through communication and/or power, which are important features within a relationship.

Part of social scripting is related to the intimate level of individual relationships and the way in which society predefines gender roles. Three areas that relate to gender can be labeled as one's affection (love), fantasy, and erotic (sexual) orientation (Francoeur & Hendrixson, 1999). These labels can be displayed differently between men and women through the ways they show love and their different views and ideas of sexual and fantasy fulfillment. A double standard between men and women and their sexual urges can be faced through perceived societal assumptions. Men are often associated with having fantasies of erotic nature and entailing somewhat aggressive sexual behavior yet women are rarely perceived to think or act in this manner given the *good girl* construct that outlines the social thought that women should be passive in relation to sexual activities and behaviors (Fox, 1977).

Social scripting results in an essentialist position on gender with the development of masculine and feminine characteristics embodied within intimate relationships. The masculine role is understood to be dominating whereas the feminine role is viewed as submissive. Moreover, if women are taught to be submissive and only view themselves

through this lens, it makes deterring from this role difficult, and although older women may have wished for gender role changes it was socially viewed as inappropriate behavior to do so. However, women who have not fallen victim to female ingrained roles realize that it is socially acceptable to be sexually independent, and a greater number of older women throughout society are now becoming empowered by having the ability to choose whether they wish to have an intimate or sexual relationship. The power of choice gives women the opportunity for relationships without fear that they are doing something wrong.

Such social scripting was demonstrated in a Canadian qualitative study called the *Health Protective Sexual Communication* (HPSC), which looked at narratives among younger women between the ages of 19 to 23 and how they communicated with their partners, family, and health care professionals (Cleary, Barhman, MacCormack, & Herold, 2002). This study examined how women facilitated communication with respect to their intentions, relevance for safe sex, their influence, and the social support they received for expressing uncertainties about this topic (Clearly et al., 2002). Many participants felt sexual health was something that should not be discussed in the beginning of a relationship, as it may be too soon to divulge personal and private information. These young women also did not feel they knew their partner well enough to disclose such personal information. The difficulties in communication could stem from their lack of comfort, effective communication skills, or from expected negative outcomes. Other times participants avoided discussing sexual health issues due to the anticipated reaction of their partner, the lack of trust in their partner, or the fear of tarnishing the relationship.

Many women in the HPSC study stated difficulty in expressing and communicating with their partners about safe sexual methods. In fact, the study reported that there was no discussion about sexual health issues prior to the women's first sexual contact (Cleary et al., 2002). Women also feared their relationships would fail and how they, as an individual, would be viewed sexually because of conversations concerning safer sexual methods (Clearly et al., 2002). Many of these women stated that they could not properly communicate, as they had never fully developed the skills. This development, as suggested by the researchers, was due to the lack of formal sexual education, additionally, older women may have been socially scripted not to discuss the topic of sexuality and intimacy, which eventually hinders communication between partners (Clearly et al., 2002). Simply being able to communicate is one of the first and most important developments of sexuality, yet it is also one of the hardest. Support and communication systems through educators or healthcare professionals should be reinforced at a young age in order for women to have effective communication skills later in life. Today's generation of younger women are encouraged to communicate and safely explore their sexuality; meanwhile many older women come from an era where societal beliefs hindered them from doing so. Older women face a problem in not having the knowledge or understanding of how to exert decision-making power with their partner(s) concerning safer sex (Emlet & Farkas, 2001; Emlet, Tangenberg, & Siverson, 2002).

The HPSC study looked at partners' inability to communicate when women were young, but did not examine how this could affect aging individuals. Furthermore, the authors suggested future research focus on how young males communicate rather than examine older women. In a society dominated by younger generations, older women may

feel uncomfortable with the topic of sexuality and intimacy due to ageist attitudes and assumptions placed upon them. With the assumptions of being asexual and having a different upbringing from today's youth, communication among older partners could be a problem.

Another important study on human sexuality in Canada was the 1998 *Canadian Contraceptive Study* (Fisher & Boroditsky, 2000). This study looked at both the sexual attitudes and practices of 1,599 Canadian women between the ages of 15 to 44. The study had some very interesting findings, one being that the first sexual experience for many Canadian females takes place between the ages of 13 to 14 years. The study further showed that oral contraceptives and condoms were often used during the first intercourse between young individuals; however, older participants showed their condom use diminished as fear surrounding STDs/STIs or pregnancy was not as prevalent as it was in the younger women.

Condoms are a method of birth control that can also decrease the chance of contacting STDs or STIs, as they can prevent bacteria, viruses, and seminal fluid from reaching one's partner during sex. Yet condoms can take on different forms of symbolism in which partners assume multiple meanings for their use (Holland, Ramazanoglu, Scott, Sharpe, & Thomson, 1996; Jackson & Scott, 1996). One may have multiple partners and view condoms as a symbol of sexual freedom whereas another partner could view condom use as a method for safe sex. Discussing contraceptive use should be explored by all age groups as each partake in sexual activity and thus are affected by it. It is also important to educate everyone regarding aspects of condom use, as older adults may not

be aware that condoms are a safe method for preventing disease and therefore should be used regularly.

Society has placed many stereotypes and assumptions upon individuals who are sexuality active, especially older women. Common stereotypes encompassing older women state they are dull, mundane, and unable to become aroused simply because of their age (Deacon et al., 1995). Because these assumptions are common in North American society, they often leave women who do participate in sexual activity to be negatively labeled as deviant or dirty. Yet healthy sexual development is not limited to younger individuals; rather it should be dependent upon normal biological and social development. Women need healthy and positive social scripting from family, ethnic and cultural backgrounds, religious training, and societal roots. Individuals do not and should not have to adhere to the common assumptions of social scripts through their sexual development. They should not be susceptible to deviant labels for having healthy sexual attitudes, behaviors, and/or responses to society's norms, no matter what a person's age. Rather, their development should be influenced and nurtured positively.

Aging women and sexuality. Many different physical barriers surrounding sexuality come with age for both women and men. Aside from particular drugs and environmental effects that could create or sustain boundaries, seniors face the reality of changes with age. This process can often prevent seniors from partaking in or enjoying sexual activity. Some challenges to sexual activity could be insufficient privacy (if in an institution), lack of a partner(s), diminished health, or the limitations to partake in sexual intercourse (MacLean, 2003).

There are also a number of common physiological changes for women based upon their age. For example, after menopause there is a decrease in estrogen resulting in vaginal dryness and a deterioration of one's vaginal tissue (Adelman, 1995; Deacon et al., 1995). Older women are more likely to overcome such barriers associated with the influence of societal assumptions when they are more comfortable with sexuality and accepting one's body, feelings, values, and attitudes (Deacon et al., 1995). Women can overcome barriers of menopause by safely exploring their sexuality, as they no longer have to worry about pregnancy. The best way to overcome sexual issues and barriers is to continue a healthy sexual and intimate lifestyle. This means to maintain sexual activity and orgasm as much as possible so that one's body is continually familiar with this process (Adelman, 1995).

A particular challenge for older women is the means of having safer sex. Even though condoms are displayed as a means for safe sex, many women have admitted their condom use tends to decrease as a relationship becomes serious. The principal understanding in a serious relationship is based upon trust, which alternatively results in monogamy and therefore a reason not to use a condom (Holland et al., 1996). Women also have been reluctant when inquiring about condoms for fear of upsetting their male partner. Because sex has been socially viewed as something men "do" to women, it can be difficult for women to assert their own needs due to this social scripting (Holland et al., 1996; Jackson, 1996). In fact Holland and her colleagues stated that men gain pleasure from sexual activity for themselves and when women insist upon condom use it is for their own safety, which goes against the construction of sexual intercourse as men's natural pleasure and women's natural duty, creating a double standard for women. This

double standard indicates that men are assumed to take pleasure from sex and have no concern for safety whereas women are constructed in sensitive roles wherein they are more concerned for others' safety than their own sexual or intimate enjoyment.

Given the multiple age-related changes that women endure, it is important to increase their knowledge and awareness concerning safe sex practices as they age (Fisher, Boroditsky, & Bridges, 1999). Lack of sexual safety by women could give way to such problems as contraction of STDs/STIs, reproductive problems, and unplanned pregnancy. Many older women may view condoms as important for prevention of pregnancy and therefore not applicable to them, and they may not view themselves at risk concerning STDs as this is often stigmatized toward younger individuals. In comparison to their younger cohorts, women 35 years of age and older were more likely to use sterilization and less likely to use nonpermanent methods such as the pill as a method of birth control (Fisher et al., 1999). With the vast amount of safer sexual practices, knowledge of birth control could create a greater depth of awareness for many women. This study, however, did not focus upon older women; rather it only encompassed younger women between the ages of 15 to 44. Further research should explore contraceptive choices among older Canadian women.

HIV/AIDS Among the Aging Population

HIV/AIDS is affecting our population as a whole, yet it has not been fully recognized within the aging population. One reason is that society assumes older adults are uninterested or incapable of sex, and thus not at risk for HIV/AIDS (Nocera, 1997). The aging population, however, is vulnerable and at risk for this disease. Moreover, the vulnerabilities of one's age, gender, and social and biological characteristics can no

longer be disregarded, as those over 50 years are the fastest rising cases of HIV/AIDS (Zablotsky, 1998).

Disease characteristics. HIV/AIDS affects the body's immune system, which is made up of cells that fight off foreign proteins and infections entering one's body (Goodroad, 2003). The most important cell in this system is called the CD4 or T-cell, which is a white blood cell. These cells serve as fundamental communicators directing antibodies where they need to go and perform immune responses (Goodroad, 2003). The HIV virus replicates itself billions of times a day by attaching itself to the white blood cells and taking control of them; when an individual is tested for HIV/AIDS, doctors are looking at these cells (Genke, 2000). In order for an individual to be diagnosed with HIV one has to be tested for the actual HIV antibody; to be diagnosed with AIDS, there must be a CD4 count of fewer than 200 cells (Genke, 2000; Goodroad, 2003; Zablotsky, 1998). When these T-cells are lost, an individual is more susceptible to infections that could otherwise be fought off. Individuals, however, do not die from AIDS; rather they die from infections their bodies can no longer fight. An individual's system becomes run down and common infections such as pneumonia and mycobacterium infections are often fatal (Goodroad, 2003).

There were an estimated 58,000 Canadians living with the HIV/AIDS virus at the end of 2005 (Public Health Agency of Canada, 2006). Of the reported AIDS cases involving Canadian women, the largest contributor to HIV/AIDS was through heterosexual contact (Public Health Agency of Canada, 2006). In Canada there are more heterosexuals testing positive for this virus, from 247 cases in 1995 to 317 cases in 1999 (Population and Public Health Branch, 2000). From June 2004, 19,464 cumulative AIDS

adult cases were reported to the Center for Infectious Disease Prevention and Control (CIDPC) in Canada; of these cases 2, 293 (11.8%) were adults over the age of 50; 1,635 were adult women with AIDS and 7,932 with HIV (Public Health Agency of Canada, 2005).

Even though the HIV/AIDS virus has declined steadily since 1995, infected females have been increasing over the past few years from 18% in 1995 to 24% in 1999 (Population and Public Health Branch, 2000). Moreover, from 1991 to 1996, the number of new HIV/AIDS cases rose 22% for those over 50 whereas the number of cases for individuals aged 13 to 49 rose 9% (Genke, 2000). The figures, as stated by Genke (2000), only represent older persons with AIDS diagnoses, and do include individuals who are HIV positive.

A study by Leger Marketing (2004) found that even though 82% of Canadians thought they were informed of how to prevent HIV/AIDS, many felt as though this disease affected primarily younger adults and children rather than the aging population. Yet, 10% of the North American population suffering from HIV/AIDS is over the age of 50 (Emlet et al., 2002; Genke, 2000; Goodroad, 2003; Nocera, 1997; Speer, Kennedy, Watson, Meah, Nichols, & Watson, 1999; Stall & Catania, 1994; Strombeck & Levy, 1998). Moreover, one study showed that even though STDs were declining slowly, HIV/AIDS is on the rise, especially for older adults (Patrick, Wong, & Jordan, 2000).

Many older adults facing HIV/AIDS today came from an era where there were many restrictions and little allowance for differences amongst societal norms (Genke, 2000). As a result, they may experience an acute sense of isolation and self-loathing when diagnosed with HIV/AIDS and could contemplate suicide (Emlet et al., 2002;

Genke, 2000). Melancholy, infuriation, and unresponsiveness have all been reactions older adults face when diagnosed with HIV/AIDS (Avis & Smith, 1998). It is because of these reactions that many older HIV/AIDS patients withdraw from society and social contact, perceiving themselves as outcasts. Older women require different types of support systems to help them through these unique psychosocial issues. However, with minimal research in the area of older women and HIV/AIDS, understanding the disease can be especially difficult for a generation of individuals 50 years of age and older.

Older women face additional challenges as they have a propensity to care for their families as they age and simply feel they do not have time to be sick. They have a tendency to feel responsible for the well-being of others, as they have always been viewed as caretakers (Avis & Smith, 1998; Emlet et al., 2002). Older women may ignore many of the warning signs of an illness because of the responsibility they feel for their children, extended family, partners, and friends. Pretending nothing is wrong is often a way to maintain their relationships (Emlet et al., 2002).

Healthcare professionals. Older adults often experience discrimination, prejudice, rejection, and ageism, which can become increasingly problematic when faced with HIV/AIDS (Emlet et al., 2002). In addition, common societal perception and ageist thoughts suggest that older women do not have to identify with or know much about HIV/AIDS as it is commonly assumed they will never be affected by the disease simply due to their age. One particular group of individuals that partake in questionable behavior toward older adults and HIV/AIDS are healthcare professionals. Many providers are often reluctant to discuss sexual health issues and risks with their older clients, and have been known to stigmatize those who are at risk for HIV/AIDS (Emlet et al., 2002;

Hillman, 2007; Speer et al., 1999; Stall & Catania, 1994; Strombeck & Levy, 1998). Overall society places a lack of emphasis and encouragement upon healthcare professionals to discuss sexual health problems with their older adult patients/clients giving them no reason to start, however older adults want this to change.

In a study looking at doctor visits, Strombeck and Levy (1998) revealed that although 94% of women 50 years of age and older had visited their doctors, only 15% of them had discussed the topic of HIV/AIDS over the course of five years. Of the women who did talk about HIV/AIDS, 72% had urged and initiated discussion with their doctors, demonstrating that doctors seldom initiated the conversations. The bottom line is that physicians need to start discussing HIV/AIDS and safe sexual activity with older patients, and start asking them the same questions they presumably ask their younger patients. As shown through this study, not *all* older women are opposed to discussing this topic; in fact, the study noted many older women wanted to discuss this subject with their physicians.

Sexual health education is needed in physician training, as doctor-older client interactions are clearly limited when discussing sexual health (Stall & Catania, 1994). Physicians tend to assume older women have monogamous relationships or they are not sexually active, therefore, educating them about HIV/AIDS is viewed unnecessary. Personal and/or cultural influences can lead to the creation of assumptions and stereotypes, such as monogamy, especially among those who are older (Emlet et al., 2002). However, even if an older woman is monogamous, it does not necessarily mean her partner is monogamous. Safer sex and possible consequences should therefore be discussed so older women are aware of the risks. Because health care providers have

been recognized to regularly discuss the risks of cigarette smoking and alcohol use, they too should regularly discuss the number of sexual partners (even if the individual is married), sexual orientation, and condom use with older women. If physicians make this a consistent part of their routine then perhaps they will become more comfortable and possibly alleviate any ageist notions they have about older adults, sexuality, and intimacy (Strombeck & Levy, 1998). Furthermore, physicians need education with regard to older adults and HIV/AIDS as many fail to perceive symptoms in older clients because many of the warning signs, such as tiredness, loss of weight, skin irritations, dementia, and swollen lymph nodes imitate age-related changes (National Association on HIV over Fifty, n.d.; Strombeck & Levy, 1998).

Cervical cancer is a common disease among older woman that has been identified as a symptom or sign of HIV/AIDS. Yet, many older women are faced with misdiagnoses that can eliminate or decrease their chance in receiving proper care and treatment. This can be due to the lack of knowledge among the older population and the inability of health care providers to ask for help or further inquire about symptoms (Emlet et al., 2002). Because many healthcare professionals rarely think of older adults as being sexually active or having or contracting HIV/AIDS, their diagnoses often occurs after the disease has progressed, resulting in a shortened survival time. Researchers strongly suggest that physicians become further educated on the symptoms and needs for older adults when being diagnosed with HIV/AIDS. This increase in awareness and knowledge could lead to not only a prolonged lifespan for those currently diagnosed but could also lead to faster detection (Strombeck & Levy, 1998).

Older Women, Sexuality, and Intimacy

Sexuality is a natural, physiological, and fundamental part of being human. It is also important for one's quality of life and well-being; therefore, a process that does not end as one ages (Gagnon, Hébert, Leclerc, & Lefrançois, 2002; Masters & Johnson, 1981; Nusbaum, Singh, & Pyles, 2004). Sexuality and intimacy can appear in the form of sexual desire, body image, gender-role identity, the concept of self or self-esteem, respect, or through physical acts such as cuddling, embracing, and/or caressing (McCarthy, 1979; Woodard & Rollin, 1981; Zeiss & Kasl-Godley, 2001). Yet, societal myths prevail concerning older women as frail, invisible, gray-haired, and asexual beings (Jones, 2002; Kingsberg, 2000; Mercer & Garner, 1989). Throughout history, numerous researchers have looked at sexuality; however, few have examined older women and sexuality.

Some general trends regarding sexual behavior throughout women's life course have been identified. As stated earlier, Kinsey, who reported and studied the sexual behavior of females, noted that although intercourse declines with age, many women continue to maintain sexual interest (Adelman, 1995; Deacon et al., 1995; Kinsey et al., 1953; Malatesta, 2007). This decline could be due to the lack of available partners women have as they grow older. In 2000, women represented 53% of the Canadian population aged 65 to 74, but this increased to 60% of those aged 75 to 84 and 70% of those 85 years of age and older (Statistics Canada, 2003). However, even though the odds of not having a male partner increases as a woman ages, this does not mean that women necessarily lose interest in sexual activity. Furthermore, men's health can limit

participation or impede their sexual activity as male age-related sexual changes such as erectile dysfunction are common (Gelfand, 2000).

Knowledge. Older women need to increase their level of understanding about sexual health, sexuality, and intimacy. By increasing knowledge, one can recognize the differences between myths and facts more easily. As often stated, there are many incorrect assumptions facing older women, sexuality, and intimacy. Examples are that: (a) sex is immoral among older women, (b) older women do not have any sexual impulses, (c) they are unable to fulfill sexual functioning, (d) they are no longer viewed as sexually attractive, (e) they may hurt themselves if they try, (f) they should learn to adjust to celibacy as they age, (g) masturbation is unhealthy, (h) menopause ends sexual intimacy, and (i) older women no longer experience orgasm (Dunn & Cutler, 2000; Kaye, 1989; Renshaw, 1979; Woodard & Rollin, 1981). Myths have even gone so far as to say that sexual older women, who are virtually perceived as cute, cookie-baking grandmothers, are abnormal or that it is unaccepted for them to have new relationship(s) after being widowed or divorced (Butler, Lewis, Hoffman & Whithead, 1994; Starr & Weiner, 1981; Zeiss & Kasl-Godley, 2001). Due to internalization of these beliefs, many older women feel they have to adhere to these conservative attitudes and/or roles from prior social scripting.

What women fail to realize is that they are not deviant for having or wanting a safe and healthy sexual and/or intimate lifestyle. Society's perception of older women and this topic should be addressed so older women no longer feel as though they are participating in something dirty, deviant, or comical (Kessel, 2001). In fact, society should become educated as a whole.

