OLDER ADULT SEXUALITY:

MEASURING HEALTHCARE PROVIDER

KNOWLEDGE, ATTITUDES, AND BEHAVIORS

by

STEPHANIE A. JACOBSON

A dissertation submitted to the Graduate Faculty in Social Welfare in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

2013

This manuscript has been read and accepted for the
Graduate Faculty in Social Welfare in satisfaction of the
dissertation requirement for the degree of Doctor of Philosophy

Harriet Goodman

Date — Chair of Examining Committee

Harriet Goodman

Date — Executive Officer

Carmen Morano

Deborah Tolman
Supervisory Committee

THE CITY UNIVERSITY OF NEW YORK

Abstract

OLDER ADULT SEXUALITY:

MEASURING HEALTHCARE PROVIDER

KNOWLEDGE, ATTITUDES, AND BEHAVIORS

by

Stephanie A. Jacobson

Adviser: Professor Harriet Goodman

Healthcare provider practices around older adult sexuality are increasingly the focus of scholarship. Researchers use available scales to study health worker knowledge and behavior in their research. This dissertation argues the need for a new scale, because the available measures are dated and do not account for changes in attitudes and medical advances over three decades. After a review of the increasing role of physicians, social workers, and other health workers providing care for sexual issues throughout history, I describe available scales for measuring knowledge and behaviors about older adult sexuality and review research that employs them. The purpose of the dissertation was to develop a contemporary measure regarding older adult sexuality practices among health workers. I utilized a two-phase plan following Bowen and Guo's 12-step mixed-method approach for scale development (2012). Phase I included a literature review and qualitative interviews with experts on older adult sexuality regarding the construct. Then I created a universe of items, reviewed them with the experts, and revised items. In Phase II, I tested the items with 155 healthcare providers and conducted analysis for reliability and validity. Based on the analysis, I culled items to create a shortened scale. I proposed a scale consisting of 52 items with three subscales: a 25-item Knowledge subscale, a 13-item Attitude subscale, and a 14-item Behavior subscale. The Knowledge subscale showed poor internal

reliability (*KR-20* = .625). The Attitudes (α = .825), and Behavior (α = .837) subscales showed good internal reliability. I also evaluated content validity and criterion-related validity for the subscales. Flaws in the methods and analysis make the 52-item proposed scale conceptually unsound. Limitations in generating the pool of items, evaluating the items, and testing reliability and validity did not produce a viable scale. I analyze problems with the methodological approach and propose a redesign that corrects for flaws in the approach employed here. I will use an inductive, social justice model that expands scale development to include interviews with practitioners and older adults. I conclude with a number of research, practice, and policy implications that will result from a redesigned scale.

Acknowledgements

To my committee chair, Professor Harriet Goodman, I want to express the deepest appreciation. Without her guidance, this dissertation would not have been possible. Through numerous track changes, she made me a better scholar and writer. She was always available for support and as a calming influence, even in the middle of the night.

To my committee members, Professor Carmen Morano and Professor Deborah Tolman, your expertise in aging, sexuality, and scale development helped me to hone my research skills. You helped me to see what was sometimes right in front of me, like the need for a new scale, instead of another study using an outdated one.

To my professors throughout the doctoral program, thank you for challenging me to think outside of my comfort zone through coursework, readings, and assignments. Thank you in particular to Professor Mimi Abramovitz for believing I could understand policy, when I was not confident, and for giving me my first opportunity to teach. I hope to teach others to think, just as you taught me to.

To my cohort, thank you for providing an environment to question concepts and learn. Thank you especially to Amy Baker for always being a sounding board, proofreader, and friend. I look forward to walking at graduation with you in May.

Thank you to my clients, for teaching me that sexual interest does not end as you age and for being so open with me. Thank you to my colleagues at Mount Sinai for pointing out that older clients do not talk to everyone about their sex lives and that I only hear about it because I ask. Thank you to all of my supervisors, Arlene Berger, Dr. Susan Bernstein, and Dr. Jane Blankman, for supporting my continuing education while building my clinical skills.

To my invaluable network of friends, Valerie Bluth, Stephanie Ihnow, Jamie Plevy, Monica Reyhani, and Naomi Schear. Thank you for finding something to read or study in order to spend hours with me in coffee shops while I wrote papers, proposals, and ultimately my dissertation. Your support made the process a little less lonely. Thank you for your ever-present support and understanding.

To my family, Mom, Dad, and Erin, thank you for supporting me while I tried to balance everything. You always believed in me and knew I could finish, even if you thought I had a little too much on my plate. Thank you for always giving me a pep talk when I needed one and for being forgiving when I got a little overwhelmed. I always know I can count on you. Thank you especially to Mom for introducing me to the field of social work and geriatrics. Who knows where I would be without your career advice.

To Michael Jacobson, thank you for being my best friend, partner, drill sergeant, calming influence, live-in grammar check, and (sometimes) chef/maid. You have always believed in me and supported me through this process, even if you did not always agree with my choices. Thank you for always reminding me of the quote from A League of Their Own, "It's supposed to be hard. If it wasn't hard, everyone would do it. The hard is what makes it great." It really does feel great!

Table of Contents

List of Tables

List of Figures

List of Appendices

CHAPTER I: INTRODUCTION AND PROBLEM FORMULATION

Demographic Trends: The Growth of an Aging Population

The population in the United States is aging; twenty percent of the population is projected to be 65 or older by 2030 (Institute of Medicine-IOM, 2008). Between 2010 and 2050, the population of older adults in America will more than double from 40.2 million to 88.5 million (Vincent & Velkoff, 2010). In addition to the increase in older adults in general, those aged 85 and older, will account for 4.3% of the total US population by 2050. Advances in healthcare have contributed to the growth of the elderly in the US (Schiavi, 1999). Public health initiatives and medical advances have led to falling death rates. In addition, a decrease in fertility has led to fewer young Americans in comparison to the elderly. Because new births are decreasing and life expectancy is increasing, the proportion of the aged population in the US will continue to grow in coming decades (Schiavi, 1999).

With the growth of older adults in America, there has been increased research in aging. In April 2013, a search of databases in Medline, PsycINFO, CINAHL, and Social Work Abstracts using the term "aging" found 366,461 articles with publication dates between 1685 and 2013. Of these articles, the majority (352,483) were published since 1970, and nearly half (176,257) were published since 2003. Although researchers have conducted studies on aging since the seventeenth century, there has been an explosion in aging research in the past ten years.

Recent research explores a number of areas that affect older adults, including immigration, medical advances, acceptance of technology, mental health, and housing. Health is a major focus of aging research. The Alliance for Aging Research (2011), a non-profit organization that focuses on expanding research on aging and health, identified a number of general and focused topics in aging and health research. These include caregiving, longevity,

medical innovations, geriatric training, policy and funding, quality of care, drug development and safety, access to medical breakthroughs, and numerous medical conditions.

One area of health research that is of growing interest is sexuality among the aged (DeVries, 2009). Studies often focus on sexual health topics, such as sexually transmitted infections (Gott, 2001; Henderson, Bernstein, George, Doyle, Paranjape, & Corbie-Smith, 2004; Kligman, 1991; Kuehn, 2008; Levy-Dweck, 2005; Lindau, Leitsch, Lundberg, & Jerome, 2006; Maes & Louis, 2003; Schick et al., 2010; Stall & Catania, 1994; Tangredi, Danvers, Molony, & Williams, 2008; Williams & Donnelly, 2002) and sexual dysfunction (American Association of Retired Persons - AARP, 2005; DeLamater & Sill, 2005; Laumann et al., 2005; Lindau, Schumm, Laumann, Levinson, O'Miurcheartaigh, & Waite, 2007; Marshall, 2010; Palacios, 2008; Schick et al., 2010; Waite, Laumann, Das, & Schumm, 2009; Zeiss & Kasl-Godley, 2001). Some of the growing literature on older adult sexuality focuses on the communication between healthcare providers and their aging clients. Much of this research explores how older clients seek help for sexual concerns (Block, 2008; Butler & Lewis, 2002; Gott & Hinchliff, 2003; Hichliff & Gott, 2011; Johnson, 1997; Laumann, Glasser, Neves, & Moreira, 2009; Lindau et al., 2006; Lindau et al., 2007; Mona et al., 2010; Moreira et al., 2004; Nusbaum, Singh, & Pyles, 2004; Sarkadi & Rosenqvist, 2001). Aging and sexuality research also explores the role of healthcare providers in dealing with the sexuality of their older clients (Agronin, 2004; Bauer, McAuliffe, & Nay, 2007; Bouman & Arcelus, 2001; Burd, Nevadunsky, & Bachman, 2006; Butler & Lewis, 2002; Dunn & Cutler, 2000; Gerbert, Maguire, & Coates, 1990; Gott, 2005; Gott, Hinchliff, & Galena, 2004; Jacobson, 2010; Kligman, 1991; Laumann, Das, & Waite, 2008; McAuliffe, Bauer, & Nay, 2007; Mona et al., 2010; Skiest & Keiser, 1997; Zeiss & Kasl-Godley, 2001). In addition to increased literature on older adult sexuality, the World Health

Organization (WHO, 2002) and Surgeon General Satcher (2001) recommended policies for an increased focus on sexuality throughout the lifespan.

Dependence on Healthcare Providers

Americans utilize healthcare services more as they age (IOM, 2008). In 2011, the National Center for Health Statistics (NCHS) reported that ninety-five percent of older adults visited a physician in the previous year. Adults aged 65 and older reported approximately seven visits to a doctor per year (Hsiao, Cherry, Beatty, & Rechsteiner, 2010). Typically, older adults have longstanding relationships with their primary care providers (Mona et al., 2010). This may explain why adults over age fifty report a desire to have their healthcare provider raise the topic of sexuality with them (Tangredi et al., 2008). As elderly people have increasing contact with the healthcare system (Anderson, 2003; Hsiao et al., 2010; IOM, 2008; NCHS, 2011) and want their healthcare providers to raise the topic about their sexuality (Tangredi et al., 2008), healthcare providers should be prepared to address these issues people face as they age.

Despite older adults' desire to have their healthcare provider introduce the topic of sexuality, numerous studies confirm that healthcare providers do not routinely assess the sexual health of older adult clients (Dogan, Demir, Eker, & Karim, 2008; Dunn & Cutler, 2000; Gerbert et al., 1990; Mona et al., 2010; Skiest & Keiser, 1997; Tangredi et al., 2008). Some factors that prevent healthcare providers from addressing sexuality include discomfort (Agronin, 2004; Burd et al., 2006; Dunn & Cutler, 2000; Kligman, 1991; Mona et al., 2010), fear of offending (Dunn & Cutler, 2000; Mona et al., 2010), lack of education (Butler & Lewis, 2002; Dogan et al., 2008; Gott, 2005; Kligman, 1991; Mona et al., 2010), stereotypes about older adults (Bauer et al., 2007; Butler & Lewis 2002; Kligman, 1991), and time (Kligman, 1991; Mona et al., 2010). The need for healthcare professionals to discuss sexual health with their clients is a growing area of

study (Laumann et al., 2008; Lindau et al., 2006; Schick et al., 2010; Zeiss & Kasl-Godley, 2001), which underscores the need for research that enhances understanding of healthcare providers' knowledge, attitudes, and behavior towards addressing sexuality among their elderly clients.

Knowledge and Attitudes of Healthcare Providers

Much of the research about the knowledge and attitudes of healthcare providers focuses on physicians (Bauer et al., 2007; Burd et al., 2006; Dunn, & Cutler; Jacobson, 2010; Kligman, 1991; Mona et al., 2010), nurse practitioners (Maes & Louis, 2011), and nurses (Bouman, Arcelus, & Benbow, 2007; Mahieu, Van Elssen, Kim, & Gastmans, 2011; Quinn-Krach & Van Hoozer, 1988; Rheaume & Mitty, 2008). When interviewed in a qualitative study, physicians identified barriers to discussing sexuality with older clients that included discomfort, lack of knowledge, and personal stereotypes (Jacobson, 2010). Other articles have reported physician discomfort discussing sexual activity and sexual health with older adults (Agronin, 2004; Burd et al., 2006; Dunn & Cutler, 2000; Kligman, 1991; Mona et al., 2010). About one quarter of nurse practitioners reported being "unable to cope with issues that arise with sexual history responses" with older clients (Maes & Louis, 2011, p. 220).

Physicians' discomfort with addressing the sexual health needs of older adults may be the result of the lack of formal education on sexual health for all age groups. Many physicians report they have not received specialized training on conducting sexual assessments or dealing with complaints related to sex (Kligman, 1991; Mona et al., 2010). Medical schools did not introduce education on sexual health into the curricula until 1961 (Butler & Lewis, 2002). Close to half (44%) of the medical schools in the US still do not have formal curricula for sexual health education (Malhotra, Khurshid, Hendricks, & Mann, 2008). Of the medical schools with sexual

health education, 92.2% developed their own courses and do not follow a standardized curriculum. The number of coursework hours devoted to sexual health ranged from three to 40 and the number of clinical hours ranged from zero to 35 (Malhotra et al., 2008). Although there are no universal guidelines for sexual health education in US medical schools, Morehouse School of Medicine (MSM), under the ausprices of Dr. Satcher, created a curriculum called *Promoting Sexual Health and Responsible Sexual Behavior: A Universal Curriculum for Health Professionals* that can be used in any healthcare professional training program (MSM, 2013). This curriculum includes a focus on sexuality throughout the lifespan.

Role of Social Workers

Social workers have an important role to play in educating healthcare providers about older adult sexuality and advocating for institutional change. Social workers focus on the entire person, including sexual issues, in caring for clients, and they can expand that approach to other professions (Shore & Pyrce, 1984). In nursing homes and other healthcare settings, social workers focus on the psychosocial needs of older adult clients and act as a liaison between these clients and staff (Fairchild, Carrino, & Ramirez, 1996). Therefore, social workers are in a position to explore the knowledge and attitudes of healthcare providers further. They have an ethical responsibility to advocate for their clients and challenge social injustice (National Association of Social Workers, NASW, 1996). In order to promote practice and policy changes in the healthcare system related to the expression of older adult sexuality, social workers should engage in research on this important area of study.

In order for social workers and other healthcare providers to conduct meaningful quantitative research on older adult sexuality and the knowledge, attitudes, and behavior of healthcare providers, they need effective means of measurement (DeVellis, 2003). Because

constructs such as attitudes and feelings are not easily measured concepts, researchers need reliable and valid instruments (Lyons & Doueck, 2010). They must utilize psychometric techniques to develop these instruments, which typically take the form of questionnaires or scales that are informed by theory (DeVellis, 2003). Before developing a new scale, it is useful for researchers to determine if a suitable instrument already exists.

Available Measures of Knowledge and Attitudes about Sexuality

Knowledge and Attitudes Scales

In order to study the knowledge and attitudes of healthcare providers toward older adult sexuality, researchers have developed a number of scales since the 1970s (Kim, Kang, & Kim, 2011; Miller & Lief, 1979; Reynolds & Magnan, 2005). The *Sexual Knowledge and Attitudes Test* (SKAT) was developed to obtain data about sexual attitudes, knowledge, and experience among medical students (Miller & Lief, 1979). Miller and Lief (1979) reported construct validity for the entire scale, coefficient-alpha reliability ranging from .68 to .86 on the attitude dimension, and KR-21 reliability of .87 on the knowledge dimension. The SKAT has been widely used; within one decade of its publication in 1972, it was administered to over 35,000 students in a number of countries and translated into several languages. However, the SKAT measures general knowledge and attitudes about sexuality among medical students and only one question asks about older adult sexuality (White, 1982a).

The Sexual Attitudes and Beliefs Survey (SABS) (Reynolds & Magnan, 2005) and *Sexual Health Care Scale – Attitudes* (SHCS-A) (Kim et al., 2011) focus on attitudes of nurses. The SABS was developed to assess the barriers nurses face in assessing sexuality (Reynolds & Magnan, 2005). Reynolds and Magnan (2005) reported Cronbach's alpha reliability ranging from .75 to .82 and construct validity, as the scale significantly correlated with SKAT and did

not correlate with social desirability scales. The SHCS-A was developed for use with oncology nurses (Kim et al., 2011). Kim and colleagues (2011) reported Cronbach's alpha reliability ranging from .70 to .72, content validity, and concurrent validity, as the scale significantly ($p <$ .001) correlated with SKAT. The SABS and the SHCS-A both focus on sexuality in general and do not ask specific questions about older adults.

Aging Sexuality Knowledge and Attitudes Scales

Adult Sexuality Knowledge and Attitudes Test (ASKAT). The ASKAT was developed to measure knowledge and attitudes about older adult sexuality (Walz & Blum, 1987). Walz (personal communication, November 11, 2011) developed the scale for practical purposes and published it in the preface to his book with Blum, *Sexual Health in Later Life* (Walz & Blum, 1987), as a self-assessment tool of knowledge and attitudes, not as a research tool. The ASKAT contains forty-nine knowledge questions that cover various topics, including continued interest and capacity for sexuality, the relationship between illness and sexual functioning, male and female changes in sexual functioning with age, and masturbation. The seventeen attitude questions are rated on a Likert-type scale from one to four of strongly agree to strongly disagree, including questions about continued sexual activity, the relationship between sexuality and well-being, and masturbation. Despite including a range of topics related to older adult sexuality, the ASKAT has not been used in any research studies. This may be due to its lack of reported reliability and validity. According to Walz (personal communication, November 11, 2011), the scale has face validity and little more. The authors did study the questions to make certain they were supported by research, and several physicians reviewed the scale in advance of its publication.

Knowledge and Attitudes toward Elderly Sexuality (KATES). Unlike the ASKAT, the KATES was developed for research purposes (Walker & Ephross, 1999; Walker, Osgood, Richardson, & Ephross, 1998). A team that included a gerontologist, a social worker, a geriatrician, a nurse, and an administrator developed a 159-item scale to assess healthcare provider knowledge, attitudes, and practices regarding older adult sexuality (Walker et al., 1998). They conducted a literature review and incorporated their own personal experiences to develop content validity (Walker & Ephross, 1999). In order to reduce the time needed to complete the scale, they divided the 159 items into four alternate forms with approximately the same number of items for each dimension (Walker & Ephross, 1999). The Cronbach's alpha reliability ranged from .72 to .94 for each of these forms (Walker & Ephross, 1999; Walker et al., 1998). Despite reported validity and reliability, the KATES is not commonly used and has only been utilized as the measurement in studies the authors conducted (Walker & Ephross, 1999; Walker & Harrington, 2002; Walker et al., 1998). The failure of the KATES to be widely used by other researchers may be because of its limitations. First, the scale only uses dichotomous items, which does not allow for measuring strength of agreement on attitude items (Walker et al., 1998). Second, the team that developed the scale reviewed it to establish content validity only. This weak method for establishing validity may mean that items are not appropriate. In 1998, Walker and colleagues reported a plan to eliminate items with weak discrimination and poor reliability, but they have not published a new version.

Aging Sexual Knowledge and Attitudes Scale (ASKAS). In response to the lack of instruments available to measure sexual knowledge and attitudes related to older adults, White (1982a) developed the measurement instrument *Aging Sexual Knowledge and Attitudes Scale* (ASKAS) (Appendix A). The ASKAS, developed before the ASKAT and the KATES, was the

first instrument that focused specifically on sexuality in older adults. The ASKAS measures two dimensions: knowledge and attitudes (White, 2011). The knowledge dimension consists of thirty-five true/false/don't know questions to measure an individual's awareness of changes to sexual functioning with old age. The attitude dimension consists of twenty-six Likert-type questions that rate general beliefs about older adult sexuality on a 7-point scale. Low scores indicate high knowledge and permissive attitudes. White (1982a) designed the complete scale for use with any group that has contact with older adults and tested it with older adults, their families, and professionals working in nursing homes.

The ASKAS has been the scale of choice to date for measuring knowledge and attitudes towards older adult sexuality because of its reported reliability and validity (Langer-Most & Langer, 2010). White (1982a) established reliability ranging from .90 to .97 for the knowledge dimension and from .72 to .96 on the attitudes dimension, using test-retest, split-half, and coefficient alpha. Predictive validity was established based on higher knowledge and more permissive attitudes predicting sexual activity in nursing home residents and educational interventions increasing knowledge and attitudes (White, 2011). Stringent tests of reliability and validity made the ASKAS a valuable tool for measuring knowledge and attitudes about older adult sexuality.

Since its development, numerous studies have employed the ASKAS to measure knowledge and attitudes of healthcare professionals about older adult sexuality (Quinn-Krach & Van Hoozer, 1988; Langer-Most & Langer, 2010; Snyder & Zweig, 2010). Others have used it as an evaluation tool to measure the effectiveness of educational interventions to promote discussions of sexual health between healthcare providers and older clients (Goldstein-Lohman & Aiken, 1995; White & Catania, 1982). In addition to its wide use in the US, researchers have

used the ASKAS in numerous international studies. For example, it was translated into Portuguese for use with a Brazilian population (Viana, Guirardello, & Madruga, 2010) and used in studies in Taiwan (Wang, Lu, Chen, & Yu, 2008), the UK (Bouman et al., 2007), and Turkey (Dogan et al., 2008).

Despite its widespread use, the ASKAS has a number of serious limitations. White developed the ASKAS over 30 years ago, and many of the questions may no longer pertain to contemporary issues related to older adult sexuality or may not include important advancements in technology and knowledge. The first of the baby boomers turned 65 in 2011 (Frey, 2008; IOM, 2008). By 2030, the cohort born in the 20 years following World War II will all be older adults (Vincent & Velkoff, 2010). Since the baby boomers came of age during the sexual revolution of the 1960s (Hart & Weillings, 2002; McLaren, 1999), they may have different generational expectations about sexuality. The introduction of the birth control pill in the 1960s and the legalization of abortion allowed for the separation of sexual intercourse and reproduction (Castelo-Branco, Huezo, & Lagarda, 2008; Loe, 2004). Consequently, this generation, especially women, were able to experience sex for recreation and self-expression, not only procreation (Hart & Wellings, 2002). As a result, sexist and heteronormative questions in the ASKAS may not reflect current attitudes or practices. In addition to missing generationally different expectations about sexuality, the ASKAS now lacks content validity because it does not address STIs, HIV, and AIDS, safer sex practices, and treatments for male and female sexual dysfunctions, all of which emerged after White (1982a) developed this instrument.

Statement of the Research

Frequently, social science researchers rely on accessible scales that are not appropriate for their study question (DeVellis, 2003). Because of the limitations of the ASKAS (White,

1982a) and other available scales, a new scale was warranted. The purpose of this dissertation was to develop and test a new, updated scale to measure the knowledge, attitudes, and behaviors of health providers regarding sexuality among elderly clients. To develop the scale, I followed the 12-step mixed-method approach to scale development outlined by Bowen and Guo (2012). I separated the steps into two phases. In Phase I, I reviewed the literature and conducted qualitative interviews with experts regarding the construct. Throughout the interview process, I created a universe of items that could comprise a new scale. In an iterative process, I reviewed the items with the experts, cognitively tested the items with experts demographically similar to intended survey respondents, and revised items as needed. In Phase II, I tested the items and conducted statistical analysis to determine item performance. I then removed items that did not perform well, conducted exploratory and confirmatory factor analysis, and tested for reliability and validity. In a future Phase III, I will administer a shorter revised scale to a larger sample and run additional tests for reliability and validity.

The resulting instrument presents a reliable and valid scale that corrects for gendered and heteronormative language, as well as developments such as HIV and treatments for male and female sexual dysfunction over the past 30 years. I evaluated the applicability of the currently used dimensions of knowledge and attitudes and included the additional dimension of behavior, based on the review of existing research and theory and qualitative interviews with experts in the field. By including all relevant dimensions, my goal was to create a scale for researchers across all disciplines in social and behavioral health to study the practices of healthcare providers with older adults about sexuality.

The creation of a valid and reliable scale has research, practice, and policy implications. Research scholars continue to use the ASKAS (White, 1982a) to understand healthcare provider

knowledge and attitudes about older adult sexuality (Bouman et al., 2007; Dogan et al., 2008; Goldstein-Lohman & Aiken, 1995; Langer-Most & Langer, 2010; Luadzer, 1995; Quinn-Krach & Van Hoozer, 1988; Snyder & Zweig, 2010; White & Catania, 1982). A contemporary scale provides researchers with a tool to measure preparedness of healthcare workers in managing, maintaining, and encouraging older adult sexuality. By measuring and understanding their knowledge, attitudes, and behaviors, social workers will be able to determine what health workers know, their attitudes, and how they conduct themselves when they work with this population. Based on research using the scale, social workers and others can develop training programs for healthcare providers. When training programs are implemented, this instrument will be useful in pre- and post-test evaluations of these initiatives. By providing trainings on older adult sexuality, institutional norms may change, and the health care provided to the elderly may improve. Additionally, policies regarding education of healthcare providers, such as required curricula in medical education, may be encouraged and advocated with the support of findings using the scale.

The chapters that follow provide the foundation that supported this dissertation and research goals. Chapter 2 is a review of the history contextualizing the available scales. The professionalization of medicine and the prominence of healthcare providers in managing sexuality are presented in order to understand the medical focus of the ASKAS and other available scales. I explore historical shifts that have influenced sexuality since the development of earlier scales to further support the need for a new scale. The next chapter describes policies that dictate ideal healthcare system practices related to sexuality among the aged and efforts to increase education. Chapter 4 goes on to review the process used by the researchers to develop

currently available scales and the relevant empirical literature that utilized them in research studies.

Chapter 5 reviews pertinent theories anchoring the new scale. I specifically focus on scripting theory and its justification for creating three scale dimensions of knowledge, attitudes, and behaviors. Additionally, I integrate theories of aging and sexuality to further justify the scale dimensions and the importance of particular themes and topics in the scale items. Chapter 6 presents the research methodology that guided data collection and analysis along with the rationale for designing a mixed-method study. The chapter also reviews issues related to the protection of human subjects.

Chapter 7 presents the findings of Phase I of the current study, including a content analysis of the empirical literature regarding emerging issues in older adult sexuality and analysis of qualitative interviews with expert key informants. This analysis resulted in the creation of 231 items in three subscales of Knowledge, Attitudes, and Behaviors with 14 topic categories, including: continuity of sexuality throughout the lifecycle; benefits of continued sexual expression; relationship status; masturbation; changes in male sexual functioning and treatments; changes in female sexual functioning and treatments; relationship between disease and sexual functioning; dementia; influence of medications on sexual functioning; LGBT and aging; sexually transmitted infections (STIs); HIV/AIDS; safer sex practices; and rights. I present the analysis of the items' performance in Chapter 8, including initial evaluation of item performance, factor analysis, reliability, and validity. Finally, Chapter 9 provides a discussion of the findings, including limitations of the current study and implications for future research.

CHAPTER II: HISTORY OF SEXUALITY AND MEDICINE IN AMERICA

The present chapter will review the history of medicine and sexuality in the US in an effort to contextualize the available scales for measuring knowledge and attitudes about older adult sexuality. The role of healthcare providers, and doctors in particular, in sexuality has increased over time and I will explore the reasons. Additionally, I will describe the historical shifts that influenced sexuality and its cohort understandings over time.