An American study (Zablotsky, 1998), which used the US National Health Interview Survey (NHIS), examined older women's knowledge of AIDS. Almost half (47%) over the age of 65 reported knowing little or nothing about AIDS compared to 14% of women between the ages of 18 to 49. Many believed that this disease could be caught by sitting on a toilet seat, being coughed on, or sharing utensils. They also did not believe that infected individuals could continue to look healthy as the disease progressed. Older women also had lower levels of knowledge on condoms and often responded that they "did not know" to factual questions regarding HIV/AIDS (Zablotsky, 1998). These findings indicate just how little older women know and understand about HIV/AIDS compared to those much younger and often more educated. Many of these older women were naive when it came to understanding and thinking about HIV/AIDS (Zablotsky, 1998). Although no Canadian data had been found on this topic, the American literature indicated a lack of education surrounding HIV/AIDS. By educating older women there could be an increase in awareness surrounding risky behavior. It is important for women and others to know the differences between myth and reality.

Yet, women can face many social deterrents that often hinder their knowledge levels on such issues as sexuality and intimacy. Older women are faced with what is known as *double jeopardy* (Mercer & Garner, 1989). This is experienced when women are subjected to discrimination based on both their age (ageism) and their gender (Mercer & Garner, 1989). Double jeopardy is the concept of how individuals have been socially scripted to view aging women. This traditional view can deter women of any age from accepting and embracing their potential as they grow older. Ageism throughout society is a type of discrimination as it places women in different roles simply because they are

older. Furthermore, in reference to this study, many believe women lose their sexual and intimate lifestyles because of their age yet this assumption is rarely placed upon older men.

Similar to double jeopardy, older women are also faced with the *double standard*; which happens when men are viewed as mature and sophisticated with age whereas women are viewed as declining in their abilities as they age (Rice, 1989). Once again, this stigma placed upon aging women is a common and oppressing thought throughout society. The double standard lessens the value of women's lives as they age, when society should be suggesting that both sexes ultimately have equal opportunities for successful and fulfilling lives as they grow older. These perceptions are incorporated and socialized within older women's lives, often without realizing it can affect their sexual and intimate lifestyles. The negative feelings women experience after being socially labeled in this manner, or not being respected for the things they do because they are women, could carry over into how they feel about being sexual or intimate with another individual. Moreover, these issues hinder older women's opportunity for increasing their education on such subject matters.

Physical changes. Sexuality and intimacy are important in the creation and promotion of positive life qualities and one's well-being (Nusbaum et al., 2004). A woman's sexuality neither has a particular age limit nor does her response system start to show major declines until the age of 50 (Kando, 1978; Kessel, 2001). Even with this understanding, older women may still find that being physically sexual is difficult as their bodies go through different age-related changes.

By the age of 60, most women have experienced some type of hair loss on their legs, arms, or in the pubic region (Gelfand, 2000; Pearson & Beck, 1989). Women's breasts also start to decrease in size as the function of breast ducts change, and their ovaries tend to decrease in size as well. Older women could also face changes in their sense of vision, hearing, taste, smell, and touch, all of which are a normal part of aging and could play a major role in one's intimate and sexual lifestyle. These changes could affect one's self-esteem, resulting in negative attitudes, and feelings of shame and disgust, and possibly lead to lower levels of sexual and intimate activity.

The most common problem among older women is a decrease in vaginal lubrication. The time to achieve sufficient lubrication could change from a few seconds up to five minutes when compared to a younger woman (Kaye, 1993). Part of the natural aging process in women is their decrease in lubrication, which has been shown to relate to the weakening of one's vagina (McCarthy, 1979; Zeiss & Kasl-Godley, 2001). During arousal, the labia does not become as enlarged as it once did, which could make intercourse very painful (Gelfand, 2000; Kaye, 1993; Masters & Johnson, 1981; Rice, 1989; Willert & Semans, 2000; Zeiss & Kasl-Godley, 2001). A women's vagina goes through many changes as she ages in both its size and ability to contract (Gelfand, 2000; Renshaw, 1979; Rice, 1989). Due to these particular changes, women may experience a dissension of their cervix; during intercourse, bumping could occur, creating pain and discomfort for the woman (Zeiss & Kasl-Godley, 2001). However, these changes should not deter couples from experiencing sexual activity or intimacy, as there are ways of accommodating them. Importantly, these changes could also increase a woman's risk for HIV transmission, as the thinning of the vaginal walls can create an easier and faster path

for the HIV infection to enter the blood stream (Genke, 2000; National Association on HIV over Fifty, n.d.). As a result, older women's risks are high when partaking in sexual activity without any form of protection.

Interest and behavior. Interest in and enjoyment of sexuality and intimacy does not end when a woman becomes older, as there are many different ways of showing this, through desire, friendship, and love with a partner (Kaye, 1993; Woodard & Rollin, 1981). In a study by the Sexuality Information and Education Council of the United States (SIECUS), 52% of women over the age of 75 years agreed that the physical act of sex became less important to them as they aged however, being intimate was still very important. It is imperative to understand that when focusing upon older women, societal perceptions often result in women living their lives in a particular way. They could feel that being sexual or intimate is unacceptable based upon common societal myths or that they are simply too old which could lead to a decrease in activity. As a result of these perceptions, older women need to learn how to overcome negative societal attitudes and beliefs and convey greater control over their sexual and intimate life (Baber, 1994).

As previously stated, older women do not necessarily lose interest in sexuality and intimacy as they age (Jones, 2002; Kingsberg, 2000; Marsiglio & Donnelly, 1991; McCarthy, 1979; Starr & Weiner, 1981; Willert & Semans, 2000). Older women no longer have the worry of pregnancy after menopause and therefore may use condoms less often making HIV/AIDS a greater possibility. Furthermore, the SIECUS study described earlier examined the differences surrounding older women's sexual desire, satisfaction, and frequency (Edwards, 2002). Although the study did not define what type of sexual activity took place, it indicated that 41% of women 50 to 59 years old, 10% of those 60 to

69 years old, and 20% of women over the age of 70 years engaged in some form of sexual activity more than once a week (Edwards, 2002). For the most part, women expressed a desire for sexual activity and/or intimacy of some kind. Many women also longed for the emotions that physical intimacy creates moreso than focusing solely on achieving an orgasm (Kingsberg, 2000; McCarthy, 1979; Voda, 1998). The SEICUS study also illustrated that only 26% of women 55 to 59 years of age (the oldest age group tested) *always* had an orgasm with their partner, however many continued to participate. This point exemplifies the idea that positive experiences can emerge from being sexual or intimate without having an orgasm (Edwards, 2002). This problem could also lie with partners who may not be interested or invested in women reaching orgasm. As well, the woman may not know how or feel comfortable in communicating what she likes or how to help achieve this action, due to social scripting that focuses on male rather than female pleasure.

Intimacy can be very positive and is found through sexual expression in touch, closeness, and emotional rapport, as some aging effects can create discomfort when physically achieving orgasm (McCarthy, 1979). Being emotionally intimate and connected with a partner is primary in relationships at any age and can be essential when unable to be physically sexual. Intimacy can also be beneficial to older women who live in an institution or other quarters where interruptions take place and extended moments of privacy are not always possible (Gelfand, 2000). This is another important factor to consider as seniors aged 85 and over made up almost half (46%) of all seniors in health-related institutions, which represented about 10% of the total senior population in 1996 (Statistics Canada, 2003).

Challenges. Through the course of aging, women experience different challenges concerning their sexuality and intimacy. Many sexual challenges experienced are referred to as secondary dysfunctions, which could stem from medical or psychological changes that are more prominent when aging (Willert & Semans, 2000). The most common and painful challenge older women experience while being sexual is called dyspareunia, which is pain occurring during sexual intercourse (Gelfand, 2000; Hajjar & Kamel, 2003; Malatesta, 2007; Masters & Johnson, 1981). This is often caused by a decrease in sex hormones, along with different chronic conditions that have been acquired. These chronic conditions could be arthritis, orthopedic problems, anxiety, retroverted uterus, hemorrhoids, and/or pelvic tumors (Gelfand, 2000).

Another very common challenge among women is known as vaginismus. This is described as spasms of the uterus and the constriction of one's vaginal outlet (Malatesta, 2007; Masters & Johnson, 1981). Although not solely specific to the aging population there is an increase among older women (Gelfand, 2000; Hajjar & Kamel, 2003; Masters & Johnson, 1981; Willert & Semans, 2000). Vaginismus is often missed in diagnoses but is commonly found among women who have previously reported painful experiences during intercourse. This challenge can be reversed by simply retraining the muscles through specific exercises.

As previously mentioned, other challenges older women face could include psychosocial factors. These factors could involve attitude and/or role changes that could be associated with disability or age-related changes. Types of psychosocial factors could include depression, anxiety, lack of partner or privacy, social conditioning, or lowered self-esteem, all of which could affect and lead to sexual difficulties (Kessel, 2001;

Malatesta, 2007; Willert & Semans, 2000; Zeiss & Kasl-Godley, 2001). It is essential that everyone become aware of the differences between myths and realities that exist throughout sex and physiological age changes as they can influence sexual functioning and one's overall health (Rice, 1989). In realizing these differences, women will then be able to have sexual experiences that are more enjoyable.

Conclusion

In reviewing literature on human sexuality, the depth of this topic is revealed and the importance of attentiveness to issues such as social scripts engrained throughout society and individual's psychosexual development is highlighted. This review looks at many factors including changes that happen both physically and cognitively. Yet, in conducting research on older women, sexuality, intimacy, and HIV/AIDS, little information has been found, especially in relation to older Canadian woman. There are very few Canadian studies on older women with regard to HIV/AIDS, especially concerning the knowledge they have about this disease, their attitudes regarding sexual health, or specifics regarding their sexual behaviors. In taking a closer look at these areas along with a rapidly aging society, and the increasing numbers of individuals 50 years and older becoming infected, the need for research and education surrounding HIV/AIDS is very important.

This study examines the depth of knowledge older women have about HIV/AIDS. Due to an intersection of ageism and sexism brought forth by society, communication can be very difficult, due to having been scripted to partake in specific gender roles for many years. Yet, HIV/AIDS does not solely affect gay men or lesbians, drug users, young adults, or men. This is a disease without gender borders or age limitations, and many

older women are increasingly becoming infected. Thus, this age group of women must be included in research on sexuality and HIV/AIDS.

Several research questions are addressed. First, what do older women know about the effects of aging on sexual activity and response? Second, what kind of attitudes do they hold concerning sexuality, and more specifically, sexuality among older individuals? Third, what do older women know about HIV/AIDS? Fourth, what factors are associated with higher levels of knowledge of HIV/AIDS?

Chapter III: Theoretical Framework: Postmodern Feminism

The theoretical framework for this study is the postmodern feminist approach. This perspective appreciates and acknowledges variations of women and their identities, as it is a socially constructed theory (Rosser, 2005). This theory examines how women have evolved throughout their lives and in doing so, takes into account how they have formed particular beliefs, morals, and values. The postmodern feminist perspective emphasizes social scripting and the impact it has on both women and men. A significant feature of this theory is that it recognizes the uniqueness of women through their age, race, class, sexuality, and cultural differences. The purpose of this perspective is to create social change and overcome traditional views often placed upon women within Western society therefore having a world with no privileged gender (Di Stefano, 1990; Emlet et al., 2002). To create this change, society has to be addressed and informed of the many issues different women face, including those concerning sexual health. In doing so, one has to take into account the increasing number of women becoming infected with HIV/AIDS and more importantly the ages of these women.

The postmodern feminist approach examines the subordination of women and recognizes the submission or oppression placed upon them throughout society (MacKinnon, 1997). These views are recognized within this study as many women have been subjected to particular ideas and ways of thinking based upon taught social scripts through the construction of how women should act. As previously mentioned, women in this study may have been brought up in a time when society felt sexual and intimate issues were not to be readily discussed. This lack of discussion was viewed as normal, through the construction of their social scripting. These scripted behaviors are now

recognized as oppression wherein women were subjected to limit their questions, comments, and desires. If women could not attend to their sexual needs, they were being prevented from attaining their wholeness as a woman on other levels both cognitively, spiritually, and/or emotionally. However, some women may have experienced different social constructs if their lived experiences were drawn from a free-love era in the 1960s and 1970s. During this time, sexuality had greater freedom and women were not scripted to feel as inhibited as previous generations to discuss this topic. This freedom and lack of socially constructed ideas of sexuality could lead to attitudes that are more liberal or increased knowledge about sexuality. However, due to societal assumptions and ageist beliefs, as these women age they may develop more reserved attitudes or their knowledge pertaining to age-related sexuality changes may be hindered because an older woman's inquiries about sexuality are often socially perceived as inappropriate.

The postmodern feminist perspective takes an in-depth look at the experiences of various groups of women within a patriarchal society. Women face poverty, racism, sexism, inadequate health care, sexual and domestic abuse(s), and limited education. Older women who have had less educational experience with regard to sexual health issues can ultimately be at a greater risk for HIV/AIDS. When sexual education is limited or not encouraged for women, their potential, rights, and understandings as women are denied (Emlet et al., 2002). The postmodern feminist perspective believes that all women are unique and by examining individuals or groups, researchers are able to observe areas in which women require further support.

The *nice girl* construct, introduced by Fox (1977), further identifies how women are socially constructed to act a particular way. This ideology is constructed early in a

woman's life, as "girls are taught to be, and rewarded for being quieter, more passive, more controlled . . . than are boys" (Fox, 1977, p. 809). Age is also a factor in the "nice girl" paradigm as older women are viewed as not sexually appealing to men and assumed not to be sexually active (Fox, 1977). Furthermore, women may limit their ability to educate themselves and make proper decisions concerning sexual behaviors and sexual health because they have internalized the socially accepted idea that women should be passive and the stigmatization that aging women are less sexual. If older women are scripted with this nice girl construct and participate in heterosexual activities where a man is characterized as the sexual aggressor and having sexual freedom (Fox, 1977), they may partake in unsuitable or dangerous behaviors by way of subservient sexual behavior (i.e., not insisting on condom use, even though they can not get pregnant) and not feeling sexually attractive. Women increase their risk of infectious diseases such as HIV/AIDS by conforming to these socially scripted behaviors.

The postmodern feminist perspective looks at social construction and the ways women have evolved to this point, the challenges of situations, and the changes that need to take place to create equality and eliminate problems. As previously mentioned, the topic of sexuality has evolved over the years and is no longer as taboo to discuss as it once was. Society has advanced in that women are increasingly targeted when discussing sexuality and intimacy; however, the focus is commonly centered toward younger women. The challenge society is faced with is how to educate older women about STDs/STIs and provide them with equal opportunities and rights as those afforded to younger women. Through social awareness and communication of sexually transmitted diseases, safer sex options, and through reflection on social scripting, women's

knowledge should increase, their decision-making change, and dangerous sexual behaviors hopefully decrease. For this to take place, all women have to be viewed as equal yet recognize that not all women have the same experiences. Society also has to be accepting and willing to promote education to those of all ages, as only then can any problem be eliminated or any change take place.

The postmodern feminist perspective also acknowledges the defenselessness that an older woman with HIV/AIDS goes through and the multiple stigmas of gender, age, and the socially constructed fear of HIV/AIDS (Emlet et al., 2002). It is important for these attributes to be recognized not only by feminists but also by society and health professionals to create effective social work interventions that "address both individual concerns and broader social change" (Emlet et al., 2002, p. 235). Fox and Murry (2001) explain that the knowledge gained through feminist research must be utilized to restructure social conditions as means to promote equality among women and men. Use of this perspective will enable women to share their perceptions regarding sexual health issues and HIV/AIDS and to deter negative sexual outcomes from happening.

Discussing sexuality, intimacy, and HIV/AIDS with women will bring forth social awareness and social change. Additionally, a postmodern perspective recognizes that each woman has unique past and present encounters that are ultimately different through their societal interactions over their life course; these experiences lead to different knowledge levels of sexual health and HIV/AIDS (Baber & Allen, 1992). Examining the knowledge of older women is instrumental, as it shows the need for further sexual health education. Recognition of this knowledge also indicates the need for sexual prevention measures, universal education, and equality, as everyone is affected.

The lack of Canadian information and research surrounding older women with HIV/AIDS can hinder one's ability of fully understanding appropriate intervention strategies that need to take place. This lack of information is apparent within society as older women are a marginalized group. For change to occur, further research and additional resources are necessary. As stated earlier, looking at older women's depth of knowledge on sexuality, intimacy, and HIV/AIDS is something Canadian research has not fully explored. There are over two million women 65 years of age and older in Canada (Statistics Canada, 2005), therefore the need for policy and education intervention on sexual health issues and the aging population is becoming greater.

Because HIV/AIDS is repeatedly viewed by society as a "male virus in a female body" (Zablotsky, 1998, p. 761), there is a low importance placed upon infected women. The postmodern perspective helps to inform the ways in which society has constructed women into gender specific roles, which can otherwise be problematic for those coping with HIV/AIDS, as there are many other issues to deal with (Lorber, 1998). Educating older adults in relation to HIV/AIDS will increase awareness, help further one's understanding that the disease can affect women, and promote social change about the attitudes and stigmas attached to this disease.

Postmodern feminism is an appropriate perspective to use for this study as it encompasses the history of societal construction and how women have been scripted into specific gender roles. Through further research, these constructs can be explored, as women are a heterogeneous group; full of unique individuals with many different needs. Thus, this perspective is also appropriate to use for specific groups of women, such as the older women participating in this research.

Chapter IV: Methodology

To answer the research questions, a questionnaire examined women's knowledge of sexual changes occurring throughout the aging process, their attitudes about sexual activity, and their sexual behavior. Women's past and current sexual interest and activities were also explored noting behavioral changes that have taken place over the life course. Additionally, questions about HIV/AIDS gave an indication of how much women knew about this topic. Questions regarding demographic information such as marital status, education level, religion, employment, current state of health, and lifetime occupation concluded the questionnaire. Directions for each set of questions were outlined prior to each section.

A questionnaire format was used as it provided a sense of anonymity that helped to result in a considerable number of complete surveys. Participants circled a number coinciding with the best answer rather than writing it out or discussing it with an interviewer. The goal was to help older women feel comfortable enough to state what they believed and understood to be true, given the sensitive subject matter. The questionnaire was not piloted prior to administering. A copy of the distributed questionnaire is shown in Appendix A.

Quantitative Research

Some literature indicates that quantitative research methods are embedded with masculine techniques (Caprioli, 2004; Guba & Lincoln, 1994; Oakley, 1998; Sprague & Zimmerman, 1993) and therefore cannot be utilized in a feminist study. Masculine techniques refer to the scientific methods that are used throughout research and can be thought to create a gender hierarchy; however, stating quantitative research is masculine

only submits to the gender dichotomy that feminists so strongly wish to absolve (Caprioli, 2004; Sprage & Zimmerman, 1993). However, if more women utilize scientific methods in their research, this status could change and "a different science might emerge" (Caprioli, 2004, p. 258), one that is not limited to a gender dichotomy. Moreover, even qualitative research can establish a hierarchy between the researcher and participant, as participants' comments are utilized for the researcher's own context (Brayton, 1997; Caprioli, 2004; Oakley, 1998), thus qualitative research is not immune from power issues.

No research tool is perfect, thus when taking a quantitative approach (Caprioli, 2004), questionnaires must be sensitive to women's race, class, and other characteristics. This study is built upon these perspectives through encompassing older women, their experiences, and their viewpoint, as well; the scales used are pre-validated through prior utilization with large samples of women. Furthermore, "qualitative and quantitative methods may be used appropriately with any research paradigm" (Guba & Lincoln, 1994, p. 105), illustrating that a quantitative approach can be used within a feminist perspective. Moreover, quantitative research has been beneficial for women in overcoming socially oppressive circumstances related to families, equality, and security (Oakley, 1998; Sprage & Zimmerman, 1993). For example, Armstrong and Armstrong (1978) noted that income inequities between men and women have been effectively documented through a quantitative social feminist perspective. With research focused on sexual health issues, the knowledge base of aging women as a whole has to be examined, therefore using a quantitative method is appropriate, as there is a greater sense of anonymity compared to qualitative research as well, a larger proportion of older women can be examined.

Procedure

The questionnaire was administered to women 50 years of age and older throughout Nova Scotia and took approximately 20 minutes to complete. The questionnaire was distributed through two outlets. First, it was disseminated to members from various "Red Hatter" groups throughout Nova Scotia. This is a women's organization whose members are mainly 50 years of age and older and who get together for social activities and outings. The members of these groups may have represented a more rural population. The head members of various Red Hatters groups throughout the province were invited to sign up for initial interest in the study at a *network encounter group* convention. Through this procedure, thirty names of head members of various groups expressed interest in distributing the questionnaires to their members. Head members were contacted to ascertain the number of members in their individual group(s). Questionnaires with self-addressed stamped envelopes were then mailed to the head members with instructions for dispersion. A separate letter was given to head members (Appendix B) outlining the distribution process for the questionnaires. The head members were asked to distribute the questionnaires at their group meetings and interested participants were requested to complete and return the questionnaires within two weeks of receiving it.

Second, the questionnaire was distributed at the Halifax Sexual Health Centre (HSHC), a sexual health clinic where approximately ten women aged 50 years and older visit per month. The centre was used as a recruitment point for individuals from an urban environment. At the HSHC, staff members gave the questionnaire to women who met the age criteria. Explanatory letters were also provided to the staff at the HSHC explaining

the dissemination procedure (Appendix C). The survey was administered in a self-addressed stamped envelope, a format that allowed participants to complete it privately within a two-week period.

A cover letter (Appendix D for Red Hatters, Appendix E for HSHC) was attached to each questionnaire. The letter described the nature of the study and the need for this topic to be addressed. Additionally, this letter outlined confidentiality, anonymity, and explained that consent was given by means of completing the questionnaire. Thus, a signature was not required, as is typical with survey research. Of the 500 questionnaires distributed, 202 were returned, for a response rate of 40%. Of those returned, 195 questionnaires were completed. For analysis, there was a final sample of 186 questionnaires as those with 25 or more unanswered questions were removed.

Dependent Variable

To measure women's knowledge of HIV/AIDS, the *HIV-Related Knowledge Scale* (LeBlanc, 1993) was used. This scale was developed by the U.S. National Center for Health Statistics as part of a larger 1987 study called the National Health Interview Survey (NHIS). This particular scale was part of a series of supplemental questions related to special health topics. It asked questions specifically related to HIV/AIDS as a way to obtain participants' depth of knowledge and understanding. The 1987 version of this scale was used for this study because the more recent version (National Centre for Health Statistics, 2005) focused on how, where, and when individuals were tested for HIV/AIDS, issues not being addressed in this study.

The NHIS combined 25 questions to demonstrate knowledge levels relating to HIV/AIDS (LeBlanc, 1993). These questions connect to this study's objective regarding

what older women know about HIV/AIDS. Questions focused on what individuals know about the disease, and asked if "AIDS leads to death" or if "you can tell if people have the AIDS virus just by looking at them". Questions 75 to 85 (on the questionnaire) were answered on a 4-point Likert scale ranging from *definitely true* to *definitely false*. Questions 86 to 99 (on the questionnaire) were answered on a 5-point scale ranging from *very likely* to *definitely not possible*, for example "how likely do you think it is that a person will get the AIDS virus from being coughed or sneezed on by someone who has AIDS?"

To compute an index variable for HIV/AIDS knowledge, the following procedure was used. Responses to the HIV/AIDS questions were recoded with a score of *0* for incorrect answers and *1* for correct answers. The mean scores for the false answers were reverse recoded to reflect positive scores. The recoded scores from the twenty-five questions were added together, multiplied by 100, and divided by 25. The index variable was called *HIV/AIDS knowledge* and had possible values ranging from 0 to 100%. Higher scores represented greater knowledge of HIV/AIDS. For example, a score of 100 means that 100% of the answers were correct. The Cronbach's alpha coefficient was not recorded for the original NHIS scale; however, for the HIV/AIDS knowledge index, it was 0.83 indicating strong internal consistency.

Independent Variables

Sexual knowledge and attitudes. White's (1982) *Aging Sexual Knowledge and Attitude Scale* (ASKAS) was used to measure women's knowledge and attitudes regarding sexual health. This 58-item scale measures knowledge and attitudes surrounding the changes or lack of changes that occur in response to the aging process

among women and men. Essentially, this scale allowed for an examination of women's knowledge about the effects of aging on sexual activity and response. The ASKAS is useful in analyzing the extent of individual knowledge and encountered obstacles with sexuality and intimacy throughout the aging process (White, 1982). Questions 1 to 35 focus upon overall knowledge of aging and sexuality. The knowledge questions ask participants whether or not they agree on items such as "sexual behavior in older people increases the risk of heart attack" or "females, after menopause, have a physiological-induced need for sexual activity". The second set of questions, 36 to 58, focuses on attitudes about sexuality and aging. Examples of these items are "it is immoral for older persons to engage in recreational sex" or "as one becomes older, interest in sexuality inevitably disappears".

Reliability of the original ASKAS has been shown to be high with test-retest coefficients for the knowledge section from .90 to .97 and from .72 to .96 for the attitude section (White, 1998). White (1998) found the alpha coefficient for the knowledge section between .90 to .93 and the attitude section from .76 to .87. Lastly, the split-half coefficient for the knowledge section had a range of .90 to .91 and the attitude section ranged from .83 to .86 (White, 1998), indicating strong reliability.

The validity of the original ASKAS was analyzed by participants taking a sexuality course (White, 1982). The education sessions were three weeks in length. There was a four- to six-week period between the pre- and post-tests. Comparisons between pre- and post-tests showed differences in the scores for those who had completed the educational program and validated the scale as those exposed to the educational sessions showed an increase in knowledge compared to those who did not partake in the sessions.

In the original ASKAS, questions were answered for the knowledge section using a *true/false/don't know* (T/F) basis and scores ranged from 1 to 3. Participants with low scores in knowledge were presumed to have higher knowledge levels and individuals who had lower scores. For the current study, the T/F questions were changed to a 7-point Likert scale ranging from *strongly disagree* to *strongly agree* to capture a greater range of participant opinion (A. Acock, personal communication, July 8, 2005).

To compute an index variable of knowledge scores, the following procedure was used. Knowledge responses were recoded with a score of *1* for each correct answer and *0* for answers scored incorrectly. Scores for the false questions were reverse coded so that a high score meant a respondent correctly identified the item as "incorrect". The recoded scores from the 35 questions (1 to 35 on the questionnaire) were added together, multiplied by 100, and divided by 35. The index variable was called *knowledge* and had possible values ranging from 0 to 100%. Thus, higher scores indicated greater general sexual knowledge with a score of 100 indicating that 100% of answers were correct.

The Cronbach's alpha for the knowledge index was 0.74. This was lower than the value of 0.9 found by White's (1982) study, but still above the minimum alpha of 0.8 generally accepted (Bernard, 2000) as adequate internal consistency.

Based on responses to the attitude questions (questions 36 to 58), an index called *attitude* was created to assess women's attitudes about sexuality and aging and their feelings regarding sexual behaviors. Items were responded on a 7-point Likert type scale, ranging from 1 for *strongly disagree* and 7 for *strongly agree*. This 7-point scale was used in the original study. For this study, the scores for the negatively worded attitude questions were reverse coded. The scores for all 23 questions were then added together

and divided by 23. Thus, index scores could range from 1 to 7 where 7 indicated the most liberal attitude expressed in response to every question regarding sexuality and lower scores indicated more conservative responses. The Cronbach's alpha for the attitude index was 0.88, indicating good internal consistency and consistent with findings in the original scale of 0.76 to 0.86 (White, 1998).

Senior adult sexuality. To measure women's sexual activity, two scales were used. First, the *Senior Adult Sexuality Scale* (SASS) by Weinstein (1998) was used. This scale is a multidimensional instrument used to assess seniors aged 50 years and older on their sexual interests, activities, and attitudes surrounding both sexuality and sexuality among older individuals. The SASS examines how women rate their participation in sexual activity, interest in sexual activities, and sexual attitudes. Rated on a 7-point Likert-type scale, questions asked about personal feelings and behaviors, with items such as "how would you rate your current participation in sexual activities?" Lower scores indicate lower levels of participation, interest whereas higher scores suggest greater participation and interest (questions about attitudes were not used). Out of five scales in the original measure, seven of the eleven questions in *senior adult sexuality scales part V, biographical information II* were used in this study.

The fifth section of the SASS measured women's sexual activities at two points in time (Weinstein, 1998). Six of the questions used from part five were answered on 7-point scales. First, participants were asked about the participation in sexual activity using an *inactive-very active* scale, the lower the score the less active the woman. This scale was used to compare women's current sexual participation with how active or inactive they felt they were when they were 35 to 45 years old. Next, a *not interested-very*

interested scale similarly compared how interested in sexuality women felt they were at different ages; once again, the lower the score the less interested participants reported feeling. The third set of questions asked women to rate their current sexual attitude on a *very conservative-very liberal* scale; this too was asked when they were 35 to 45 years of age. Finally, the seventh question from this section requested women to identify their sexual orientation.

Validity of the original SASS study was established and supported through factor analysis (Weinstein, 1998). Face and content validity were explored and validated by a qualified individual and senior reviewer. Cronbach's alpha for the survey's original subscales indicated acceptable internal reliability. Weinstein (1998) stated reliability scores were 0.90 and 0.84 for the *interest subscales* and 0.66 for the *sexual activities scale* (which included questions related to participation and attitudes).

Items from a second scale measuring women's sexual behavior were also used as additional measurement of women's sexual activity. The *Brief Index of Sexual Functioning for Women* (BISFW) evaluates women's awareness, performance, and fulfillment concerning sexuality, fantasies, and responses (Rosen, Taylor, & Leiblum, 1994). Nine questions from the original questionnaire were used for this study to obtain an in-depth look into women's sexual lives. These questions focused on the frequency of one's sexual activity. Seven of these questions were part of a *sexual activity* scale in the original questionnaire. These seven questions asked about one's frequency of kissing, masturbation, mutual masturbation, petting and foreplay, oral sex, vaginal penetration or intercourse, and anal sex in the past month. Responses used a 7-point Likert scale ranging from *not at all* to *more than once a day*. Two additional questions were used in this

questionnaire but were not part of any subscale; they were originally scored to examine the existence of one's sexual partner. These questions asked participants if they had a "current sex partner" and if they "had been sexually active within the past month"; both required a *yes* or *no* answer and were scored on the same *yes/no* scale within this study, as the original. Additional questions on this scale were not utilized as they focused on arousal and orgasms, concepts that were not examined in this study.

Reliability for the original BISFW was determined through Pearson's correlation(s) between the subscale scores. The test-retest was distributed over one month, and reliability varied between 0.68 and 0.78 (Rosen et al., 1994). The internal consistency was high at 0.83 (Rosen et al., 1994).

Validity in the original scale was assessed through a comparison of the BISFW with the *Derogatis Sexual Function Inventory (*Derogatis & Melisaratos, 1979), which measured individuals' sexual feelings, understanding, functioning, and contentment. Correlations between these scales varied positively between .59 and .69 (Rosen et al., 1994), indicating acceptable convergent validity.

To compute an index variable for behavior questions from the BISFW and SASS were combined. The following procedure was used for the behavior index as it looked at women's current and previous behavior patterns. Based on the responses to questions from the SASS scale, new variables were computed to identify one's participation, interest, and attitudes wherein a score of *1* was given if the answer to the current question was the same or greater than the number circled referencing when they were 35 to 45 years old. Responses to questions examining one's frequency of specific sexual behaviors, taken from the BISFW (questions 68 to 74 on the questionnaire) were also

recoded with a score of *0* if participation was *not at all; 1* if participation was at least once in the previous month, and *2* if participation was more than once in the previous month. Question 74 asked if women engaged in anal sex over the past month, this question was omitted from analysis, as no women had indicated that they had engaged in this behavior. Furthermore, questions 63, 64, and 65 (on the questionnaire) were not used in this index, as they did not relate to sexual behavior. The 13-item behavior index had possible values ranging from 0 to 20, with higher scores indicating greater frequency in sexual behavior. The Cronbach's alpha for the behavior index was 0.85, indicating strong internal consistency.

Demographics

The last section of the questionnaire examined participant demographics through categorical, closed-ended questions. Three demographic questions were obtained from *part I, biographical information I*, in SASS and examined marital status, education, religious affiliation, retirement, employment, state of health, and lifetime occupation. Unfortunately, a question asking about age was accidentally left off the questionnaire. As a result, I was unable to determine the effect that age may have on sexual attitudes, behaviors, and HIV/AIDS knowledge for older women.

Data Analysis

Data were entered into Microsoft Excel (2003, SP2) and the Statistical Package for the Social Sciences (SPSS 14.0) licensed software. The data were cleaned and reviewed for accuracy by comparing the SPSS file to originally completed questionnaires.

The index variables, HIV/AIDS knowledge, sexual knowledge, sexual behavior, and sexual attitudes were then computed as previously described. Descriptive statistics were computed for each variable including means, standard deviation, and frequencies. Tables, histograms, and bar charts were generated to describe the distribution of selected variables in each index. To examine how the index variables varied by the demographics, one-way analysis of variance (ANOVA) was utilized. Each index was used as the response variable and each demographic as the explanatory variable. To examine relationships between HIV/AIDS knowledge, sexual knowledge, sexual behavior, and sexual attitudes, pairwise Pearson's correlations were computed.

A linear regression technique with backwards elimination of predictor variables was used to develop stochastic models to predict HIV/AIDS knowledge. Two predictive models were investigated. The first model used only sexual knowledge, sexual attitudes, and sexual behavior as predictors. The second model included all of the demographic variables in addition to the three noted above. Indicator variables were created to represent marital status, education level, religious preference, employment status, state of health, and lifetime occupation. The indicator variables were computed using the "reference coding" strategy. One level of each of these variables was arbitrarily chosen as the reference level. For the other levels, the indicator was set to 1 if the participant selected it, otherwise the indicator was set to 0. A respondent's selection of the reference level is indicated when all indicators for that variable are set to "0".

Missing Data

A series of methods were utilized to handle missing data. First, questionnaires with approximately one-quarter or more missing responses (equivalent to 25 or more

questions) were discarded from analysis, as they would not provide substantial information to the study. For the most part, there was no pattern around missing data, but sixteen of the questionnaires that were discarded had left every second page unanswered. Based on this procedure, 8% of the returned questionnaires were removed, resulting in a final sample size of 186.

The remaining missing data in the knowledge, behavior, and AIDS knowledge indexes were coded as *0*, with the following exception. For knowledge items, participants who wrote a question mark or "don't know" on the questionnaire were given a score of *4* (on a scale of 1 to 7). This strategy was used because it was assumed that such responses indicated neither disagreement nor agreement with a question. However, responses were given a score of *0* if a response was simply missing. For the behavior scale, answers were coded as *0* when they were missing or when the answer picked was *not at all*. Questions for the HIV/AIDS knowledge scale were given a score of *0* for any missing responses. Missing data on the attitudes index remained as missing apart from the exception noted in the next paragraph.

Survey questions 42, 43, and 44 in the attitude index were worded in such a way that participants sometimes believed that only one of the three questions needed to be answered. Questions 42 and 43 were negatively worded questions and question 44 was worded positively. In the missing data procedure, strong agreement to one of these questions was assumed to imply strong disagreement with the other two. Based on this assumption, questions were then recoded to the opposite response of the one circled. For example, if questions 42 and 43 were unanswered and 44 had an answer of 7, the previous two questions were recoded with a score of 1. Likewise, if questions 42 and 43

had an answer of 1 and question 44 was unanswered question 44 then received a score of 7. However, this strategy of recoding did not take place if there was only one question left unanswered. This strategy was used 33 times for question 44, 34 times for question 43, and 3 times for question 44.

Ethical Considerations

The data for this study were obtained through self-administered questionnaires. Participants were asked to complete the questionnaires at their leisure and return within two weeks using a provided self-addressed stamped envelope. Each questionnaire had a cover letter that outlined the study, the importance, and how confidentiality and anonymity would be maintained.

Few organizations in Nova Scotia are easy to gain entry, consisting primarily of women age 50 and older, however the Red Hatters are a large organization in which female members are 50 years of age or older. Accessing women through this group could have been helpful to the members because being part of a group environment could create a layer of support for those participating in the study. Furthermore, this study could encourage possible discussion within the groups and among individuals. Women participating through the HSHC already had professional contacts for additional support after participating in this study because they had visited the sexual health centre. This research obtained ethical approval from the Mount Saint Vincent University Research Ethics Board. The following are examples of potential issues and concerns that were addressed or that may arise when researching a topic related to sexual health.

Participants were informed that their participation was voluntary, that the topic was sensitive in nature, and that there could be what some may feel are potentially

distressful outcomes because of participating. For example, some questions could result in participants wanting to be tested for sexually transmitted infections including HIV/AIDS. Moreover, the survey could provoke painful memories of current or past relationships. For these reasons, phone numbers for the *Nova Scotia STI/HIV/AIDS* helpline, *Nova Scotia Association for Sexual Health*, *Avalon Sexual Assault Center*, and the website for *HIV Wisdom for Older Women* were included in cover letters.

Some people may believe that questions about sexuality could be distressful for older women; moreover, distress could increase with age. No support was found in the literature with regard to the survey questions being potentially distressful to this age group of women. Each scale used had been distributed to large groups of women without any record of distress. Additionally, Dr. Estelle Weinstein (creator of the SASS) and Dr. Sandra Leiblum (creator of the BISF) were contacted and asked if any distress was reported from participants using these scales. Both researchers confirmed that no distress was found, which might possibly stem from a cohort effect wherein women are from the same era or experience similar life experiences. In this study, no participant(s) noted feeling offended in any way through reading or completing the questionnaire. In fact, positive comments and feedback relating to the topic and study were noted on some of the questionnaires.

The potential benefits of certain questions (i.e., asking about specific behaviors) within this study could also be a concern for some people. A number of researchers (Clearly et al., 2002; Public Health Agency of Canada, 2006; Strombeck & Levy, 1998) identified the area of sexual health research and HIV/AIDS as needed for future research therefore giving a rationale for including questions on specific sexual behaviors and

experiences. For example, an annual study from the Public Health Agency of Canada (2006) stated:

> More epidemiological and behavioral data are needed to better understand the HIV/AIDS situation among older adults to inform prevention and care programs. Population based surveys should continue to include questions regarding condom use and the number of sexual partners, as well as HIV testing behaviors, for all age groups. Attitudes and knowledge about HIV/AIDS should be studied among those aged 50 years and older in order to assess the potential misconceptions or knowledge gaps that older adults may have with regard to HIV transmission and prevention . . . research into the sexual risk behaviors of older Canadians needs to be supported. (p. 38)

Moreover, section five of the *Tri-Council Policy: Ethical Conduct for Research Involving Humans* (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, & Social Sciences and Humanities Research Council of Canada, 1998), which guides all ethical reviews, addresses the issue of inclusion of older participants in research. A “principle of distributive justice” provides the background for this section, asking if “the overall benefits and burdens of research distributed fairly, and have disadvantaged individuals and groups received a fair share of the benefits of research?” (p. 51). Two groups highlighted in this section being denied the benefit of research are women and “the elderly”. This section clearly states, “age has been used unfairly to exclude individuals from participation in research. The result of such exclusion is that insufficient research has been done on the young and on the

elderly" (p. 52). Furthermore, an intersection between age and gender means that older women may be at particular risk of being excluded from research for "protecting them" and therefore denied the benefits of such research. This study sought to empower older women by recognizing the importance of sexual health with age and by not denying their right to partake in understanding and exploring sexual health issues.

Chapter V: Results

Research results showed that the women had moderately liberal attitudes in relation to the sexuality and sexuality among older individuals. The women also had a moderate level of knowledge about sexual health and aging but lower levels of knowledge about HIV/AIDS. As well, several factors predicted HIV/AIDS knowledge scores.

In this chapter, I first outline the sample's demographics. This is followed by an examination of participants' knowledge and attitudes of sexuality. Findings also explore any relationships between one's knowledge and attitudes with the demographic questions. Next, participants' knowledge of HIV/AIDS is outlined noting any significant relationships to factors such as marital status or education. Lastly, a regression analysis is presented, which examined the variables predicting HIV/AIDS knowledge.

Sample Description

Table 1 describes the participants. The majority of women were married or cohabitating (71%) and the most common education level was community college diploma or certificate (22%). Furthermore, the women were mostly Roman Catholic (37%), fully retired (58%) and unemployed (73%). These women considered themselves to be in good health (66%) and indicated a variety of lifetime occupations. With this stated, there was still a range of answers within each demographic question reflecting a variety of participant backgrounds, as can be examined in Table 1.