Professionalization of Medicine

Currently, older adults rely primarily on healthcare providers, especially physicians, for advice about sexual health (Kligman, 1991); however, this was not always the case. Physicians did not have a role in sexual health until the consolidation of the medical profession in the early 20th century (Austin, 1983; Flexner, 1960; Starr, 1982). Beginning in America in the mid-1700s, doctors received training through an unstandardized apprentice system supplemented by informal classes and demonstrations of anatomy (Flexner, 1960). In 1765, the trustees of the College of Philadelphia proposed the first formal professorship of medicine. By 1870, licensing requirements had become rigorous, and medical school curricula consolidated (Starr, 1982). By 1876, more than one hundred medical schools had formed in the US (Flexner, 1960). At the beginning of the 20th century, the American Medical Association (AMA) began grading medical schools, and medical education became standardized, resulting in physicians achieving professional status in the 1920s (Starr, 1982). The discovery of germs and the introduction of antibiotics in the following decades secured the authority of physicians in American society.

The role of healthcare providers in sexuality began with the initiation of physicians into reproductive health (Capitulo, 1998; Kobrin, 1966; Simonds, Katz Rothman, & Meltzer Norman, 2007). In the early 20th century, physicians began to dominate reproductive care. As sexuality

fell into the domain of medicine, psychiatrists began categorizing sexual perversion (Adam, 1995), researchers studied sexual behavior (Kinsey, Pomeroy, & Martin, 1948; Kinsey, Pomeroy, Martin, & Gebhard, 1953) and articulated a sexual response cycle (Masters & Johnson, 1966), and pharmacologists developed an oral contraceptive (Bailey, 1997; Chesler, 1992; Hart & Wellings, 2002; Kennedy, 1970; McLaren, 1999). Events in the 19th and 20th centuries placed sexuality firmly in the realm of the medical profession.

Medicalization is a process through which medical terms come to define problems (Giami, 2008), and health issues are understood within a medical framework. Within this paradigm, physicians are the professional group that categorizes illnesses and behaviors as healthy or sick (Moynihan, 2003). As doctors dominated reproductive care, physicians defined which sexual behaviors were normal and which were not (Giami, 2008). By the time White (1982a) developed the Aging Sexual Knowledge and Attitudes Scale (ASKAS), the medicalization of sexuality was firmly entrenched. Consequently, the ASKAS reflects the medicalized aspects of sexuality. Therefore, the ASKAS is medical in its focus and pathologizes certain changes in sexual functioning that occur with age currently viewed as normal.

Early History of Sexuality in the US (1900-1979)

Childbirth in the Early 1900s

The entrance of medicine into the intimate lives of their patients, especially women, was evident as they assumed the dominant role in childbirth. Until the 20th century, midwives assisted in the majority of births in America (Simonds et al., 2007). Midwives continued to deliver approximately half of all babies in America in the 19th and early 20th centuries (Kobrin, 1966). By the early 20th century, with the professionalization of medicine and the introduction of the field of obstetrics, physicians sought to gain dominance in childbirth. Obstetricians argued

that normal pregnancy was the exception (Kobrin, 1966). Childbirth was ultimately pathologized (Capitulo, 1998), and "physicians' urged accordingly that every mother has a right to such care as shall preserve her and hers in life and health, the care which, they said, the midwife cannot provide since the necessary skills are difficult to teach" (Kobrin, 1966, p. 359).

Physicians have come to dominate childbirth in the US and, as a result, obstetricians determine the care women need throughout pregnancy (Simonds et al., 2007). Because of the dominance of men in medicine during the last century, reproductive healthcare developed through a male lens and patriarchal values influenced other aspects of sexuality.

Classification of Homosexuality in the Early 1900s

Beginning in the 19th century, physicians and psychiatrists pathologized homosexuality in articles in professional journals (Adam, 1995). During that period, laws prohibited sodomy, which could be punishable by death (McLaren, 1999). The American Psychiatric Association (APA) included sexual deviations in 1952 in its first *Diagnostic and Statistical Manual of Mental Disorders (DSM),* the standard for classifying psychiatric disorders (De Block & Adriaens, 2013). At that time, the *DSM* categorized sexual deviations as personality disorders. In 1968, the revised *DSM-II* specified homosexuality as a sexual deviation (De Block & Adriaens, 2013). Because homosexuality was viewed as pathological, medical professionals sought to cure it though medications, shock therapy, castration, hysterectomy, lobotomy, and aversion therapy (Adam, 1995; Freud, 1962; Katz, 1976).

The first efforts to depathologize homosexuality involved attempts to humanize gays and lesbians (Katz, 1976). These continued through the 1940s and beyond (Adam, 1995). In the summer of 1948, Henry Kay developed a human rights group for gay men, which later became the Mattachine Society (Katz, 1976). In 1955, Del Martin and Phyllis Lyon founded a lesbian

rights group called Daughters of Bilitis (DOB). Gay and lesbian people continued to establish advocacy organizations through the 1960s as part of the civil rights movement. In 1968, the North American Conference of Homophile Organizations (NACHO) began coordinating advocacy efforts surrounding homosexuality (Adam, 1995).

One year after NACHO declared "gay is good" (Adam, 1995, p. 79), the most symbolic event in the gay liberation movement occurred. On Friday June 27, 1969, New York City Police raided The Stonewall, a gay bar. Although police had raided The Stonewall and other gay bars in the past, the response to this action was different, because the patrons fought back. Riots continued outside of Stonewall through June and July of that year (Duberman, 1993). Stonewall empowered gay liberation groups that called for organized resistance against institutions that were anti-homosexual, including the medical profession (Adam, 1995).

Ultimately, the advocacy of organized gay liberation groups led the National Association for Mental Health to press for decriminalization of homosexual acts in 1970 (Adam, 1995), and in 1972, the NASW rejected discrimination against homosexuality. By 1974, the APA removed homosexuality as a mental disorder from the *DSM* (Adam, 1995; De Block & Adriaens, 2013). Although the latest edition of the *DSM* no longer includes homosexuality or uses the term, "sexual deviation," it does include sexually related diagnoses, including gender dysphoria and paraphilic disorders, such as transvestic disorder (APA, 2013).

Although gay rights activism began in the 1960s, it continues to the present day. Despite case law and changes in state legislation, sodomy laws remained in place in the US until 2003 with the Supreme Court case of Lawrence v. Texas (2003). This case determined that sodomy laws in Texas were not constitutional and, by extension, legalized same-sex sexual activity throughout the US. Similarly, it was not until 2009 with The Matthew Shepard and James Byrd,

Jr., Hate Crimes Prevention Act (2009) that violence due to gender identity and sexual orientation were added to the list of hate crimes. As of this writing, most states still do not recognize gay marriage. Nevertheless, the recent Supreme Court Case of the United States v. Windsor (2013) determined that the Defense of Marriage Act (DOMA) was unconstitutional, and legally married same-sex couples became eligible for federal benefits.

Treatment of Venereal Disease in the 1940s

Historically, Americans considered venereal diseases a moral, not a medical, problem. Without an effective treatment for syphilis, medical professionals were initially hesitant to become involved in treating venereal disease (Parascandola, 2008). However, with the emergence of germ theory in the 19th century, the microorganisms that caused gonorrhea and syphilis were isolated. By the 20th century, the Wasserman test for syphilis enabled doctors to make a definitive diagnosis of the disease, which led to a search for treatments. In 1909, the Japanese scientist Sahachiro Hata produced a drug treatment, Salvarsan, which was an arsenical compound with serious side effects. Doctors often injected Salvarsan without the patient's consent, especially women, to prevent the spread of syphilis. The discovery of penicillin in 1943 provided an effective treatment for syphilis and gonorrhea without major side effects. This enabled doctors to treat sexually transmitted infections (STIs) successfully.

The Kinsey Studies of Sexuality in 1948 and 1953

At the same time that medical discoveries were changing treatment of sexually transmitted diseases, sex became a legitimate area of scientific inquiry, and research served to demystify human sexuality (McLaren, 1999). Kinsey and colleagues (1948; 1953) were pioneers in the scientific study of sexuality (Schultheiss & Glina, 2010). Notably, Kinsey and his researchers were not medical doctors. However, they conducted the first large-scale study of

sexual behavior, which described the types of sexual acts men (Kinsey et al., 1948) and women (Kinsey, et al., 1953) performed and the frequency of each activity. In separate studies, these researchers interviewed men and women and asked them to give subjective reports about their sexual behaviors.

Of particular significance for this dissertation research, Kinsey and colleagues were the first to report observations about the relationship between sexuality and aging (George & Weiler, 1981). In their 1948 study of sexual behavior and human males, they found age was the single greatest indicator of frequency of sexual activity. Although they found sexual behaviors persisted into late life, they declined as men aged. When Kinsey and colleagues (1953), expanded their original study to sexual behavior among females, they found that sexual frequency among women also decreased with age. However, their observations must be considered in the context of their sample. Kinsey and colleagues (1948) interviewed 14,084 men in their initial study, but only 106 of them were over the age of 60. In their study of female sexuality (Kinsey et al., 1953), they interviewed 22,378 women; however only 95 of these women were over the age of 60. Consequently, although these researchers (Kinsey et al., 1948; 1953) made broad statements about sexual activity and decreasing frequency as a function of age, these statements were based on an extremely small number of cases of people over age 60 compared to a much larger number of younger adults. Nonetheless, the findings of Kinsey and colleagues (1948; 1953) established the study of sexual behavior in older adults as a legitimate field of research (Pfeiffer & Davis, 1972).

The Introduction of Oral Contraception in 1960

Women used various methods to avoid pregnancy for centuries (May, 2010). However, because of the 1873 federal Comstock law, women found it difficult to obtain birth control such

as condoms and pessaries. These items and information about contraception were viewed as pornographic under federal law and could not be sent through the mail legally, transported between states, or imported (Kennedy, 1970). In addition, many states had similar laws that ranged in stringency. As a result, women had to obtain birth control devices on the black market (Stansell, 2010). In the 1910s, feminists began a fight to legalize contraception. In 1918, Judge Crane interpreted the New York State Comstock law to allow doctors to prescribe contraception to prevent disease (Kennedy, 1970). Margaret Sanger wanted contraception to be legalized for all purposes, but following Judge Crane's decision, she focused on doctors prescribing contraception. In 1936, Mrs. Sanger, along with the American Birth Control League (ABCL) appealed the case of *United States v. One Package of Japanese Pessaries*, in which a package of contraceptive devices Mrs. Sanger ordered was confiscated under the Comstock law. In this case, Judge Hand ruled that doctors should be permitted to discuss options for contraception and should have sole discretion in determining appropriate prescriptions (Kennedy, 1970; May, 2010). Other cases brought at the state level rejected state Comstock laws, often stipulating that contraception would be allowed for married women only (May, 2010). In response, Sanger developed birth control clinics with physicians on staff.

Although this case law required a physician to be involved in the provision of birth control, a survey of medical schools in 1922 found none provided training on sexual health or matters related to sex (McLaren, 1999). By 1937, the American Medical Association (AMA) issued a statement that medical schools should teach students about contraception, and physicians began to accept their new role. Sanger continued her feminist advocacy and argued that physicians needed to provide safe and effective contraception (Kennedy, 1970) in order for women to attain sexual pleasure (McLaren, 1999). Physicians accepted the task of limiting

family size, because of the economic conditions of the Depression, but many only approved of contraception for married couples (McLaren, 1999).

The first oral contraception pill was approved and put on the market in 1960 (Stansell, 2010). By 1964, the birth control pill became the most popular form of contraception in the US, with more than 6.5 million married women reporting its use (May, 2010). The number of unmarried women taking the birth control pill is unknown, because some state laws prohibited doctors from prescribing birth control pills to unmarried women. As a result, some single women had to use another form of contraception, lie about their marital status, or find a physician willing to provide a prescription anyway. Although the need for a physician to prescribe the birth control pill bolstered the role of the physician in management of female sexuality (Bailey, 1997), "the pill also empowered women to make demands on their physicians – initially by asking for prescriptions and later by insisting on more information and safer oral contraceptives" (May, 2010, p. 5).

The introduction and increased availability of an oral contraceptive in the 1960s occurred during a period of dynamic changes in society in general and attitudes towards sexuality in particular (Hart & Wellings, 2002; McLaren, 1999). The sexual revolution had already begun when the birth control pill came on the market (May, 2010). Teenagers and young adults began challenging cultural norms, and sex outside of marriage became more apparent. In 1963, the courts lifted the strict censorship outlined in the Comstock laws, which allowed for public discussions of sexuality (Steigerwald, 1995). As censorship laws changed, the introduction of the birth control pill allowed for separation between sex and reproduction (Castelo-Branco et al., 2008; Loe, 2004). Unmarried women could participate in sexual intercourse without fear that they would become pregnant (May, 2010). Many women were emancipated because they could

control reproduction without the approval or knowledge of their partner. The second half of the twentieth century witnessed the acceptance of sexual activity for pleasure, especially for women (Hart & Wellings, 2002). A recent federal decision on June 10, 2013 allows for Plan B, a type of emergency contraception known as the morning-after pill, to be sold in pharmacies without a prescription (Planned Parenthood, 2013). Although the introduction of an oral contraceptive pill gave women more control over their bodies, and Plan B is now available without a prescription, doctors and drug companies remain the primary gatekeepers for women's reproductive health (Loe, 2004).

The Masters and Johnson Study of 1966

Masters and Johnson (1966) began their research on the human sexual response cycle in order to provide scientific research to physicians to understand their patients' sexual problems (Schultheiss & Glina, 2010). The human sexual response cycle is based on a medical model and describes a fixed sequence of physical changes based on a biological drive (Schultheiss & Glina, 2010). Their research included observations of older adult sexuality. Extending Kinsey's earlier observations that older men (Kinsey et al., 1948) and women (Kinsey et al., 1953) participated in less frequent sexual activity, Masters and Johnson (1966) reported that older men have an increase in sexual inadequacy after 50 years of age, and impotence increased further with each decade of age. They attributed decreased male responsiveness to both physical and psychological causes and found that the changes in the sexual response cycle were more complicated for women as they aged. They noted increased discomfort and pain and decreased lubrication for women with age. Psychiatrists' diagnoses of sexual dysfunction is still based on a disturbance in the sexual response cycle described by Masters and Johnson in 1966 (APA, 2013).

Recent History of Sexuality in the US (1980-Present)

Although the 1960s is associated with the sexual revolution, some assert the era of sexual liberation ended in the 1980s (Leo, 1984; McLaren, 1999) because of an increase in sexually transmitted diseases. In 1984, Leo wrote in *Time* magazine that the sexual revolution was over. He cited increasing incidents of genital herpes as a prime cause of a cultural shift in sexual behavior (Leo, 1984), but Acquired Immune Deficiency Syndrome (AIDS) soon became the focus of headlines and an even greater threat in the minds of Americans (McLaren, 1999; Parascandola, 2008). With rising rates of Human Immunodeficiency Syndrome (HIV) and AIDS, no treatment for the disease, and its association with sex, Americans became more conscious of the consequences of unbridled sexual activity.

The Emergence of HIV/AIDS in 1981

On June 4, 1981, the Centers for Disease Control and Prevention (CDC) published a Morbidity and Mortality Weekly Report (MMWR) on *Pneumocystis carinii* pneumonia in gay men in Los Angeles (CDC, 1996). This MMWR was the first report of what people later came to know as AIDS and the identification of the HIV virus. AIDS quickly became the focus of headlines and prominent in the minds of Americans (McLaren, 1999; Parascandola, 2008). Since the beginning of the AIDS epidemic, people feared HIV infection and stigmatized people who carried the virus and even people in groups associated with high rates of HIV/AIDS (Malcolm, Aggleton, Bronfman, Galvao, Mane, & Verrall, 1998). Similar to the response to syphilis, people viewed AIDS as a moral problem (Giami, 2008; Parascandola, 2008). Individuals were largely uncomfortable discussing HIV/AIDS because of its association with sexual activity and drug use among socially stigmatized groups, such as men who have sex with men and injection drug users.

During the early years of the epidemic, people with AIDS (PWA) faced healthcare providers who did not understand the mode of transmission and lacked a viable treatment (Parascandola, 2008). Although a few physicians undertook the treatment of people with HIV/AIDS, gay men in New York City created the first groups that provided psychosocial care for people with AIDS (Tavares & Lopez, 1984). The Gay Men's Health Crisis (GMHC) began as a group of gay men meeting to discuss the loss of their friends (Getzel, 1997; Tavares & Lopez, 1984), and in 1982, GMHC became the first AIDS service organization (ASO) (Eaklor, 2008). GMHC started with one full time and one part time employee and a few hundred volunteers (Getzel, 1997). The organization initially worked to raise money for research into AIDS and to offer support to PWA and their caregivers (Getzel, 1997). It grew enormously, so that fifteen years later in 1997, GMHC had 350 full-time employees and over 8,000 volunteers.

Social workers were deeply involved in establishing GMHC and other community-based organizations serving PWAs, and their bio-psychosocial perspective permeated services these organizations delivered (Getzel, 1997). Overall, social workers played a key role in service provision to people with HIV/AIDS from the early years of the epidemic (Linsk, 2011; Strug, Grube, & Berkerman, 2002) in community-based agencies, but also in hospital settings (Getzel, 1992). Social workers offered focused grief therapy and supported clients as they inevitably died during the early years of the epidemic (Bowen, 2013; Strug et al., 2002). In addition to providing counseling, social workers assisted with housing, helped clients with advanced directives, and advocated for services (Bowen, 2013).

When researchers identified the transmission of AIDS as a blood borne virus (HIV), social workers were at the forefront of education and prevention efforts targeted at high-risk groups (Bowen, 2013). Social workers continue to work in programs that aim to alter risky

sexual behaviors and minimize the risk of HIV transmission, including teaching the proper use of condoms (Strug et al., 2002) and, most recently, harm reduction prevention approaches (Lieberman, 2012; Mund, Heller, Meissner, Matthews, Hill, & Cunningham, 2008). Most of the fight against the spread of HIV/AIDS targeted gay men, IV drug users, young people, and individuals with multiple sexual partners. Consequently, older adults have received little information about how to protect themselves (Giami, 2008). With the discovery of antiretroviral medications in 1995, the role of social work in AIDS prevention and treatment changed as the trajectory of the disease moved from terminal illness to a chronic condition (Bowen, 2013). Social workers along with other health professionals now work with clients and their families to manage HIV/AIDS as chronic illness and continue to provide prevention education (Bowen, 2013).

Sexual Dysfunction among Men and Women

A definition of erectile dysfunction in 1993. Male sexual dysfunction became an increasingly popular area of scientific study at the beginning of the 1990s (Castelo-Branco et al., 2008). The first International Conference for Consensus on Erectile Dysfunction took place in 1993. During this conference, doctors abandoned the term "impotence" and replaced it with the term "erectile dysfunction," which they defined as "the incapacity to achieve and maintain a penile erection enough to attain satisfactory sexual relations" (Castelo-Branco et al., 2008, pp. 55-56). The change in terminology further situated problems with male sexual performance as a medical problem. At that point, doctors treated impotence invasively with injections into the shaft of the penis, surgery, or vacuum pumping (Loe, 2004).

Discovery of Viagra in 1998. Following the change in terminology from "impotence" to "erectile dysfunction," the first anti-impotence pill, Viagra, arrived on the market in March 1998

(Herzog, 2008). Pfizer, the drug company that discovered Viagra and now manufactures it, popularized the term, "erectile dysfunction," and introduced the acronym ED. Before the introduction of Viagra, people assumed a decline in sexual functioning was a normal part of aging (Masters & Johnson, 1966). The availability of an oral medication for erectile dysfunction challenged the stereotype that advancing age limited men's sexual performance (Castelo-Branco et al., 2008). Kingsberg (2002) labeled the new focus on the topic of sexuality among older adults as the "Viagratization of America" (2002, p. 431).

With a pharmaceutical treatment for erectile dysfunction, physicians became more likely to intervene when men complained about their sexual performance (Marshall, 2010). Before the popularization of Viagra, doctors thought 90% of erectile dysfunction was because of psychological factors, and 10% because of physical or organic factors (Marshall, 2010). Following the release of Viagra, medical consensus about the causes of erectile dysfunction changed dramatically. Currently, researchers attribute 10 to 30% of erectile dysfunction to psychological factors and 70 to 90% to physical factors (Marshall, 2010). Along with these changing beliefs regarding the cause of ED, physicians, primarily urologists, have displaced psychologists and therapists, who formerly treated sexual dysfunction (Loe, 2004).

A definition of female sexual dysfunction in 1998. Encouraged by the approval of Viagra to treat erectile dysfunction, doctors and pharmaceutical companies began exploring the problems in sexual functioning among women (Tiefer, 2001). The medical industry continued to follow a paradigm of pathology, popularized by Freud (1962) and the *DSM* framework, to contextualize female sexuality and what is *normal* (Tiefer, 2001). Although many women seek care from gynecologists, the study and definition of female sexual problems is the focus of many urologists (Goldstein, 2008), so that in 1998 the American Foundation of Urologic Disease

(AFUD) agreed on a definition of female sexual dysfunction (FSD) (Berman, Berman, & Goldstein, 1999). Their definition included hypoactive sexual desire disorders, sexual aversion disorders, sexual arousal disorders, orgasmic disorders, and sexual pain disorders (Berman et al., 1999; Herzog, 2008).

Female sexual dysfunction can be difficult to diagnose because of this broad definition (Moynihan, 2003). Recommended evaluations include taking a history of the problem, a full physical exam, a pelvic exam, and laboratory tests as needed (Berman et al., 1999). The evaluation may also include genital blood flow, pH, which is measured with a digital probe, and vibratory perception thresholds before and after stimulation. Doctors may use ultrasound to measure blood flow in the clitoris, labia, urethra, vagina, and uterus. The physical exam for female sexual dysfunction is invasive and medical in its focus.

In 2000, the Food and Drug Administration (FDA) published recommendations for trials on drugs to treat FSD (Herzog, 2008). Still, no definitive treatment is available. The only drug considered for FDA approval was Intrinsa, a testosterone patch (Herzog, 2008), which the FDA ultimately rejected in 2004 because of lack of evidence to assuage concerns about possible negative effects. Some women receive testosterone to treat FSD with off-label prescriptions. Hormone replacement with estrogen alone or in combination with progesterone has been popular for decades to relieve sexual symptoms associated with menopause, including vaginal dryness (Harvard Medical School, 2011a; Palacios, 2008). Despite the popularity of hormone replacement therapy (HRT), the risks and benefits have been hotly debated (Palacios, 2008). There remains no treatment of choice for women experiencing sexual difficulties.

Some scholars (Castelo-Branco et al., 2008; Loe, 2004; Moynihan et al., 2002) argue that the medicalization of sexuality, especially the focus on ED and FSD, has gone too far.

Moynihan and colleagues (2002) claim that physicians and pharmaceutical companies medicalized sexuality in order to earn large sums of money. In the case of Viagra, Pfizer defined unacceptable erectile performance as abnormal (Loe, 2004) and has grossed large sums of money from a medication that is the most popular ever sold (Hart & Wellings, 2002).

In 2000, Leonore Tiefer met with colleagues to challenge the medicalization of women's sexuality and developed the New View Campaign (Tiefer, 2001; Tiefer, Hall, & Tavris, 2002). The New View sheds light on the separation of the mind and body in the medical model and the need to integrate these two parts in order to understand female sexual functioning (Tiefer, 2001). Tiefer and colleagues advocate, ". . . there is no one 'normal' format for women's sexual response of experience" (2002, p. 228). The New View identifies four life factors that may affect female sexual dissatisfaction: socio-cultural, political or economic, partner and relationship, psychological, and medical. These interrelated aspects of life do not ignore the possibility that medical factors may influence female sexual functioning, but it provides a more holistic view.

Consistent with the goals of the New View, Basson and colleagues (2004) challenged the model of the sexual response cycle used to define FSD. They claimed that Masters and Johnson (1966) based their model of female sexual response on male sexuality. In 2000, Basson proposed a female sexual response cycle for women in long-term relationships that deemphasized the focus on genital responses and recognized the emotional benefits of sex, including respect, intimacy, trust, affection, and communication. Consequently, Basson and colleagues (2004) conceptualized female sexual dysfunction to include women's sexual interest/desire disorders, subjective sexual arousal disorders, genital sexual arousal disorders, women's orgasmic disorders, and pain disorders.

The Introduction of Scales to Study Older Adult Sexuality

Beginning in the late 20th century, researchers began to study the extent to which doctors and other health workers addressed sexuality among their older adult clients. In order to conduct this research, they developed scales to measure attitudes of health providers about sexual issues in older clients. White published the Aging Sexual Knowledge and Attitudes Scale (ASKAS) in 1982(a), one year after the first publication on AIDS appeared (CDC, 1996). In this historical context of medicalizing sexuality through childbirth (Capitulo, 1998; Kobrin, 1966; Simonds et al., 2007); classification of homosexuality (Adam, 1995; De Block & Adriaens, 2013; Freud, 1962; Katz, 1976); treatment of venereal disease (Parascandola, 2008); the Kinsey studies (George & Weiler, 1981; Kinsey et al., 1948; Kinsey et al., 1953; McLaren, 1999; Schultheiss & Glina, 2010); oral birth control (Bailey, 1997; Castelo-Branco et al., 2008; Hart & Wellings, 2002; Kennedy, 1970, Loe, 2004; McLaren, 1999); and studies by Masters and Johnson (1966; Schultheiss & Glina, 2010), the medical focus of the ASKAS is easily understood. The ASKAS mirrors the medicalization of the phenomenon, but fails to address the many discoveries and cohort shifts since its development. Consequently, it fails to include some of the most significant issues that may influence the sexual lives of older adults today.

Although the ASKAS (White, 1982a) remains the most widely used scale to measure attitudes and behaviors about older adult sexuality, researchers developed the Knowledge and Attitudes toward Elderly Sexuality (KATES) (Walker & Ephross, 1999; Walker et al., 1998) in an effort to modernize the scale. Despite these efforts, there have been a number of historical shifts since the introduction of these scales, which make them lack validity today. Although White (1982a) published the ASKAS after the sexual revolution, the scale does not account for its impact on modern cohorts. The ASKAS focused on older adults who came of age before the

sexual revolution, when there was a strong focus on sex within the confines of marriage and patriarchal ideals. This may explain the sometime sexist and marriage-focused views of the ASKAS. Additionally, the MMWR publication on *pneumocystic carinii* pneumonia (CDC, 1996) appeared one year before White (1982a) published the ASKAS. Therefore, HIV/AIDS knowledge (Bowen, 2013; Giami, 2008; Linsk, 2011; McLaren, 1999; Parascandola, 2008; Strug et al., 2002) was not widespread at the time and is not reflected in the scale. Pharmacological treatment for male sexual dysfunction was not available until 1998 (Castelo-Branco et al., 2008; Herzog, 2008; Kingsberg, 2002; Loe, 2004; Marshall, 2010) and, that same year, urologists presented the first definition of female sexual dysfunction (Berman et al., 1999; Goldstein, 2008; Harvard Medical School, 2011a; Herzog, 2008; Moynihan, 2003; Palacios, 2008). Although White (1982a) published the ASKAS after homosexuality was removed from the APA *Diagnostic and Statistical Manual* (Adam, 1995; De Block & Adriaens, 2013), it was before sodomy laws were overturned (Lawrence v. Texas, 2003) or crimes against homosexuals were considered hate crimes (Matthew Shepard and James Byrd, Jr., Hate Crimes Prevention Act, 2009). As a result, ASKAS does not account for issues that relate to LGBT older adults or those engaging in same sex behavior. Due to the novelty of these ideas, available scales are dated and do not reflect current developments in attitudes and understanding of sexuality.

Summary

The medicalization of sexuality began when physicians claimed childbirth as their purview (Capitulo, 1998; Kobrin, 1966; Simonds et al., 2007) and continued with the pharmacological treatment for male sexual dysfunction (Castelo-Branco et al., 2008; Herzog, 2008; Kingsberg, 2002; Loe, 2004; Marshall, 2010). It remains evident in the effort to define normal female sexual functioning (Berman et al., 1999; Goldstein, 2008; Harvard Medical

School, 2011a; Herzog, 2008; Moynihan, 2003; Palacios, 2008). White (1982a) developed the ASKAS within the medical model of sexuality. This medical focus fails to address the psychological, social, and relationship impacts on sexuality (Tiefer, 2010).

In addition, the historical context in which White (1982a) developed the ASKAS questions the validity of that tool today. The ASKAS does not include new knowledge, such as HIV/AIDS and treatments for male and female sexual dysfunction. Furthermore, the ASKAS fails to address the sexual needs of a population that came of age in a particular period. The current cohort of older adults was in their sexual prime during the sexual revolution and gay rights movement. As a result, older adults today may have different views about sex outside of marriage and homosexuality. A new scale should incorporate historical and cultural shifts to improve validity today.

CHAPTER III: POLICIES INFLUENCING SEXUALITY AND HEALTHCARE AMONG THE ELDERLY

Increased medical knowledge, the emergence of new sexually transmitted diseases, and cultural shifts regarding attitudes towards sexual behavior make available scales for measuring health professional knowledge and attitudes about older adult sexuality outdated. These same changes have strengthened the place of sexuality and sexual health in the realm of medicine. Nevertheless, healthcare professionals remain uncomfortable discussing sexuality with their older adult clients (Agronin, 2004; Burd et al., 2006; Dunn & Cutler, 2000; Jacobson, 2010; Kligman, 1991; Mona et al., 2010), even though older adults continue sexual expression and expect health workers, particularly physicians, to provide them information and support (Tangredi et al., 2008). Raised awareness of sexual health concerns led to policy recommendations for how healthcare providers should deliver care. Although some of these policies mention older adults, few focus on their particular needs. On the other hand, policies targeting older adults often focus on health, but exclude sexuality or sexual health. I will review relevant policies in this chapter. Notably, policy recommendations extend beyond physicians and support the idea that a range of healthcare providers should be able to address the sexual issues of their older adult clients.

Surgeon General's Call to Action

Dr. David Satcher released the Surgeon General's *Call to Action to Promote Sexual Health and Responsible Sexual Behavior* in 2001, in which he called for an open and thoughtful conversation about sexuality. The *Call to Action* outlined public health concerns related to the consequences of irresponsible sexual behavior, including STIs, HIV/AIDS, unintended pregnancy, and sexual violence. Although Satcher pointed out these public health concerns, he

also focused on the positive aspects of sexuality, which he identified as "an integral part of human life . . . [that] can foster intimacy and bonding as well as shared pleasure in our relationships. It fulfills a number of personal and social needs, and we value the sexual part of our being for the pleasures and benefits it affords us" (2001, p. 1). The *Call to Action* called on health care professionals and policy makers, as well as all Americans, to discuss sexuality openly.

Although the focus of Surgeon General Satcher's *Call to Action* (2001) was not predominantly older adults, he did consider this population when he promoted sexual health, responsible sexual behavior, and research. He envisioned sexual expression throughout the lifespan. Along with its emphasis on research, the *Call to Action* acknowledged that sexuality could be difficult for health workers and their clients to discuss. Research indicates it is especially difficult for healthcare providers to address sexual health with their elderly clients (Agronin, 2004; Burd et al., 2006; Dunn & Cutler, 2000; Kligman, 1991; Mona et al., 2010).

The *Call to Action* (Satcher, 2001) identified physicians, nurses, pharmacists, and other health care professionals as the primary contacts for people with sexual health problems. Nevertheless, health providers, including social workers, typically do not have adequate training to deal with sexual issues among people of all ages (Kligman, 1991; Maes & Louis, 2011; Mona et al., 2010). Consequently, Satcher recommended the addition of curriculum content on sexuality for medical personnel, including sexual history taking and training for personal bias awareness regarding sexuality among diverse populations, including the elderly.

World Health Organization

One year following the Surgeon General's *Call to Action* (Satcher, 2001), the World Health Organization (WHO, 2002) issued a set of recommendations in a policy paper, *Active*

Aging: A Policy Framework. This action plan encouraged a healthy and active lifestyle throughout the lifespan; however, it did not mention sexuality specifically. Nevertheless, the WHO recommendations did call attention to increasing rates of HIV/AIDS in older adults worldwide. Most incidence reports of HIV/AIDS infection internationally only included individuals younger than 50 years of age. Significantly, the WHO recommendations included removing age limitations on data collection and encouraged research that focused on HIV/AIDS affected older adults. In addition to research, WHO recommended increased education and prevention efforts for HIV/AIDS among older adults. Although WHO provided recommendations for HIV/AIDS research and testing in older adults, it did not address larger issues related to sexual health among older people. In particular, it did not encourage healthcare professionals to focus on general sexual health concerns with their older adult clients.

Along with the Pan American Health Organization (PAHO) and the World Association for Sexology (WAS), WHO also published recommendations for promoting sexual health in general in *Promotion of Sexual Health Recommendations for Action* (PAHO, 2000). One of their educational goals was to provide education, training, and support about reproductive health, sexual health, and STIs and HIV/AIDS prevention to health professionals, including physicians, nurses, clinical psychologists, social workers, and any other health practitioners or promoters. Their proposed curriculum included basic knowledge of human sexuality, identification of personal attitudes towards sexuality, and different sexual orientations and practices. These recommendations did not focus on older adults in particular, but included them with the lifespan.

Centers for Disease Control and Prevention

Although WHO (2002) called for health professionals to focus on HIV/AIDS among older adults, the Centers for Disease Control and Prevention (CDC) recommendations for

HIV/AIDS testing excluded individuals over age 65 (Branson et al., 2006). Revised recommendations in 2006 included routine screening for HIV for all patients in health-care settings aged 13 to 64. This expansion to 64 from the previously recommended age of 50 occurred because the CDC found 13% of new HIV infections occurred among people between 50 and 64 (CDC, 2009a). However, the CDC continues to exclude people 65 and older from their recommendations for testing, because they accounted for only 2% of new diagnoses. The CDC argued that the inclusion of adults aged 50 to 64 would increase physician awareness of the need to test their older patients and raise knowledge of HIV/AIDS risk among older adults. Although the CDC expanded recommendations for HIV testing, adults over age 65 remain excluded for purposes of HIV screening.

Healthy People 2020

The US Department of Health and Human Services (HHS, 2010a) released *Healthy People 2020*, which proposed target health-related goals for the next ten years. These objectives were intended to serve as a national guide for health promotion and disease prevention. However, they ignored the recommendations of the WHO in 2002 and the CDC's recommendation in 2006 to expand HIV testing and monitoring to older people. In 2010, *Healthy People* goals included increased HIV testing, increased condom usage, and reduction in chlamydia and gonorrhea rates (HHS, 2010b). For all of these HIV/AIDS and STI goals, the target was a 10% improvement for individuals aged 15 to 44. The sexual health goals in Healthy People excluded all adults aged 45 and older. Ten years after Satcher (2001) recommended an increased emphasis on sexuality throughout the lifespan, HIV and STI testing prevention efforts remain focused on a younger population.

Although *Healthy People* ignores the sexual health needs of older adults, it does recommend increased geriatric education for healthcare professionals (HHS, 2010b). In 2009, only 2.7% of physicians and 4.3% of geriatric psychiatrists had a special certification to work with elderly patients. *Healthy People* set a goal of a 10% improvement for both groups by 2020. Although it suggests geriatric training for health care professionals, *Healthy People 2020* excludes education about the sexual needs of older adults.

Recommendations for Reproductive Health Screenings

The majority of recommendations for healthcare providers regarding sexual health relate to STIs, including HIV/AIDS. In addition to these recommendations, the American Cancer Society (ACS, 2010) and the US Preventive Services Task Force (USPSTF, 2011) recommend screening for breast, cervical, and prostate cancers. In 2009, the USPSTF (2011) called for biannual mammograms to screen for breast cancer in women aged 50 to 74. They report insufficient evidence of a benefit in screening women aged 75 and older. Similarly, the ACS (2010) only recommends pap smears for women under age 70. For men, the USPSTF (2011) recommends yearly prostate specific antigen (PSA) blood tests and digital rectal exams (DRE) up until age 75.

Notably, Medicare (Centers for Medicare and Medicaid Services, CMS, 2009) only covers cancer screenings consistent with ACS (2010) and USPSTF (2011) recommendations. Medicare follows these guidelines for screening of sexual related organs for cancer because of limited evidence that further testing will change survival outcomes. Unfortunately, these guidelines may limit discussion of sexuality, because screenings for cancers in sexual organs could offer an opening for healthcare professionals to discuss sexual health with their older adult patients.

Joint Commission on the Accreditation of Healthcare Organizations (JCAHO)

The Joint Commission (2011) is an independent organization that accredits healthcare organizations and programs in the US, including hospitals, nursing homes, substance abuse care, diagnostic services, and homecare. Recently, it released a field guide with recommendations for creating a welcoming environment for LGBT clients. LGBT people face health disparities in certain physical and mental health conditions, lack of healthcare, higher rates of substance abuse, higher rates of STIs, and larger incidences of certain cancers (Joint Commission, 2011). Additionally, LGBT clients often feel stigmatized in healthcare agencies. The Joint Commission provides recommendations for using language comfortable for LGBT clients that enable them to share their sexual health concerns. Although the guide does not specifically apply to older adult clients, it encourages healthcare providers to ask assessment questions in a manner that will encourage sharing of sexual orientation and gender identity (Joint Commission, 2011).

Policies and Recommendations in Practice

Despite inadequate awareness of sexual health concerns among the elderly population at the policy level, programs such as the Center of Excellence for Sexual Health (CESH) at Morehouse School of Medicine (MSM, 2011) have made an effort to promote sexual health across the lifespan. CESH has a number of initiatives. The National Advisory Council on Sexual Health (NAC) encourages a national dialogue on sexuality and sexual health and develops the initiatives for the CESH. Bridge Building is a CESH initiative committed to dealing with policy issues related to sexual health. Considering the increased medicalization of sexuality, their Sexual Health Curriculum Development is particularly important. Guided by the recommendations of the Surgeon General's *Call to Action* (Satcher, 2001), CESH developed an educational program*, Promoting Sexual Health and Responsible Sexual Behavior: A Universal*

Curriculum for Health Professionals, to educate physicians and other health care professionals about sexuality and sexual health concerns across the lifespan (MSM, 2011). It also includes people with disabilities and chronic conditions, which are common among older adults. Nonetheless, the extent of the implementation of the CESH curriculum is not available.

The American Medical Association (AMA, 2010) requires Continuing Medical Education (CME) credits for doctors to maintain a license to practice. The goals of CME requirements are "to maintain, develop, or increase knowledge, skills, and professional performance and relationships that a physician uses to provide services for patients, the public, or the profession" (AMA, 2010, p. 2). Numerous CME courses focus on geriatrics, but an Internet search found only two sessions offered on sex and aging (CMElist, 2011; Harvard Medical School, 2011b). In November 2011, Harvard Medical School hosted a CME titled *Aging: Treatment Perspective and Challenges.* During this two-day course, one session focused on lesbian, gay, bisexual, and transgender older adults and caregivers and another session, titled *Sex and Aging: Changes and Challenges for Men, Women, and their Clinicians,* addressed similar issues among heterosexual elderly. Similarly, Mount Sinai Medical Center offers an online CME course with a segment called *Love and Sex after 60* (CMElist, 2011). The American Medical Association continuing education requirement presents an opportunity for a wider focus on sexuality throughout the lifespan.

Summary

The Surgeon General's *Call to Action* (Satcher, 2011) and the PAHO (2000), along with WAS and WHO, recommended increased training for healthcare providers and proposed curricula for healthcare providers to identify their personal attitudes towards sexuality. Additionally, the expansion of testing recommendations by the CDC (2009a) to age 64 aimed to

increase physician awareness of the increasing rise in HIV/AIDS infection in older populations. Continued education, such as the trainings from Morehouse School of Medicine (2011), is extremely important to encourage healthcare professionals to focus on sexual health. The effectiveness of new policies and trainings need to be tested; however, as discussed earlier, available tools to measure their effectiveness are no longer appropriate. Many of the policy recommendations discuss HIV/AIDS infection, but the Aging Sexual Knowledge and Attitues Scale (ASKAS) (White, 1982a) has no questions about HIV/AIDS or safer sex practices. A new scale is necessary to measure the effectiveness of initiatives and change in healthcare education.

CHAPTER IV: REVIEW OF EMPIRICAL LITERATURE

The review of historical shifts and policy recommendations supports the notion that knowledge and attitudes toward sexuality changes over time. New discoveries increase knowledge. In addition societal and cohort attitudes change, along with behaviors. Despite these changes over time, researchers primarily rely on scales that are over 30 years old. The current chapter will review the research using available scales for measuring healthcare provider knowledge and attitudes toward older adult sexuality.

Scales to Measure Knowledge and Attitudes about Older Adult Sexuality

Three scales (Walker et al., 1998; Walker & Ephross, 1999; Walker & Harrington, 2002; Walz & Blum, 1987; White, 1982a; White, 1982b; White & Catania, 1982) are available for measuring knowledge and attitudes about older adult sexuality. Walz and Blum (1987) developed the Adult Sexuality Knowledge and Attitudes Test (ASKAT) as part of a book, but the developers and other researchers never used it for research purposes. Walker (1982a) developed the Aging Sexual Knowledge and Attitudes Scales (ASKAS) for research purposes, and researchers continue to use the scale today. Walker and colleagues (1998; 1999; 2002) developed the Knowledge and Attitudes toward Elderly Sexuality (KATES) scale for research purposes. Although other researchers cite studies conducted by Walker and colleagues (1998; 1999; 2002) that use the KATES, no other researchers have employed this scale. The present chapter reviews the research that cites and uses the available scales in an effort to compare results and evaluate the current use of the scales.

Aging Sexual Knowledge and Attitudes Scale (ASKAS)

White wrote about the development of the ASKAS and reported conducting tests for validity in three articles (White, 1982a; White, 1982b; White & Catania, 1982). He first wrote

about the ASKAS with Catania (1982) when they employed this scale in an experimental study of the effectiveness of sexual education on older adults, their families, and nursing home staff. Using randomly assigned experimental and control groups, White and Catania (1982) provided six hours of education about older adult sexuality to the experimental groups. In order to test the effectiveness of the educational intervention, the researchers used the ASKAS, which they stated they "developed as part of an ongoing NIMH study of Sexuality in Long-Term Care Institutions" (White & Catania, 1982, p. 126). Based on differences in the scores between the experimental and control groups on the ASKAS, the researchers reported significant improvements for older adults in knowledge ($F = 32.66$, $df = 2, 27$, $p < .0001$; $R^2 = .71$) and attitudes ($F = 23.33$, $df = 2, 27$, $p < .007$; $R^2 = .63$), for their relatives in knowledge ($F = 186.75$, $df = 2, 27$, $p < .0001$; $R^2 = .93$) and attitudes ($F = 104.06$, $df = 2, 27$, $p < .0001$; $R^2 = .89$), and for staff members in their knowledge ($F = 33.77$, $df = 2, 27$, $p < .0001$; $R^2 = .71$) and attitudes ($F = 3.48$, $df = 2, 27$, $p < .05$; $R^2 = .20$) after participating in the educational intervention.

White (1982b) next employed the ASKAS in a correlational study that hypothesized that higher knowledge and more permissive attitude scores in nursing home residents would be associated with higher frequency of sexual activity among residents. White asked older adults living in nursing homes to complete the ASKAS and report the frequency of sexual activity in the past month. Multiple regression analysis found frequency of sexual activity significantly predicted knowledge and attitudes among nursing home residents ($F = 21.24$, $df = 2, 240$, $p < .0001$; R^2 of .21).

After publishing experimental (White & Catania, 1982) and correlational (White, 1982b) research articles using the ASKAS, White (1982a) published the ASKAS in *A Scale for the Assessment of Attitudes and Knowledge Regarding Sexuality in the Aged*. He explained that he

developed the items that comprise the scale based on a review of literature on the physiology and psychology of older adult sexuality. He reported that the attitude items assumed that attitudes people had about sexuality among institutionalized older adults predicted their attitudes in other settings. White described the scoring of the ASKAS, which allowed for knowledge scores ranging from 35 to 105, with one point assigned for a correct answer, two points assigned for an incorrect answer, and three points assigned for an answer of "don't know." Lower knowledge scores indicated more knowledge. The attitudes items were scored on a Likert scale from one to seven, with one indicating strongly agree and seven indicating strongly disagree. A lower score on the attitude section indicated attitudes towards older adult sexuality that were more permissive. Finally, White (1982a) described his analysis of results from prior studies (White, 1982b; White & Catania, 1982) and an unpublished doctoral dissertation that reported factor analysis and reliability and validity testing. Based on his work with colleagues, White (1982a) determined that the items loaded more heavily on the factors that he hypothesized and concluded that a two-factor solution of knowledge and attitudes was appropriate. He reported reliabilities, based on test-retest, split-half, and coefficient alpha, ranging from .90 to .97 for the knowledge subscale and from .72 to .96 for the attitude dimension. He presented predictive validity based on his findings that knowledge and attitudes improved with an educational intervention (White & Catania, 1982). Based on high levels of reliability and validity testing, White (1982a) presented the full scale and scoring criteria for use by other researchers.

Following its development, the ASKAS has been the scale of choice for measuring knowledge and attitudes towards older adult sexuality because of its reported reliability and validity (Langer-Most & Langer, 2010). According to a search on Web of Knowledge conducted May 9, 2013, all three articles written on the development of the ASKAS (White, 1982a; White,

1982b; White & Catania, 1982) have been cited widely. Researchers cited the correlational study (White, 1982b) 40 times, the experimental study (White & Catania, 1982) 29 times, and the article describing the scale (White, 1982a) 25 times. Taking into account duplications, researchers cited White's articles 94 times, as reported on the Web of Knowledge. However, the number of citations indicated here are not exhaustive, because the Web of Knowledge does not list all articles that refer to the ASKAS (Bouman et al., 2007; Quinn-Krach & Van Hoozer, 1998; Snyder & Zweig, 2010).

Researchers mentioned the ASKAS in literature reviews on psychological and cultural impacts on aging (Libman, 1989) and older adult sexuality (Haddad & Benbow), sexuality in nursing home populations (Hajjar & Kamel, 2003; Zeiss & Kasl-Godley), assumptions about older adult sexuality (Deacon, Minichiello, & Plummer, 1995), and the effectiveness of psychotherapy and educational treatment for men with sexual dysfunction (Fisher, Swigen, & O'Donohue, 1997; O'Donohue, Swingen, Dopke, & Regev, 1999). Researchers have also used the ASKAS in the development of new sexuality scales (Ortego, Zubeidat, & Sierra, 2006), including the *Sex after MI [myocardial infarction] Knowledge Test* (Steinke & Swan, 2004) and the *Aging Sexuality Knowledge and Attitudes Scale for Dementia* (DEMASKAS) (Livini, 1994). In addition, researchers have used the ASKAS extensively in correlational (Allen, Petro, & Phillips, 2009; Bouman et al., 2007; Creti & Libman, 1989; Dogan et al., 2008; Glass, Mustian, & Carter, 1986; Glass & Webb, 1995; Hillman & Stricker, 1996a; Hinrichs & Vacha-Haase, 2010; Langer-Most & Langer, 2010; Luketich, 1991; Quinn-Kracher & Van Hoozer, 1988; Ross, Humble, & Blum, 2013; Snyder & Zweig, 2010; Spector & Fremeth, 1996; Steinke, 1994; Wang et al., 2008) and evaluation studies (Adams, Rojas-Camero, & Clayton, 1990; Bauer, McAuliffe, Nay, & Chenco, 2013; Goldman & Carroll, 1990).

Correlational Design Using ASKAS. Since 1982, researchers have reported correlations between a number of demographic factors and knowledge or attitudes about older adult sexuality. Often these correlations are inconsistent among studies. Researchers reported a significant correlation between age and knowledge on the ASKAS among physicians ($r = -.25$; $p = .046$) (Dogan et al., 2008), health educators ($r = .3045$, $p < .05$) (Glass & Webb, 1995), and nursing students ($r = .54$, $p < .001$) (Quinn-Krach & Van Hoozer, 1998), with respondents who were older having higher levels of knowledge. Additionally, Hillman and Sticker (1996a) found that age was most predictive of knowledge among college undergraduate students in an introductory psychology class ($R^2 = .10$, $p < .01$) (Hillman & Stricker, 1996a), with older age predicting higher levels of knowledge. Although a number of studies found significant relationships, researchers found no significant correlation between age and knowledge among gynecologists (statistics not provided by researchers) (Langer-Most & Langer, 2010) and in healthcare providers in nursing homes ($r = -.11$, $p > .05$) (Glass et al., 1986).

In studies that use the ASKAS, the relationship between age and attitudes is more inconsistent than the correlation with knowledge. Researchers found that older nursing students ($r = .44$, $p < .001$) (Quinn-Krach & Van Hoozer, 1988), older care staff in nursing homes and residential care ($r = -0.33$; $p = 0.0001$) (Bouman et al., 2007), and older adults in long-term care ($r = -.27$, $p < .05$) (Spector & Fremeth, 1996) have significantly more positive attitudes about older adult sexuality than their younger counterparts do. On the other hand, Langer-Most and Langer (2010) found a significant relationship ($r = .20$, $p = .02$) between age and attitudes among gynecologists; specifically, those over the age of 40 had significantly poorer attitudes toward older adult sexuality than those under 40. Snyder and Zweig (2010) found that age significantly accounted for variability in attitudes scores ($F(2, 97) = 5.18$, $p = .007$) of medical and doctoral

psychology students, with those aged 25 to 29 ($M = 1.72$) having less permissive attitudes than those aged 21 to 24 ($M = 1.64$) and 30 and older ($M = 1.65$). Additionally, there was no significant relationship between age and attitudes found among physicians (statistics not provided by researchers) (Dogan et al., 2008) and health educators ($r = -.0881$, $p > .05$) (Glass & Webb, 1995).

Most researchers found no significant relationship between gender and knowledge or attitudes when they employed the AKSAS in their research. This holds true with a variety of populations, including gynecologists (statistics not provided by researchers) (Langer-Most & Langer, 2010), medical and psychology doctoral students ($t = -.82$, $p > .10$ for knowledge) ($t = .69$, $p > .10$ for attitudes) (Snyder & Zweig, 2010), nursing students (statistics not provided by researchers) (Luketich, 1991), older adults (statistics not provided by researchers for attitudes) (Spector & Fremeth, 1996) ($t = -1.73$, $p = 0.08$ for sample 1) ($t = -0.42$, $p = 0.67$ for sample 2) (Steinke, 1994), and nursing home staff (statistics not provided by researchers) (Bouman et al., 2007) ($r = .10$, $p > .05$ for knowledge) ($r = -.16$ for attitudes, $p > .05$) (Glass et al., 1986). Nevertheless, a study of physicians in Turkey found that females had significantly less knowledge ($t = 3.10$; $p = .003$) and more restrictive attitudes ($t = 2.01$; $p = .049$) than males (Dogan et al., 2008). It is possible that this discrepancy based on gender is due to the gender role differences in Turkey, which is predominantly a Muslim country.

Other studies found significant relationships between ethnic groups and knowledge or attitudes. When controlling for age, Hillman and Stricker (1996a) found that ethnic group significantly predicted knowledge ($R^2 = .05$, $p < .05$). African American college undergraduate students were significantly ($p < .01$) less knowledgeable ($M = 62.78$) about older adult sexuality than Hispanic ($M = 56.01$) and White ($M = 55.99$) students. Quinn-Krach and Van Hoozer

(1988) also found that Asian nursing students were significantly ($f = 18.36$, $p < .001$) less knowledgeable and had significantly ($f = 33.09$, $p < .001$) more restrictive attitudes than White students. More recently, Snyder and Zweig (2010) found no relationship between race and knowledge ($t = -.62$, $p > .10$) or attitudes ($t = -.54$, $p > .10$) about older adult sexuality in medical and psychology doctoral students.

The results of correlations between religiosity and knowledge or attitudes are also difficult to interpret, perhaps because attitudes may change over time. In 1986, nursing home staff reporting strong religious beliefs had significantly ($r = .29$, $p < .05$) higher knowledge about older adult sexuality (Glass et al., 1986). More recently, Bouman and colleagues (2007), found no significant (Mann-Whitney U, $Z = -1.56$, $p = .11$) relationship between religiosity and attitudes of nursing home staff regarding older adult sexuality. This shift may reflect changes in attitudes about sexuality over time expressed in the relationship between religious beliefs and sexual beliefs. Interestingly, religious health educators had significantly ($r = .4782$, $p < .05$) more restrictive attitudes toward older adult sexuality (Glass & Webb, 1995), while nursing students showed no significant relationship between religiosity and knowledge or attitudes (statistics not provided by researchers) (Quinn-Krach & Van Hoozer, 1988). Religiosity may influence instructors more than their students, perhaps reflecting a generational shift.

In the majority of populations, researchers have found no significant relationship between marital status and knowledge or attitudes about older adult sexuality. This is evident in studies about a number of groups, including nursing students (statistics not provided by researchers) (Luketich, 1991), medical and psychology doctoral students ($t = -.80$, $p > .10$ for knowledge) (Snyder & Zweig, 2010), health educators ($r = -.1797$, $p > .05$ for knowledge) ($r = -.0842$, $p > .05$ for attitudes) (Glass & Webb, 1995), nursing home staff (Mann-Whitney U, $Z =$ -

1.51, $p = .12$ for attitudes) (Bouman et al., 2007) ($r = -.23$, $p > .05$ for knowledge) ($r = .09$, $p > .05$ for attitudes) (Glass et al., 1986), and older adults (statistics not provided by researchers for knowledge) (Ross et al., 2013). An earlier study (Steinke, 1994) found a significant relationship ($F = 3.88$, $p = 0.02$) between marital status and knowledge for older adults, with those who were married ($M = 60.82$) being more knowledgeable about sexuality than those who were widowed ($M = 64.70$) or separated or divorced ($M = 73$). Interestingly, a more recent study (Snyder & Zweig, 2010) found a significant difference ($t = -2.27$, $p < .05$) based on marital status for medical and psychology doctoral students, with single or divorced students ($M = 1.68$) having more permissive attitudes than those who are married or living with a partner ($M = 1.73$). This also might be the result of changing norms regarding sex outside of marriage.