Table 1

Participant Characteristics

Characteristics	*n*	%
Marital Status		
Married/cohabiting	130	71.4
Single/separated/divorced	29	15.9
Widowed	23	12.6
Education		
Less than high school	16	9.0
High school diploma	24	13.4
Some university/community college	27	15.1
Business school/Diploma/certificate from community college	79	44.1
Masters/doctorate/Professional degree	33	18.4
Religion		
No religion	7	3.9
Roman Catholic	66	36.9
Baptist/Presbyterian	19	10.6
Anglican	27	15.1
United Church of Canada	56	31.3

(Table 1 continues)

Characteristics	*n*	%
Religion		
Other/Lutheran	4	2.2
Employment Status[a]		
Fully retired	107	57.5
Partially retired	17	9.1
Employed part-time	16	8.6
Employed full-time	34	18.4
Unemployed	136	73.1
Homemaker	28	15.1
Health[b]		
Fair	22	12.2
Good	119	66.1
Excellent	39	21.7
Occupation		
Management/administration/professional	30	19.6
Sales/clerical	36	23.5
Healthcare	29	19.0
Educator	21	13.7
Other	37	24.2

[a]Participants could choose multiple answers therefore percentages to do not equal 100. [b]No one stated they were in poor health.

Knowledge about Sexuality

The knowledge index was computed as a measure of what older women know about sexuality and sexuality among aging individuals. Individual knowledge scores (n = 186) ranged from 17% to 94% with an average of 62% (SD = 14.32), indicating that the average respondent correctly answered 62% of the knowledge questions. This indicates a moderate level of knowledge pertaining to general sexual health issues. Figure 1 demonstrates the distribution of knowledge scores. The bell shaped curve indicates that approximately equal proportion of women scored above and below the average.

Results of a one-way ANOVA test indicated there was only one factor that was significant: one's lifetime occupation, $F(4, 148) = 2.72$, $p < .05$. A Bonferroni post-hoc test indicated a significant difference in one's average knowledge score between those with a lifetime occupation in the healthcare field (M = 68.57) and those who had an occupation as manager, administrator, or professional (M = 57.24). No differences were found between any other lifetime occupation groups (educator, sales/clerical, or other). No significant differences were found on any other demographic variables (results not reported).

Table 2 shows the number of respondents who answered each question, the mean, and standard deviation of the original 1 to 7 score, as well the percent of correctly answered questions. Questions are organized from highest to lowest percent of correct responses (the last column in the table). Several items are of particular notice when examining what these women know about the effects of aging on sexual activity and response. First, many of the questions in this section related to sexual

health in men reflected correct answers that were below 50%, which may indicate lower levels of knowledge about men's sexual health. For example, only 17% correctly agreed that older men typically experienced a reduced need to ejaculate and therefore maintained an erection longer than younger men maintain. In addition, only over one quarter of the women correctly knew that there is a greater decrease in male sexuality with age than among women.

However, respondents had high levels of knowledge on some items related to sexuality in general or women's sexuality. For example, nine out of ten women correctly disagreed that older men and women needed younger partners as a means for sexual stimulation. Moreover, 88% correctly identified that sexual activity was not dangerous to one's health as they age. However, one out of every four women did not know there is a reduction in lubrication and therefore a longer time needed to achieve lubrication for women over 65 years, compared to younger women. In general, these results indicated that the women feel sexual activity does not end with age.

Figure 1

Range of Sexuality Knowledge Scores

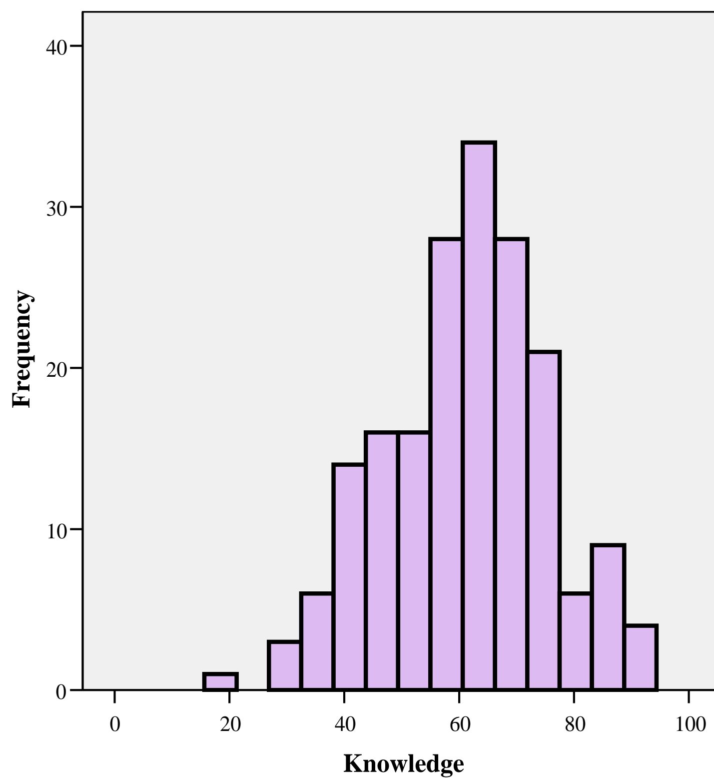

Table 2

Knowledge Regarding Sexuality and Aging

Questions	*n*[a]	Mean	*SD*	%[b]
Need younger partner for stimulation (F)[c]	183	6.23	1.43	90
Sexual activity is dangerous to health as one ages (F)	185	6.14	1.44	88
Drugs/alcohol lower sex drive (T)[c]	185	5.79	1.50	86

(Table 2 continues)

Questions	n[a]	Mean	SD	%[b]
Prescriptions alter sex drive (T)	183	5.92	1.66	84
Sexual interest is maintained into 80s/90s (T)	184	5.80	1.24	83
Excessive masturbation brings mental confusion/dementia (F)	172	6.23	1.41	81
Women over 65 have reduced lubrication compared to younger women (T)	179	5.75	1.53	81
Sexual activity has beneficial psychological effects (T)	185	5.47	1.45	80
Sexual activity has beneficial physical effects (T)	184	5.47	1.47	76
Fear of the inability to perform sexually brings about inability to perform sexually in older males (T)	180	5.36	1.39	75
Aging women take longer to achieve lubrication than younger women (T)	183	5.42	1.68	75
Impotence can be treated and/or cured (T)	180	5.29	1.33	73
Men 65 and over are unable to have intercourse (F)	178	5.53	1.55	73
Aging women experience painful intercourse due to reduced lubrication (T)	183	5.33	1.67	72
Sexual activity in those over 65 increase their risk for a heart attack (F)	182	5.30	1.78	67

(Table 2 continues)

Questions	n[a]	Mean	*SD*	%[b]
Sex is typically a lifelong need (T)	184	5.11	2.01	66
Male's sex urge increases with age (F)	178	5.14	1.57	65
Disinterest reflects depression (T)	181	4.97	1.62	65
It takes longer for males over 65 to attain erection compared to younger males (T)	180	5.07	1.67	63
Older women are sexually unresponsive (F)	182	4.99	1.69	62
Masturbation has benefits on sexual responsiveness (T)	172	5.01	1.47	60
Sexual frequency decreases in older men (T)	176	4.71	1.51	59
The penis of males over 65 is less firm than younger males (T)	171	4.94	1.77	56
Women experience a loss of sexual satisfaction after menopause (F)	185	4.68	1.78	55
Age change(s) slow response time rather than reduces interest (T)	180	4.68	1.50	53
Maintain sexual responsiveness in aging males is the consistency of sexual activity over the lifespan (T)	176	4.68	1.57	50
Males over 65 have less intense orgasm compared to younger males (T)	176	4.55	1.64	49
Cigarettes diminish sexual desire (T)	167	4.55	1.80	45

(Table 2 continues)

Questions	n^a	Mean	*SD*	%[b]
Menopause increases the psychological need for sexual activity (F)	177	3.50	1.52	44
Impotence increases in men over 60 (T)	168	4.55	1.42	42
End of sex can be due to social/psychological causes not physical/biological (T)	182	3.98	1.91	38
Common determinant of frequency of sex in older couples is the interest of the husband in a sexual relationship with his wife (T)	179	3.66	2.00	33
Most sexually active young people tend to be relatively active when older (T)	172	4.03	1.61	32
There is a greater decrease in male sexuality than female sexuality (T)	179	3.65	1.71	27
Older men have reduced need to ejaculate therefore have longer erection compared to younger men (T)	166	3.14	1.71	17

Note. Responses ranged on a 7-point scale, where 1 = strongly disagree, 7 = strongly agree.

[a]Number of responses per question. [b]Percent of correctly answered questions. [c]Correct response, T = true, F = false.

Attitudes Regarding Sexuality

The attitude index was computed to measure what attitudes older women have regarding sexuality and sexuality among older individuals. Individual attitude scores (n = 136) ranged from 3 to 7 on a 7-point Likert scale with an average of 5.78 (*SD* = 0.86), indicating liberal attitudes. Figure 2 confirms this, showing a skewed

distribution of data in which the majority of women had very liberal attitudes in the 6 to 7 range and the remaining participant scores had less liberal views as their scores were spread through the mid range. An ANOVA test revealed a significant relationship between education and sexual attitudes, $F(7, 124) = 3.47$, $p < 0.01$. A Bonferroni post-hoc test revealed that women with a Master's or Doctorate degree ($M = 6.60$) scored significantly higher on their sexual attitude compared to those with less than a high school diploma ($M = 5.15$), but were not significantly different from any other type of educational level. No other significant relationships were found between other demographic variables and sexual attitudes (results not reported).

Table 3 presents the number of responses to each question, the mean, and standard deviation from the 7-point scale. Questions are organized from highest to lowest mean (the last column). Several items showed a desire and need for women to be further educated regarding function changes that occur in women and men. For example, women indicated they would like to learn more about sexual changes that occur in older years with an average score of 5.12. Additionally, women generally disagreed that they knew all they needed to about sexuality in people 65 years and older (3.10).

When asked if sexual interest was disgraceful among those who are 65 years or older an average score of 1.62 was found, indicating that participants strongly disagreed with this statement. Women also felt that recreation sex was not immoral for older persons (5.21). In general, participants' responses showed generally positive attitudes and signified that they view sexually active lifestyles as positive in aging women.

Figure 2

Range of Sexual Attitude Scores

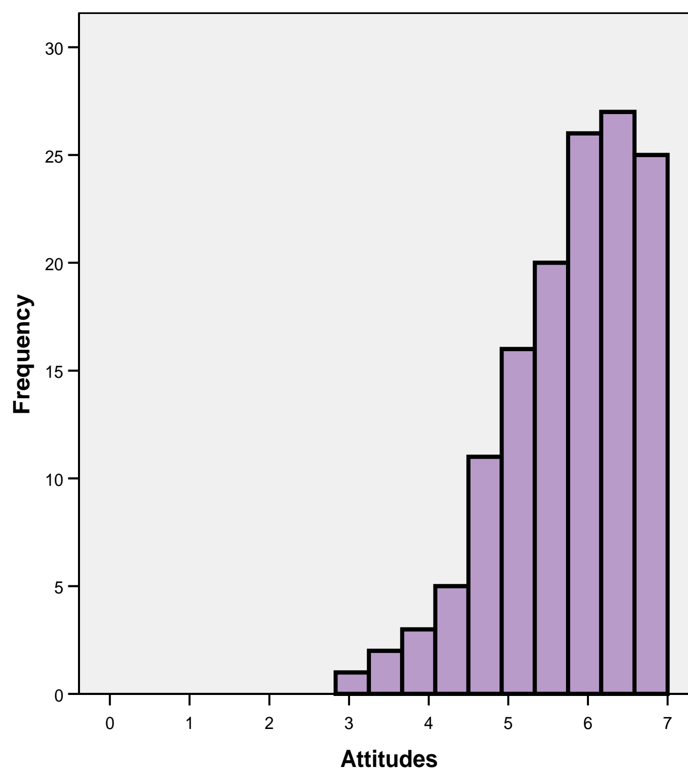

Table 3

Attitudes Regarding Sexuality and Aging

Questions	*n*[a]	*SD*	Mean
Staff should be trained/educated in sexual activity and aging (P)[b]	180	1.45	6.07
Institutions should be trained/educated in sexual activity and aging (P)	181	1.30	6.19
Institutions should provide social interaction (P)	168	1.59	5.81
I support sexual education for staff (P)	182	1.69	5.69

(Table 3 continues)

Questions	n^a	*SD*	Mean
Masturbation is acceptable for older men (P)	171	1.72	5.32
Masturbation is acceptable for older women (P)	172	1.76	5.30
I support sexual education for residents in nursing homes (P)	181	1.95	5.24
I would like to know more about function changes with age (P)	169	2.03	5.12
My relative in nursing home in sexual relationship is not my concern (P)	177	2.08	5.01
I know all I need to about sexuality over 65 (N)[c]	181	2.06	3.10
Interest in sexuality inevitably disappears when over 65 (N)	184	1.59	2.65
Institutions should not encourage/support sexual activity (N)	181	1.73	2.45
I would not place person in a home supporting sexual activity of residents (N)	179	1.75	2.41
People over 65 have little interest in sex (N)	181	1.63	2.33
I would complain if there was sexual activity between residents within nursing home (N)	176	1.59	2.24
Nursing homes should separate genders (N)	185	1.73	2.21
Residents should not engage in sexual activity in nursing home (N)	160	1.68	2.17
If my relative in nursing home was in a sexual relationship, I would complain to management (N)	171	1.60	2.17

(Table 3 continues)

Questions	n^a	*SD*	Mean
Nursing homes do not have to give privacy (N)	182	1.61	2.13
If my relative in nursing home was in sexual relationship, I would remove them (N)	172	1.64	2.10
Recreational sex is immoral for older people (N)	181	1.42	1.79
Masturbation is harmful (N)	176	1.37	1.67
Sexual interest for those over 65 brings disgrace (N)	184	1.43	1.62

Note. Questions ranged on a 7-point scale, 1 = strongly disagree, 7 = strongly agree. Raw scores are presented (i.e., scores prior to recoding for the attitudes scale).

[a]Number of responses per question. [b](P) = positively worded questions therefore the higher the score the more liberal. [c](N) = negatively worded questions, the lower the score the more liberal the answer.

Sexual Behavior

The behavior index was computed to measure older women's behavior patterns. Individual behavior scores (n = 186) ranged between 0 to18 with the average score of 6.88 (*SD* = 4.56). This indicates that although scores varied, these women were only somewhat sexually active. Figure 3 illustrates a multimodal distribution of women's behavior scores indicating multiple frequent behaviors.

When tested with demographics, a one-way ANOVA found a significant relationship between sexual behavior and marital status, $F(2, 179) = 20.17$, $p < 0.01$. A Bonferroni post-hoc test indicated women who were married or cohabiting (M = 8.14) scored significantly higher in their sexual behavior compared to those who were

single, divorced, separated (*M* = 4.03), or widowed (*M* = 3.52). A one-way ANOVA also found a significant relationship between sexual behavior and lifetime occupation, $F(4, 148) = 2.54$, $p < 0.05$. A Bonferroni post-hoc test showed that those who were managers, administrators, and professionals (*M* = 8.20) had significantly higher sexual behavior scores than those who had lifetime occupations as educators (*M* = 4.52). No other significant relationships were found between other demographic variables and sexual behavior (results not shown).

Table 4 examines the distribution of responses to the behavior questions. Women were somewhat active: 70% of the sample had a current sex partner and 48% had been sexually active in the past month. Eighty-two percent of women rated their current sexual interest to be very interested given sexual activity was available whenever they wanted. Furthermore, 25% indicated participation in some type of petting and/or foreplay more than once in the past month, 57% kissed more than once a month, and 18% participated in oral sex once in the past month. No one indicated they had participated in anal sex within the last month, thus this question is not included in the table. Overall, these findings illustrated that many of these older women are sexually and intimately active. However, over three-quarters noted lower current sexual participation compared to when they were younger.

Figure 3

Sexual Behavior Distribution

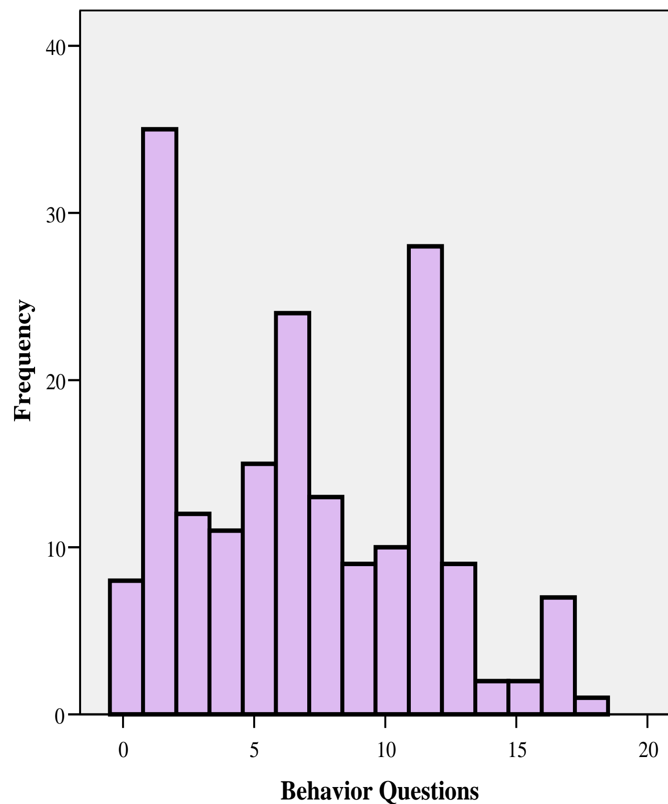

Table 4

Sexual Behaviors

Question	*n*	%
Rating of current participation in sexual activities		
Inactive	77	41.4
Active	109	58.6

(Table 4 continues)

Question	*n*	%
Current participation in sexual activities compared to when you were 35 to 45 years old		
Decreased	142	76.3
Maintained/increased	44	23.7
Rating of your current interest in sexual activities		
Not interested	33	17.7
Interested	153	82.3
Current interest in sexual activities compared to when you were 35 to 45 years old		
Decreased	109	58.6
Maintained/increased	77	41.4
Current sex partner		
No	55	29.6
Yes	131	70.4
Sexually active in the past month		
No	97	52.2
Yes	89	47.8

(Table 4 continues)

Question	*n*	%
Kissing		
Not at all	57	30.6
Once a month	22	11.8
More than once a month	107	57.5
Masturbation		
Not at all	128	68.8
Once a month	42	22.6
More than once a month	16	8.6
Mutual masturbation		
Not at all	154	82.8
Once a month	21	11.3
More than once a month	11	5.9
Petting and foreplay		
Not at all	94	50.5
Once a month	45	24.2
More than once a month	47	25.3

(Table 4 continues)

Question	n	%
Oral sex		
Not at all	140	75.3
Once a month	34	18.3
More than once a month	12	6.5
Vaginal penetration/intercourse		
Not at all	105	56.5
Once a month	36	19.4
More than once a month	45	24.2

Knowledge Regarding HIV/AIDS

The HIV/AIDS knowledge index was computed as a measure of what older women know about HIV/AIDS. Individual HIV/AIDS knowledge scores (n = 186) ranged from 8 to 96% with an average of 56% (SD = 20.01), indicating that the average woman correctly answered 56% of the HIV/AIDS knowledge questions. This average is 6% lower than that of general sexual knowledge, which shows there is less of an understanding about HIV/AIDS.

A one-way ANOVA found a significant relationship between HIV/AIDS knowledge and education, $F(7, 171) = 2.90$, $p < 0.01$. A Bonferroni post-hoc test indicated that the average knowledge scores for women with a professional degree (M = 65.22) were significantly higher compared to those with a business school degree

(M = 48.41). No difference was found when compared to other groups of education, and all other educational groups were similar. In addition a one-way ANOVA found a relationship between one's lifetime occupation and HIV/AIDS knowledge, $F(4, 148) = 3.53$, $p < 0.01$. The Bonferroni post-hoc test established that the AIDS knowledge scores of those with a lifetime occupation in the healthcare field (M = 67.17) were significantly higher when compared to those who had worked in sales/clerical jobs (M = 52.56). There were no differences when compared to the other occupational groups. Finally, a one-way ANOVA found a relationship between employment status and HIV/AIDS knowledge, $F(2, 183) = 3.68$, $p < 0.05$. A Bonferroni post-hoc test indicated significantly higher AIDS scores for those who were employed part time (M = 64.25) when compared to those who were employed full-time (M = 61.53) and those who were unemployed (M = 53.68). No other significant relationships were found between the demographic variables and HIV/AIDS knowledge (results not reported).

Table 5 shows the number of women who answered each question, as well as the means and standard deviations for each question. The percentage of correctly answered questions are listed in order from highest to lowest (in the last column). In examining individual items, there were some interesting findings. When questioned how likely it would be to get the AIDS virus from eating in a restaurant where the cook had AIDS, only 20% correctly answered that it was not possible, indicating a lack of understanding of how AIDS could be spread. Additionally, when asked how likely it was to get the AIDS virus from kissing (with the exchange of saliva), only 22% of women correctly knew that it was not possible. Moreover, when asked if any

person with the AIDS virus could pass it onto someone else during intercourse, 17% incorrectly stated that it was false. However, in another question 96% correctly stated that one is likely to get AIDS from having sex with a person with AIDS. These results suggest that women realized AIDS could be obtained from sexual activity but results were somewhat inconsistent; some myths about how HIV/AIDS could be transmitted continue to be believed.

Figure 4

Range of HIV/AIDS Knowledge Scores

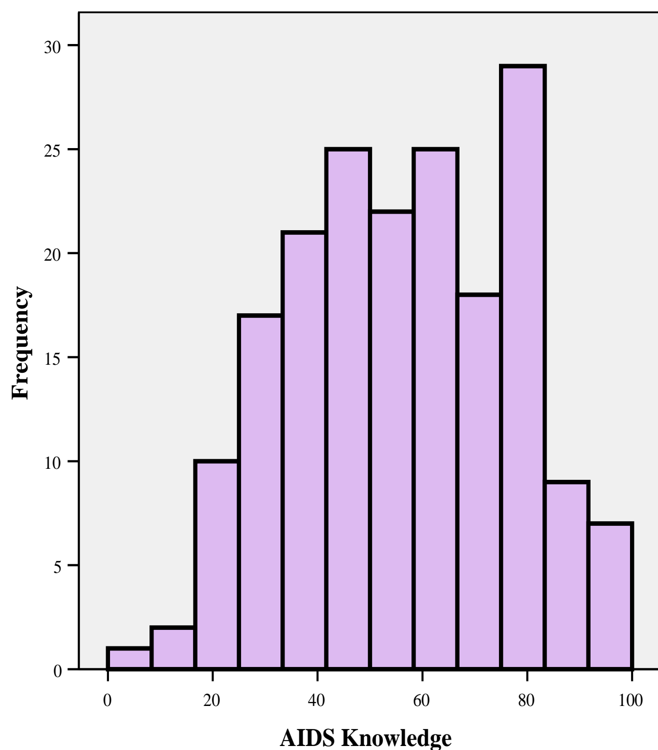

Table 5

HIV/AIDS Comprehension

Questions	n^{a}	Mean	*SD*	%[b]
1. Person with AIDS can pass to someone during sexual intercourse (T)[c]	185	3.81	.46	83
2. A pregnant woman, who has AIDS can give AIDS to her baby (T)	184	3.77	.51	80
3. Can tell person has AIDS by looking at them (F)[c]	183	3.73	.58	78
4. AIDS cripples the body's protection against disease (T)	182	3.76	.51	78
5. There is no cure for AIDS (T)	186	3.65	.66	74
6. There is a vaccine to protect from AIDS (F)	171	3.44	.77	53
7. AIDS is caused by a virus (T)	179	3.21	1.03	50
8. AIDS is common in older people (F)	182	3.46	.61	49
9. A person can be infected with AIDS virus and not have AIDS disease (T)	179	3.20	.97	48
10. AIDS leads to death (T)	186	3.26	.86	46
11. AIDS can damage the brain (T)	167	2.86	.81	20
12. Likely to get AIDS by having sex with person who has AIDS (T)	184	4.72	.66	96

(Table 5 continues)

Questions	n^{a}	Mean	*SD*	%[b]
13. Can get AIDS by sharing needles (T)	184	4.91	.34	91
14. Can get AIDS if coughed/sneezed on (F)	183	3.89	1.10	70
15. Can get AIDS living near hospital (F)	183	4.61	.72	69
16. Can get AIDS if work near someone with AIDS (F)	185	4.49	.75	59
17. Can get AIDS by using utensils used by someone with AIDS (F)	182	3.59	1.17	59
18. Can get AIDS from kissing the cheek of a person with AIDS (F)	185	4.38	.84	54
19. Can get AIDS from shaking hands (F)	184	4.34	.87	52
20. Can get AIDS from people at school with AIDS (F)	185	4.40	.74	51
21. Can get AIDS from public toilet (F)	184	4.14	.92	38
22. Can get AIDS by donating blood (F)	184	3.66	1.45	38
23. Can get AIDS from kissing with saliva exchange (F)	179	2.20	1.24	22
24. Can get AIDS from blood transfusion (F)	185	2.43	1.18	22
25. Can get AIDS from cook with AIDS (F)	180	3.80	.92	20

Note. Questions 1 to 11 are scored on a scale of 1 to 4, with 1 = definitely false, 4 = definitely true. Questions 12 to 25 are scored on a scale of 1 to 5, with 1 = definitely not possible, 5 = very likely. Scores for the false questions were reverse coded.

[a]Number of responses per question. [b]Percent of correctly answered questions. [c]Correct response, T = true, F = false.

Factors Predicting HIV/AIDS Knowledge

To explore what variables predicate HIV/AIDS knowledge, linear regression and correlation analyses were performed. First, pairwise Pearson correlations were computed between the indexes for general sexual knowledge, sexual behavior, sexual attitudes, and HIV/AIDS knowledge (see Table 6). A significant positive relationship was found between HIV/AIDS knowledge and sexual knowledge, sexual attitudes, and sexual behaviors. A significant positive relationship was also found between sexual attitude and sexual knowledge. There was no relationship between sexual behavior and sexual knowledge. In addition, no relationship was found between one's sexual attitude and their sexual behavior.

Table 6

Correlations Between Sexuality-Related Scales

Variables	1.	2.	3.	4.
1. Sexual Knowledge	-			
2. Sexual Attitude	$.30^{**}$	-		
3. Sexual Behavior	.07	.13	-	
4. HIV/AIDS Knowledge	$.25^{**}$	$.27^{**}$	$.22^{**}$	-

** $p < 0.01$.

Two linear regressions were used to develop predictive models of women's HIV/AIDS knowledge (see Table 7). Model 1 used the indexes of general sexual health knowledge, sexual attitudes, and sexual behavior. This model was significant, $F(3,132) = 9.32$, $p < 0.01$, with all three index variables being significant predictors. This model explained 17% of the variation in HIV/AIDS knowledge.

In the second model, indicator variables for demographic factors were added to see if there would be an increase in the R^2. These indicator variables were generated from responses to marital status, education level, religion, current employment, current state of health, and lifetime occupation. This second model was significant, $F(5,130) = 8.74$, $p < .01$. The model explained 25% of the variation in HIV/AIDS knowledge. The three indexes previously mentioned and two demographic variables were significant predictors. The R^2 increased between model 1 and model 2 by 8%.

The statistical assumptions for the appropriateness of regression analysis were satisfactorily verified for each of these models. For example, collinearity diagnostics for model 2 showed the condition number was 19.74 and the highest variance inflation factor was 1.16. Both of these values were well below the thresholds of the condition number of 30 and variance inflation factor of 10 (Bernard, 2000), indicating no reason for concern. Additionally, the Durbin Watson statistic for model 2 was 2.03, indicating that observations were not serially autocorrelated.

As already mentioned, in the second model only two demographic variables were significant in predicting HIV/AIDS knowledge. A relationship was found among those with some university or community college education, $t(130) = 2.37$, $p <$

.05, and with those who had a lifetime occupation in the healthcare field, $t(130) = 2.79$, $p < .01$. The three index predictors used in model 1 remained significant with little variation: (a) sexual knowledge, $t(130) = 2.87$, $p < .01$, (b) sexual behavior, $t(130) = 2.95$, $p < .01$, and (c) sexual attitudes, $t(130) = 1.88$, $p = .10$. In summary, the regression analysis indicated that one's general sexual knowledge, sexual behavior, sexual attitudes, some university or community college, and a lifetime occupation in the healthcare field could positively influence one's HIV/AIDS knowledge.

Table 7

HIV/AIDS Knowledge Regressed onto Sexual Indexes and Demographic Factors

	Model 1			Model 2		
	Slope	*SE B*	*β*	*Slope*	*SE B*	*β*
Sexual indexes						
Knowledge	0.38	0.12	0.27^{**}	0.33	0.11	0.23^{**}
Attitude	3.74	1.91	0.16^{*}	3.48	1.85	$0.15^{\dagger}$
Behavior	0.86	0.35	0.20^{*}	0.95	0.32	0.23^{**}
Education[a]						
Some university/college				9.91	4.17	0.18^{*}
Lifetime occupation[b]						
Healthcare				11.26	4.04	0.22^{**}

Note. Model 1, $R^2 = 0.17$. Model 2, $R^2 = 0.25$. [a]Reference group = less than high school diploma. [b]Reference group = other.

$^{\dagger}p < .10$. $^{*}p < .05$. $^{**}p < .01$.

Chapter VI: Discussion

Older women's sexuality is often not researched or recognized given the societal assumption they are asexual (Deacon et al., 1995; Dunn & Cutler, 2000; Kessel, 2001; Wiley & Bortz, 1996). As a result, the Public Health Agency of Canada (2006) has identified the need for future research to examine aging women, education regarding sexual health issues, behaviors among older adults, and HIV/AIDS. This study contributes to the research by examining the knowledge and attitudes women over 50 years of age have about sexuality, sexual health issues, and HIV/AIDS.

One hundred and eighty-six women completed the survey. Results show that these women are moderately sexually active. Seventy percent of women in the study have a sexual partner and about half participated in sexual activity within the past month, with the most frequent sexual behavior being kissing and petting or foreplay. The least common behavior among women was anal sex, with no one reporting this. There may be a newfound freedom for many women upon menopause. Yet, as they acquire new partners or increase participation in various sexual activities, women may neglect to engage in proper safety methods (Hillman, 2007). The disregard that is undertaken by not partaking in safe sexual behavior could be a result of not knowing the consequences that might arise, not understanding the reasons for continuing to use protection, or the inability to communicate about sexual behaviors. This oppressive circumstance can occur among women given that they are often viewed as a submissive figure within heterosexual relationships and scripted to not suggest using a condom or discuss previous sexual histories with their partner. This oppression is often socially constructed among women, as noted by Fox (1977) and the "nice girl" paradigm where, in order to be

viewed as feminine; a woman must exemplify sex-appropriate behaviors of passive, non-questioning actions. Therefore, if a woman does conform to these behavior traits, she may partake in risky sexual activities and increase her chance of acquiring diseases or infections such as HIV.

Over half of the women currently consider themselves very sexually active and very interested in sexual activity, although there was a decline from when they were 35 to 45 years of age. This decline could be due to not having a partner, or if they or their partner are unable to perform sexually. Dunn and Cutler (2000) state that older adults found their sex life to be more satisfying now compared to when they were 40 years old. Women may find they have more freedom to be sexually active, they may be more comfortable with their body, or they could have greater enjoyment as the pressure of becoming pregnant is no longer a concern therefore making the experience more enjoyable. Additionally, Wiley and Bortz (1996) note that older women wished to partake in sexual activities at least once a week which coincides with this study as most women have an intimate partner or were sexually active more than once in the past month.

Results reveal that these women are somewhat knowledgeable in sexual health issues and have relatively liberal attitudes about sexuality and sexuality among older people. This indicates that the socially constructed concept that sexuality ends with increased age is not always recognized by women who are 50 years of age or older. However, these women have lower knowledge levels of HIV/AIDS in comparison to their general sexual health knowledge. Women are still not fully aware of HIV/AIDS as they may be socially scripted to believe in age and gender biases that this disease happens predominantly to males or younger individuals (Emlet et al., 2002; Zablotsky, 1998).

Results emphasize the need for knowledge building among aging women and the deterrence of societal assumptions such as women being asexual. Women account for an increasing number of HIV positive tests and older Canadians account for an increase number of AIDS cases (Public Health Agency, 2006). These facts indicate that youth and being male do not solely determine HIV/AIDS infection and that awareness is needed within all ages and genders. What follows is a discussion about women's general sexual health knowledge, their attitudes about sexuality, and their knowledge of HIV/AIDS. Finally, the gaps found in participants' knowledge concerning sexuality, intimacy, and HIV/AIDS are examined with implications for research and practice presented.

It should be noted, though, that this study is limited to a convenience sample and may not be representative of women 50 years and older in Canada. However, participants do exemplify similar characteristics to Canadian women between the ages of 55 to 64 years, based on a 2006 report from Statistics Canada. For example, 66% of the women in this study perceived their health to be good and 22% stated excellent compared to 33% of Canadian women ages 55 to 64 who stated good health and 18% who indicated excellent health. In examining the educational attainment of women in this study, 15% received a university or college degree and as of 2004, compared to just over 20% of Canadian women between 55 and 64 years of age had a university or college degree. This study also examined women's work. Nine percent work part-time, which is lower than Statistics Canada (2006) result showing that 30% of women between 55 and 64 years of age work part-time. Seventy-one percent of the women in this sample are currently married or living common-law, which is identical to Statistics Canada's results. Finally, 13% of this study are widowed compared to 10% of Canadian women.

Knowledge of Physical Effects on Sexual Activity and Response

What do women know about the effects that aging has on sexual activity and responses? Women demonstrated their knowledge by answering questions related to changes that occur to one's body and how or if these changes affect sexual activity. On average, women answered 62% of these questions correctly. The answers show few extremely high or low scores; furthermore, women with a lifetime occupation in the healthcare field were inclined to have higher scores. The average score displays the women's knowledge about sexual activity and aging effects as a whole, and suggests somewhat low knowledge levels. Results show the need for education, social awareness, and communication about changes to women's bodies with age and the impact this can play upon sexual activity and responses.

Increased knowledge, social awareness, and communication might help women to make safer sexual and intimate choices, as they will be more knowledgeable and understanding of their body and their partners and feel socially accepted for inquiring about sexual health. In examining particular questions in relation to sexual changes among women, just over half incorrectly answered that women truly feel that "menopause increases the need for sexual activity". Questions with higher percentages of correct scores are items such as "needs a younger partner for stimulation" or that "sexual interest can be maintained into one's 80s/90s". As previously mentioned, participants negate the fact that they have to be young in order to maintain sexual interest or activity. Further social awareness has to be brought forth as society continues to manifest ageist beliefs about sexuality and intimacy (Emlet et al., 2002; Hillman, 2007).

Women scored lower on questions asking about men's age-related sexual health changes such as "older men have reduced need to ejaculate therefore have a longer erection compared to younger men", which just under one in five women correctly answered. Women may not have a vast understanding about sexual health in relation to men given their social construction about sexual health. This construction may limit women's ability to feel empowered to inquire or communicate about sexual health and sexual health related to men. These social circumstances may hinder women's knowledge and their ability to fully understand the changes that can occur to one's body and therefore may negatively affect their sexual activity (Baber, 1994).

Common societal myths suggest that aging individuals are physically unable to partake in sexuality activity (Deacon et al., 1995; Gelfand, 2000; Jones, 2002; Kingsberg, 2000; Mercer & Garner, 1989). Results from the knowledge scale, however, indicate that older women dismiss this socially scripted myth and generally know that sexual activity is not dangerous to older people's health. For example, when asked if sexual activity can increase one's risk for a heart attack, over two-thirds correctly answered this was false. Furthermore, three-quarters recognize that the physical effects of sexual activity are beneficial to their health. It is optimistic to see the majority of women nullify the common societal assumption that age could lead to health risks if one is sexually active. As literature notes that social scripting can lead to improper decision-making or hinder communication abilities wherein women may feel they are unable to partake in sexual activity given their age (Emlet & Farkas, 2001; Emlet et al., 2002; Hillman, 2007). However, aging women should be encouraged to communicate about sexual health with

their partners, as sexuality and intimacy should be considered beneficial activities rather than ones that they are unable to participate in or may cause them harm.

Adelman (1995) suggests that people should maintain sexual activity and orgasms as much as possible so their body is familiar with the process. Only one third of the women in this study correctly state that those who are *somewhat* active during their youth maintain sexual activity as they get older. Women's sexuality however does not have an age limit (DeLamater & Sill, 2005) and women's sexual response system do not start to decline until after the age of 75 (Malatesta, 2007). Literature outlines the importance of sexuality and indicates that sexuality does not end throughout the aging process (Dunn & Cutler, 2000; Gagnon et al., 2002; Masters & Johnson, 1981; Nusbaum et al., 2004). The women's views in this study are consistent with these findings that sexual interest can be maintained until one is in their later years. Moreover, half of the women specified sex as a lifelong need corresponding with Kessel's (2001) findings, affirming that older adults can maintain sexual functioning and activities well into their 80s and 90s.

Some women may perceive the *thought* of sexual activity to be consistent throughout life yet they may feel that the act of sex is not a lifelong need. As mentioned previously, sexual activity can take many forms including the intimacy of communication, hugging, and kissing (Deacon et al., 1995; Malatesta, 2007). Older women can be inhibited from sexual activity if they do not have a partner, their health is poor, or if they live in a facility, where they are unable to participate in such activity (Dunn & Cutler, 2000; Malatesta, 2007; Willert & Semans, 2000; Zeiss & Kasl-Godley, 2001). However, just because a woman is unable to partake in the activity, social constructs should not dictate that women do not consider sexual activity, that they have

do not have a desire to be capable of participating, that they wish for a partner, or their response to sexual activity is no longer there. Older woman may not feel they are able to voice these desires, as they could believe it is inappropriate given social scripting; however, through education, social awareness, and communication, society will have fewer predetermined ideas about older women's sexuality and recognize that sexuality is neither limited to age nor do older women lose their sexual responsiveness altogether.

Educating women about sexual health issues is one way to promote the concept of awareness and knowledge however not all educational systems work in the same manner. For example, utilizing the critical/emancipatory paradigm (Morgaine, 1992) in education can bring forth recognition of societal myths and assumptions that are placed upon older women. Women become informed and gain insight (Morgaine, 1992) through understanding societal age and gender biases. Moreover, this paradigm will help advance women to create individual and personal alterations through deconstructing and overcoming previous social scripts which will empower social change (Morgaine, 1992). This development occurs through discussion with others about life histories and experiences, which can be acquired via group-program settings with other women. Change can also occur through utilizing interpretive knowledge, which brings forth awareness of underlying perceptions and interactions from women's life experiences (Morgaine, 1992). This recognition and further understanding will provide women with additional insight and motivation to create change within their life.

This study also asked if women 65 years and older have a reduction in vaginal lubrication compared to younger women, and only approximately half answered that this statement was correct. Although physical responses may be slower in reacting, women

still wish to partake in sexual activity. Furthermore, fewer women agree that it takes longer for them to achieve lubrication in comparison to their younger counterparts. Additional findings show that approximately 4 out of 5 participants correctly know that as women age, they may experience painful intercourse due to a reduction in elasticity of the vagina and a reduction of lubrication, which is common in older women. However, 25% of this sample does not realize that age affects the achievement of lubrication, which can result in painful intercourse, and this is problematic. If women have never been informed of age-related changes and if they are unaware that physical changes occur, they may not inquire or explore various solutions. Furthermore, women may feel it is inappropriate to inquire or communicate about such issues, as this would deviate from the "nice girl" construct wherein a woman does not question matters related to sexual activity as this passiveness maintains male power within a heterosexual relationship (Fox, 1977). However, there are various methods to prevent painful intercourse from occurring. There clearly is a need for women and society to become educated regarding what happens to a woman's body with age and ways to overcome these issues.