The relationships between experience or education and knowledge or attitudes about older adult sexuality using the ASKAS are also inconsistent. Researchers found no significant relationship between number of years working with older adults and knowledge or attitudes for nursing students (statistics not provided by researchers) (Luketich, 1991) (statistics not provided by researchers) (Quinn-Krach & Van Hoozer, 1988) or health educators ($r = .1181$, $p > .05$ for knowledge) ($r = -.0769$, $p > .05$ for attitudes) (Glass & Webb, 1995). In contrast, Bouman and colleagues (2007) found more recently that nursing home staff with less experience in the field had significantly more restrictive attitudes (Mann-Whitney U, $Z = -3.19$, $p = .001$) than those with more experience. In line with these findings, Glass and colleagues (1986) found significant relationships between attitudes and level of education. Interestingly, they found that a higher level of nursing education correlated significantly with attitudes that were more permissive ($r = -.39$, $p < .05$), but a higher level of general education correlated significantly with attitudes that were more restrictive ($r = .43$, $p < .05$). This could be the result of experiential learning

opportunities nurses receive that may not be a part of general education. Alternatively, it may be the result of differing professional roles in a nursing home, such as administrative positions that require a greater focus on policy rather than client relationships, which may confound the relationship.

In addition to demographic factors, researchers have used the ASKAS to measure knowledge and attitudes in comparison to other factors. Ross and colleagues (2013) found a significant ($r = .25$, $p < .01$) relationship between knowledge scores on the ASKAS and HIV knowledge in older women living in the community. Other researchers (Hillman & Stricker, 1996a) found that a close relationship with a grandparent was significantly predictive ($R^2 = .02$, $p < .05$) of permissive attitudes as measured by the ASKAS among college students. Similarly, Allen and colleagues (2009) found a significant relationship ($F(1, 523) = 136.33$, $p = 0.0001$) between attitudes on the ASKAS and young adults' rating of the acceptability of coupled and autoerotic behavior, with more permissive attitudes associated with higher ratings of acceptability. Interestingly, higher levels of knowledge did not predict beliefs about acceptability of sexual behaviors among older adults (statistics not provided by researchers). Consistent with these results, nursing home staff attitudes ($r = -.59$, $p < .01$), but not knowledge ($r = -.25$, $p > .01$), significantly correlated with their responses to the acceptability of resident participation in sexual activity (Hinrichs & Vacha-Haase, 2010).

In his own research with the ASKAS, White (1982a) stated, "the instrument lends itself to the study of attitude-knowledge relationship which, in the area of aging sexuality, present fertile ground for educational gerontology" (1982a, p. 501). However, in another study he reported a "very low positive correlation ($r = .13$) between attitudes and knowledge" (1982b, p. 19). Since White's comments on the relationship between knowledge and attitudes, other

researchers have found no significant relationship between these factors in physicians (statistics not provided by researchers) (Langer-Most & Langer, 2010), medical and psychology doctoral students (statistics not provided by researchers) (Snyder & Zweig, 2010), and nursing students ($r = .13$, $p > .05$) (Luketich, 1991). On the other hand, some researchers found a significant correlation between higher knowledge scores and more permissive attitudes among nursing students ($r = .25$, $p < .004$) (Quinn-Krach & Van Hoozer, 1988) and college undergraduate students ($r = .20$, $p < .01$) (Hillman & Stricker, 1996a). Contrary to findings in most studies, Glass and colleagues (1986) found that nursing home staff with higher knowledge scores had more restrictive attitudes towards older adult sexuality ($r = -.30$, $p < .05$). This may be explained by high knowledge scores among administrators or supervisors who may be more concerned about nursing home operations than client care. In addition to the possible moderator of professional role suggested by Glass and colleagues (1986), Hillman and Stricker (1996a) found that contact with a grandparent moderates the relationship between knowledge and attitudes about older adult sexuality. They reported that for students without relationships with a grandparent, there were no significant correlation ($r = -.08$, $p > .05$) between knowledge and attitudes. In another study, Hillman and Stricker (1994) reviewed the literature on the relationship between knowledge and attitudes in studies using the ASKAS and found a number of possible moderators that could explain discrepant findings, including "death anxiety, religion, religiosity, and the level of responsibility for elderly persons" (p. 259).

Although researchers have studied knowledge and attitudes about older adult sexuality in a number of populations, including physicians (Dogan et al., 2008), gynecologists (Langer-Most & Langer, 2010), staff in nursing homes (Bouman et al., 2007; Glass et al., 1986), students (Hillman & Stricker, 1996a; Luketich, 1991; Quinn-Kracher & Van Hoozer, 1988; Snyder &

Zweig, 2010), health educators (Glass & Webb, 1995), and older adults (Creti & Libman, 1989; Ross et al., 2013; Steinke, 1994), it can be difficult to compare the results across these studies because of inconsistent scoring procedures. Some researchers (Snyder & Zweig, 2010) identified problems with analysis using the standard scoring system, as missing answers or responses of "don't know" seem to indicate "less knowledge than an incorrect response" (p. 241). Additionally, it is impossible to know based on the score how many questions a respondent answered correctly. As a result, some researchers scored the ASKAS-K coding 1 point for every correct answer and zero points for every incorrect answer, resulting in a score from zero to 35, with 35 being a perfect score (Glass & Webb, 1995; Quinn-Kracher & Van Hoozer, 1988; Snyder & Zweig, 2010) or as a percentage (Ross et al., 2013). Others eliminate one or more of the questions from the subscale (Glass & Webb, 1995; Luketich, 1991). In an effort to compare results among various studies, I adjusted the scores, but was unable to account for answers of "don't know" or "missing" (see Table 1). Based on this imperfect adjustment, medical and psychology doctoral students had the most knowledge of older adult sexuality (Snyder & Zweig, 2010), followed closely by health educators (Glass & Webb, 1995). On the other hand, older adults in a wellness program had the least knowledge of older adult sexuality (Steinke, 1994), followed closely by other community dwelling older adults (Steinke, 1994) and college students (Hillman & Stricker, 1996a).

The ASKAS attitude subscale (ASKAS-A) should be scored from 26 to 182, using a 7-point Likert scale (White, 1982a). Based on this scoring system, a lower score indicates attitudes that are more permissive. Some researchers collapsed the 7-point Likert scale into five points (Glass et al., 1986; Glass & Webb, 1995; Quinn-Kracher & Van Hoozer, 1988). Additionally

Table 1

Comparison of Studies included in the Literature Review

Authors	Study Population	*n*	Knowledge		Attitudes		Corrected *M*[a]	
			M	*SD*	*M*	*SD*	*ASKAS-K*	*ASKAS-A*
Dogan et al. (2008)	Physicians	87	48.81	14.10	53.40	21.10	48.81	53.40
Langer-Most & Langer (2010)	Gynecologists	141	49	8	81	17	49	81
Bouman et al. (2007)	Staff in residential care	112	--	--	59.29	13.82	--	59.29
	Staff in nursing homes	122	--	--	60.51	10.46	--	60.51
Glass et al. (1986)	Staff in nursing homes	57	53.04	--	121.89	--	53.04	74.27
Snyder & Zweig (2010)	Medical students	50	27.0	.8	1.70	.02	43	44.2
	Psychology doctoral students	50	27.0	.8	1.69	.01	43	43.94
Quinn-Kracher & Van Hoozer (1988)	Nursing students	158	17.4	2.66	52.33	5.93	49.7	55.01
Luketich (1991)	Nursing students	42	51.24	9.68	50.95	22.81	52.75	50.95
Hillman & Stricker (1996a)	College undergraduate students	241	60.58	12.69	67.86	21.62	60.58	67.86
Glass & Webb (1995)	Health educators	42	24.7	4.37	110.7	14.6	45.3	27.02
Steinke (1994)	Community dwelling older adults	177	60.58[b]	13.3	67.92[b]	27.98	60.58	67.92
	Older adults in wellness program	127	62.48[c]	14.0	78.77[c]	29.02	62.48	78.77
Ross et al. (2013)	Older women in community	186	62%	14.32	--	--	48.3	--
Creti & Libman (1989)	Older men in community	29	57	--	61	--	57	61
	Older women in community	29	56	--	55	--	56	55

Note. "Scoring is such that a low knowledge score indicates high knowledge and a low attitude score indicates a more permissive attitude" (White, 2011, p. 49).

[a] Adjusted for comparison because study did not use standardized scoring procedure.

[b] Only 157 answered the knowledge and 148 answered the attitude questions.

[c] Only 114 answered the knowledge and 108 answered the attitude questions.

Glass and Webb (1995) reversed the scoring so that a higher score indicated attitudes that are more permissive. Snyder and Zweig (2010) used the full 7-point Likert scoring system, but presented a mean of the responses for a score between one and seven, instead of adding the points for a score between 26 and 182. In an effort to compare, I adjusted the scores (see Table 1). Based on this adjustment, health educators had the most permissive attitudes (Glass & Webb, 1995) and gynecologists had the most restrictive attitudes (Langer-Most & Langer, 2010). Because the study of community dwelling older adults (Glass & Webb, 1995) produced an outlier, it is possible there are unknown differences in the methods. Eliminating this outlier, psychology doctoral students have the most permissive attitudes (Snyder & Zweig, 2010), followed closely by medical students (Snyder & Zweig, 2010).

Evaluation Studies Using ASKAS. Similar to the work by White and Catania (1982), researchers have used the ASKAS as pre- and post-tests to determine the effectiveness of educational interventions in nursing staff (Bauer et al., 2013) and older adults (Adams et al., 1990; Goldman & Carroll, 1990). Bauer and colleagues (2013) used the ASKAS-A to measure attitudinal changes in nursing staff who participated in a three-hour workshop on older adult sexuality, including stereotypes, normal changes, illness, dementia, and capacity. The researchers found significantly (Mann-Whitney $U = 4799$, $z = -2.541$, $p = .011$; $r = .17$) more permissive attitudes at post-test ($M = 52.00$) compared to pre-test ($M = 54.00$). Although mean attitude score improvement was statistically significant from pre-test to post-test, the change was small and may be less valuable because the researchers did not utilize a control group. The responses that improved mainly related to items focused on understanding sexual needs of older adults. Emotionally charged items, such as ones that focus on moral or religious beliefs, remained unaffected by the intervention.

Other researchers focused on interventions in healthy older adults (Adams et al., 1990) and older couples experiencing sexual dysfunction (Goldman & Carroll, 1990). Adams and colleagues (1990) used the full ASKAS to measure knowledge and attitude changes in older adults following two 90-minute educational sessions on sexuality and aging, which focused on normal changes and sexual expression. There was no significant ($p > .05$) difference between the pre- and post-test scores on the ASKAS for knowledge or attitudes (specific statistics not provided by researchers). Similarly, Goldman and Carroll (1990) reported no statistically significant difference ($t = 1.3742$, $p = .1854$) in attitudes on the ASKAS before ($M = 52.00$) and after ($M = 61.70$) a workshop based on the P-LI-SS-IT model, which focuses on permission giving, limited information specific suggestions, and intensive therapy. Similarly, there was no significant difference ($t = 1.7311$, $p = .0996$) in attitudes for the control group from pre-test ($M = 53.35$) to post-test ($M = 61.00$). On the other hand, there was a significant ($t = -4.0629$, $p = .0001$) improvement in knowledge from pre-test ($M = 61.95$) to post-test ($M = 51.65$) for couples that received the intervention and no significant ($t = 1.0761$, $p = .2953$) change for couples in the control group from pre-test ($M = 55.25$) to post-test ($M = 57.30$). Goldman and Carroll (1990) used a randomized control group in order to eliminate the weaknesses they found in other evaluation studies that did not use an experimental design. Adams and colleagues (1990) did not report the scores or statistical results for knowledge and attitudes separately, so it is unclear if they also would have found a change in knowledge, and they did not use a control group. Considering the small sample sizes ($n = 10$) (Adams et al., 1990) ($n = 20$) (Goldman & Carroll, 1990) in both studies, it would be difficult to achieve statistical significance without a large change in the attitude scores. It is possible that Goldman and Carroll (1990) found some change because they gave their intervention only to older adults in couples who might have been more

interested in change, while the older adults in the study by Adams and colleagues (1990) reported very negative attitudes toward sex outside of marriage.

Critique of ASKAS. In addition to a confusing scoring system (Snyder & Zweig, 2010) and wording that makes questions difficult to understand (Rockwood & Constantine, 2009), Hillman and Stricker (1996b) criticize the knowledge and attitude subscales and White's (1982a) assumption that attitudes towards older adult sexuality in nursing homes predict general attitudes toward older adult sexuality. Using a sample of 458 college students, the researchers analyzed the responses to items on the ASKAS using factor analysis. Hillman and Stricker (1996b) ultimately proposed a two-factor solution for the attitudes subscale that included a permissive/restrictive dimension and an empathic/indifferent dimension. The items with high loading values on the permissive/restrictive factor focused on tolerating or limiting sexuality in older adults. The items with high loading values on the empathic/indifferent factor focused on sympathetic or avoidant behaviors with more emotional involvement. Although researchers have not begun using this two-factor solution, it may explain some of the results including improvement in items focused on understanding sexual needs, but not on emotionally charged items (Bauer et al., 2013).

Knowledge and Attitudes toward Elderly Sexuality (KATES)

Walker and colleagues (1998; 1999; 2002) wrote about the development of the KATES in three articles. In their first article (Walker et al., 1998), the researchers studied the knowledge, attitudes, and practices about older adult sexuality among staff in long-term care facilities, elderly residents, and community dwelling older adults. They described the development of the 159-item scale by a team, including a gerontologist, a social worker, a geriatrician, a nurse, and an administrator. Their next study (Walker & Ephross, 1999), which tested the knowledge and

attitudes of older adults in long-term care and in the community, further described the development of the scale. Although their first paper (Walker et al., 1998) described three dimensions of knowledge, attitudes, and practices, their next papers (Walker & Harrington, 2002; Walker & Ephross, 1999) only reflected the two dimensions of knowledge and attitudes. The team established content validity by developing and reviewing items based on a review of literature and personal experiences. Due to the length of the scale, the researchers divided the items into four equivalent forms. In the first study (Walker et al., 1998), Cronbach's alpha reliability ranged from .7231 to .9229 on the forms. In the second study (Walker & Ephross, 1999), Cronbach's alpha reliability ranged from .77 to .94 on the forms.

In 2002, Walker and Harrington used the KATES for pre- and post-testing in a study of the effectiveness of an educational training for staff at a nursing home. The training consisted of four modules: 1) the need for sexuality, 2) sexuality and dementia, 3) sex and aging, and 4) personal issues. The researchers offered different modules to different groups of subjects. In this study, Walker and Harrington (2002) described the KATES as a consisting of 70 items, including 10 general items, and 15 items specific to each of the modules. They reported a Cronbach's alpha reliability of .91 for the entire scale, .70 for the general items, and a range from .64 to .76 for the individual modules. These authors did not report how the KATES used in this study differed from the original 159-item version. Although the researchers (Walker et al., 1998; Walker & Ephross, 1999; Walker & Harrington, 2002) never published any version of the KATES for public use, they do describe the items, which are all dichotomous. Knowledge items are scored as correct and incorrect based on the literature, and attitude items are scored as correct when they reveal more permissive views (Walker & Eprhoss, 1999).

According to a search on Web of Knowledge on May 9, 2013, other authors cited each of the three articles Walker and colleagues wrote on the KATES. Researchers cited Walker and colleagues (1998) first article on the scale's development four times; the second article (Walker & Ephross, 1999) seven times; and their article (Walker & Harrington, 2002) using the KATES to evaluate effectiveness of a training 13 times. Taking into account duplications, Walker and colleagues' articles were cited a total of 24 times on the Web of Knowledge.

Researchers mention these studies in a number of literature reviews about older adult sexuality knowledge and attitudes of staff, including nurses (Mahieu et al., 2011) and the effectiveness of training programs (Clarke, 2013; Willert & Semans, 2000), especially interdisciplinary education (Higgins et al., 2012). Other articles cite the studies in a discussion of resident experience of sexuality in long-term care setting (Frankowsky & Clark, 2009), how to deal with sexual expression in long-term care (Esterle, Munoz Sastre, & Mullet, 2011; Shuttleworth, Russell, Weerakoon, & Dune, 2010), and advocacy for the sexual needs of older couples (Skultety, 2007). Although a number of literature reviews cite studies by the developers of the KATES (Walker et al., 1998, Walker & Ephross, 1999; Walker & Harrington, 2002), the KATES is not utilized as a measurement tool by other researchers. Studies have mentioned research using the KATES, but ultimately decided a different measure was more comprehensive (Le Gall, Mullet, & Riviere Shafighi, 20002). They often elected to use the ASKAS (Bauer et al., 2013; Dogan et al., 2008).

Summary

Researchers often cite the ASKAS and KATES in research, but the ASKAS is more widely used in correlational studies and evaluation research. The KATES has never been used by other researchers to measure knowledge and attitudes. It may not be the measurement of

choice in research on the knowledge and attitudes about older adult sexuality for a number of reasons. First, in order to utilize the KATES, the researcher must contact the authors for approval to use their instrument. Additionally, the use of only dichotomous items makes it difficult to measure the magnitude of agreement on attitude questions and thus perform useful analyses (Walker et al., 1998). Finally, the research team only established content validity and did not follow-up on plans to test the scale further.

Although the ASKAS (White, 1982a) appears the measurement of choice, and researchers (Bauer et al., 2013; Ross et al., 2013) continue to use it today, results are inconsistent. The relationship between the two subscales remains in question, as does the possibility of two-dimensions within the attitude subscale (Hillman & Stricker, 1996b). The scoring system (Snyder & Zweig, 2010) and the wording of the questions (Rockwood & Constantine, 2009) are confusing. Additionally, differences over time in correlational studies especially in terms of religiosity and marital status, further support the idea that the ASKAS (White, 1982a) is outdated due to cultural and historical shifts.

CHAPTER V: THEORETICAL FRAMEWORK

Just as history, policy, and research are always changing, popular theories are mutable and contextual. In scale development, relevant theories drive development of items and scales as a whole (DeVellis, 2012). Newer theories emphasize different aspect of older adult sexuality that are essential to include in a new scale. In this chapter, I consider these theories and their influence on dimensions, topics, and particular items for inclusion in a new scale. In particular, I consider the applicability of dimensions within the scale based on scripting theory (Gagnon & Simon, 2005; Simon & Gagnon, 1969; Simon & Gagnon, 1986). Prior scales (Walker & Ephross, 1999; Walker et al., 1998; Walz & Blum, 1987; White, 1982a) have used the dimensions of knowledge and attitudes. Walker and colleagues (1998; Walker & Ephross, 1999) also considered including practices or behaviors as a third dimension, but they eventually excluded it.

This chapter reviews and integrates theories of sexuality. These include sexual scripting theory (Gagnon & Simon, 2005; Parker, 2010; Simon & Gagnon, 1969; Simon & Gagnon, 1986) and gendered sexuality (Schwartz & Rutter, 1998). In addition, it considers theories about aging, such as disengagement theory (Cumming, Dean, Newell, & McCaffrey, 1960; Cumming & Henry, 1961; Havighurst, 1961; Schiavi, 1991) and lifespan orientation (Baltes, 1987; Baltes, Reese, & Lipsitt, 1980; Carstensen, 1995). Because theory in the social sciences narrowly explains a phenomenon (DeVellis, 2012), I will integrate these theories to create a basis for a new scale. These theories provide important underpinnings for the development and ultimate testing of an instrument to measure healthcare providers' knowledge, attitudes, and behaviors.

Social Construction of Sexuality and Aging

Sex and sexuality are socially constructed concepts (Gagnon & Simon, 2005; Vance, 1999). They are understood in various ways that change over time and vary according to cultural norms. That is, there is no universal meaning for specific sexual acts and sexuality. For example, two older women in a nursing home holding hands and kissing on the cheek may be understood in a number of ways. They could be friends displaying companionship, sisters displaying a shared history, or lovers displaying intimacy. Ultimately, the meaning ascribed to this act is contextual and socially constructed. This social construction extends beyond sex acts to sexual discourses (Foucault, 1978). Dicourses on sexuality and their meanings also vary by institution and relationship. As a result, subjective views of sexuality influence ideas and regulations about sexual behavior (Gagnon & Simon, 2005; Vance, 1999).

Power relationships mediate sexual discourses (Foucault, 1978). When medical providers gained the authority to address sex with their patients, physicians began managing the sexuality of their patients. In addition to ensuring optimal sexual functioning, doctors defined what was acceptable and what was inappropriate sexual behavior. Foucault describes "the medicalization of the effects of confession" (1978, p. 67). When psychiatry emerged as a medical specialty, psychiatrists encouraged patients to discuss their sexual fantasies and encounters in a therapeutic manner in order to determine what was within the normal range and what was pathological. Power relationships change over time and are always dynamic (Foucault, 1978). The relationship between physicians and patients has shifted, but healthcare providers still have the power to initiate conversations about sexuality or not. These discourses remain socially constructed and reflect the healthcare provider's attitudes about sexuality within the contemporary context. As a result, today, few healthcare providers raise the topic of sexual

health with their older clients (Dogan et al., 2008; Dunn & Cutler, 2000; Gerbert et al., 1990; Mona et al., 2010; Skiest & Keiser, 1997; Tangredi et al., 2008). If a patriarchal society influences physicians, discourses will be hegemonic and continue to repress discussions about older adult sexuality.

Sexual Scripting Theory

Sexual scripting theory conceptualizes the social construction of sexuality at three levels: cultural, interpersonal, and intrapsychic (Simon & Gagnon, 1986). These dimensions interact with each other to determine the relationship among sexual identity, roles, and acts. Cultural scenarios are the social guidelines by which people know, express, and experience sexuality. Intrapsychic scripts are internal aspects of a person, such as personality, that influence roles in sexual situations or discussions, and interpersonal scripts help people negotiate these roles. In relation to the scale construction undertaken in this dissertation, sexual scripting theory at these three levels serve different functions in understanding sexual discourses between healthcare providers and their clients.

Cultural scenarios influence guidelines that indicate suitable sexual aims, objects, and partners (Simon & Gagnon, 1986). These guidelines specify the appropriate times, places, and who may participate in sexual activity. Until recently, sexuality in old age was not an expected phenomenon in the cultural scenario (Simon & Gagnon, 1986). Simon and Gagnon (1986) defined older age as post-sexual, stating significant sexual events are not anticipated. Unfortunately, they did not expand beyond this one short statement on older adult sexuality. Even though research indicates that older adults remain sexually active (Beutel, Schumacher, Weidner, & Brahler, 2002; Kontula & Haavio-Manila, 2009; Kuehn, 2008; Lindau, et al., 2006; Lindau et al., 2007; Schick et al., 2010; Waite et al., 2009; Zeiss & Kasl-Godley, 2001), the

Western cultural scenario still excludes older adults from many sexual scripts. Because of the cultural script that older adults are asexual and the belief that sexual behavior among older adults should remain private (Lai & Hynie, 2011), healthcare providers may not be comfortable discussing sexuality with older clients. Many healthcare providers report that they do not broach the topic of older adult sexuality because they believe older adults are not sexually active (Bauer et al., 2007; Butler & Lewis, 2002; Kligman, 1991). The cultural scripts of healthcare providers reflect societal attitudes towards older adult sexuality.

Intrapsychic scripts include personal and private wishes, desires, and fantasies (Simon & Gagnon, 1986). Despite cultural scripts of asexuality attributed to older adults, intrapsychic scripts comprise a person's own sexual preferences and desires. In the context of discourses between healthcare providers and older adult clients, the intrapsychic scripts may conflict, which affects the likelihood of the providers and clients discussing sexuality. Many healthcare providers report that they do not broach the topic of older adult sexuality because of their lack of knowledge about the subject (Butler & Lewis, 2002; Gott, 2005; Kligman, 1991; Mona et al., 2010). It is possible that increased knowledge about older adult sexuality would influence healthcare providers to raise the topic with their clients. Knowledge about older adult sexuality and its application to clinical practice reflects the intrapsychic scripts of healthcare providers.

Interpersonal scripts create congruence, by allowing for negotiation between the cultural scenario and the intrapsychic reality of the individual (Parker, 2010). Even though there may be a cultural script of asexuality attributed to older adults, health workers and older adults can negotiate older adults' continued sexual desire through their own interpersonal scripts. In the realm of healthcare providers and older adult clients, interpersonal scripts may allow healthcare providers to intervene despite cultural stereotypes (Bauer et al., 2007; Butler & Lewis, 2002;

Kligman, 1991) or lack of knowledge (Butler & Lewis, 2002; Gott, 2005; Kligman, 1991; Mona et al., 2010). In a recent study (Jacobson 2010), doctors reported that they primarily discussed sexuality with their older clients when the client raised the topic. When a client broaches the topic of sex, that client may be acting in conflict with the cultural and intrapsychic scripts of the healthcare provider. This would require the healthcare worker to develop a new interpersonal script in order to address that client's sexual health concerns. Healthcare providers may react to situations that arise involving older adult sexuality in ways that conflict with their knowledge and attitudes. Their relationship with a client may influence their behaviors and allow them to overcome negative attitudes and lack of knowledge. The interplay between the scripts appears in Figure 1.

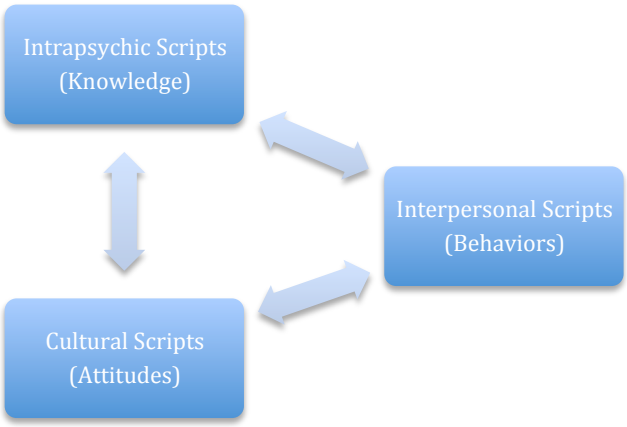

Figure 1. The relationship and interaction between the scripts in Scripting Theory and how they relate to the proposed subscales.

Disengagement theory. Disengagement theory closely influences the dimensions in sexual scripts. It asserts that older adults wish to withdraw from active life (Havighurst, 1961) and proposes social ties go through a process of mutual disengagement, in which society and the older person withdraw from each other (Cumming & Henry, 1961), beginning when a person reaches their early 60s (Cumming et al., 1960). Disengagement theory holds that older people

change in self-perception, which results in their withdrawal from society. As a result, society expects older adults to decrease their social interactions and the variety of these interactions; those interactions that do remain change in pattern and quality. Cumming and colleagues considered disengagement as successful aging and claimed it was inevitable and unavoidable (Cumming & Henry, 1961).

Disengagement implies a static view of older adult sexuality and largely influences the cultural scenarios outlined in sexual scripting. Sexual behaviors are acts of social engagement, and according to disengagement theory (Cumming & Henry, 1961), people would discontinue sexual activity beginning in their mid-60s. Disengagement theory creates an asexual script that influences society to be less open to sexual expression in the elderly. If older adults incorporate these stereotypical societal beliefs of asexuality, they may develop an intrapsychic script of shame surrounding sexual acts (Schiavi, 1999). Additionally, if healthcare providers incorporate concepts from disengagement theory, they may not see the need to build a knowledge base about older adult sexuality. Cumming and Henry (1961) proposed that both the individual and society play roles in the process of disengagement, which occurs easily when both are ready to disengage. However, conflict occurs if either the older person or society are not prepared for disengagement. Either the individual or the healthcare provider may reject the cultural script of disengagement. In this case, the interpersonal relationship between healthcare provider and older adult is more likely to allow for continued engagement, including sexual engagement.