Survey items also inquired about menopause and if sexual satisfaction is lost after this change occurs. Fifty-five percent of the women correctly report that this statement is not correct. Women were also asked if after menopause there is a physiologically induced need for sexual activity, 56% of them answered this question incorrectly by indicating that this statement is true. Participants' responses and the number of incorrect responses on these two questions suggest lower knowledge about menopause-induced changes and sexual activity.

The course of menopause is effectively unique for each woman therefore the responses given could be typical of individuals' experiences. The average onset age of menopause is 51 years (Canadian Institute of Health Information, 2003). Given that women in this study had to be 50 years or older to participate, it is likely that most of them will have gone through or are going through menopause. Aging women need to be informed of the changes that occur with their bodies through menopause and how these can affect their risk for HIV infection, as this understanding may influence their decision-making. The interaction between menopause and HIV/AIDS is often overlooked within the realm of research; however, this is very important. Further research is needed regarding sexual behaviors and senior populations (Malatesta, 2007; Public Health Agency, 2006).

Many of the questions relating to men's sexual health had a lower number correct answers. For example, when asked if older men typically experience a reduced need to ejaculate and therefore maintain an erection for a longer time compared to younger men, only 17% correctly agree. Additionally, just over half of the women correctly know that men over 65 years, compared to younger men, typically take longer to attain an erection, and less than 20% correctly know men have a reduced need to ejaculate in comparison to their younger counterparts. These findings illustrate women's lower levels of understanding about the effects of aging on men compared to women. Yet, for heterosexual women to make safe decisions regarding sexual and intimate behaviors they need to be conscious of sexual health issues that could occur among men. One reason women are unaware or do not educate themselves about men's sexual health may pertain

to the ways they have been restricted, through social scripting, to not inquire or discuss such matters.

Women are sometimes viewed as submissive concerning the topic of sexual activity and asking related questions is considered inappropriate and unnecessary (Deacon et al., 1995; MacKinnon, 1997). Women in this study might have felt it was inappropriate to answer questions relating to men's sexual health or they may not have known how to respond. This could be due to women not feeling proficient enough to answer questions related to men's sexual health. However, women are living longer than men therefore increasing their chances at having more than one partner during their lifetime. For example, widowhood and divorce has also increased and can contribute to one's frequency of sexual or intimate activity and additional partners (Hillman, 2007; Kingsberg, 2000). Therefore, it is essential for heterosexual women to understand fully age-related changes among women *and* men as means for educated decision-making or simply to further enjoy their sexual experiences.

In summary, women only scored an average of 62% on the sexual knowledge questions, and seem somewhat more likely to correctly know about aging changes in women than in men. Overall, results of the knowledge section found gaps in these women's knowledge of male sexual activity and functioning. These lower scores could indicate a lower degree of knowledge. An increase in knowledge with regard to both female and male age-related changes could help with more informed and comfortable decision-making between partners and result in healthier sexual and intimate relationships. Furthermore, awareness of and communication about age-related changes could help older women during intimacy to feel greater control and confidence with

sexual or intimate situations, as they are aware that the processes taking place with their bodies are normal (Rice, 1989). Further knowledge and social awareness will also deter previous social constructs that absolved women from inquiring or the self-assurance to inquire about sexual health.

Attitudes Concerning Sexuality and Sexuality Among Older Individuals

In addition to inquiring about knowledge, this research also examined the attitudes women have regarding sexuality and their attitudes concerning sexuality and older adults. The analysis of attitudes is important because women who had positive attitudes may be more willing to become educated about sexual health issues and therefore lead to increased knowledge about this topic or visa versa. Correlational analyses did indicate that sexual health knowledge and sexual attitudes were related. Those with liberal attitudes could be more inclined to ask questions, comment on situations, or make inquiries about certain circumstances compared to those who are conservative, all of which may also help in increasing one's knowledge levels of AIDS as the correlational analyses indicated that these are related. However, it may also be that women with more liberal sexual attitudes seek to develop greater knowledge about HIV/AIDS. Women's attitudes are somewhat liberal, with an average score of 5.78 (on a 7-point Likert type scale). The majority believe that sexual activity among individuals 65 and over is not disgraceful and that it is acceptable for older adults to partake in recreational sex. Nevertheless, even though older women may have liberal attitudes due to prior social scripting these attitudes may not be expressed through their daily life as they come to believe that sexual behavior, activity, and health to be private or inappropriate for older women. Attitudes can stem from various backgrounds and

generations in which these women were raised. These women were raised in the 1950s and 1960s, which is known as the free-love era, baby boomer generation, and the period in which the birth control pill was introduced.

This survey asked questions about women's attitudes on sexual activity within a nursing home. Aging individuals may have challenges with attaining privacy for sexual activity or intimacy when living in an institution such as a nursing home (Deacon et al., 1995; Hajjar & Kamel, 2003; Kessel, 2001; MacLean, 2003). Statistics Canada (2002) indicates that approximately 10% of women and 5% of men (aged 65 and over) live in a healthcare institution. Thus, with the aging population growing, this issue cannot be ignored. The majority of women agree that they would not complain if they knew of sexual activity in a nursing home or if their relative, in a nursing home, was in a sexual relationship. Furthermore, they agree that residents should not be discouraged from engaging in sexual activities in a nursing home and should be given privacy. These ideas suggest liberal attitudes wherein people do not have to limit their sexual and intimate possibilities just because they are in a nursing home. Institutions need to be mindful of these needs and support regulations and policies regarding such issues, as residents do not always have a strong voice in such matters.

Additionally, women agreed quite strongly that institutions and staff should be educated about sexuality and aging. However, there is a lower response rate supporting sexual education for residents in institutions. This lower score may be associated with societal assumptions that sexuality education is not required or felt unnecessary for older people, especially those in nursing homes (Dunn & Cutler, 2000; Kessel, 2001). This is

another socially constructed belief that older adults face limiting their ability to learn or ask questions related to sexual health.

There are many socially constructed assumptions about aging women and sexual activity such as sex being immoral and masturbation being unhealthy (Dunn & Cutler, 2000; Kaye, 1993; Renshaw, 1979; Woodard & Rollin, 1981). These topics were addressed in survey questions and results indicate that respondents negated these socially constructed myths. For example, the women feel masturbation has benefits to sexual responsiveness. Similarly, a majority do not believe that masturbation is harmful. However, when specifically asked if masturbation is acceptable for older men or women, less than half agreed with this statement. This result indicates mixed views in that although masturbation is not necessarily viewed as harmful some feel it is not an acceptable activity for older people. This is yet another socially scripted concept that adheres to age dichotomy in that older and younger women are viewed differently in relation to the same sexual activity. However, nearly all responses affirm recreational sex among seniors as being not immoral, negating the social understanding that older adults are deviant for partaking in sex. Promotion of healthy sexual lives across the lifespan could help in eliminating these stereotypes.

Many women indicate they want to learn more about changes in sexual functions as one ages, and many stated they did not know all they needed to about sexuality in people aged 65 and older. The responses of those who do not wish to learn more may be due to a lack of opportunities, for example, a woman may feel she should not partake in such behaviors therefore not require additional information (Willert & Semans, 2000). This thought may stem from a believed age bias that older women do not partake in

sexual activity, which is often portrayed by society (Rice, 1989). There also may not be an opportunity to acquire sexual health information especially for women who do not feel comfortable communicating with their healthcare professional or if there is no readily available location to obtain sexual health information (Cleary et al., 2002). However, the ability to discuss sexual health issues with a professional assumes one has the confidence level to initiate this conversation (Emlet et al., 2002; Zeiss & Kasl-Godley, 2001). If a woman is socially scripted to feel that she is not supposed to act sexually or discuss sexually related topics, such confidence may not develop. Furthermore, a lack of interest in education may also relate to being with the same partner for many years as education could be viewed as unnecessary. Married women may view their relationship as committed and monogamous and not feel a need for education on sexual functions across the lifespan. However, monogamy does not mean women are participating in sexual activity, how regularly, if they know enough, or if women are sexually satisfied. Limited knowledge and communication could be a hindrance as women may rely on their partner's understanding, and men are not necessarily informed about sexual changes of both genders. Therefore, being well versed on sexual health issues will promote informed and educated decision-making and communication benefiting the future health of both partners.

What affects attitudes around sex? Correlational analyses indicate a relationship between having liberal attitudes about sexuality and HIV/AIDS knowledge. Results also suggest that the more liberal one's attitudes the more knowledgeable they will be regarding general sexual knowledge. It may be that liberal attitudes indicate a greater desire to learn or that higher education could result in beliefs that are more liberal.

Participants' attitudes were not related to their sexual behaviors. This could be because women may not have a partner or there are limitations to their participation in sexual activity given their partner's health. A major factor for women's participation in sexual activity is the availability of a male partner (Gelfand, 2000) as there can be a decrease in potential male partners as women become older therefore limiting their activity. Furthermore, maintaining sexual activity (for heterosexual couples) can be related to the men's health as there are various age-related changes that can affect men, such as decreased testosterone or erectile dysfunction (Zeiss, Kasl-Godley, 2001). In line with this, some women did state their desire to partake in sexual activity however; they were limited because of their partner. Women were asked if they were sexually active in the past month, some who had responded "no" left written comments explaining why they had not, such as "only because of surgery", "husband has prostate cancer. He had radiation and we hope to have sex in six months, one day at a time", and "husband had prostate operation 11 months ago, no sexual activity as of yet!" These comments suggest that the women would participate in sexual or intimate activity however due to their circumstances they are unable, and a reason as to why women's liberal attitudes were not related to sexual activity. Participants' statements and related literature indicate that women's attitudes regarding sexual or intimate activity is present.

HIV/AIDS Knowledge

These women have somewhat low levels of knowledge about HIV/AIDS. Moreover, average scores on this scale are lower compared to general sexual health knowledge scores. The lower score on HIV/AIDS knowledge is likely indicative of the fact that society often assumes older women are not at risk for HIV/AIDS as they are

uninterested or incapable of sex, which could also deter women from establishing knowledge about HIV/AIDS (Nocera, 1997; Stall & Catania, 1994). Not surprisingly, a great extent of information and research on HIV/AIDS relates to young adults, drug users, or gay men thereby constructing the notion that HIV/AIDS is not a threat to older heterosexual individuals, which can result in them thinking there is no need to explore or learn about HIV/AIDS.

It should be noted that this study consists primarily of heterosexual women. Heterosexual sex is the most common risk factor contributing to HIV/AIDS in older women (Hillman, 2007; Public Health Agency, 2006; Zablotsky & Kennedy, 2003). Furthermore, heterosexual women may partake more frequently in unsafe and risky behaviors, such as not using a condom, as the fear of becoming pregnant disappears due to menopause (Fisher et al., 1999). Women often experience socially constructed ageist stigmas and gender biases that are centered on older women. Such occurrences can hinder a woman's self-worth as they may internalize these beliefs, ultimately leading to their participation in risky sexual behaviors they otherwise would not, for fear of losing their partner (Emlet et al., 2002). Women may also submit to risky behaviors in heterosexual relationships due to the "nice girl" paradigm, which emphasizes that a good woman does not question sexual behaviors, as it is not "lady" type behavior (Fox, 1977). Furthermore, as previously noted, this construct perceives women as submissive and passive in relation to sexual activities because such behaviors are viewed as masculine behaviors (Fox, 1977).

As previously noted, the illusion that older women are not at risk for HIV/AIDS is often conceptualized as truth. Yet, there are a vast number of occurrences affecting and

influencing women's risk of HIV/AIDS. As the population becomes older, new relationships may occur because of deaths, divorces, or separations. Furthermore, given age and gender stigmatization that are often attached to older women, physicians neglect to focus on women's sexual health, even with the evidence of increasing sexual activity also due to sexual enhancement medications such as Viagra and Cialis (Villarosa, 2003). Without effective education, older women are limiting their knowledge about sexual health and engaging behaviors that may be high risk. Women are faced with scripted gender biases that encourage them to be submissive in relation to sexual activity and sexual health information hindering their ability for learning. Furthermore, aging women also face socially scripted constructs that they are asexual. Increased social awareness will change and diminish such constructs wherein older women will be able to educate themselves and eliminate biases that focus upon their gender and age. Furthermore, social awareness, education, and communication of sexual health and HIV/AIDS in an aging population have to be promoted to enlighten women on safe sexual behaviors and actions.

As previously mentioned, there are various ways of educating older women. Educational programs can utilize an instrument/technical paradigm approach, wherein women become educated through information, skills, and methods (Morgaine, 1992). The topic of HIV/AIDS, general sexual health and intimacy can be applied through this approach by way of learning how to communicate with health professionals and partners, and the skills needed to inquire further about these topics. However, this paradigm does note that unless the individual wants to learn, it is likely that no change in their current lifestyle will be made (Morgaine, 1992). Furthermore, one could use the critical/emancipatory approach, as indicated earlier. This method deconstructs myths and

assumptions that can be related to sexual health and the aging population. Using this method will break down the stigmas attached to older women relation to sexual health and acknowledge and promote the facts and truth about healthy sexual living.

Despite the overall low levels of HIV/AIDS knowledge, some individual items regarding HIV/AIDS had high levels of understanding. For example, a high number of women in this study agree that a person is likely to get AIDS by having sex with a person who already has AIDS and that AIDS can be passed through unprotected sexual intercourse. These findings are comparable to Zablotsky and Kennedy (2003), who used the NHIS scale. Furthermore, the study also indicated that older women viewed themselves to be at low or no risk for HIV/AIDS and the results displayed a need for education about risks and protection from HIV (Zablotsky & Kennedy, 2003).

Many women in this study know that one is likely to get AIDS from sharing needles with someone who has AIDS. These results are not surprising, as sexual activity and needle sharing are publicly recognized and often stated as major factors for acquiring HIV/AIDS. However, other information not as widely recognized and that women had significantly lower correct scores on were that AIDS can damage the brain and that AIDS can lead to death. Additionally, many women believe that (a) they are very likely to get AIDS from eating food made by a cook who has AIDS, (b) one is likely to get AIDS from going to school with someone who has AIDS, and (c) AIDS can be passed by sitting on a public toilet seat. Lower scores on such questions indicate that numerous societal myths continue to be recognized as true. Other research with similar findings, for example in a study by Hillman (2007), questioned 160 women on their knowledge of HIV/AIDS; one-tenth indicated they could contract HIV by using a public toilet seat.

Given the lack of public information regarding older women and HIV/AIDS, little is known about the disease and how one may be at risk; therefore, women may feel they are not at risk and that HIV/AIDS will never affect or harm them, thus they do not feel the need to be educated or discuss this topic (Hillman, 2007). Yet older women are susceptible to this virus and can be at a greater risk compared to youth because of age-related changes (Hillman, 2007; Nocera, 1997; Stall & Catania, 1994; Strombeck & Levy, 1998; Zablotsky & Kennedy, 2003) and the internalization of both ageism and sexism. Due to the limitations of age and sexism that older women face they may also be at greater risk for HIV/AIDS. Their limited knowledge about sexual health and diseases, their actions encompassing communication and decision-making, their involvement in risky sexual behaviors, and their perception of myths about this disease (Hillman, 2007; Strombeck & Levy, 1998; Zablotsky, 1998; Zablotsky & Kennedy, 2003). Education and socialization about HIV/AIDS and sexuality including the awareness of socially constructed ageism and sexism may help reduce women's risks as Zablotsky and Kennedy (2003) note, "lack of knowledge regarding personal risk and self-protection prevents older adults from defending themselves from sexual transmission of HIV" (p. 124). Risk factors can be acquired through a partner's previous sexual experiences and limited communication about this, increased number of partners, unprotected sexual activity, and lack of preventative awareness (AIDS Infonet, 2007; Stall & Catania, 1994; Zablotsky & Kennedy, 2003). However, older women's increased risk about HIV/AIDS is not only sustained individually, rather society plays a large role in contributing to this hindrance.

This study also explores the knowledge women have about HIV/AIDS and if their sexual behavior(s) is related. As noted previously, sexual behavior is positively and significantly related to one's knowledge of HIV/AIDS. Results suggest that women's involvement in sexual or intimate activities has an effect on the knowledge they will have about HIV/AIDS. However, results show that general sexual knowledge and sexual attitudes are not related to women's sexual behavior. Therefore, a woman may have knowledge of age-related changes occurring in men and women but have any level of HIV/AIDS knowledge. General sexual knowledge is important as it can assist in constructing informed decisions about sexual behaviors and establish awareness of potential issues that could arise, such as risk for HIV/AIDS. Furthermore, if women do not encompass the skills to discuss issues pertaining to sexual health, it could, hinder their ability to make appropriate and safe decisions concerning sexuality and intimacy.

Women's sexual attitudes, general sexual knowledge, sexual behaviors, and background characteristics were analyzed to note significant relationships to HIV/AIDS knowledge. Correlations indicate that women's general sexual health knowledge, sexual attitudes, and sexual behaviors are positively related to HIV/AIDS knowledge. This makes sense, as knowledge that woman have about general sexual health can influence their knowledge of HIV/AIDS as they may be more inclined to inquire about sexual related issues. However, it may also be that women with higher levels of HIV/AIDS knowledge are also motivated to learn more about general sexual health. Given the correlational design of this study, a direction for this relationship can not be assumed. General sexual knowledge is comprised of a number of topics including men's sexual health, age-related changes, and effects that age changes have on sexual activity.

Women's understanding in one area may be greater than another however the more informed a woman is the greater chance she may know more about HIV/AIDS. Results also show the more liberal a woman's sexual attitude the greater HIV/AIDS knowledge she will have. As previously noted, women with liberal attitudes may be more inclined to possess greater communication proficiency and inquire about diseases such as HIV/AIDS in comparison to those with conservative attitudes, which could be socially constructed. Social awareness about such topics will break these constructs and bring forth recognition that topics such as HIV/AIDS have to be discussed with aging women. Through seeking and being informed on HIV/AIDS and sexual health information, liberally minded women may have greater awareness of issues that could arise or age-related problems that could occur throughout sexual activity. As a result, women with greater sexual health knowledge and more liberal sexual attitudes could be considered to have greater understanding of HIV/AIDS or perhaps women who are educated about HIV/AIDS may be more knowledgeable about sexual health and have sexual attitudes are more liberal.

Women's HIV/AIDS knowledge is not greatly impacted by their background characteristics. However, those with some university or college education have significantly higher levels of knowledge about HIV/AIDS in comparison to those with a high school diploma, business or community college, or a professional degree. Women with some university or college may have been provided opportunities to expand on their comprehension of HIV/AIDS through their ability to ask questions and gain knowledge through their education. Furthermore, women who have worked in the healthcare field as their lifetime occupation show higher levels of HIV/AIDS knowledge in comparison to those with previous work in sales or clerical occupations. This occupation may provide

circumstances relating to HIV/AIDS via education or with patients/clients therefore increasing one's awareness and knowledge of the disease.

Factors Associated with HIV/AIDS Knowledge

To examine factors associated with HIV/AIDS knowledge, scores from sexual knowledge, sexual behavior, and sexual attitude questions were regressed onto HIV/AIDS knowledge. Results indicate that sexual knowledge, sexual behavior, and sexual attitude scores are not very strong predictors of one's HIV/AIDS knowledge. Only 17% of the variation HIV/AIDS knowledge scores were explained by the linear regression model using these predictors. In the second regression model, demographic variables were added to sexual knowledge, sexual behavior, and sexual attitudes. The addition of the demographics revealed that postsecondary education and a lifetime occupation in the healthcare field were significant predictors of HIV/AIDS knowledge compared to all other demographics, and the sexual indexes remained significant predictors. However, even with the inclusion of demographic variables only 25% of the variation in women's HIV/AIDS knowledge can be explained using linear regression. The relationship, though significant, is not very strong. This suggests that other life experiences or background characteristics not quantified in this study (e.g., one's age) may contribute to an increased understanding of HIV/AIDS.

Women's sexual behavior is a factor in HIV/AIDS knowledge. Those who participate more frequently in sexual activities may be more likely to inquire about sexual health issues and therefore increase their knowledge of HIV/AIDS. Increased sexual behaviors may also be due to one's knowledge of sexually transmitted diseases. Older women who participate frequently in sexual activity may disconnect from the socially

constructed view that older women are not capable or do not want to participate in sexual activity, therefore possibly increasing their likelihood of inquiring about HIV/AIDS.