Because healthcare providers maintain a position of power in relation to their clients (Foucault, 1978), they have a great influence on the disengagement process. By not encouraging discussions of sexuality, healthcare providers may inadvertently influence older adults to believe that continued sexuality is not important or appropriate. On the other hand, they have the ability

to reject the script of disengagement and reflect shifting cultural attitudes and new knowledge about sexuality among older adults.

Gendered sexuality. Gendered sexuality is a theory based in social construction and the belief that people learn about sexuality through cultural customs, values, and expectations in society (Schwartz & Rutter, 1998). People enact male and female roles in society influenced by the culture at large. Certain behaviors are determined to be masculine and others feminine. Sexual norms are unwritten, but ascribe specific sexual behaviors and identities to men and women. The social construction of gender closely influences the stereotypes of older adult sexuality associated with the cultural level scripts.

The social construction of sexuality continues throughout the lifespan and the gendering of sexuality persists over the life course. The Gendered Sexuality Life Course (GSLC) model combines a gender lens with lifespan development (Carpenter, 2010). GSLC proposes that sexuality, beliefs, and behaviors are the result of positive and negative experiences throughout life. Gender assignment influences these experiences throughout life (Daniluk, 1998). One example may be societal stigmatization of older men and women who are interested in sex. From an early age, individuals may learn that sexually interested older adults are *dirty old men* or *ridiculous old ladies* (Schwartz & Rutter, 1998). Because of the intersection of gender and age stereotypes, older adults may have negative views about their own continued sexual activity, and their healthcare providers may have similar negative views. Alternatively, older adults and their healthcare providers may reject these views and reflect a more modern view of older adult sexuality.

In addition to influencing stereotypes about older adult sexuality in general, gendered sexuality influences cultural understanding of male and female sexual identity. For men,

masculinity is socially constructed and romantic interest is represented by penile erections (Schwartz & Rutter, 1998). Because of the importance of an erection and penetrative sex, older men have difficulty coping with erectile dysfunction. Men are expected to be able to perform sexually at any given opportunity. Because erections are so socially valued, it is understandable why Viagra has become an extremely successful medication, and healthcare providers focus on addressing male sexual dysfunction more than other factors, including female sexual dysfunction. Although this excludes other issues that may be important for continued sexual engagement among men and women, it is an artifact of cultural expectations about sexuality.

The focus on male sexual functioning and desire over that of females may explain why one popular scale (White, 1982a) of healthcare provider knowledge and attitudes about older adult sexuality confirms the belief that a woman's likelihood of remaining sexually active in older adulthood is predominantly influenced by her husband's desire. However, Petersen and Hyde (2011) found that differences in sexual desire by gender are largely socially constructed because of societal beliefs about power. The similarity between genders is an important consideration for healthcare providers, considering the means by which sexuality entered the medical field in a sexist way that continues today.

Sexual fluidity. Just as Petersen and Hyde (2011) found that differences in sexual desire by gender are socially constructed, Diamond (2008) purported that the model of sexual orientation is based on a male norm, and female sexuality is more fluid than previously portrayed. Researchers are beginning to acknowledge that female sexuality is not a stable trait; rather, sexual attraction is more fluid for women. Sexual fluidity is a "situation-dependent flexibility in women's sexual responsiveness" (Diamond, 2008, p. 3). Emotional ties rather than gender may determine female sexual orientation. As a result, women may desire men in some

situations and women in others. Considering the growing gender ratio due to longer life expectancy of women than men (Vincent & Velkoff, 2010), older women may begin romantic or sexual relationships with other women. If healthcare providers are unaware of the potential for sexual fluidity among women, they may incorrectly assume that women who were married in the past will not have same sex relationships at other times in their lives.

Successful Aging

Successful aging is a group of concepts about the conditions under which people obtain maximum happiness and satisfaction in older age (Havighurst, 1961). Havighurst (1961) developed the concept of successful aging in the 1950s, and Rowe and Kahn (1997) reexamined it in the 1990s. Successful aging is a social construction, and its definition has changed over time. With influences from culture and history, the conceptualization of successful aging has evolved.

Initially, Havighurst (1961) proposed various schema of successful aging that emphasized the opinion of society, rather than that of the older person. Havighurst (1961) did not consider how an older person might define a satisfying life. He asserted that society determined the lifestyle appropriate for successful aging by placing a high value on the ability of an older person to maintain a middle-aged lifestyle into old age. Based on this theory of successful aging, older adults were only successful if they maintained their previous level of sexual functioning as they grew older. Those older adults who lost functioning were therefore unsuccessful; this may have influenced the cultural script of the asexual older adult.

At the end of the twentieth century, Rowe and Kahn (1997) began writing about successful aging in response to medical advances that enabled many older people to maintain good health. Until recently, health professionals and the public at large assumed that disease and

disability were an inevitable part of aging. However, progress in the field of medicine and evidence that disease and disability could result from lifestyle and factors other than age alone ignited Rowe and Kahn's renewed interest in the concept of successful aging.

As a result, they created a multidimensional, widely accepted definition of successful aging. Rowe and Kahn's (1997) definition of successful aging is "the avoidance of disease and disability, the maintenance of high physical and cognitive function, and sustained engagement in social and productive activities" (Rowe & Kahn, 1997, p. 433). They pointed to the importance of active engagement with life for successful aging. Consistent with their concept of successful aging, healthcare providers should assist clients in avoiding disease in order to remain actively engaged in life, including sexually.

If influenced by the concept of successful aging developed by Rowe and Kahn (1997), a modern cultural script would assume a new cultural norm where older adults remain actively engaged in life, rather than disengaged and asexual. Because the most popular scale for measuring knowledge and attitudes about older adult sexuality (White, 1982a) was developed before Rowe and Kahn (1997) began publishing, it was influenced by dated theories of successful aging. Because of the dynamic nature of sexual scripting theory, modern cultural scripts should reflect shifting attitudes about sexuality among older adults.

Life-span orientation considers development as it occurs in a continual process (Baltes et al., 1980). Life-span development studies behavioral consistencies through the course of an individual's life and focuses on individual plasticity (Baltes, 1987). If adults maintain similar sexual interests throughout their lives, healthcare providers need to remain open to a range of activities that allow for sexual expression for clients of all ages. If healthcare providers maintain

dated cultural scripts that older adults do not maintain sexual desires, healthcare providers may fail to address the sexual interest among elderly people.

Summary

Theories of aging and sexuality can be woven together to shed light on the factors that affect healthcare provider likelihood of addressing sexuality with older adults. In addition to providing a rationale for studying older adult sexuality, theories of aging and sexuality provide the groundwork for a scale that measures healthcare provider knowledge, attitudes, and behaviors around older adult sexuality. Gendered sexuality (Carpenter, 2010; Schwartz & Rutter, 1998) and female sexual fluidity (Diamond, 2008) theories have influenced the language and content of the new scale. As a result, a new scale of older adult sexuality ensures questions about same-sex partnerships and correct for sexist and heteronormative language.

Scripting theory in particular provides a framework to develop a new scale for measuring healthcare provider role in managing older adult sexuality. The cultural, interpersonal, and intrapsychic scripts (Simon & Gagnon, 1986) parallel attitudes, behaviors, and knowledge respectively (see Figure 1). Other popular scales (White, 1982) used the dimensions of attitudes and knowledge. When considering scripting theory (Simon & Gagnon, 1986), attitudes and stereotypes largely influence cultural scripts. Disengagement theory (Cumming et al., 1960; Cumming & Henry, 1961), successful aging (Havighurst, 1961; Rowe & Kahn, 1997), and life-span orientation (Baltes et al., 1980; Baltes, 1987) all influence the cultural script. Disengagement (Cumming et al., 1960; Cumming & Henry, 1961) framed older adults as asexual. Successful aging (Havighurst, 1961; Rowe & Kahn, 1997) and life-span orientation (Baltes et al., 1980; Baltes, 1987) are current theories that support the notion of continued sexual interest in adulthood. An Attitude subscale in a new scale determines if healthcare providers

subscribe to outdated notions of older adult asexuality or reject this cultural script. The intrapsychic scripts outlined by sexual scripting theory (Simon & Gagnon, 1986) largely reflect knowledge. The Knowledge subscale in the contemporary instrument developed here shows if providers understand current issues that affect older adult sexuality. Unlike available scales (White, 1982a) that do not try to explain any divide between knowledge and attitudes, behavior or practices, including communication style and relationships, reflects the interpersonal script, which can mediate relationships. Therefore, the scale developed here includes a subscale of Behavior to measure how healthcare providers respond to issues of sexuality with their older clients. I considered these three dimensions when developing a new scale, since they likely interact to influence healthcare providers' likelihood of addressing sexuality among older clients.

CHAPTER VI: RESEARCH DESIGN AND METHODOLOGY

Study Rationale

The proposed study is anchored in the importance of sexuality among older adults, which is a normative aspect of adult development that has significance because of its impact on health (Block, 2008; Gott, 2005; Schwartz, 2007) and general well-being (AARP, 2005; Bauer et al., 2007; Schwartz, 2007). The research presented here supports the aspirations of older adults and addresses the obstacles they encounter in their efforts to maintain sexual expression. Older people report healthcare providers play an important role in helping them manage and maintain sexual health (Kligman, 1991; Tangredi et al., 2008). Despite this, many healthcare providers are hesitant to discuss sexuality with their older adult clients (Dogan et al., 2008; Dunn & Cutler, 2000; Gerbert et al., 1990; Mona et al., 2010; Skiest & Keiser, 1997; Tangredi et al., 2008).

Many researchers use the Aging Sexual Knowledge and Attitudes Scale (ASKAS) in their studies of healthcare providers and older adult sexuality (Adams et al.; Allen et al., 2009; Bauer et al., 2013; Bouman et al., 2007; Creti & Libman, 1989; Dogan et al., 2008; Glass et al., 1986; Glass & Webb, 1995; Goldman & Carroll, 1990; Hillman & Stricker, 1996a; Hinrichs & Vacha-Haase, 2010; Langer-Most & Langer, 2010; Luketich, 1991; Quinn-Kracher & Van Hoozer, 1988; Ross et al., 2013; Snyder & Zweig, 2010; Steinke, 1994; Spector & Fremeth, 1996; Wang et al., 2008). White (1982a) developed this instrument to measure the knowledge and attitudes of health workers and community members towards older adult sexuality. Although researchers have employed ASKAS as recently as 2013 (Bauer et al., 2013), it has been over three decades since its development. Consequently, the scale does not reflect medical developments in sexual health and changes in attitudes about sex, older adult sexuality, and sexual fluidity that have occurred over the past thirty years. The ASKAS does not address

generationally different expectations of sexuality. The separation between sex and reproduction (Castelo-Brano et al., 2008; Loe, 2004) is not considered, and therefore, the scale does not address the particular needs of older women today. It does not address issues related to STIs, HIV, AIDS, or safer sex practices, which are increasingly issues for older adults (CDC, 2008a; CDC, 2008b; CDC, 2009b; Kuehn, 2008). White (1982a) developed the scale before recent medical developments, such as Viagra or hormonal treatments for female sexual dysfunction. Finally, the scale is heteronormative and consequently does not address the particular needs of LGBT older people or older adults who engage in sexual activity with same-sex partners. Researchers have used the ASKAS and focused on knowledge and attitudes alone. In this dissertation I argue for an additional dimension, behavior, which would lead to fuller understanding of how healthcare providers respond to issues of sexuality with their older clients.

In the social sciences, researchers often rely on existing scales, even if their suitability is in question (DeVellis, 2012). The preceding chapters indicate many ways in which the ASKAS (White, 1982a) is no longer suitable for research on healthcare provider knowledge and attitudes about older adult sexuality and concerns about sexual health. Social changes and medical developments over the past three decades underscore the need to assess healthcare providers' knowledge, attitudes, and behaviors in a contemporary context. In this study I developed a new scale to serve that purpose. The ASKAT (Walz & Blum, 1987) and the KATES (Walker & Ephross, 1999; Walker et al., 1998) also were developed as scales to measure the knowledge and attitudes of healthcare providers toward older adult sexuality. However, they fell into another common problem in scale development. The developers created items that may have had face content validity at the time (DeVellis, 2012, p. 2), but they did not conduct the necessary reliability and validity tests that make strong measurement scales.

I developed a new scale using stringent psychometric evaluation methods to measure the knowledge, attitudes, and behaviors of healthcare providers toward older adult sexuality and sexual health. Since constructs in social sciences derive from theory, a clear understanding of the theory was necessary to conceptualize the problem for measurement (DeVellis, 2012). Informed by appropriate theories of aging and sexuality, this new scale takes into account changes in the landscape of contemporary practice with elderly people and is stringently developed and tested for reliability and validity.

Research Goals

I developed and tested a new scale that corrects for the limitations of the ASKAS. My specific research goals were:

- To develop a scale for measuring the dimensions of knowledge, attitudes, and behaviors of healthcare providers toward older adult sexuality;
- To generate a pool of items related to knowledge, attitudes, and behaviors towards sexuality among the elderly based on a content analysis of the relevant literature;
- To confirm items and generate additional questions from key informant interviews with experts in older adult sexuality;
- To evaluate the appropriateness of items in the subscales, using exploratory and confirmatory factor analysis;
- To test the validity and reliability of the new scale; and
- To demonstrate the predictive ability of the new scale.

Methods

The two most prominent methods of scale development are the quantitative process described by DeVellis (2012) and the mixed-methods approach used by Bowen and colleagues

(Bowen, 2008; Bowen, Bowen, & Wooley, 2004) in developing the Elementary School Success Profile and later outlined in *Structural Equation Modeling* (Bowen & Guo, 2012). Table 2 provides a full outline of these steps. A major difference between these two methods is that DeVellis (2012) begins with item development through a literature review, while Bowen and colleagues (2004; 2008) conduct qualitative interviews with key informants following the literature review to create items. Additionally, the Bowen and Guo (2012) model calls for consultation with experts two more times, along with the intended respondents. Considerations of ontological and epistemological questions informed my decision to employ a modified mixed-method approach.

Table 2

Comparison of Scale Development Methods

Quantitative Method[1]	Mixed Method[2]
Theory and literature review	Extensive theory & literature review
	Interview experts about construct
Create pool of items and decide on format	Create pool of items
Expert review of items	Expert review of items
	Cognitive testing with intended respondents
	Additional expert feedback of revisions
Test with a sample along with validation items	Pilot test
Statistically analyze	Conduct initial statistical analysis
	Test with larger sample
	Conduct exploratory factor analysis (EFA)
	Conduct confirmatory factor analysis (CFA)
	Conduct reliability and validity tests

[1] DeVellis, 2012
[2] Bowen et al., 2004; Bowen & Guo, 2012

Ontology frames questions about the nature of reality and what can be known about that reality (Guba & Lincoln, 1994). Epistemology questions how we know what we know (Patton, 2002). The nature of the relationship between the knower and the investigator is important to

this decision (Guba & Lincoln, 1994). Three major research orientations address these questions (Teddlie, Tashakkori, & Johnson, 2008). Quantitative studies adhere primarily to a positivist approach, which focuses on one, provable, verifiable social reality. Positivist studies use the language of numbers and employ statistics to determine the strength of that reality. In contrast, qualitative studies mainly adhere to a constructivist or naturalistic approach that suggests there are multiple realities. They presume that reality is socially constructed and not fully knowable because of the volatility of the environment and complexity of phenomena (Patton, 2002). A third orientation to inquiry is mixed-method studies that adhere to a pragmatic paradigm that integrates both perspectives and incorporates both numerical and narrative data (Teddlie et al., 2008).

Pragmatism avoids complete adherence to either a quantitative positivist approach or a qualitative constructivist approach; it encourages mixing that allows for the benefits of both (Johnson, Onwuegbuzie, & Turner, 2007; Teddlie et al., 2008). A pragmatic approach to research enables the problem and research questions to guide the methods, rather than a strict methodological allegiance. This approach was useful for the present study, because it included qualitative interviews to generate potential items for the scale and quantitative methods to test its validity and reliability. This type of mixed method approach, which is chronological, and where one phase builds on another, is a sequential multi-strand mixed method design (Teddlie et al., 2008).

A mixed-methods approach to scale development is useful in social work research, because there often is not enough research about a problem to develop a thorough scale using quantitative methods alone (Bowen & Guo, 2012). In the current study, I reviewed and analyzed existing scales and literature and conducted qualitative interviews to inform the development of

an initial pool of items. In the second phase, I conducted preliminary testing of these items and analyzed the results.

Research Design

Bowen and Guo (2012) present 12 steps for mixed-method scale development (see Table 2), which guided this dissertation. In the present dissertation, I follow these guidelines, with some minor modifications, in two phases and propose a future third phase (see Figure 2).

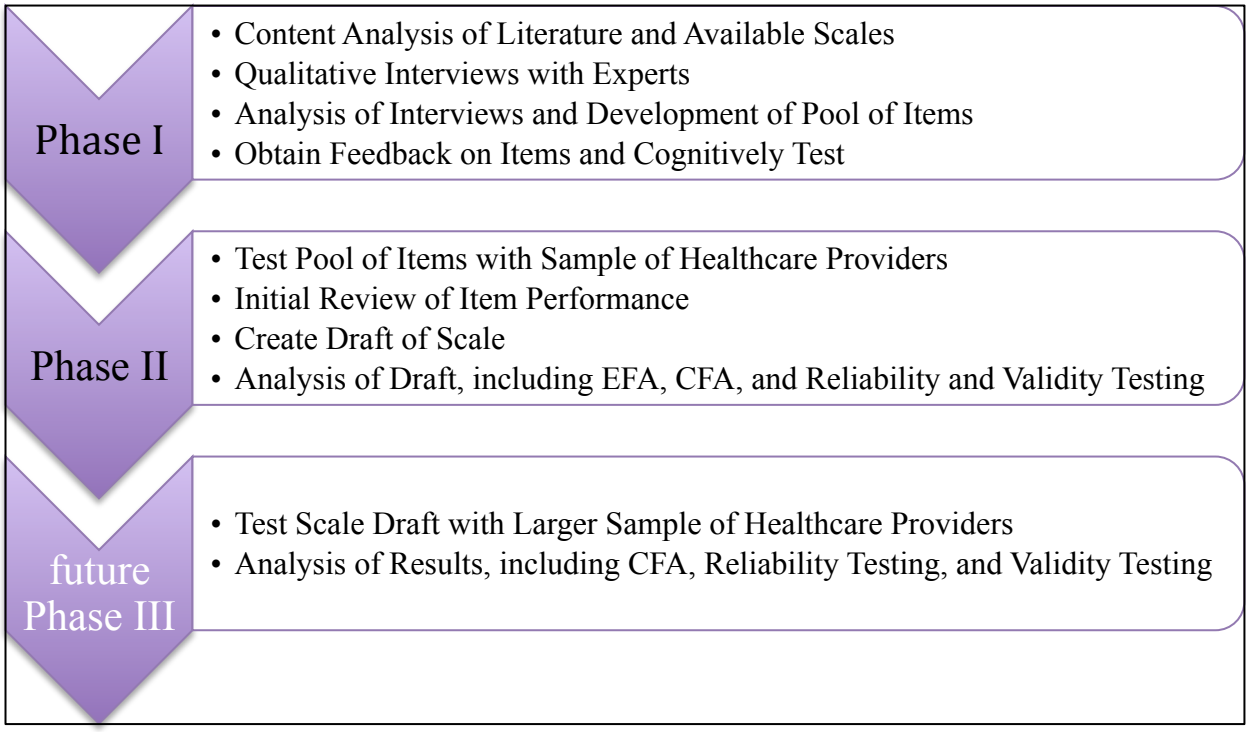

Figure 2. The two phases of research in the present dissertation and a future third phase. These phases reflect the mixed method approach to scale development.

Study Phase I

The goal of the first phase of this dissertation was to generate a pool of items for possible inclusion in the scale. In order to create those items, I conducted an in depth review of relevant literature and interviewed experts in the field of older adult sexuality. Based on the analysis of the literature and interviews, I developed a pool of items for testing in Phase II.

Literature Review. Phase I began with a detailed analysis of available scales and literature for potential item content. I searched EBSCO databases, including CINAHL, Health Source, MEDLINE, PsycARTICLES, PsycINFO, Social Work Abstracts, and SocINDEX, for relevant articles using search terms such as "sex*," "older adult," "aged," and "elderly." I used more specific search terms if I needed additional information on a certain topic area. I tried to limit the articles to those since 2000, but I included earlier articles that were seminal articles on the topic or contained relevant information that remains supported by literature that is more recent. I also reviewed books on older adult sexuality. Based on my review of the articles and books, I searched for specific articles that were often cited in relevant works. In this process, I reviewed 64 empirical and practice based articles, books, and websites. Of those 64, ten were from before 2000.

Sampling. I employed a non-probability, purposeful sampling strategy to identify participants for qualitative interviews. Non-probability sampling allowed for greater focus and intention (Patton, 2002). A purposeful sampling strategy enabled me to identify healthcare providers who met the most important criterion: expertise in addressing sexuality and sexual health with the elderly. By focusing on healthcare providers who have experience with older adults and sexuality, I was able to incorporate expert, contemporary knowledge in the development of the scale.

This involved intensity sampling through which I identified subjects that had the greatest experience with the phenomenon (Patton, 2002). Prior information about the topic among potential informants was necessary for intensity sampling. For example, I identified a sex educator with experience discussing sexuality with older adults, who conducts education sessions with healthcare providers and older adults and publishes books on the topic. She is also the

founder and past president of the Sexuality and Aging Consortium. She was the first key informant recruited for participation in Phase I of this research. I sent her a recruitment letter (Appendix B) by electronic mail to secure her participation.

I identified other experts at a conference organized by the Sexuality and Aging Consortium. I approached them about participating using a recruitment script (Appendix C). In addition to using an intensity sampling strategy, I utilized snowball sampling to enlarge the pool of key informants. This sampling approach involved inviting participation of people who had experience with the phenomenon and then asked them to recommend other informants. For example, I asked the conference organizer and attendees at the conference to recommend other experts to interview. Healthcare providers identified by snowball sampling received a recruitment email (Appendix D) describing the study and the nature of their participation. Participants who agreed to participate received a thank you letter (Appendix E) and those who refused received a thank you for their consideration of the letter (Appendix F) asking for other recommendations. At the end of each interview, I asked the expert for additional recommendations.

Using both intensity and snowball sampling, I identified potential informants who met my selection criteria. Some potential participants refused to participate, citing scheduling issues or self-evaluation that they could not provide enough relevant information. However, many of these individuals recommended other experts to interview. These recommendations often included experts that I had already recruited for participation. I continued to interview until I reached saturation at nine experts. These participants included doctors, nurses, sex educators, a social worker, an art therapist, and a professor of gerontology.

Interviews. I conducted in-depth interviews with key informants either face-to-face or over the telephone. Although researchers often use focus groups in studies to develop new scales (Tolman & Porche, 2000), this was not appropriate for the current study, because it is not practical to assemble a group of healthcare providers at a single time and place due to busy schedules. Additionally, their expertise was in particular areas, such as treatment of sexual disorder or LGBT issues, so a focus group would have made interviewing unfocused. Instead, I used a semi-structured interview that allowed for flexibility. Although I pre-determined the domains to be covered, I did not specify the sequence and the wording in advance (Patton, 2002). Instead, the "interview is structured in terms of the research problem" (Whyte, 1984, p. 97). As such, a semi-structured interview allowed me the freedom to add topics introduced by the informant that I did not anticipate in advance. Consequently, I was able to incorporate topics that arose in one interview for discussion in future interviews. As salient issues arose and themes or items emerged, a semi-structured interview allowed me to explore them with subsequent informants. The combination of structure and discovery was necessary for the interviews, because it allowed me to switch from evaluating the previously available scale to evaluating potential items.

Interview Protocol. The semi-structured interview protocol (Appendix G) began with a noncontroversial, easy to answer grand tour question (Patton, 2002), which asked the expert to talk about their experience in the field. The flexibility of a semi-structured protocol was invaluable at this point. Some of the experts focused extensively on their expertise, which took time away from reviewing and generating items. I worked to redirect those participants and learned to adjust the questions to focus on item review and development. In subsequent interviews, I took a more directive approach. I informed future participants that I had chosen

them because of their expertise in the field, and then I asked them to describe briefly how they became involved in the field of older adult sexuality. Once the key informants discussed their expertise, I directed them to discuss barriers to addressing sexuality with older adult clients.

After I built rapport with the experts by discussing their experiences talking to older adult clients about sexuality and their expert opinion on the field of practice, I focused on specific questions about scale construction. Prior to the first five interviews, I sent a copy of the ASKAS (White, 1982a) (Appendix A) to informants for them to review. During those early interviews, I asked them to briefly review the scale again and to give their expert opinion about what aspects of the scale are appropriate for contemporary practice. The review of the ASKAS included asking which questions or sections they would discard because they are no longer relevant to current practice. I asked what specific topics or questions they did not think were important. I also asked informants about the appropriateness of the scale's length, structure, and ease of use. Because of the possibility that some of the informants might have completed the ASKAS in the past, I planned to ask for their reflections about the experience. However, none of the experts had ever completed the ASKAS in other studies.

After reviewing questions, I brought the subscales of knowledge and attitudes to the attention of the experts and asked them to reflect on them to determine if they thought they remained appropriate and relevant to the study of healthcare providers and older adult sexuality. I then asked the informants to consider other subscales that might be appropriate and what they would consider ideal subscales or dimensions if they were designing such a scale. One early informant suggested a subscale of behaviors or practices, which fit well with scripting theory. Consequently, I added "behavior" as a potential subscale in interviews with subsequent experts. Further questions queried types and structures of questions for each dimension discussed.

After completing the first five interviews, which reviewed the ASKAS, I began analyzing the narrative data and results from the literature review. Based on that information, I developed a preliminary universe of items. I focused the remaining four interviews on reviewing the proposed items to determine appropriateness, necessary modifications, and deletions and to generate more potential new items instead of reviewing the ASKAS. I asked participants similar questions about the new items that I asked the earlier experts about the ASKAS. Because initial respondents focused on describing their personal expertise, I worked to focus on specific questions and wording in these later interviews by asking for examples and wording of potential items. Since I reviewed the items with experts who are healthcare providers, they were able to provide cognitive testing of the target respondents. I revised the items after each interview, and subsequent experts reviewed the revisions.

Finally, I asked the key informants for their opinions about appropriate organizations that may be helpful in recruiting healthcare workers for testing the scale draft. In an effort to give informants the final say, I ended with a closing question (Patton, 2002), which asked if they had anything else to add. This question allowed the informants to give any additional information not covered in the interview.

Analysis of Data. I analyzed the qualitative data, as well as available scales and literature, using thematic analysis. Thematic analysis involves looking for patterns and themes within the data (Braun & Clarke, 2006; Padgett, 2008). Braun and Clarke (2006) identify six phases of thematic analysis. These begin with becoming familiar with the data and creating initial codes. It continues with looking for themes, reviewing the appropriateness of the themes, and naming the themes. The final step is the creation of a report. I used this six-phase method for thematic analysis as a guide to analyze the qualitative data. I reviewed the literature and

interviews for topics that seemed important for a new scale. Based on the review of the literature and the initial interviews, I organized essential literature, expert comments, and suggested questions around topics, which I named and included in the scale. I then reviewed these topics and proposed items with the remaining experts.

Item Construction. I used the themes identified in the analysis of literature and interviews to create a pool of items, which also included specific item suggestions. Some of the items came directly from participants; others I developed based on expert comments and empirical literature. Once I developed the initial pool of items after the first five interviews, I reviewed them with the additional four experts for feedback. I revised items between interviews, thus developing the items in an iterative process of interviewing, analyzing, and revising.

Qualitative methods emphasize the credibility of the informants and their ability to explain phenomena fully and accurately (Patton, 2002). In order to ensure credibility of the findings from Phase I, interviewing continued until I reached saturation. Informants began to repeat ideas and agreed with the appropriateness of the pool of items with only minor suggestions. Additionally, the recommendations for additional experts were individuals I had already interviewed for the study.

Using Qualtrics, an online survey program, I developed the finalized 231 items and demographic questions into a survey that participants could complete online (see Appendix N for all items). The items included 110 nominal level dichotomous knowledge questions, 47 interval level 5-point Likert attitude questions, and 74 interval level 5-point Likert behavior questions. The 231 items included questions from 14 topic areas identified through the review of the literature and expert interviews: continuity of sexuality throughout the lifecycle; benefits of continued sexual expression; relationship status; masturbation; changes in male sexual

functioning and treatments; changes in female sexual functioning and treatments; relationship between disease and sexual functioning; dementia; influence of medications on sexual functioning; LGBT and aging; sexually transmitted infections (STIs); HIV/AIDS; safer sex practices; and rights.

Study Phase II

The items developed in Phase I constituted a preliminary measure that I tested with a sample of health workers who have contact with older people. I analyzed the results by reviewing item performance, including means and correlations to determine items for inclusion in a draft of the scale (see Figure 2). I then used exploratory factor analysis (EFA) and confirmatory factory analysis (CFA) to confirm the subscales. Finally, I tested reliability and validity of the draft.

Sampling. I used purposive sampling of healthcare providers who work with older adults to test the items. I initially proposed a sample of 300 participants, because DeVellis (2012) suggests this sample size for typical scale performance testing. I presented a poster at the Gerontological Society of America (GSA) conference in November 2012 with results from Phase I of this dissertation. Because GSA is a large multidisciplinary society for professionals in the field of aging, the conference attracts appropriate healthcare providers for initial recruitment for completion of the draft scale. Next to my poster, I placed a sign requesting that healthcare providers drop their business cards, so I could contact them later with the recruitment email to complete the survey. I also requested participation when I spoke with healthcare providers using a script (Appendix H). Once I completed Phase I and developed the universe of items, I sent an email requesting participation from the GSA attendees who had provided contact information via their business cards (Appendix I).

In order to obtain additional participants, I made a list of all of the hospitals in the five boroughs of New York and searched their websites for available email addresses of healthcare providers. Based on this search, I emailed 3,904 healthcare workers in the New York Metro area requesting their participation in completing the survey (Appendix J). My initial emails yielded few participants. I used the subject line, "Win an iPad mini by participating in an easy online survey!" However, I quickly determined that potential subjects might have thought the email was spam, so I resent those emails with the subject line "Research Participation Request," which resulted in more subjects. I used that subject line in all future emails.

In addition to sending emailing potential subjects, I arranged for a recruitment announcement to be posted on the listservs, blogs, and Facebook pages of the American Geriatrics Society, the Hartford Foundation, and the Sexuality and Aging Consortium (Appendix K). The American Geriatrics Society posted the announcement on their member research page and included it in their trainee/student listserv. The Hartford Foundation included the posting in an e-newsletter to their fellows. The Sexuality and Aging Consortium posted the announcement on their Facebook page and in their blog. In addition, I posted the survey on my person LinkedIn, Facebook, and Twitter accounts.

Despite pursuing a number of avenues, it was difficult to recruit 300 participants. DeVellis states, "practical experience suggests that scales have been successfully developed with smaller samples" (2012, p. 102). Because of difficulties in recruitment, I decreased the sample size to 150 participants. The smaller sample appeared sufficient for scale development at this stage, because I plan to conduct future research to test the reliability and validity of a shortened version of the instrument with a larger sample.

Analysis of Data. In order to determine the efficacy of a new scale, I reviewed item performance, including means and correlations. In addition, I qualitatively reviewed items for appropriateness and redundancy. After culling the items that did not perform well, I performed EFA and CFA to confirm the subscales. Finally, I tested for reliability and validity. Reliability is the extent to which the scale provides the same results consistently (Rubin & Babbie, 2008). A highly reliable scale measures the variable, rather than random error. Validity is the extent to which the scale measures the concept it is supposed to measure.

Factor Analysis. After culling items due to poor performance, I analyzed the data for the remaining items using EFA via SPSS. EFA is often used early in the process of developing a scale to determine scale structure and item performance (Bowen & Guo, 2012). EFA determines which items clustered together to test the proposed dimensions or subscales of Knowledge, Attitudes, and Behaviors. Although EFA is not sufficient for establishing the psychometric properties of the instrument, it is an important initial step (Bowen & Guo, 2012). Because of the small sample size, the EFA results were difficult to interpret. Instead, I conducted CFA for the subscales to determine the applicability of the items in measuring the construct. Using traditional statistical analysis in SPSS, I performed CFA to determine the goodness of fit of the proposed subscales.

Reliability. Reliability testing is extremely important in scale development, because high levels of reliability increase statistical power (DeVellis, 2012). The reliability of a new scale can be measured using three method types: parallel forms, internal consistency, and test-retest (Hudson, 1982). Parallel-form reliability involves giving subjects two versions of the same scale on separate occasions (Carmines & Zeller, 1979). This form of reliability testing was not

realistic because there is no alternative form for this scale and subjects would have been difficult to recruit for a second administration.

Based on the same concept as parallel-form reliability, split-half reliability is a measure of internal consistency and involves splitting the set of items in the scale and correlating them (DeVellis, 2003). Split-half reliability at the level of each subscale also can be conducted in one administration, because the full scale is used and then split in analysis. Due to biases that may develop while completing the survey, such as learning from past questions so answers improve or getting tired so answers worsen, I did not perform split-half reliability. Split-half reliability essentially estimates another type of internal consistency measure, known as coefficient alpha (Hudson, 1982). I used Cronbach's coefficient alpha, α, to test the correlation between each item in the subscales (DeVellis, 2003). Because questions about knowledge were dichotomous, Kuder-Richardson formula 20, or *KR-20*, was used for those items.

While split-half and coefficient alpha determines internal consistency, test-retest reliability tests temporal stability by comparing scores on two occasions (DeVellis, 2003). Because of difficulty recruiting participants and high rates of discontinuing the survey, I did not contact participants to complete the scale again to run test-retest reliability. I will run test-retest reliability in future studies by asking participants if they are willing to be contacted and complete the survey again two weeks later. At that point, scores from the first administration will be correlated with the scores on the second occasion (DeVellis, 2012). Because the scale should be measuring a stable construct, the correlation should be high.

Validity. Validity testing of a new scale supports the idea that the scale measures what it is supposed to test (Hudson, 1982). Three types of validity can be measured: content, criterion-related, and construct. Content or face validity is the extent to which the items in the scale

represent relevant domains of the construct (DeVellis, 2003). This type of validity is typically measured by asking experts familiar with the research topic to review the scale items and suggest additions. As the scale was developed in an iterative process with expert healthcare providers, the experts reviewed items as they were developed to ensure content validity.

Criterion-related validity measures the extent to which the scale correlates with a designated criterion measure (DeVellis, 2003). This type of validity is concerned with the relationship between the instrument and an outside criterion that it should correlate with (Carmines & Zeller, 1979). In the present study, I tested the correlation between the new scale and the response of healthcare providers to a question about their previous training specific to older adult sexuality. I expected that participants who never received training would have lower knowledge, less permissive attitudes, and less permissive behaviors.

Construct validity involves the theoretical relationship between the variables being measured and other established measures (DeVellis, 2003). This type of validity can be established by determined the correlation between the scale and other existing scales. Construct validity includes convergent and discriminant validity (Hudson, 1982). Convergent validity is a measure of the scale's ability to correlate highly with other scales that measure similar constructs, while discriminant validity is a measure of the scale's ability to correlate poorly with measures of different constructs. I tested discriminant validity between subscales to ensure they measured separate concepts. I did not include other measures in Phase II to test construct validity, because the universe of items was already lengthy and time consuming, but I used a single item asking about comfort with older adult sexuality to determine the validity. By adding additional validated scale questions, it is likely that more subjects would have terminated participation. Future research will include other scales to test construct validity.

Protection of Human Subjects

This study was reviewed by the City University of New York institutional review board and received initial approval (298413-1). Additional amendments and revisions also received approval (298413-2 through 298413-5). Although human subjects are participants in both phases of this study, the risk of harm to individuals was minimal. Expert informants received and signed an informed consent for participation (Appendix L). Because they were experts in the field, I asked the participants to waive confidentiality in order to have their names and expertise associated with the scale. All participants, except two, agreed to waive confidentiality. Subjects in Phase II completed an online informed consent (Appendix M) before they began online participation in the survey. Regarding risks, both Phase I and Phase II participants could be exposed to stress and anxiety because the questions addressed the topic of sexuality and their professional performance regarding older adult sexuality. Expert informants were probed about their encounters and their communication regarding sexuality with older adults in a professional setting. Although some participants might have experienced discomfort and embarrassment, it was minimal. If Phase I participants experienced distress, I planned to stop the interview and provide appropriate resources for additional support, but this did not occur. Phase II subjects were voluntary, anonymous participants able to stop the survey at any time. There were no direct benefits to participants in Phase I. In Phase II, participants had the opportunity to enter their names into a raffle for an iPad mini. Participation in the raffle required subjects to reveal their identity. Potentially, all participants benefit from the development of the new scale, because it may be useful in future studies and to test training programs that help other healthcare providers discuss sexuality with their older adult clients.

Summary

The reluctance of healthcare providers to acknowledge and discuss sexuality and sexual health with older adult clients is well documented (Dogan et al., 2008; Dunn & Cutler, 2000; Gerbert et al., 1990; Mona et al., 2010; Skiest & Keiser, 1997; Tangredi et al., 2008). Although the Aging Sexuality Knowledge and Attitudes Scale (ASKAS) (White, 1982a) is often used to study these issues (Adams et al.; Allen et al., 2009; Bauer et al., 2013; Bouman et al., 2007; Creti & Libman, 1989; Dogan et al., 2008; Glass et al., 1986; Glass & Webb, 1995; Goldman & Carroll, 1990; Hillman & Stricker, 1996a; Hinrichs & Vacha-Haase, 2010; Langer-Most & Langer, 2010; Luketich, 1991; Quinn-Kracher & Van Hoozer, 1988; Ross et al., 2013; Snyder & Zweig, 2010; Steinke, 1994; Spector & Fremeth, 1996; Wang et al., 2008), the scale is outdated (Snyder & Zweig, 2010). By following a mixed-method approach to scale development (Bowen & Guo, 2012) in a two-phase study, this dissertation created a scale to measure healthcare provider role in the management of older adult sexuality, with initial validity and reliability testing. This process allowed experts to inform the development of the scale. In future studies, I will test a shorter version of the scale with a larger sample for additional CFA and more stringent reliability and validity testing.

CHAPTER VII: PHASE I RESULTS

Scale Development

Following a mixed-method approach to scale development, I divided the steps into two phases. In the present chapter, I review results from the first phase of the research method. During Phase I, I conducted a literature review, which included analyzing 64 relevant articles, books, and legal decisions. In conjunction with the literature review, I interviewed nine experts in the field of older adult sexuality. In the first five expert interviews, I asked the informants about their experience in the field and had them review the Aging Sexual Knowledge and Attitudes Scales (ASKAS). I asked them to make suggestions, including specific items, for a new scale based on that review. Based on the literature and the first five expert interviews, I developed a universe of items, which I reviewed with the remaining experts. I asked the remaining four experts to review the items, give feedback, and suggest additional items. This process resulted in a pool of 231 items for testing in Phase II.

Literature Review

The first step in scale development involves a literature review (Bowen et al., 2004; Bowen & Guo, 2012; DeVellis, 2012). Similar to historical shifts and medical advances, contemporary literature reflects changes in knowledge and issues related to older adult sexuality. This chapter reviews the current empirical and practice-based literature in order to identify issues for inclusion in a contemporary scale for measuring knowledge, attitudes, and behaviors regarding older adult sexuality. The ASKAS (White, 1982a) and other scales (Walker & Ephross, 1999; Walker et al., 1998; Walz & Blum, 1987) cover a number of areas that remain important today. However, knowledge about the continuity of sexuality throughout the lifecycle, normal changes in male and female sexuality, the impact of disease and medications on

sexuality, changes in relationship status on sexuality, and masturbation as reflected in those instruments are dated. The content validity of older scales is questionable because new subjects and areas of research became more prominent in recent years. As indicated in previous chapters, these issues include an aging LGBT population, treatments for male and female sexual dysfunction, STIs and HIV/AIDS, and safer sex practices. The review of contemporary research enabled me to propose important content for an updated scale.

Qualitative Interviews

In the mixed method approach to scale development (Bowen et al., 2004; Bowen & Guo, 2012), the second step is to interview people with reputational expertise related to the phenomenon. Following initial interviews with experts, Bowen and colleagues (2004; 2012) suggest creating a pool of items, reviewing the items with experts, cognitive testing with potential respondents, and expert review of revisions to items. I included these steps within the qualitative interviews, because the experts mirrored the characteristics of the intended respondents; consequently, they provided cognitive testing. I developed the items and reviewed them with experts in an iterative process.

Sample. The sample in Phase I consisted of nine healthcare providers with expertise in older adult sexuality. I interviewed the first five experts about their experience in the field, feedback on the ASKAS (White, 1982a), and suggestions for a new scale. This group consisted of two sex educators, two nurses, and one social worker, some of whom agreed for me to identify them in this dissertation. Ms. Peggy Brick was a sexuality educator in a high school and the Director of Education at Planned Parenthood. When she retired, she conducted workshops on sexuality for older adults and trainings for professionals. She developed a teaching manual about older adult sexuality and continues to teach older adults and professionals from the revised

version *Older, Wiser, Sexually Smarter: 30 Sex-Ed Lessons for Adults Only* (Brick et al., 2009). Ms. Brick also founded the Consortium on Sexuality and Aging. Dr. Melanie Davis is also a sex educator, and she is co-president of the Consortium on Sexuality and Aging. She completed her dissertation in clinical psychology on conversations between physicians and their patients about sexuality.

The two nurses who participated in Phase I did not give permission to reveal their identities, and I will refer to them as RN1 and RN2. RN1 has master's degrees in nursing and counseling and a Ph.D. in Psychobiology. She has published widely in the area of sexuality, with six books, 180 articles, and numerous book chapters on sexuality, including an early study of HIV infections in older adults. RN2 is a nurse and nursing home administrator, who also serves as a national educational consultant to long-term care facilities on issues related to the aging process and how to care for the sexual needs of elderly individuals. She became interested in older adult sexuality because of incidents she observed within nursing homes.

Mr. Travis Ingersol is a social worker who developed an interest in older adult sexuality because he encountered sex negativity among staff in a residential care facility. He pressed for staff training to deal with ageist stereotypes about sexuality and to teach basic sexual health information to residents, including STI knowledge and basic sexual functioning. While in graduate school, Mr. Ingersol designed a curriculum to train people working with older adults about the misperceptions and myths about aging and sexuality. Currently, he consults with retirement communities to design and implement sexual expression and protection from harm policies.

I interviewed a second group of four experts about their experience, asked for feedback on the newly developed items accumulated in the initial interviews, and solicited additional

suggestions for scale items. This group consisted of an art therapist, two doctors, and a gerontologist. Mr. Ben Davis is an art therapist who works in mental health settings with LGBT adults. He has dealt with adult populations ranging in age from 18 to 98, but currently works primarily with older adults. In his training, he found that the LGBT and older adult populations were vastly underrepresented and underserved, so he sought out additional training. He now trains agencies and individuals to work better with LGBT older adults and issues related to sexuality.

Dr. Carl Gray is a physician who completed a fellowship in palliative care. He believes that he is more comfortable talking about difficult subjects with patients because of his palliative care training. He observed that as people get sicker and older, they were still interested in trying to have sexual relationships. Dr. Gray has provided trainings and information sessions for older adults about sexuality at local community centers. Dr. June Lavalleur trained as a physicians' assistant and then went to medical school at the age of 41. She completed a Sexual Attitude Restructuring (SAR) seminar and as a gynecologist became particularly interested in older adult women. She completed a rotation examining mature women and was director of the Mature Women's Center at University of Minnesota. Dr. Lavalleur has lectured about sexuality and aging throughout the Midwest. In her retirement, she is training to become a certified sexual health counselor. Dr. Brian DeVries is a gerontologist with interests in lifespan development issues, particularly focused on the later years. His interest in social relationships, social health, and social interactions led him to study the experiences of disenfranchised older adults, particularly those who identify as LGBT. He has published widely on the experiences of LGBT individuals in later life. The combination of these experts from various fields of training with

experience working with older adults in a variety of settings provided a broad spectrum of feedback and experience about current issues in older adult sexuality.

Topics raised by respondents. Respondents brought up a number of topics regarding the development of a new scale. In addition to the dimensions of knowledge and attitudes, experts suggested adding a behavior or practice dimension. This suggestion aligns with scripting theory (Simon & Gagnon, 1986); therefore, I incorporated this additional dimension in the scale and development of candidate items. Experts pointed to the need for the measurement of specific demographic factors and for the use of particular language throughout the survey. Additionally, a number of themes emerged that mirrored the themes found in the literature. These included continuity of sexuality throughout the lifecycle; benefits of continued sexual expression; masturbation; normal changes and treatments for male and female sexual dysfunction; relationship between disease and sexual functioning, specifically dementia; influence of medications; LGBT issues; and safer sex practices. Additionally, experts suggested questions that related to a theme of patient rights.

Experts did not spontaneously remark on three themes identified in the literature review. These were relationship status, sexually transmitted infections (STIs), and HIV/AIDS. Based on my review of the literature, I developed items for the scale based on these topics and the second group of experts reviewed them. With the prompts of the suggested items, experts noted the appropriateness of the themes and items.

Demographics. Although the final proposed scale will not include demographic questions so that researchers can add items that are appropriate to their own studies, the experts discussed the importance of demographic items, including age, cultural background, sexual orientation, religiosity, occupation, and type of agency. Based on their expertise with LGBT

populations, Mr. Davis and Dr. DeVries suggested particular wording for a question on gender. Mr. Davis suggested using the term, "gender" rather than "sex," or leaving a blank space to allow people to express their gender as they would identify themselves. Based on his work with LGBT populations, he stated, "from a best practices standpoint, it would be . . . fill in the blank." Dr. DeVries suggested the need for two questions when one expects a large transgender respondent pool, including "the gender by which they identify and the gender into which they were born." The focus on demographic items, especially based on the particular interests of experts, may have distracted from item development, but I used an open-ended question about gender in Phase II.

Several informants discussed the need to ask respondents about their level of education and about training specific to sexuality and older adult sexuality. Developing an item specific to trainings in older adult sexuality was ultimately important for testing criterion-related validity. Additionally, Ms. Brick suggested asking a baseline question in the demographics section to determine comfort. Ultimately, I created an item that asked respondents to rate the extent to which they agree with the statement "older adult sexuality makes me uncomfortable" on a five-point Likert scale. This item was important for testing construct validity.

Language. Based on a review of the ASKAS, Dr. Davis suggested using the term "older adult" and excluding terms such as aged and elderly. Dr. Lavalleur and Dr. DeVries suggested defining "older adult." Dr. Lavalleur said, "because people define older very differently depending on the age that they are, so if you give this to a 28 year old, they may think of older as being 50. . . . If you give this to somebody who's in their 60s, they might think of being older as their 80s." On each page of the instrument, there is a statement that says, "for the purposes of this survey, when we refer to older adults consider this to mean 65 or older." Also based on the

ASKAS, Dr. Davis suggested using the term long-term care facilities, instead of nursing homes, because it includes more types of residences.

Ms. Brick, Dr. Davis, and RN1 discussed the need to define the term "sexual activity," which is used throughout the ASKAS. Dr. Davis suggested a question that "helps you understand how the person taking this survey is defining sexual activity." In the demographics section of the scale, I included a checklist that asked respondents to indicate the activities that they consider sexual activity. Although Dr. Gray, Dr. DeVries, and Mr. Davis agreed on the importance of the question, inclusion of this type of question would be at the discretion of researchers who use the new scale in future studies.

Themes Found in ASKAS and Other Scales

Continuity of Sexuality throughout the Lifecycle

Relevant literature. A number of recent studies (Beutel et al., 2002; Kontula & Haavio-Manila, 2009; Lindau, et al., 2006; Lindau et al., 2007; Schick et al., 2010; Waite et al., 2009; Zeiss & Kasl-Godley, 2001) reported decreased sexual activity as adults age. The most recent study of aging and sex to date (Schick et al., 2010) found that only 42.0% of women and 53.4% of older men age 50 and older reported being sexually active in the past year. These low rates of sexual activity may be due to the different ways researchers define "sexual activity." For example, many researchers (Kontula & Haavio-Mannila, 2009; Waite et al., 2009) define sexual activity as sexual intercourse with a partner, while others do not provide a specific definition.

Although there was a steady decline in partnered sex that correlates with age (Beutel et al., 2002; Kontula & Haavio-Manila, 2009; Lindau, et al., 2006; Lindau et al., 2007; Schick et al., 2010; Waite et al., 2009; Zeiss & Kasl-Godley, 2001), frequency of sexual intercourse remained stable for those who remain active (Lindau et al., 2007; Waite et al., 2009). For

individuals who remained sexually active, frequency of partnered sex remained stable through age 74 (Lindau et al., 2007; Waite et al, 2009), with approximately two-thirds reporting intercourse at least two to three times per month and only declined modestly for adults over age 75 (Waite et al., 2009). Although frequency decreased somewhat in adults aged 75 to 85, more than half of sexually active older adults reported sexual intercourse at least two to three times per month, and nearly one quarter reported having sexual intercourse at least once a week (Lindau et al., 2007). Even though sexual activity declined with age, frequency of sexual intercourse was stable among older adults who remained sexually active. Because the studies defined sexual activity as partnered sex, the decline in activity, but not in frequency, may be the result of the lack of a partner, not lack of interest.

Qualitative findings. Consistent with the empirical literature, all informants referred to the continuity of sexuality throughout the lifecycle. Ms. Brick suggested, "Sexuality continues [to] what 30, 40, 50, let alone, 70, 80, 90." Based on this statement, I initially developed a dichotomous true/false item that stated, "People remain sexual beings into their 70s, 80s, and 90s." Dr. DeVries responded to this item, "I differentiate those decades pretty significantly and recognize that there are decreases in sexual activity within that age range. So to say it is accurate. . . it's in some ways lumps 70, 80, and 90 year old together." Similarly, RN1 stated, "we're all sexual beings from the time we're born to the time we die," which I turned into a true/false item. Mr. Davis responded that this was a potentially controversial question because it included infancy. I ultimately edited those items to create one candidate item, "Sex remains an essential part of life throughout the lifespan."

Consistent with the literature that frequency of sexual intercourse remains stable for older adults, Dr. Davis said, "if you had a crappy sex life before 65, it's probably going to stay crappy

later. Or if you have a good one." A number of experts responded to this item and gave suggestions for structuring a clear and concise question, which led to a dichotomous true/false item, "If one enjoyed sex in their younger years, one is more likely to enjoy sex as an older adult."

In addition to feedback that led to dichotomous true/false knowledge questions, experts gave examples from their practice that informed the development of the behavior questions. Mr. Ingersol proposed an example of a couple telling a healthcare provider to walk into their room in a long-term care facility while they were having sex. Similarly, RN2 discussed possible reactions to walking into a room and finding two people in bed together. Her suggests included "throw[ing] the person out of bed." These examples led me to develop items based on practice experience that would rate the likelihood subjects would respond in specific ways. For example, "If I were working in a long-term care facility and knocked on the door of a room and found a couple having sexual intercourse, I would ___." Subjects were asked to rate each option on a scale of 1 to 5 the likelihood that they would "be disgusted," "ask them to stop," "make them get out of bed," "leave and talk to them later," and "inform their family of their behavior."

Benefits of Continued Sexual Expression

Relevant literature. The literature strongly supports the notion that continued sexual expression, with or without a partner, has a positive impact on mental (AARP, 2005; Barnard, 2011a; Bauer et al., 2007; Schwartz, 2007) and physical health (Barnard, 2011a; Block, 2008; Gott, 2005). When men and women have orgasms or a close physical connection, the hormone oxytocin is released and produces feelings of happiness (Schwartz, 2007). Older adults who have at least one orgasm per week have lower rates of depression (Barnard, 2011a). Older adults with regular sexual partners report fewer symptoms of depression and less stress (AARP, 2005).

Research indicated that regularly sexually active adults are generally healthier (AARP, 2005; Lindau et al., 2006; Lindau et al., 2007; Schick et al., 2010; Zeiss & Kasl-Godley, 2001). Fifty-four percent of regularly sexually active older adults report excellent or very good health (AARP, 2005). In comparison, only 36% of older adults who are not regularly sexually active reported excellent or very good health (AARP, 2005). In addition, 98% of women reported a belief that being sexually active was good for their health (Lindau et al., 2006). Although there seems to be a relationship between health and sexual activity, the direction of the correlation is difficult to determine. Older adults who are healthier may be more likely to be sexually active or being sexual active may lead to better health.

Regardless of the direction of the relationship, practitioners report a connection between sexual pleasure and a strong the immune system (Barnard, 2011a; Block, 2008), pain relief due to the release of endorphins (Block, 2008), and cardiovascular benefits (Barnard, 2011a; Block, 2008). In addition, orgasms exercise the pelvic-floor, which can prevent bowel and bladder incontinence (Barnard, 2011a). Although the relationship between health and sexual activity is unclear, sexuality in older adults appears to be associated with improved health outcomes.

Qualitative findings. A number of expert informants remarked on the health benefits of remaining sexually active. While RN1 and Mr. Ingersol commented on the health benefits in general, Mr. Davis specifically discussed the benefits of sexual activity for managing anxiety. This led to the development of the item "sexual activity reduces stress."

In addition to the benefits of remaining sexually active, Dr. Gray commented on the misconceptions that continued sexual activity was dangerous. He described older adults worrying about having a heart attack or stroke as a result of sexual activity. In response to these suggestions, I included true/false items about the risk of heart attack and stroke as a result of sex.