General sexual health knowledge also was related to HIV/AIDS knowledge. Through understanding general sexual health issues one may also learn about HIV/AIDS in relation to sexual activity. Conversely, one who does not have an understanding about general sexual health may also have limited knowledge about HIV/AIDS.

Attitudes were also related to HIV/AIDS knowledge. Individuals with attitudes that were more liberal may be inclined to explore knowledge related to HIV/AIDS. Conversely, learning more about HIV/AIDS may contribute to increased liberal attitudes about sexuality. The investigation of the relationship between attitudes and sexual knowledge is important, as liberal attitudes could influence women to deter from social scripts and further discuss sexual health, especially in relation to HIV/AIDS.

Analyses indicate that postsecondary education and those with a lifetime occupation within the health care system were also factors for HIV/AIDS knowledge. Individuals with postsecondary education may have a greater willingness to learn and inquire about such things as HIV/AIDS, therefore increasing their knowledge. However, working in the healthcare system could be a factor as women may have worked in an environment where education or knowledge of sexual health diseases such as HIV/AIDS was required or readily accessible.

Limitations

Limitations are found within the any study, in this study a limitation could be the personal nature of the topic and the age of the participants. One limitation is that the topic of sexuality, intimacy, and HIV/AIDS can be sensitive for women 50 years of age and

older, as a result of internalization of the good girl construct. Thus, they may not feel comfortable discussing or answering questions regarding this topic, which is one possible reason for some incomplete questionnaires. However, the questionnaire wording was easy to read (except for a few indices of missing data) and participants had the opportunity to maintain privacy because they never had face-to-face contact with me. Furthermore, results from this study indicated that participants felt seemingly comfortable as comments were written on a number of returned questionnaires. Some stated how they were thankful for this research, "thank you, made me think a lot" and others revealed their comfort through explaining their situations "my husband suffers depression and has been an alcoholic. . . alcoholics do not make good sex partners" and "husband had major surgery for bone cancer of the pelvis, no fun for awhile".

Exploring the "Red Hatter" groups could have been a limitation as these women may not be an accurate sample of women 50 years of age and older in Nova Scotia. Because the "Red Hatters" are a socially integrated group, these women could be more sociable or have attitudes that are more liberal and therefore more willing to participate. Furthermore, women in the "Red Hatters" could also have higher levels of education, possibly enhancing one's knowledge of HIV/AIDS and sexual health issues with aging. This could limit or generalize the sample as they may have greater sexual knowledge and more liberal sexual attitudes compared to those with less education or less social integration. Similarly, Halifax Sexual Health Centre participants may have more sexually-related health experience, knowledge, or more liberal attitudes given their level of comfort in attending a sexual health clinic. These women may have a greater understanding of HIV/AIDS compared to those who do not go to sexual health clinics.

However, using these groups is of great importance when conducting exploratory research, as the need for further examination is exposed.

Lack of detail about age is a serious limitation to this study. Participants were not required to provide their age because this question was accidentally left off the questionnaire. However, women in this study were 50 years of age and older therefore can be examined within the 55 to 64 years of age group as mentioned by Statistics Canada (2006) about similar characteristics. Colin's (2000) Public Health Agency of Canada report indicated that 43% of women 65 years of age and older are married (legal marriage in Canada includes cohabiting); in this study, 70% stated they were married or cohabiting. Thus, it may be inferred that the women in this study are in the younger realm of "older women"; however, this cannot be known for certain, and limits being able to examine if women closer to age 50 had attitudes that are more liberal or greater knowledge about sexual health issues compared to older women who may have been more conservative with their answers given the era in which they grew up. In a study by Hillman (2007) where women were between 55 and 87 years of age, age did make a difference. The study noted that the older the participant the less understanding she had about HIV/AIDS (Hillman, 2007). Some women, in this study, had written their age on the questionnaire; however, there were not enough to supply an accurate average or analysis of age with the questions.

Lastly, a limitation to this study relates to questions that were not asked on the questionnaire. Questions asking about potentially risky behaviors, thoughts on if their sexual behaviors are viewed as being risky, or if women consider themselves to be at risk for HIV/AIDS were not asked. Furthermore, other questions that were not asked related

to specific sexual behaviors such as, (a) how many partners do you have (or had), (b) how do you partake in safe sexual behavior, (c) does your partner use condoms and if so, how often, (d) do you discuss your sexual behavior with your partner(s), (e) are you tested regularly for STDs/STIs? Not asking these questions could be a limitation in this research, as it cannot currently conclude that lower levels of sexual health knowledge or HIV/AIDS knowledge result in risky sexual behavior.

Implications

The findings of this study can be utilized in several ways. This study shows the great need for research and social awareness to examine aging women and sexual health issues. Furthermore, communication is key especially with healthcare professionals and additional social support outlets (e.g., health clinics, community discussion groups, and pharmacists) who can become informed about sexual health knowledge through these results and inform older women and discard socially constructed ideologies that older women are asexual. This study could also help in educating staff within healthcare and long-term care institutions regarding sexual activity among residents, which should be a priority (Hajjar & Kamel, 2003). Those managing such environments must restrain their pre-constructed gender biases and ageist stereotypes regarding the sexual and intimacy wishes of older adults, and focus on the needs and health of those living there. This research will help in further establishing this by way of education, awareness, and communication. Professionals can also utilize this research to assist in awareness created through informing older women of sexual health issues specified on aging, as this study has indicated the need for education.

Given that society often constructs older women into roles that they are sexually inactive and therefore not at risk for STDs/STIs, outlets for education, awareness, and communication on sexual health issues may be limited. A societal recognition must be constructed to educate individuals that HIV/AIDS is not limited to age or gender and to decrease the socially constructed myths and views of older women HIV/AIDS, and sexuality. Through greater education, public awareness, promotion of healthy sexuality, and open communication, greater acceptance and understanding will be brought forth. Furthermore, society must encourage older women to negate from previous social scripts wherein they feel unable to question their sexual health or feel deviant for inquiring about body changes that occur in women and men.

There are a number educational approaches that can be utilized to teach older women about sexual health. As previously outlined the use of instrumental/technical or critical/emancipatory methods (Morgaine, 1992) of teaching allow individuals learn through different processes. Older women are able to learn the fundamental skills that have otherwise been deconstruct through social scripting, such as communicating with their partner or health practitioner regarding sexual health. Educating through the critical/emancipatory approach helps women learn the differences between myths, assumptions, and false truths that older women are often subjected given age and gender biases. Therefore, when educating individuals about sexual health, facts on the latest statistics are not the only way to inform rather; women need to learn the tools and methods needed to acquire in-depth knowledge, understanding, communication, and the ability to learn truth from myth.

Future research. Researchers exploring relationships between knowledge, attitudes, behaviors, and HIV/AIDS can use these findings to support the need for further research. Future comparative research among older women over time can be conducted, for example, analysis between women from the "silent generation" (1925 to 1942) with those from the baby-boom generation (1946 to 1964). Research could also include mixed methods or qualitative research in which older women have the opportunity to speak about their lived experiences, their knowledge and attitudes about the subject matter, and problems they face as a result of societal biases and ageist/sexist tendencies. Future research could also examine a larger population of women 50 years and older and use age as a covariate.

Finally, this questionnaire could also be distributed to women from various ethnic groups to obtain insight about cultural factors influencing sexual knowledge and health, as this questionnaire did not focus or inquire about ethnicity. Moreover, Aboriginal women (First Nations, Métis, and Inuit) could be examined as research has shown Aboriginals as a whole are almost three times more likely to be infected with HIV compared to non-Aboriginal persons (Public Health Agency, 2006).

Information into practice. Insufficient support and communication to older women is often brought about by societal biases and ageism, which in turn influences women to think they are unable to contract HIV/AIDS (Emlet & Farkas, 2001; Stall & Catania, 1994; Strombeck & Levy, 1998; Zablotsky, 1998). Disseminating this study's results could initiate communication about sexual health issues by healthcare professionals, prevention programs, and support groups to older adults. These

professionals should engage the aging population and increase awareness on societal myths to groups of young and older women.

Findings could also be submitted to physicians and healthcare professionals who may not recognize HIV/AIDS to be commonly associated with older women and may not understand older women's limited knowledge in this area. Physicians and healthcare professionals need to become educated concerning the effects and symptoms as HIV/AIDS often replicates age-related symptoms such as fatigue, memory loss, or weight loss (Strombeck & Levy, 1998). Furthermore, information on the changes that happen to one's body with age and the impact this can have on sexual health should be disseminated by healthcare professionals; as this study's regression analysis indicated that greater sexual health knowledge is related to HIV/AIDS knowledge. It is important to note that if women are unaware of changes taking place, they may not request information or advice from a healthcare professional or additional programs or groups.

Healthcare professionals also need to recognize the sensitivity of this topic, yet have the ability to discuss the impacts and provide information required for educated decision-making. Discussion between women and healthcare professionals could lead to education and learning on both parts. The more often this topic is openly discussed, the greater the chance that learning will take place and stereotypes will be revealed and removed. Healthcare professionals must also deal with potential stereotypes and anxiety they may have regarding this topic (Hillman, 2007).

Furthermore, professionals should state to older women that participation in sexual or intimate activities is natural and not something that will cause harm. Professionals should normalize safe sexual activities, be supportive, and question

particular sexual behaviors to create an open and honest discussion with older women. As previous literature has mentioned, healthcare professionals are often enthusiastic to inform patients about the risks of alcohol and tobacco, they too should be as enthusiastic to inform about sexual health behaviors (Strombeck & Levy, 1998).

Research encompassing sexual health issues and aging can also influence nursing homes and other senior-related institutions. The information brought forth through this study demonstrates that older women do not believe sexual health ends with age while encompassing perceptions that this sexuality should not be neglected within institutions. This study noted that sexual health and aging should be taught to those working and living within institutions. Education, at any age, will increase awareness and allow individuals to make informed decisions. Furthermore, increased knowledge and an open mindedness of staff will help to create a more comfortable environment for both residents and employees.

Lastly, information from this study can be used as an informative tool to support the need for education, communication, and social awareness between the aging population and society. Social support groups (for sexual health issues and HIV/AIDS) should include information regarding aging individuals. There is a need to educate and communicate to older women about safe sexual health and disperse the socially constructed myths that women are unable to partake in sexual and intimate activities given their age and gender. Through increased social awareness and use of a critical/emancipatory paradigm in education (Morgaine, 1992), self-defeating ideologies can be exposed and women become educated and aware about aging and sexual health issues. Being informed about such issues is important for women of all ages, as it will

enhance their sexual and intimate decision-making choices. Every woman deserves a sexual and intimate lifestyle that is safe, healthy, and pleasing. Older women may not be able to embrace these qualities if they do not have the means to become educated due to prior socially constructed roles that influence older women to be submissive on the topic of sexuality and sexual health. Communicating with a physicians or their partner is something that should be encouraged; however, this could be a problem if women have been socially scripted to believe they do not need to become educated, or do not need to learn about safe sexual practices because they are in a monogamous relationship. These are only some of the problematic situations that older women can experience. However, educating society will increase awareness and deter some of these preconceived myths through creating awareness and promotion about safe sexual and intimate behaviors of older women.

Chapter VII: Conclusion

This exploratory quantitative study focuses upon older women's sexuality by asking questions about sexual knowledge, attitudes about sexuality, sexual behaviors, and HIV/AIDS, and a number of important findings emerge. Although using a convenience sample, this study provides the first Canadian baseline for understanding sexuality and sexual health in older women. Examining responses from women 50 years of age and older from a feminist perspective identifies the need to negate socially constructed ageism and gender biases about sexuality. The risk for HIV/AIDS is greater for aging women as age-related changes to their body makes virus transmission easier. Furthermore, the results of this study indicate there is need for social awareness, education, and greater communication about HIV/AIDS as scores were somewhat low concerning knowledge about this disease.

Although women's sexual knowledge is higher than HIV/AIDS knowledge scores, there is a still a great deal of information that is not known. For example, women are not thoroughly educated on the effects that menopause can have on one's sexual responses. Furthermore, there is a lack of confidence in answering questions related to men's sexual health changes. For heterosexual women, understanding both genders' sexual age-related changes can allow for more informative decision-making and perhaps increase comfort level between partners. Through social awareness women will be encouraged not to conform to prior socially constructed scripts that have made them feel unable or uncomfortable to learn about sexual health and sexuality. This understanding could be difficult for older women who may have been brought up under the misconception that they do not need to acquire further knowledge or education on sexual

health, whether it is about women or men. This stigma could affect women's knowledge, awareness, and communication about sexual health and prevent healthy sexual lifestyles.

Education encompassing age-related changes and the promotion of eliminating ageist and sexist biases associated with sexuality, intimacy, and HIV/AIDS is vital, as there is a desire for women to learn more about sexuality and the age-related changes. This study showed women had somewhat liberal attitudes regarding sexuality and sexuality among older adults. Participants' attitudes indicate that sexuality among aging women is not something they dismiss.

The responses, indicating that sexuality can be a lifelong process, suggest that education, social awareness, and communication about sexual health issues and aging should be initiated. Many women indicate they are sexually active, yet results show there is a definite need for women become further knowledgeable and decipher between socially scripted myths and facts, which have been constructed within them. Furthermore, older women need to become empowered to feel they are equal, negating gender and age biases that society often places upon them wherein older women may have the ability to achieve a greater, healthier, sexual life.

Results from this study found that women's HIV/AIDS knowledge scores were not relatively high. Many women continue to believe common societal myths, further indicating that their knowledge about HIV/AIDS is not sufficient. Yet women, who are sexually active, need to become aware how this disease is transferred and what they can do to protect themselves from acquiring it. Furthermore, societal awareness can educate older women through deterring previous socially scripted ideas in that HIV/AIDS is not limited to younger individuals, one's sexual preference, or drug users.

As previously mentioned, healthcare professionals can also help create a knowledge base for older women through communicating problems and solutions that may occur during sexual activity or intimacy. Local centers and groups within rural or smaller communities as well within urban areas should also be readily available to acknowledge age-related sexual health issues within a comfortable and nonjudgmental environment and use a variety of educational approaches (i.e., not just instrumental) to do so. Even if sexual health is constructed as a taboo topic for older women, information sessions focusing upon women's general health could include information on age-related body changes, sexual health issues, and, where to seek support or further sexual education, if required.

This study also notes that women's demographic information such as education, marital status, religion, and health did not predict HIV/AIDS knowledge levels. This illustrates that one's background does not necessarily predict the knowledge or awareness they have about HIV/AIDS. Social awareness is required for all women, especially with regard to the many bodily changes they face with age. Fewer stigmas will be placed on older women with regard to sexuality, intimacy, and HIV/AIDS when the concepts that (a) they are able to contract HIV/AIDS, (b) continue to be sexually active, and (c) have been socially scripted to be passive and elusive about questioning sexual behaviors or methods of safety, are comprehended and socially deconstructed. This awareness will demonstrate that sexuality and intimacy does not have to end as people age. Furthermore, social awareness will bring forth the opportunity to inform older women regardless of their prior education, marital status, religion, or health status.

Limited research is being done on sexual health, intimacy, and HIV/AIDS within the aging Canadian population compared to younger cohorts. Society is aging each year and without communication, education, awareness, and the elimination of sexist and ageist beliefs, older women may participate in risky sexual behaviors, therefore this is not an issue to be ignored. This quantitative, exploratory research can therefore be utilized as a stepping-stone for further research. This study has given women a voice through which their understanding and requirement for greater communication and further education and awareness is indicated. Women need to be regarded as equal throughout society, and aging women should not be susceptible to discrimination or oppression due to their age or gender. Socialization of aging women in association with sexual health issues will influence awareness and help in the creation and sustainability of healthy aging for all women.

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APPENDIX A

QUESTIONNAIRE

Older Women's Attitudes and Knowledge Regarding Sexuality, Intimacy, & HIV/AIDS

Questionnaire

Part A: Please rate each of your responses according to the level you agree or disagree by circling the appropriate number.

	Strongly disagree						Strongly agree
1. Sexual activity in aging people is often dangerous to their health.	1	2	3	4	5	6	7
2. Males over the age of 65 typically take longer to attain an erection of their penis than do younger males.	1	2	3	4	5	6	7
3. Males over the age of 65 usually experience a reduction of intensity of orgasm relative to younger males.	1	2	3	4	5	6	7
4. The firmness of erection in males 65 years and older is often less than that of younger males.	1	2	3	4	5	6	7
5. The older female (65+ years of age) has reduced vaginal lubrication relative to younger females.	1	2	3	4	5	6	7
6. Ageing females take longer to achieve adequate vaginal lubrication relative to younger females.	1	2	3	4	5	6	7
7. The older female may experience painful intercourse due to reduced elasticity of the vagina and reduced vaginal lubrication.	1	2	3	4	5	6	7
8. Sexuality is typically a lifelong need.	1	2	3	4	5	6	7
9. Sexual behaviour in older people (65+) increases the risk of heart attack.	1	2	3	4	5	6	7

	Strongly disagree						Strongly agree
10. Most males over the age of 65 are unable to engage in sexual intercourse.	1	2	3	4	5	6	7
11. The relatively most sexually active younger people tend to become the relatively most sexually active older people.	1	2	3	4	5	6	7
12. There is evidence that sexual activity in older persons has beneficial physical effects on the participants.	1	2	3	4	5	6	7
13. Sexual activity may be psychologically beneficial to older person participants.	1	2	3	4	5	6	7
14. Most older females are sexually unresponsive.	1	2	3	4	5	6	7
15. The sex urge typically increases with age in males over 65.	1	2	3	4	5	6	7
16. Prescription drugs may alter a person’s sex drive.	1	2	3	4	5	6	7
17. Females, after menopause, have a physiological-induced need for sexual activity.	1	2	3	4	5	6	7
18. Basically, changes with advanced age (65+) in sexuality involve a slowing of response time rather than reduction of interest in sex.	1	2	3	4	5	6	7

	Strongly disagree						Strongly agree
19. Older males typically experience a reduced need to ejaculate and hence may maintain an erection of the penis for a longer time than younger males.	1	2	3	4	5	6	7
20. Older males and females cannot act as sex partners as both need younger partners for stimulation.	1	2	3	4	5	6	7
21. The most common determinant of the frequency of sexual activity in older couples is the interest or lack of interest of the husband in a sexual relationship with his wife.	1	2	3	4	5	6	7
22. Barbiturates, tranquilizers, and alcohol may lower the sexual arousal levels of ageing people and interfere with sexual responsiveness.	1	2	3	4	5	6	7
23. Sexual disinterest in ageing people may be a reflection of a psychological state of depression.	1	2	3	4	5	6	7
24. There is a decrease in frequency of sexual activity with older males.	1	2	3	4	5	6	7
25. There is a greater decrease in male sexuality with age than there is in female sexuality.	1	2	3	4	5	6	7
26. Heavy consumption of cigarettes may diminish sexual desire.	1	2	3	4	5	6	7

	Strongly disagree						Strongly agree
27. An important factor in the maintenance of sexual responsiveness in the aging male is the consistency of sexual activity throughout his life.	1	2	3	4	5	6	7
28. Fear of the inability to perform sexually may bring about an inability to perform sexually in older males.	1	2	3	4	5	6	7
29. The ending of sexual activity in old age is most likely and primarily due to social and psychological causes rather than biological and physical causes.	1	2	3	4	5	6	7
30. Excessive masturbation may bring about an early onset of mental confusion and dementia in aging people.	1	2	3	4	5	6	7
31. There is an inevitable loss of sexual satisfaction in post-menopausal women.	1	2	3	4	5	6	7
32. Secondary impotence (or non-physiologically caused) increases in males over the age of 60 relative to young males.	1	2	3	4	5	6	7
33. Impotence in ageing males may literally be effectively treated and cured in many instances.	1	2	3	4	5	6	7

	Strongly disagree						Strongly agree
34. In the absence of severe physical disability males and females may maintain sexual interest and activity well into their 80s and 90s.	1	2	3	4	5	6	7
35. Masturbation in older males and females has beneficial effects on the maintenance of sexual responsiveness.	1	2	3	4	5	6	7
36. People 65 years and older have little interest in sexuality.	1	2	3	4	5	6	7
37. A person 65 years and older who shows sexual interest brings disgrace to himself/herself.	1	2	3	4	5	6	7
38. Institutions, such as nursing homes, ought not to encourage or support sexual activity of any sort in their residents.	1	2	3	4	5	6	7
39. Male and female residents of nursing homes ought to live on separate floors or separate wings of the nursing home.	1	2	3	4	5	6	7
40. Nursing homes have no obligation to provide adequate privacy for residents who desire to be alone, either by themselves or as a couple.	1	2	3	4	5	6	7

	Strongly disagree						Strongly agree
41. As one becomes older (say past 65), interest in sexuality inevitably disappears.	1	2	3	4	5	6	7
If a relative of mine, living in a nursing home, was to have a sexual relationship with another resident I would:							
42. complain to the management	1	2	3	4	5	6	7
43. move my relative from this institution	1	2	3	4	5	6	7
44. stay out of it as it is not my concern	1	2	3	4	5	6	7
45. If I knew that a particular nursing home permitted and supported sexuality activity in residents who desired such, I would not place a relative in that nursing home.	1	2	3	4	5	6	7
46. It is immoral for older persons to engage in recreational sex.	1	2	3	4	5	6	7
47. I would like to know more about the changes in sexual functioning in older years.	1	2	3	4	5	6	7
48. I feel I know all I need to know about sexuality in people 65 years and older.	1	2	3	4	5	6	7

	Strongly disagree						Strongly agree
49. I would complain to the management if I knew of sexual activity between any residents of a nursing home.	1	2	3	4	5	6	7
50. I would support sex education courses for residents in nursing homes.	1	2	3	4	5	6	7
51. I would support sex education courses for the staff of nursing homes.	1	2	3	4	5	6	7
52. Masturbation is an acceptable sexual activity for older males.	1	2	3	4	5	6	7
53. Masturbation is an acceptable sexual activity for older females.	1	2	3	4	5	6	7
54. Institutions, such as nursing homes, ought to be trained or educated with regard to sexuality in people 65 years and older and/or disabled.	1	2	3	4	5	6	7
55. Staff of nursing homes ought to be trained or educated with regard to sexuality in people 65 years of age and older and/or disabled.	1	2	3	4	5	6	7
56. Residents of nursing homes ought not to engage in sexual activity of any sort.	1	2	3	4	5	6	7

	Strongly disagree						Strongly agree
57. Institutions, such as nursing homes, should provide opportunities for the social interaction of men and women.	1	2	3	4	5	6	7
58. Masturbation is harmful and ought to be avoided.	1	2	3	4	5	6	7

Part B: Please rate each of your responses by circling the appropriate number.