Relationship Status

Relevant literature. Lower rates of partnered sexual activity among older adults (Beutel et al., 2002; Kontula & Haavio-Manila, 2009; Lindau, et al., 2006; Lindau et al., 2007; Schick et al., 2010; Waite et al., 2009; Zeiss & Kasl-Godley, 2001) may be due to the changing availability of a partner (AARP, 2005; Brecher, 1984; Diokono, Bown, & Herzog, 1990; Lindau et al., 2006; Matthias, Lubben, Atchison, & Schweitzer, 1997; Pfeiffer & Davis, 1972; Schick et al., 2010; Waite et al., 2009). Married older adults are nearly six times as likely to be sexually active than older adults who are unmarried (Matthias et al., 1997). One study found that three-quarters of married older men and more than half of married older women were sexually active, while only one third of unmarried older men and only one out of twenty unmarried older women were sexually active (Diokono et al., 1990). According to a sex educator who works with older adults, after age 65, there are approximately three times as many single women as single men (Brick et al., 2009). Older adults with a partner are more likely to report being sexually satisfied than older adults who are not partnered (AARP, 2005).

Qualitative findings. In response to items on relationship status, Dr. DeVries discussed the importance of the theme, stating that that marital status was one of the primary predictors of sexual behavior. He also noted the heteronormativity of the language used in the relationship status section of the proposed new scale items. He suggested changing the language to "partnerships," rather than "marriage." Based on these remarks, I developed language and added items that he suggested about the difference in rates of marriage and partnership between heterosexual men and gay men. Nevertheless, I retained language about widowhood, since marriage has been an extremely important factor in sexual behavior for the current cohort of older adults.

Masturbation

Relevant literature. Masturbation is self-stimulation of one's body, particularly the genitals, for sexual arousal with or without orgasm (Brick et al., 2009). More than half of men and nearly a quarter of women aged 65 to 74 reported masturbating in the past year (Lindau et al., 2007). Older adults may experience sexual pleasure through masturbation either by choice or because they do not have a partner due to death, illness, divorce, or separation (Price, 2011). Even when they have partners, older adults, like younger adults, may masturbate to supplement partnered activity (Brick et al., 2009). Masturbation may encourage continued sexual desire and address sexual tension. Couples may participate in shared masturbation or mutual masturbation, especially when sexual penetration is difficult or impossible.

In addition to the physical and psychological benefits of continued sexual activity (AARP, 2005; Bauer et al., 2007; Gott, 2005; Schwartz, 2007), masturbation has another set of practical benefits. Masturbation helps women maintain sexual functioning (Brick et al., 2009). It decreases vaginal atrophy and preserves vaginal tissue elasticity and vaginal lubrication. As men and women age, their bodies may require different types of stimulation to attain arousal and orgasm (Price, 2011). Masturbation is a tool for exploring pleasure and stimulation.

Qualitative findings. Many of the experts talked about masturbation. RN1 noted it was "the most common sexual activity for people around the world." This led me to create a true/false question that stated, "less than a quarter of older adults masturbate." Dr. Lavalleur pointed out the difference in masturbation rates by gender. Referring to the literature, I eliminated the original item and added two new items, "More than a quarter of older men report masturbating in the past year (T)." and "More than a quarter of older women report masturbating in the past year (F)."

Similarly, Mr. Ingersol suggested two attitude questions, “masturbation is a healthy normal sexual activity for older males” and “masturbation is a . . . healthy normal sexual activity for older females.” I developed these statements into two Likert-type response items. In response, Dr. Gray said, “I think that it's good that you have it separated out, you know males and females.” He admitted his personal opinion that differed for men and women, which he had not expected.

Ms. Brick, Mr. Ingersol, and RN2 all proposed items from their practice to use as a behavior question about public masturbation. RN2 said, “Right away if someone sees somebody masturbating, everyone . . . tells them not to do it and don't touch and pulls them away and out of the area and makes the person feel like they're doing something wrong . . . not something natural.” Based on these observations, I created a matrix of interval level Likert items: “If I were working in a long-term care facility and saw a resident masturbating in front of other people, I would ___.” They are asked to rate the likelihood they would react in each of the following ways: “feel uncomfortable addressing it,” “ignore it,” “tell them that their behavior is inappropriate in public,” “tell them that masturbating is inappropriate in general,” “help them find a private area,” “inform their family about their behavior,” and “arrange for them to get cognitive testing.”

Normal Changes in Male Sexual Functioning

Relevant literature. As men age, they produce less testosterone and experience a number of other normal changes that affect their sexual activity (Brick et al., 2009). These differences may include reduced sperm production, delayed ejaculation, less forceful orgasm, and erection changes. Younger men experience psychogenic erections, which do not require direct physical stimulation (Westheimer & Lehu, 2005). However, as men age these types of

erections decrease, and eventually men require direct stimulation of the penis to achieve erections. Additionally, erections may take longer to attain, are not as firm, are lost soon after orgasm, and the refractory period before another erection lengthens (Brick et al., 2009). These changes in male sexual functioning are normal.

However, even though these changes normally come with age, erectile dysfunction (ED) advertising has led to a general societal belief that typical changes in sexual functioning are dysfunctional. According to one doctor, the clinical definition of ED is the inability to attain an erection more than half of the time (Olson, 2011). Nearly half of men over 65 report erectile difficulties (Waite et al., 2009), and these problems occur across countries studied (Laumann et al., 2005). However, some men may report ED, even when it does not meet the clinical standard. The popularization of advertising for drugs for ED may have lead to increased reports of ED, which grew by 26% between 1999 and 2004 (AARP, 2005).

In addition to ED, men reported a number of other sexual issues (Lindau et al., 2007; Waite et al., 2009). Approximately a quarter of older men reported climaxing too quickly, anxiety about sexual performance, inability to climax, and diminished interest in sex (Lindau et al., 2007). This decreased interest in sex may relate to declining levels of testosterone that occur with age (DeLamater & Sills, 2005). Men experience a 30% decline in testosterone levels between ages 40 to 70 alone. More than one quarter of men reported that sexual problems made them avoid sex (Waite et al., 2009).

Despite the availability of treatments for male sexual dysfunction, such as injections, implants, and vacuum devices at the time the scale was developed, the ASKAS (White, 1982a) does not include any questions about these treatments. Viagra, the first anti-impotence pill, arrived on the market in March 1998 (Herzog, 2008). Although Viagra was the first treatment in

a pill form, there are now three such drugs on the market (Hersch, 2011). Viagra requires good timing and communication with the partner, because it creates a small window for erection (Westheimer & Lehu, 2005). Cialis was developed to manage these issues and is advertised to last thirty-six hours. In 2005, more than one in ten men over age 60 reported taking a medication for improved sexual functioning (AARP, 2005). A recent study (Schick et al., 2010) found that 17% of men reported using a medication for erectile dysfunction during their last sexual encounter. The percentage of older men who reported using these medications increased with age until age 70, when the usage rate declined (AARP, 2005). According to a sex therapist, only about half of men who take a medication for erectile dysfunction continue to use it for over a year (Brick et al., 2009). This may be because of side effects, which include flushing and headache (Westheimer & Lehu, 2005).

According to practitioners, men may also discontinue the use of medications for ED because of changes within their relationship (Brick et al., 2009; Hersch, 2011; Westheimer & Lehu, 2005). Medications need to be successfully integrated in a couple's relationship and sex life (Brick et al., 2009), which can be facilitated by sex therapy (Hersch, 2011). When men begin taking pills to enhance erections, they have new expectations of sex, which their partner may not be prepared for (Westheimer & Lehu, 2005). There may be increased pressure for unwelcomed sexual intercourse. Additionally, some partners report fear that a renewed sexual capacity will lead to the temptation for their partners to cheat. Even if cheating does not occur, this jealousy may cause tension in the relationship (Westheimer & Lehu, 2005).

Qualitative findings. Consistent with reports from the empirical literature, several informants discussed changes that occur in sexual functioning for men as they age, along with

treatments. Although Dr. Davis noted increased ejaculatory control, Mr. Ingersol discussed the increased refractory period. RN1 discussed the causes of these changes:

> [It] may be due to the vascular system problems with anything that . . . gums up the plumbing. . . . Also damage to the pelvic nerve in men, whether they had a prostatectomy or some type of treatment for prostate cancer, which is very common in older men. . . . If they ride a bicycle . . . without a padded seat, there's damage to the pelvic nerve, so there are a lot of things. . . .

This resulted in a knowledge true/false question "riding a bicycle can cause problems with sexual response in older men (T)." Dr. Davis also noted the ASKAS implied, "the erection is king. . . . A lot of these questions assume that if the guy can't have an erection then he's not having good sex, and that's not necessarily the case because there are a lot of guys who are able to have very good sex despite they're not being able to have an erection." Based on this reflection, I developed a question that considers the attitude that "the erection is king:" "Older men are able to enjoy sex if they don't have an erection." I ask respondents to rate their level of agreement using a 5-point Likert scale from strongly disagree to strongly agree.

In addition to questions about changes in sexual functioning, experts discussed treatments for problems with sexual functioning. Dr. Davis commented, "statistically most men don't stay on Viagra for more than a year." This statement is backed up by the literature (Brick et al., 2009; Westheimer & Lehu, 2005), so I developed the item, "Most men who try Viagra continue using it until they are no longer interested in sexual activity." Dr. Lavalleur remarked on the importance of including all drug treatments, not just Viagra, in the scale. In response, I changed all questions that mention Viagra to also include Levitra and Cialis. Consistent with the literature about the need to integrate medications into the relationship (Brick et al., 2009), Dr.

Lavalleur also suggesting asking a question about discussing the effects of ED medication with the partner. This led me to develop a Likert-scale behavior question: "When men begin taking an oral medication for erectile dysfunction, such as Viagra, Levitra, or Cialis, I discuss it with their partner."

Normal Changes in Female Sexual Functioning

Relevant literature. As women age, their testosterone (Brick et al., 2009) and estrogen (Westheimer & Lehu, 2005) levels decline, which lead to normal changes in female sexual functioning. Testosterone is related to libido; so declining amounts may lead to decreased desire (Brick et al., 2009). Nearly half of women report lack of interest in or desire for sex (Lindau et al., 2007). According to sex therapist Dr. Ruth Westheimer, declining amounts of estrogen can lead to decreased vaginal elasticity, narrowing and shortening of the vagina, decreased size of the labia, clitoris, uterus, and ovaries (Westheimer & Lehu, 2005), and thinning of the vaginal walls (Westheimer & Lehu, 2005; Zeiss & Kasl-Godley, 2001). Additionally, decreased blood flow to the pelvic region (Westheimer & Lehu, 2005) causes post-menopausal women to have less and delayed lubrication (Price, 2011; Westheimer & Lehu, 2005; Zeiss & Kasl-Godley, 2001); more than two-thirds of women reported difficulty with lubrication (DeLamater & Sill, 2005; Lindau et al., 2007).

Because of normal changes, such as decreased lubrication and thinning of the vaginal walls, intercourse may become uncomfortable or painful as women age (Brick et al., 2009; Westheimer & Lehu, 2005). Seventeen percent of older women reported pain or discomfort during intercourse (DeLamater & Sill, 2005; Lindau et al., 2007). In their classic study of the human sexual response cycle, Masters and Johnson (1966) described sexual activity followed by dyspareunia, which involves vaginal burning, pelvic aching, and lower abdominal distress and

dysuria, which involves burning and irritation upon urination in older women. In addition to sexual discomfort secondary to dyspareunia and dysuria, older women in this early study reported that the uterine contractions associated with orgasm could become so painful that they avoided orgasm and/or sexual activity completely. Of women who reported at least one sexual problem, approximately one quarter reported that the problems led them to avoid sex (Waite et al., 2009). In addition to women who avoided orgasm due to pain, approximately one-third of older women reported an inability to climax and nearly a quarter reported they did not find sex pleasurable (Lindau et al., 2007).

Although the ASKAS (White, 1982a) does include female sexual changes that occur with age, it does not cover possible treatments. No definitive treatment is available for female sexual dysfunction, but hormone replacement therapy (HRT) with estrogen alone or in combination with progesterone have been popular for decades to relieve sexual side effects, such as dryness, associated with menopause (Harvard Medical School, 2011a; Palacios, 2008). These treatments are available as pills, creams, and patches (AARP, 2005). Approximately fifteen percent of women over age 60 report taking a hormone pill, four percent use a cream, and one percent use a patch. Interestingly, the use of hormone pills in women aged 45 and older decreased from 1999 to 2004, while the use of hormones creams and patches remained consistent. This decline may have been because of studies that reported potential risks of HRT (Palacios, 2008).

Despite the popularity of HRT, the risks and benefits have been hotly debated (Palacios, 2008). In 2001, researchers reported that HRT relieved symptoms of menopause and protected against osteoporosis, heart disease, colon cancer, and Alzheimer's disease (Harvard Medical School, 2011a). The risks included increased susceptibility to breast cancer and gallbladder disease. Recent research links HRT to increases in those conditions in addition to increased risk

of stroke, blood clots, and dementia. Currently, physicians recommend vaginal creams, inserts, or rings that contain estrogen instead of HRT.

Since HRT is highly controversial (Palacios, 2008), some practitioners recommend other treatments for women. A number of risk-free treatments are available for vaginal discomfort that do not require prescriptions (Barnard, 2011b; Kellogg Spadt, 2011; Price, 2011; Westheimer & Lehu, 2005). The use of lubricants can make painful intercourse more pleasurable (Price, 2011; Westheimer & Lehu, 2005). The proper functioning of nerves in the vagina can be maintained by moisturizing daily, massaging the inner wall at least twice per week, and having an orgasm weekly (Barnard, 2011b). Women can also eliminate a number of common products, because they may cause vaginal irritation (Kellogg Spadt, 2011). These products include pads, shampoo and conditioner, laundry products, douches, and shaving cream. These simple changes may reduce vaginal discomfort.

Because of the continued confusion about effective treatment, physicians may be hesitant to discuss sexual dysfunction with female clients, particularly elderly women (Jacobson, 2010). Despite continued controversy, treatments are available for female sexual dysfunction and warrant further attention.

Qualitative findings. Informants' experiences in the field reflected the literature on changes in female sexual functioning. Dr. Davis described pelvic floor prolapse and pain with sexual activity, a feature noted in the literature (Brick et al., 2009; DeLamater & Sill, 2005; Lindau et al., 2007; Westheimer & Lehu, 2005). RN1 pointed out that both women and their partners may experience pain on intercourse due to vaginal dryness. As a result, I developed a true/false knowledge item, "Vaginal and vulvar dryness is older women can make intercourse uncomfortable/painful for women and their partners (T)."

In addition to physiological changes that occur with age, Dr. Davis suggested including questions about ways by which women can support their own health, such as using vaginal and vulvar moisturizers. Other experts recommended including vaginal dilators to treat atrophy. In response to a proposed behavior item recommending vaginal dilators for atrophy, Dr. Gray noted he had only recently discussed vaginal dilators with patients. He questioned the necessity of such a specific question, but I ultimately decided to retain the question. It is of particular interest that a male physician was the one to question the relevance of a question about female sexual functioning. In addition to dilators and massage for women with vaginal atrophy, Dr. Lavalleur suggested adding vaginal estrogen and vaginal moisturizers to knowledge questions about how women managed their own sexual health issues.

Relationship between Disease and Sexual Functioning

Relevant literature. Researchers consistently link health and sexual activity in older adults (AARP, 2005; Lindau et al., 2006; Lindau et al., 2007; Schick et al., 2010; Zeiss & Kasl-Godley, 2001). Older adults who rate their health as poor are less likely to participate in sexual activity (Lindau et al., 2007). Those who report poor health and are sexually active are more likely to report having problems with sex. Health problems typically precede decline in sexual activity and function (Schick et al., 2010; Zeiss & Kasl-Godley, 2001). A number of specific illnesses, including heart disease, diabetes, stroke, cancer, arthritis, depression, and dementia, are linked to problems with sexual functioning.

Heart disease. Researchers found that sexual inactivity significantly correlates with heart disease ($p < .01$) and high blood pressure ($p < .01$) (Matthias et al., 1997). More than half of men and women over age 60 have high blood pressure and nearly half have high cholesterol (AARP, 2005). High blood pressure and cholesterol are precursors to a heart attack, which can

seriously affect one's sex life (Westheimer & Lehu, 2005). Following a heart attack or other serious heart condition, specific instructions may be necessary for continued sexual activity.

Diabetes. Nearly one quarter of adults over age 60 in the US have a diagnosis of diabetes (AARP, 2005). Researchers found that diabetes significantly ($p < .05$) correlates with sexual inactivity (Matthias et al., 1997). When not properly controlled, diabetes can result in damage to the nerves that allow men to have erections (Westheimer & Lehu, 2005). Erectile dysfunction related to diabetes can be especially upsetting to men, because they continue to desire sex, but cannot attain an erection. In women, diabetes can cause yeast infections (Price, 2011) and vascular damage (Westheimer & Lehu, 2005) that can lead to vaginal dryness, difficulty with arousal, decreased lubrication, and difficulty attaining orgasm. To combat these changes, older adults may need increased stimulation and lubrication to maintain sexual activity.

Stroke. Researchers found a significant correlation ($p < .05$) between sexual inactivity and higher rates of stroke (Matthias et al., 1997). Problems associated with a stroke can range from mild to severe and may include memory difficulties and paralysis (Westheimer & Lehu, 2005). After stroke, individuals may continue to desire sex. To remain sexually active after a stroke, individuals should be advised to focus on areas of the body that have not been affected by the damage to the brain.

Cancer. All types of cancer and associated treatments may affect sexual functioning and interest in sex (Bolte, 2011). Fatigue and pain are often associated with cancer and its treatment. In order to combat fatigue, older adults with cancer may want to participate in sexual activity in the morning, instead of in the evening. To deal with pain, analgesics can be taken approximately one hour before planned sexual activity.

Some specific types of cancer, such as breast, cervical, and ovarian, affect women's sexual functioning and their sense of sexual desirability. Approximately one out of every hundred women over 60 is diagnosed with cervical or ovarian cancers (AARP, 2005). Approximately one out of every twenty women over 60 is diagnosed with breast cancer. Chemotherapy and radiation to treat these cancers can cause vaginal dryness, which can make sex uncomfortable and lead to loss of desire (Westheimer & Lehu, 2005). Many women with breast cancer need to have one or both breasts surgically removed. Because breasts are so closely tied with sexual attractiveness, women may feel undesirable after surgery.

Similar to women, specific types of cancer that affect men can influence sexual functioning. Approximately one quarter of men over age 60 have an enlarged or swollen prostate and 16% of men over age 70 are diagnosed with prostate cancer (AARP, 2005). There are 2 million prostate cancer survivors in the United States, and many have decreased libido and erectile dysfunction because of surgery or radiation (Weinsberg, 2011). Since approximately 80% of prostate cancer is diagnosed at the early-stage, surgeons are able to perform erectile nerve-sparing procedures that allow for continued erections.

Arthritis. Researchers found that arthritis and sexual inactivity significantly correlate ($p < .001$) (Matthias et al., 1997). Approximately one third of men and women over age 60 are diagnosed with arthritis (AARP, 2005). Although not life threatening, arthritis can make sex extremely painful and reduce desire as a result (Westheimer & Lehu, 2005). Sex therapists Drs. Westheimer and Lehu (2005) suggest a number of simple life style changes that may make it possible for arthritis sufferers to remain sexually active. First, arthritis pain may be worse at certain times of day, so timing sex during low pain periods is important. Second, taking a pain relieving medication or warm bath or shower before sex can reduce discomfort and make sex

more enjoyable. Finally, since arthritis is often located in particular areas, changing sexual positions may alleviate pain during sex.

Depression. Approximately 10% of adults over age 60 have a diagnosis of depression (AARP, 2005). Untreated depression negatively affects sexual arousal and desire (Lourenco, Azevedo, & Gouveia, 2011; Fabre & Smith, 2012; Thakurta et al., 2012) and is closely linked with erectile dysfunction (Araujo, Durante, Feldman, Goldstein, & McKinlay, 1998; Nicolosi, Moreira, Vila, & Glasser, 2004). Although many studies report a relationship between depression and erectile dysfunction, the direction of the effect is unclear because depression may cause sexual difficulties or erectile dysfunction may lead to depression. In an effort to determine the direction of the causation, Nicolosi and colleagues (2004) measured depressive symptoms and correlated them with reported sexual satisfaction. Prevalence of depressive symptoms was significantly ($p < 0.0001$) lower for men who were extremely satisfied with sex compared to men who were dissatisfied. The relationship between depressive symptoms and sexual satisfaction showed a linear trend.

Dementia. There is little information available about the relationship between dementia and sexuality (Price, 2011). Dementia causes impaired memory, language, and reasoning (Price, 2011), which can influence sexual desire and functioning (Kuhn, 2011). During the early to moderate stage of dementia, older adults may continue to desire sex and remain sexually active. However, if a partner assumes a caregiving relationship, they may no longer desire sex. As dementia progresses, sexual desire and functioning typically diminish. Some individuals with dementia may become hypersexual and demand sexual talk and activity from their partner or others (Kuhn, 2011; Westheimer & Lehu, 2005). Due to cognitive changes, individuals with moderate to advanced dementia may not be able to consent to sexual activity (Kuhn, 2011). Sex

therapists encourage partners of individuals with dementia to reflect on what feels right and, if comfortable, explore sexual needs outside the relationship (Price, 2011).

Qualitative findings. Based on their experiences, the expert informants refined the items on the effects of chronic illnesses. Dr. Lavalleur suggested warm baths help with pain relief for older adults suffering from arthritis, in addition to pain relieving medications. This remark led me to create a matrix of interval level Likert items: "If an older adult patient reported arthritis pain during sex, ___", followed by a series of statements, including "I am comfortable discussing ways to make sex more pleasurable," "I recommend taking a nonsteroidal pain reliving medication prior to sex," "I recommend timing sex during low pain periods," "I discuss trying alternate sexual positions," "I recommend taking a warm bath before sex," "I recommend discontinuing sexual activity," and "I don't discuss it." Subjects are asked to rate on a scale of 1 to 5 the extent to which they agree with their likelihood of responding in each way. Reflecting that practitioners do not discuss sexual problems with older adults who are ill, RN2 stated, "for other caregivers when they're faced with some critical health issues in caring for someone they put the idea of sexuality on the back burner." I developed a behavior item that reflects this statement. Many of the experts talked about chronic illnesses in general, but some mentioned diabetes, arthritis, and prostate cancer specifically.

Many of the expert informants were interested in discussing the impact of dementia on sexual health. Consistent with the research on this topic (Kuhn, 2011), several of the experts felt it was important to include items about dementia and the ability to consent to sexual activity. Mr. Ingersol stated, "Once you get to a certain level it doesn't matter if you're married, it's not consensual." These concerns led me to create true/false knowledge questions about consent and dementia: "People with dementia are unable to consent to sexual activity (F)." and "No matter

their level of dementia, older adults are able to have sex with their long-term partner (F)." RN2 also discussed elder abuse and the need to inform adult protective services when it occurs. In response, I created a behavior item using a five point Likert scale from strongly agree to strongly disagree: "If a patient with dementia begins a sexual relationship with somebody who is cognitively intact, I assess for elder abuse."

In addition to the ability to consent and elder abuse, a number of experts raised the ethical issue of sexual relationships outside of marriage when one of the partners has dementia. RN2 talked about her practice experience in which she has seen incidents when one person in a couple is living in a nursing home with dementia and the other lives independently. She discussed the issues that arise when the nursing home resident begins a new relationship with another resident. Others talked about the healthy partner starting a new relationship. These observations led to attitude items: "If my patient, whose partner has dementia and no longer remembers the relationship, begins a relationship with a neighbor, I would think it is morally wrong" and "I think it is morally wrong for someone who is married and has dementia to begin a sexual relationship with somebody in their long-term care facility."

When reviewing the questions in the dementia section, Dr. Gray and Dr. DeVries talked about the importance of these specific questions and their thought provoking nature. Dr. DeVries stated:

> There had been a recent . . . some interesting writing on dementia and sexual activity, but I think you targeted that by the comparison with the true and false question as well as one of the Likert questions . . . addressing some sexual relations with somebody with dementia and somebody who's cognitively intact. It seems to me that's sort of a crucial issue, and I like that you're getting at that.

Influence of Medications on Sexual Functioning

Relevant literature. In the US in 1997, doctors wrote more than 1.5 billion prescriptions (Finger, Lund, & Slagel, 1997). This amounted to an average of six prescription medications for every person living in the country. By 2005, adults over age 45 reported taking twice the number of prescription medications than they took in 1999 (AARP, 2005). Many commonly prescribed medications cause sexual side effects (Finger et al., 1997).

More than half of men and women over the age of 60 take an antihypertensive to treat high blood pressure (AARP, 2005). No antihypertensive medications are completely free of sexual side effects (Westheimer & Lehu, 2005). Central antiadrenergic agents and diuretics can cause erectile disorder (Finger et al., 1997). Guanethidine often causes erectile disorders, decreased desire, and difficulty ejaculating. Although beta-blockers are advertised to cause fewer difficulties with erection, half of patients taking these medications reported decreased sexual desire. Hydralazine and prazosin rarely cause these side effects, but some patients report priapism as a result (Finger et al., 1997). ACE inhibitors are the least likely anti-hypertensive medications to cause changes in sexual functioning.

Almost one in ten adults over the age of 60 report taking an antidepressant (AARP, 2005). Nearly all antidepressants cause changes in sexual functioning (Finger et al., 1997). Tricyclics often cause erectile dysfunction in men and absent or delayed orgasm in both men and women. Serotonin reuptake inhibitors (SSRIs) were initially advertised to have no sexual side effects, but many men and women taking SSRIs have reported delayed orgasm (Finger et al., 1997). Although trazodone does not typically affect erection or orgasm, it sometimes causes priapism (Finger et al., 1997).

Anti-hypertensive and antidepressant medications have the most pronounced sexual side effects; however many other medications, including nonprescription medications, can affect sexual functioning (Finger et al., 1997). More than a quarter of adults over age 60 report taking a painkiller (AARP, 2005). Naproxen purchased with a prescription or over-the-counter as Aleve can cause erectile dysfunction and lack of ejaculation (Finger et al., 1997). Antacids are accompanied by erectile disorder and decreased desire.

Considering the wide array of sexual side effects from a number of medications (Finger et al., 1997), many sex therapists encourage older adults with sexual problems to give a list of their medications to their healthcare provider (Brick et al., 1997). An open discussion about medications and sexual functioning is important, because many patients may discontinue important medications if they believe they are affecting sexual functioning (Finger et al., 1997).

Qualitative findings. Informants talked about the impact of medications, particularly heart medications and antidepressants on patient's sexual functioning. Dr. Lavalleur included over-th- counter medications and their affects on sexual functioning. These remarks, consistent with the extensive literature on the effects of a wide range of prescription and over-the-counter medications led me to develop true/false knowledge questions about specific medications and their impact on sexual functioning. Additionally, Mr. Ingersol suggested a behavior question: "What would be the first thing you do if an older adult is complaining about erectile difficulties or loss of lubrication. . . . Make sure they go to their doctor first and do a check on their medications." I reframed this as a behavior item: "If a patient complains about sexual difficulties, I discuss their medications with them to see if they might be a factor."