	Very inactive						Very active
59. How would you rate your current participation in sexual activities?	1	2	3	4	5	6	7
60. How would you rate your participation in sexual activities when you were 35 - 45 years old?	1	2	3	4	5	6	7

	Not interested						Very interested
61. How would you rate your current interest in sexual activities, if it were available whenever you wanted it?	1	2	3	4	5	6	7
62. How would you rate your interest in sexual activity when you were 35 - 45 years old?	1	2	3	4	5	6	7

	Very conservative						Very liberal
63. How would you rate your current sexual attitudes?	1	2	3	4	5	6	7
64. How would you rate your sexual attitudes when you were 35 - 45 years old?	1	2	3	4	5	6	7

Please circle the appropriate letter for your response:

65. Do you consider yourself a:

a. Heterosexual person (preference for sexual partner of opposite sex)

b. Homosexual person (preference for sexual partner of same sex)

c. Bisexual person (can prefer sexual partner of either sex)

66. Do you currently have a sex partner?

a. Yes

b. No

67. Have you been sexually active during the past month?

a. Yes

b. No

Using the scale below, indicate how frequently you have engaged in the following sexual experiences during the past month. (Please answer each of the following, even if it may not apply to you)

	Not at all	**Once**	**2 or 3 times**	**Once a week**	**2 or 3 times a week**	**Once a day**	**More than once a day**
68. Kissing	1	2	3	4	5	6	7
69. Masturbation	1	2	3	4	5	6	7
70. Mutual masturbation	1	2	3	4	5	6	7
71. Petting and foreplay	1	2	3	4	5	6	7
72. Oral sex	1	2	3	4	5	6	7
73. Vaginal penetration or intercourse	1	2	3	4	5	6	7
74. Anal sex	1	2	3	4	5	6	7

Part C: Please rate each of your responses by circling the number you feel is appropriate.

	Definitely false	**Probably false**	**Probably true**	**Definitely true**
75. AIDS leads to death.	1	2	3	4
76. There is no cure for AIDS at present.	1	2	3	4

	Definitely false	Probably false	Probably true	Definitely true
77. Any person with the AIDS virus can pass it on to someone else during sexual intercourse.	1	2	3	4
78. A pregnant woman who has the AIDS virus can give AIDS to her baby.	1	2	3	4
79. AIDS can cripple the body's natural protection against disease.	1	2	3	4
80. AIDS is especially common in older people.	1	2	3	4
81. There is a vaccine available to the public that protects a person from getting the AIDS virus.	1	2	3	4
82. You can tell if people have the AIDS virus just by looking at them.	1	2	3	4
83. A person can be infected with the AIDS virus and not have the disease AIDS.	1	2	3	4
84. AIDS is a disease caused by a virus.	1	2	3	4
85. The AIDS virus can damage the brain.	1	2	3	4

	Definitely not possible	Very unlikely	Somewhat unlikely	Somewhat likely	Very likely
86. How likely do you think it is that a person will get the AIDS virus from having sex with a person with AIDS?	1	2	3	4	5
87. How likely do you think it is that a person will get the AIDS virus from sharing needles for drug use with someone who has AIDS?	1	2	3	4	5
88. How likely do you think it is that a person will get the AIDS virus from living near a hospital or home for AIDS patients?	1	2	3	4	5
89. How likely do you think it is that a person will get the AIDS virus from being coughed or sneezed on by someone who has AIDS?	1	2	3	4	5
90. How likely do you think it is that a person will get the AIDS virus from sharing plates, forks, or glasses with someone who has AIDS?	1	2	3	4	5
91. How likely do you think it is that a person will get the AIDS virus from shaking hands or touching someone who has AIDS?	1	2	3	4	5
92. How likely do you think it is that a person will get the AIDS virus from attending school with a child who has AIDS?	1	2	3	4	5

	Definitely not possible	Very unlikely	Somewhat unlikely	Somewhat likely	Very likely
93. How likely do you think it is that a person will get the AIDS virus from kissing on the cheek a person who has AIDS?	1	2	3	4	5
94. How likely do you think it is that a person will get the AIDS virus from working near someone with AIDS?	1	2	3	4	5
95. How likely do you think it is that a person will get the AIDS virus from donating/giving blood?	1	2	3	4	5
96. How likely do you think it is that a person will get the AIDS virus from using public toilets?	1	2	3	4	5
97. How likely do you think it is that a person will get the AIDS virus from receiving a blood transfusion?	1	2	3	4	5
98. How likely do you think it is that a person will get the AIDS virus from eating in a restaurant where the cook has AIDS?	1	2	3	4	5
99. How likely do you think it is that a person will get the AIDS virus from kissing- with exchange of	1	2	3	4	5

Part D: Please circle the best corresponding answer.

100. What is your marital status?

a. Married

b. Cohabiting

c. Single

d. Separated

e. Divorced

f. Widowed

101. What is the highest level of education you have attained?

a. Less than high school diploma

b. High school diploma

c. Some university

d. Some community college

e. Diploma/certificate from community college

f. Masters or Doctorate

g. Professional degree (e.g., law, medicine)

102. What is your Religious preference?

a. No religion

b. Roman Catholic

c. Jewish

d. Baptist

e. Anglican

f. Lutheran

g. United Church of Canada

h. Latter Day Saints (Mormon)

i. Presbyterian

j. United Church of Christ (Congregational)

k. Other (please specify)____________________

103. Which of the following best describes your current employment situation?

a. Fully retired

b. Partially retired

c. Student

d. Employed part-time

e. Employed full-time

f.. Unemployed

g. Homemaker

104. How would you rate your current state of health?

a. Poor

b. Fair

c. Good

d. Excellent

105. Lifetime occupation if you are/have been employed (Please specify): ____________________________

APPENDIX B

INFORMATION LETTER FOR RED HATTER LEADERS

(Letter was printed on Mount Saint Vincent University letterhead)

Older Women's Attitude and Knowledge Regarding Sexuality, Intimacy, and HIV/AIDS

Pamela Ross, Masters Student, Department of Family Studies & Gerontology
Mount Saint Vincent University

Thank you for helping me to distribute this questionnaire, your involvement will help to explore older women's knowledge, attitudes, and behaviours regarding sexuality, intimacy, and HIV/AIDS. Please follow this outline when distributing the questionnaire.

- Please ask women 50 years of age and older if they would consider participating.
- Let the women know the purpose of the questionnaire. You can explain that I am a student from Mount Saint Vincent University working toward a Masters degree in Family Studies and Gerontology. Please mention that the questionnaire looks at women's knowledge and awareness of sexual health issues and aging, attitudes, and behaviors regarding sexual activities, and understanding of HIV/AIDS.
- To preserve confidentiality and anonymity, ask the women to read over the package later, in private, once they have left the meeting. A self-addressed stamped envelope is included; please note that I am requesting that questionnaires be returned within 2-3 weeks.
- It is important to distribute the questionnaire to everyone in your group as a way to maintain anonymity. Please let the women know that they do not have to complete the questionnaire and that if they do choose to return it, they may leave blank any questions they do no wish to answer.
- Let the women know that the questionnaire takes approximately 20 minutes to complete.
- Please assure the women that the questionnaire is anonymous and confidential; they will not be asked for their name or any identifying information.
- Please suggest to the women to keep the cover letter (see attached) of the questionnaire for important contact and resource information. The contact information is as follows:
    - Pamela Ross (902) 233-4354 (cell) or at pamela.ross@msvu.ca (Researcher)
    - Dr. Áine Humble at (902) 457-6109 or at aine.humble@msvu.ca (Thesis Advisor)
    - If you have questions about how this study is being conducted and wish to speak with someone who is not directly involved in the study, you may contact the Chair of the University Research Ethics Board (UREB) c/o Mount Saint Vincent University Research and International Office, at (902) 457-6350 or via email at research@msvu.ca.
    - Nova Scotia Association for Sexual Health (which contains contact information for local health clinics) www.nssexualhealth.ca
    - Nova Scotia STI/HIV/AIDS helpline is 1-800-566-2437

- Avalon Sexual Assault Centre at (902) 425-0122

Thank you again for your time and effort with helping me gather participants for this study, it has been greatly appreciated.

Sincerely, Pamela Ross

APPENDIX C

INFORMATION LETTER FOR THE HALIFAX SEXUAL HEALTH CENTRE NURSES

(Letter was printed on Mount Saint Vincent University letterhead)

Older Women's Attitude and Knowledge Regarding Sexuality, Intimacy, and HIV/AIDS

Pamela Ross, Masters Student, Department of Family Studies & Gerontology
Mount Saint Vincent University

Thank you for helping me to distribute this questionnaire, your involvement will help to explore older women's knowledge, attitudes, and behaviours regarding sexuality, intimacy, and HIV/AIDS. Please follow this outline when distributing the questionnaire.

- Please ask women 50 years of age and older if they would consider participating.
- Let the women know the purpose of the questionnaire. You can explain that I am a student from Mount Saint Vincent University working toward a Masters degree in Family Studies and Gerontology. Please mention that the questionnaire looks at women's knowledge and awareness of sexual health issues and aging, attitudes, and behaviors regarding sexual activities, and understanding of HIV/AIDS.
- To preserve confidentiality and anonymity, ask the women to read over the package later, in private, once they have left the centre. A self-addressed stamped envelope is included; please note that I am requesting that questionnaires be returned within 2 - 3 weeks.
- Please let the women know that they do not have to complete the questionnaire and that if they do choose to return it, they may leave blank any questions they do no wish to answer.
- Let the women know that the questionnaire takes approximately 20 minutes to complete.
- Please assure the women that the questionnaire is anonymous and confidential; they will not be asked for their name or any identifying information.
- Please suggest to the women to keep the cover letter (see attached) of the questionnaire for important contact and resource information. The contact information is as follows:
    - Pamela Ross (902) 233-4354 (cell) or at pamela.ross@msvu.ca (Researcher)
    - Dr. Áine Humble at (902) 457-6109 or at aine.humble@msvu.ca (Thesis Advisor)
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    - Nova Scotia Association for Sexual Health (which includes contact information for local health clinics) www.nssexualhealth.ca
    - Nova Scotia STI/HIV/AIDS helpline is 1-800-566-2437

- Avalon Sexual Assault Centre at (902) 425-0122

Thank you again for your time and effort with helping me gather participants for this study, it has been greatly appreciated.

Sincerely,
Pamela Ross

APPENDIX D
COVER LETTER TO RED HATTER PARTICIPANTS

(Cover letter was printed on Mount Saint Vincent University letterhead)

Older Women's Attitude and Knowledge Regarding Sexuality, Intimacy, and HIV/AIDS

Pamela Ross, Masters Student, Department of Family Studies & Gerontology
Mount Saint Vincent University

Introduction

The need for research focusing on women's understanding of sexuality issues in later life, and in particular, HIV/AIDS is great, yet rarely explored within Canada. Women are increasingly faced with widowhood, divorce, separation, or are remaining single, and more likely to form new, intimate relationships than previous generations. Re-entering the dating scene can be very exciting; however, women may feel they no longer have to use protection when being sexual or intimate because pregnancy is of less concern after menopause. This behaviour could pose a risk to those involved, especially if they are unaware of risks such as sexually transmitted disease(s) and/or sexually transmitted infections (STDs/STIs).

Purpose

The purpose of this study is to gain a greater understanding of older women's knowledge, attitudes, and behaviours regarding sexuality, intimacy, and HIV/AIDS. This study will examine older women's knowledge and awareness of sexual health issues and aging, their attitudes and behaviours, and understanding of HIV/AIDS. The results from this study will appear in a master's thesis. The results could also be published in an academic journal such as the *Canadian Journal of Human Sexuality* or presented at an academic conference in order to raise awareness on a topic that is seldom explored within Canada. Individual responses will not be reported in any publications or presentations of this research.

Invitation

I am seeking women 50 years of age and older from Nova Scotia to participate in a survey focusing on knowledge and attitudes regarding sexual health issues. The questionnaire, which will take approximately 20 minutes to complete, can be completed in any environment felt comfortable for you. Please note that while completing the questionnaire, you have the right, at any point, to leave particular questions blank. Additionally, you do not have to complete or send back the questionnaire if you do not wish. Please be assured, however, that the questionnaire is anonymous and you will not be asked to give your name or any other identifying information. Also, confidentiality is assured, as only the researcher and thesis advisor will view the questionnaires, which will be kept in a secured, locked file and destroyed within one year of completing the study. If you decide to participate in this study, please return the questionnaire in the self-addressed stamped envelope provided within 2 - 3 weeks of receiving it. Your completion of this questionnaire will not affect your involvement with the Red Hatters Club.

Contact Information
For further information or questions regarding the content of this study please contact myself, Pamela Ross at (902) 233-4354 (cell) or at pamela.ross@msvu.ca or my thesis advisor, Dr. Áine Humble at (902) 457-6109 or at aine.humble@msvu.ca. The results of this study can be mailed upon completion and request, even if you did not complete the questionnaire. The completed and bound thesis will be located at Mount Saint Vincent University in the department of Family Studies and Gerontology and the Mount Saint Vincent University library. If you wish to contact the researcher for the summary results please note that your contact information will not be kept on file or be accessible to anyone else.

If you wish to inquire about being tested for STDs/STIs, HIV, or AIDS please contact the Nova Scotia STI/HIV/AIDS helpline at 1-800-566-2437. The Nova Scotia Association for Sexual Health is also available; please visit www.nssexualhealth.ca for contact information on sexual health centres in your area. If this questionnaire provokes the resurface of painful memories from relationships and/or sexual encounters, the Avalon Sexual Assault Centre located in Halifax is also available for support at (902) 425-0122.

If you have questions about how this study is being conducted and wish to speak with someone who is not directly involved in the study, you may contact the Chair of the University Research Ethics Board (UREB) c/o Mount Saint Vincent University Research and International Office, at (902) 457-6350 or via email at research@msvu.ca.

APPENDIX E
COVER LETTER TO HALIFAX SEXUAL HEALTH CENTRE PARTICIPANTS

(Cover letter was printed on Mount Saint Vincent University letterhead)

Older Women's Attitude and Knowledge Regarding Sexuality, Intimacy, and HIV/AIDS

Pamela Ross, Masters Student, Department of Family Studies & Gerontology
Mount Saint Vincent University

<u>Introduction</u>

The need for research focusing on women's understanding of sexuality issues in later life, and in particular, HIV/AIDS is great, yet rarely explored within Canada. Women are increasingly faced with widowhood, divorce, separation, or are remaining single, and more likely to form new, intimate relationships than previous generations. Re-entering the dating scene can be very exciting; however, women may feel they no longer have to use protection when being sexual or intimate because pregnancy is of less concern after menopause. This behaviour could pose a risk to those involved, especially if they are unaware of risks such as sexually transmitted disease(s) and/or sexually transmitted infections (STDs/STIs).

<u>Purpose</u>

The purpose of this study is to gain a greater understanding of older women's knowledge, attitudes, and behaviours regarding sexuality, intimacy, and HIV/AIDS. This study will examine older women's knowledge and awareness of sexual health issues and aging, their attitudes and behaviours, and understanding of HIV/AIDS. The results from this study will appear in a master's thesis. The results could also be published in an academic journal such as the *Canadian Journal of Human Sexuality* or presented at an academic conference in order to raise awareness on a topic that is seldom explored within Canada. Individual responses will not be reported in any publications or presentations of this research.

<u>Invitation</u>

I am seeking women 50 years of age and older from Nova Scotia to participate in a survey focusing on knowledge and attitudes of sexual health issues. The questionnaire, which will take approximately 20 minutes to complete, can be completed in any environment felt comfortable for you. Please note that while completing the questionnaire you have the right, at any point, to leave particular questions blank. Additionally, you do not have to complete or send back the questionnaire if you do not wish. Please be assured, however, that the questionnaire is anonymous and you will not be asked to give your name or any other identifying information. Also, confidentiality is assured, as only the researcher and thesis advisor will view the questionnaires, which will be kept in a secured, locked file and destroyed within one year of completing the study. If you decide to participate in this study, please return the questionnaire in the self-addressed stamped envelope provided within 2 - 3 weeks of receiving it. Your completion of this

questionnaire will not affect your access to services from the Halifax Sexual Health Centre.

Contact Information

For further information or questions regarding the content of this study please contact myself, Pamela Ross at (902) 233-4354 (cell) or at pamela.ross@msvu.ca or my thesis advisor, Dr. Áine Humble at (902) 457-6109 or at aine.humble@msvu.ca. The results of this study can be mailed upon completion and request, even if you did not complete the questionnaire. The completed and bound thesis will be located at Mount Saint Vincent University in the department of Family Studies and Gerontology and the Mount Saint Vincent University library. If you wish to contact the researcher for the summary results please note that your contact information will not be kept on file or be accessible to anyone else.

If you wish to inquire about being tested for STDs/STIs, HIV, or AIDS please contact the Nova Scotia STI/HIV/AIDS helpline at 1-800-566-2437. The Nova Scotia Association for Sexual Health is also available; please visit www.nssexualhealth.ca for contact information on sexual health centres in your area. If this questionnaire provokes the resurface of painful memories from relationships and/or sexual encounters, the Avalon Sexual Assault Centre located in Halifax is also available for support at (902) 425-0122.

If you have questions about how this study is being conducted and wish to speak with someone who is not directly involved in the study, you may contact the Chair of the University Research Ethics Board (UREB) c/o Mount Saint Vincent University Research and International Office, at (902) 457-6350 or via email at research@msvu.ca.