Themes Missing from Existing Scales

Although the ASKAS (White, 1982a) covers a number of important issues related to older adult sexuality, it excludes key issues that are important at present. For example the ASKAS fails to cover issues related to older adults who identify as lesbian, gay, bisexual, or transgender (LGBT). In addition, although the ASKAS covers male and female changes in sexual functioning with age, it does not include available treatments that can allow for continued sexual activity throughout the lifecycle. Other omissions in the ASKAS include questions regarding STIs, including HIV/AIDS, or safer sex practices. The inclusion of these issues is necessary for a scale of knowledge, attitudes, and behaviors toward older adult sexuality that appropriate to 21st Century practice.

LGBT and Aging

Relevant literature. In the US, there are approximately three million adults aged 65 or older who identify as LGBT (National Gay and Lesbian Task Force, 2011). Experts estimate that this number will double by 2030. Today's older adults grew up during a period when homosexuality was not widely accepted (Brick et al., 2009) or in some states illegal. The expected increase of older adults who identify as LGBT by 2030 may reflect increased comfort about being "out" as older adults (Brick et al., 2009). Despite these increasing numbers of self-identified LGBT older adults, in a recent study of over 2,000 older adults, only eight reported they were in same sex relationships (Lindau et al., 2007). The low rates of same sex relationships in this older adult sample are difficult to explain, but the question asks about relationships and not behavior and the wording of questions could have prevented respondents from answering honestly.

Historically, researchers have made assumptions about heterosexuality and vaginal-penile intercourse (Marshall, 2010). Although this type of research and practice is not homophobic, it is heterosexist (Brick et al., 2009). Heterosexism is the assumption that people are heterosexual, unless specifically explicated. This construct can make heterosexism unwittingly hurtful to older LGBT adults or those engaging in same sex behaviors. For example, institutionalized heterosexism has led LGBT older adults to have inadequate healthcare (National Gay and Lesbian Task Force, 2011). At the macro policy level, same-sex couples were not eligible for federal benefits, such as Medicare or Social Security based on their partner's work history, until the recent Supreme Court case, which overturned the Defense of Marriage Act (DOMA – United States v. Windsor, 2013). Similarly, same-sex life partners were not eligible for Social Security survivor's benefits, which resulted in a loss of $124 million to elderly LGBT individuals each year until DOMA was overturned. Same-sex partners may still not be eligible for certain state benefits, such as spousal refusal for Medicaid, which protects a spouse's home and assets when applying for long-term care or nursing home benefits. Although this may be changing, hospitals have denied visitation to a same-sex partner (National Gay and Lesbian Task Force, 2011). Because of the extent of institutional heterosexism, older adults who identify as LGBT may be uncomfortable seeking healthcare from organizations that do not focus on their unique needs (Brick et al., 2009).

Researchers are beginning to explore the needs of LGBT adults. One study of older adult sexuality attempted "to frame information in ways that are relevant to heterosexual and gay, lesbian, and bisexual individuals" (Zeiss & Kasl-Godley, 2001, p. 18). Although numbers of older adults who identify as LGBT are increasing and they experience extensive institutional

heterosexism, research on older adult sexuality is just beginning to reflect the issues that affect LGBT older adults.

Qualitative findings. Reflecting on the importance of LGBT issues in the literature, informants identified a number of issues related to LGBT older adults, including sexual fluidity. Dr. Davis stated, "when you're in a facility where there's tons more women than men . . . some people tend to be more flexible with their orientation as they get older. So you might have a woman who identifies as straight, but has a female cuddle buddy, or even a sex partner." This reflects Diamond's (2008) theory that sexuality is not fixed for women and may change due to context. This resulted in the item: "If I were working in a long-term care facility with a woman who I thought was heterosexual, I would feel uncomfortable if she ___." Participants are asked to rate the degree to which they agree with the statements "regularly cuddled with her female roommate" and "had a female sex partner."

Other experts talked about the ability for older LGBT adults to express their sexuality. Specifically, Mr. Ingersol discussed the pressure that some LGBT older adults feel to go back into the closet when they move to long-term care settings. He also talked about older adults lying to their healthcare providers about their sexuality to avoid discrimination. Experts also talked about dealing with expressions of sexuality, such as cross-dressing, in long-term care settings. These remarks led to a number of knowledge, attitude, and behavior items.

In addition to sexual expression, Dr. DeVries discussed differences in the health problems LGBT older adults might experience. He stated, "older lesbians have a higher rate of reproductive cancers than probably heterosexuals and older gay men have somewhat higher rates of anal cancers." I included knowledge questions about the different rates of illness in LGBT older adults.

Another consideration under discussion was whether to separate LGBT questions from general sexuality questions. Dr. Lavalleur talked about a similar discussion at a conference that she attended. She stated, "we talked about separation of LGBT and how people tend to do that. . . . And not sure if that's really the way it's supposed to be and there was great disagreement among the experts who were there. Some felt absolutely it should be and some felt it shouldn't be." Dr. DeVries who specializes in LGBT and aging stated:

> That's a common dilemma. . . . I still think we're at a place where it's important to draw it out, I still prefer that there be a separate section. . . . I think it draws attention, it has a benefit to . . . unpack the heteronormative ways . . . [and] draw attention to the unique and often neglected experiences of LGBT people. So I think it's worth having in there separately.

In response to these suggestions, I decided to maintain LGBT issues as a separate section in the scale. In future revisions, I may consider changing this if there are significant cultural shifts.

Sexually Transmitted Infections (STIs)

Relevant literature. Despite widespread concern about their occurrence, the ASKAS (White, 1982a) does not include items about STIs. Prevalence studies of STIs among older adults in the US are very limited (Brick et al., 2009). However, there are some indications that they are at risk for infections. According to the CDC (2009b), the number of cases of syphilis in adults aged 65 and older nearly doubled between 2004 and 2008. One study found that approximately one out of every one hundred older adults is diagnosed with an STI (Smith & Christakis, 2009). The most commonly diagnosed STIs in older adults are chlamydia, gonorrhea, HPV, HIV, syphilis, genital herpes, and trichomoniasis.

In contrast to the US, Great Britain has focused considerable attention on STIs among older adults. They have been more aggressive in tracking STIs among older people and introducing interventions to prevent their spread. According to Family Planning Association (FPA) in the UK (2010), chlamydia cases increased by 72% in adults aged 45 to 64 from 2002 to 2006, and gonorrhea rates increased by 93% in adults between 45 and 64 from 1999 to 2008. Based on these increasing rates of these infections, the FPA developed a campaign called the "Middle-Age Spread" to promote sexual health awareness among older people. Although the increased rates of syphilis in the US and chlamydia and gonorrhea in Great Britain are alarming, limited research exists in either country about STI transmission among older adults.

Qualitative findings. Although RN1 briefly mentioned STIs in the context of safer sex practices, none of the other experts spoke extensively about the risk of STIs among older adults. When prompted by suggested items that I developed based on the literature review, experts discussed the theme further. Mr. Davis said that older adults may benefit from education about STIs. He also stated that many of his older clients may be familiar with STIs, such as syphilis, but are unfamiliar with newer STIs, such as human papillomavirus (HPV). Similarly, Dr. DeVries talked about the "higher rates of exposure to . . . HPV" for older gay men. I used these discussions to alter and add to the items developed on STIs based on the literature.

HIV/AIDS

Relevant literature. Today's elderly reached adulthood before the first cases of AIDS appeared (Price, 2011). Notably, White (1982a) created the ASKAS before scientists isolated the HIV virus. HIV spreads in a number of ways, but is also classified as an STI. Although there is some research on STIs among older adults in America, recent studies and public health surveys have focused on HIV and AIDS infections in older adults. According to the CDC, a

quarter of all people living with HIV in 2006 were aged 50 and older (2008a). The number of adults over age 50 living with HIV or AIDS nearly doubled from 2001 to 2005 (Kuehn, 2008). By 2015, more than half of individuals living with HIV will be aged 50 or older (Brick et al., 2009; High et al., 2012). This growing number of HIV positive older adults is due to new infections (CDC, 2008b; High et al., 2012) and increased effectiveness of antiretroviral medications, which has expanded the life expectancy of those who are HIV positive to a median age greater than 70 (High et al., 2012). In a recent report, the New York City Department of Health (NYC-DOH) stated, "persons aged 50 and older play an important but under-recognized part in the HIV/AIDS epidemic" (2010, p. 4).

Although HIV/AIDS infections are increasing among older adults (CDC, 2008a; CDC, 2008b; Kuehn, 2008, NYC-DOH, 2010), they are difficult to identify (Whipple & Scura, 1996). Older adults do not always report symptoms during the early stages of HIV or AIDS, because they may believe these are signs of normal aging. Early symptoms of HIV include general aches and pains, coughing, headache, decreased energy, loss of appetite and weight, and short-term memory loss. Because these symptoms mimic dementia or other chronic illnesses associated with aging, HIV among older people is referred to as the "great imitator" (Whipple & Scura, 1996). Health workers may delay or overlook HIV/AIDS diagnoses in older adults (Kuehn, 2008). This may be because physicians and programs that test for HIV have the false belief that older adults are not sexually active. Consequently, few regularly test this population for HIV/AIDS (Hooyman & Kiyak, 2005).

Older people with HIV progress faster to end stage AIDS and die faster than younger people do (Cahill, South, & Spade, 2000). The reason for this is not known, but it may be due to delay in diagnosis, normal age-related decline in the immune system, or drug interactions

between HIV/AIDS medications and medications for other health ailments. Little research exists about how HIV affects older adults' immune systems differently than younger people (Cahill et al., 2000; High et al., 2012). Although doctors prescribe HIV/AIDS medications to older people, additional research is needed in this population. The subjects in most HIV/AIDS drug trails are people 45 and younger. Additionally, older adults who are HIV positive need specialized support services in the community (High et al., 2012).

Older adults misjudge the threat of HIV (Tangredi et al., 2008); among older adults surveyed, only 28% believed that AIDS was a problem for them (Maes & Louis, 2003). They reported that their risk of contracting AIDS was low. Henderson and colleagues (2004) reported similar findings. They tested the HIV/AIDS knowledge among women over the age of fifty at a general medicine clinic in an urban area. Each woman answered nine questions to measure AIDS knowledge; higher scores correlated with more knowledge of AIDS. The mean score was 3.7 out of 9; none of the subjects answered all questions correctly. Even though 84% knew unprotected heterosexual sex was a high-risk activity, these women underestimated the effectiveness of abstinence and condom use in preventing AIDS. In contrast, they overestimated the risks of certain benign activities, such as kissing. Approximately half of the women knew that abstinence was effective in prevention, and only 13% knew that condoms could effectively prevent HIV.

Qualitative findings. Similar to STIs, experts only discussed HIV/AIDS risk after reading potential items developed from the literature. Dr. DeVries pointed to the importance of the topic, stating, "It's an aging epidemic . . . and there's some interesting research that says that people with HIV . . . [experience aging] related . . . diseases and characteristics about ten years earlier than those who are HIV negative." Dr. Gray also suggested the importance of testing

older adult for HIV at yearly physicals if they report being sexually active with multiple partners or any other risky behaviors. I incorporated the feedback from these experts into the items that I previously developed.

Safer Sex Practices

Relevant literature. Although very little research exists on sexual risk taking behaviors in older adults (Gott, 2005), studies (Kuehn, 2008; Lindau et al., 2006; Schick et al., 2010; Stall & Catania, 1994; Zablotsky, 1998) support the idea that older adults are not regularly using condoms. Stall and Catania (1994) found very low rates of condom use by Americans over the age of 50 nationwide. When compared with demographically similar individuals in their 20s, Americans over the age of 50 were one sixth as likely to use condoms (Stall & Catania, 1994). In a survey of older women, almost two-thirds of single women who reported sexual activity in the past 10 years stated that they had not used a condom (Lindau et al., 2006). More recently, less than one quarter reported using a condom during their last sexual encounter (Schick et al., 2010).

Social and biological factors may explain decreased condom use. After menopause, older women may assume that their male partners do not need to use a condom because they can no longer become pregnant (Hooyman & Kiyak, 2005; Westheimer & Lehu, 2005). Four out of five women reported that they agree that condoms should be used even if pregnancy is no longer a risk (Lindau et al., 2006); however, they still reported low rates of usage. This may be because women of the baby boomer generation were taught to use condoms to prevent the spread of STIs such as herpes that are not life threatening (Price, 2011). Older adults may believe that unprotected sex does not carry serious risks. Additionally, Zablotsky (1998) proposes the possibility that the changing gender ratio and scarcity of male sexual partners may cause older

women to forgo safe sex practices for fear of losing a potential sexual partner to a woman who is willing to have sex without a condom. If women believe that unprotected sex does not have life threatening consequences (Price, 2011), they may be more likely not to use barrier forms of protection if pressured.

In addition to underestimating the risk of STIs, difficulty applying a condom could partially explain decreased usage (Kuehn, 2008). Incomplete erection and arthritic hands can make putting on a condom very difficult, just as poor vaginal lubrication can make condoms uncomfortable during intercourse. Practitioners suggest that for men who have difficulty attaining or maintaining an erection, a female condom may be a solution (Price, 2011). Although they are more expensive than traditional condoms, female condoms do not interfere with a man's erection because it is inserted into the female and does not require a firm erection. Additionally, the use of a good lubricant can make sex with a condom more comfortable.

Qualitative findings. A number of experts expanded on the literature on safer sex practices and discussed its importance for older adults. For example, RN1 stated, "If older adults feel they can't get pregnant, so they don't think about the problems that could occur with a new partner in terms of sexually transmitted infections, so they don't consider using safer sex, such as condoms, etc." Dr. DeVries also explained that many older adults only see sexually transmitted infections as a problem for younger persons and do not employ safer sex practices. I developed a behavior question in response to suggestions about safer sex practices that stated, "I recommend that my older adult patients use condoms when they have sexual intercourse." Dr. Lavalleur suggested editing this question to separate out older adults in monogamous relationships. As a result, I changed the question to say, "I recommend that my older adult patients, who are not in a monogamous relationship, use condoms when they have sexual intercourse."

Mr. Ingersol and Dr. DeVries also talked about reasons that some older adults do not practice safer sex. Mr. Ingersol explained that many older men do not want to use condoms because the condom cuts off circulation and can result in loss of an erection. He suggested that older adults "might need a bigger condom . . . that's not as tight, so it doesn't cut off the circulation." I considered these remarks when I developed the behavior question: "If an older man reports that he has difficulty maintaining an erection when using a condom, I recommend ___." Respondents are asked to rate the amount to which they agree to specific options, including "not worrying about using a condom," "using a bigger condom," and "using a female condom."

Rights

Some of the experts suggested a theme that I conceptualized as "Rights." Ms. Brick talked about federal regulations for privacy in long-term care settings. Similarly RN2 stated, "I think there are some that feel that families have the right to make decisions for a resident, when in fact they don't. Residents make their own decisions." I did not review resident rights in the literature review and I decided to look into this issue further. In a recent book on sexuality in long-term care settings, Doll (2012) reviews federal regulations and refers to those that give residents the right to privacy. In addition, she proposes guidelines that recommend that spouses be allowed to share a room if both consent. I incorporated these guidelines and regulations into knowledge questions.

Scale Items

I developed the items for the scale in an iterative process that involved an extensive review of the current research about older adult sexuality and in depth interviews with key informants who brought a range of knowledge, experience, and expertise about this topic. Their

real-world experience helped operationalize concepts reported in the empirical literature that enabled me produce a pool of potential scale items that are relevant to current practice with older adults. The initial five experts gave feedback on the ASKAS (White, 1982a) and provided important suggestions for topics and items that should be included. Based on their suggestions and the review of the literature, I developed an initial pool of items. I reviewed these items with the following four experts. After each interview, I edited items based on their feedback (see Appendix N for a full list of items).

I determined that I reached saturation after the experts agreed with the majority of the items and gave minor feedback for changes. Additionally, the second group of experts gave positive feedback on the items that they reviewed. After the experts reviewed the items and I determined that I reached saturation, I transferred the items into an online format. From there, I began Phase II and recruited to test the appropriateness of the dimensions and items.

CHAPTER VIII: PHASE II RESULTS

Based on the review of the relevant literature and qualitative interviews in Phase I, I developed a pool of 231 items in the three subscales of Knowledge, Attitudes, and Behaviors for psychometric testing. In the present chapter, I will discuss the recruitment process and resulting sample, including demographic information. I will review the process by which I culled the items. After presenting reliability and validity findings, I will discuss the final proposed scale.

Recruitment

I began recruitment for Phase II of the study on March 28, 2013, after receiving Institutional Review Board (IRB) approval to collect data. I sent the approved recruitment email to contacts at the American Geriatrics Society, the Hartford Foundation, and the Aging a Sexuality Consortium. The American Geriatrics Society posted the recruitment announcement on their Facebook page and in the blog. Additionally, they distributed the email through their listserv. The Hartford Foundation sent the recruitment announcement via e-newsletter to their fellows. The Aging and Sexuality Consortium posted the announcement on their Facebook page and their blog. On the same day, I sent the recruitment email to the healthcare providers who had expressed interest in participating in the survey during the 2012 Gerontological Society of America conference. I also began sending recruitment emails to healthcare providers at hospitals in the five boroughs of New York City that listed email addresses on their websites. Despite these efforts, the response rate was low, so I continued sending emails to addition healthcare providers at local hospitals through May 21, 2013.

I sent the recruitment emails directly to 3,904 healthcare providers. In addition, I posted the announcement on my personal Facebook, LinkedIn, and Twitter pages. The recruitment announcement asked the recipients to forward the announcement to appropriate colleagues and

friends. The recruitment email and announcements asked people interested in completing the survey to click on a hyperlink that took them to the electronic survey housed on Qualtrics. The survey remained active on the Qualtrics website from March 28, 2013 through June 10, 2013.

Between March 28, 2013 and June 10, 2013, 279 people clicked on the recruitment survey link. It is impossible to calculate an accurate response rate because the total number of people who saw the announcement is unknown. Based on the 3,904 emails sent to healthcare providers, 7.15% (n = 279) of potential subjects clicked on the link. Of those 279, 47 did not answer any of the questions. The 232 individuals who began the survey comprise 83.15% of the people who clicked on the link and 5.94% of the 3,904 email recipients. Of the 232 individuals who began the survey, 77 did not continue to the end. The 155 individuals who completed the survey represent a 3.97% response rate based on the 3,904 people who received the email. Because more people received the announcement through other sources, including forwarded messages, listservs, blogs, and Facebook postings, the actual response rate is less than 3.97%, which is extremely poor. The 155 people who completed the survey comprise 55.56% of the people who clicked on the link. Finally, they represent a 66.81% completion rate considering the number of people who began the survey. I received additional qualitative feedback by email from participants who reported that the survey was too long and time intensive. Therefore, the low rate of completion may be due to the length of the survey.

Sample

For those people who completed the survey, I computed measures of central tendency for the demographic variables. The mean age of the sample was 41.28 (N = 154, SD = 12.59). The age varied widely, with a range of 53; the minimum age was 22 and the maximum age was 75. The majority of the sample identified as female. Of the respondents, 67.7% (n = 105) identified

as female, 31.6% (n = 49) identified as male, and 0.7% (n = 1) chose not to respond. Most of the respondents identified as White (76.1%, n = 118). The remaining respondents identified in a number of ways: Asian (7.1%, n = 11); Hispanic or Latino (5.8%, n = 9); Asian Indian (1.9%, n = 3); African (1.9%, n = 3); African American (1.3%, n = 2); mixed race (1.3%, n = 2); other (1.3%, n = 2), which was self-defined as "misc" or "confused;" and Middle Eastern (0.7%, n = 1). The majority of the respondents identified as heterosexual (81.3%, n = 126). The other respondents identified as homosexual (12.3%, n = 19), bisexual (1.9%, n = 3), and other (1.9%, n = 3), which was self-defined as "keep to one partner always," "undefined," and "queer." I asked respondents to rate how religious they were on a scale from 1 (not at all) to 5 (very). The mean level of religiosity was 2.61 (N = 154, SD = 1.26). The modal response was "not at all" religious, but with responses evenly distributed from one to four.

In addition to basic demographic information, I asked respondents about their employment and educational background. The majority of respondents had completed graduate school (85.8%, n = 133). The remaining respondents graduated college (12.3%, n = 19) or graduated high school (.6%, n = 1). The professions reflect the level of education. The majority of respondents were doctors (37.4%, n = 58). Other respondents were social workers (23.2%, n = 35), nurses (13.5%, n = 21), nurse practitioners (5.2%, n = 8), psychologists (4.5%, n = 7), and physical therapists (1.9%, n = 3). In addition, 13.6% (n = 21) identified as other professions, including administrators, occupational therapists, personal care aides, physicians assistants, medical students, dieticians, acupuncturists, educators, therapists, dentists, or orthodontists. These professionals worked at a variety of agencies, but predominantly in hospital settings (38.1%, n =59). The remaining respondents worked in an outpatient hospital setting (23.2%, n = 23.2), another type of hospital setting (7.7%, n = 12), private practice (6.5%, n = 10), homecare

(3.2%, $n = 5$), and long-term care facilities (2.6%, $n = 4$). In addition, 18.2% ($n = 28$) worked in another agency setting, including senior centers, universities, consultants, and unspecified.

I also asked respondents about their training in relation to older adult sexuality. More than half of the respondents reported that they never receiving sexuality training specific to older adults (51.6%, $n = 80$). Of the 75 respondents who did receive training, 90.7% ($n = 68$) reported that they received training as part of their professional education; 9.3% ($n = 7$) reported that they received training at their agency; and 21.3% ($n = 16$) reported they sought training outside of their place of employment. Some respondents received training in multiple places, including professional education, their agency, and outside their agency. Of the 75 respondents who received training, 82.7% ($n = 62$) reported that they received training in one training location, 13.3% ($n = 10$) reported receiving training in two of the training locations, and 4% ($n = 3$) reported receiving training in all three types of training locations. There was no significant difference by profession in training, including as part of professional education ($x^2 = 8.947$, $df = 6$, $p = .177$), at the agency ($x^2 = 12.362$, $df = 6$, $p = .054$), outside the agency ($x^2 = 5.669$, $df = 6$, $p = .461$), never ($x^2 = 7.288$, $df = 6$, $p = .295$), and number of training locations ($F(6, 147) = 1.611$, $p = .148$). Additionally, there was no significant difference in whether or not the respondent received training in their agency based on agency type ($x^2 = 8.294$, $df = 9$, $p = .505$).

I asked respondents to rate their comfort with older adult sexuality on a scale from 1 (very uncomfortable) to 5 (very comfortable). The mean level of comfort was 3.87 ($n = 155$, $SD = 1.01$). Responses were mainly distributed between neutral, somewhat comfortable, and very comfortable. There was no significant correlation between number of types of training received and comfort with older adult sexuality ($r = .154$, $p = .055$). Additionally, there was no significant difference in comfort by profession ($F(6, 147) = .588$, $p = .740$).

Finally, I asked respondents to check off the behaviors that they consider sexuality activity in order to understand how subjects defined "sexual activity." The majority of respondents considered vaginal intercourse (98.1%, $n = 152$), oral sex (97.4%, $n = 151$), anal intercourse (96.1%, $n = 149$), masturbation (89.0%, $n = 138$), and fondling (81.3%, $n = 126$) to be sexual activity. Less than half of the respondents considered kissing (45.2%, $n = 70$), hugging (21.9%, $n = 34$), holding hands (15.5%, $n = 24$), and other activities (2.6%, $n = 4$), including cybersex, to be sexual activity. The mean number of acts respondents considered sexual activity was 5.47 ($N = 155$, $SD = 1.547$). The responses ranged from one act to nine acts. There was no significant difference in number of acts considered sexual activity by profession ($F(6, 147) = .800$, $p = .571$). Additionally, there was no significant correlation between number of acts considered sexual activity and level of education ($r = .128$, $p = .115$) and number of types of sexual education ($r = .115$, $p = .155$). However, there was a significant correlation between number of acts considered sexual activity and comfort with older adult sexuality ($r = .236$, $p = .003$).

Comparison of Completed and Incomplete Responses

Because 33.2% of the individuals who began the survey did not complete it, I conducted *t*-tests and performed chi square tests to determine if there was a significant difference in demographics between those who completed the survey and those who stopped. There was not a significant difference ($t = 1.693$, $df = 228$, $p = .092$) in the ages of those who completed ($M = 41.28$, $SD = 12.593$) and those who did not complete ($M = 38.36$, $SD = 11.754$). There was also not a significant difference between those who completed the survey and those who did not in terms of gender ($x^2 = .284$, $df = 2$, $p = .868$), race ($x^2 = 7.073$, $df = 7$, $p = .421$) and sexual orientation ($x^2 = 4.998$, $df = 4$, $p = .287$). Additionally there was not a significant difference ($t =$

.953, *df* = 228, *p* = .342) in the religiosity for those who completed (*M* = 2.61, *SD* = 1.259) and those who did not complete (*M* = 2.45, *SD* = 1.136).

In addition to demographic variables, I analyzed the differences between subjects that completed the survey and those who did not by education and profession. There was not a significant difference (*t* = 1.139, *df* = 225, *p* = .256) in the education levels for those who completed (*M* = 4.86, *SD* = .404) and those who did not complete the survey (*M* = 4.78, *SD* = .530). Similarly, there was not a significant difference between those who completed the survey and those who did not in terms of profession (x^2 = 11.512, *df* = 6, *p* = .074) and agency type (x^2 = 5.387, *df* = 6, *p* = .495).

I analyzed responses between those who completed the survey and those who did not based on comfort, sexuality training, and definition of sexual activity. There was not a significant difference (*t* = .185, *df* = 217, *p* = .854) in reported comfort with older adult sexuality between those who completed (*M* = 3.87, *SD* = 1.005) and those who did not complete (*M* = 3.84, *SD* = .963). Similarly, there was not a significant difference (x^2 = .105, *df* = 1, *p* = .746) between those who completed the survey and those who did not in terms of whether or not they received older adult specific sexuality training in the past. There was a significant difference (*t* = 1.967, *df* = 230, *p* = .050) in the number of types of trainings received for those who completed (*M* = .59, *SD* = .701) and those who did not complete (*M* = .40, *SD* = .613). These results suggest that the number of types of older adult specific sexuality trainings respondents received is different between those who did and did not complete the survey. Specifically, the results suggest that people who received training in more places were more likely to complete the survey. Similarly, there was a significant difference (*t* = 2.877, *df* = 230, *p* = .004) in the number of behaviors considered to be sexual activity for those who completed (*M* = 5.47, *SD* = 1.547)

and those who did not complete (M = 4.70, SD = 2.508). These results mean that the number of acts that people consider sexual activity is different between those who did and did not complete the survey. This suggests that people who completed the survey had a more inclusive definition of sexual activity and had more training specific to older adult sexuality than those who terminated their participation.

Because of the large percentage of people who stopped the survey before completing it, I was concerned that there may be a difference between the group that completed and the group that did not. The two groups were demographically similar in many ways, including age, gender, profession, education, and sexual orientation. However, of particular interest, the group that completed the survey received more trainings specific to older adult sexuality and had more inclusive definitions of sexuality activity.

Initial Evaluation of Item Performance

According to the mixed method approach (Bowen et al., 2004; Bowen & Guo, 2012), the researcher should conduct initial statistical analysis after collecting a sample in the pilot test. To prepare for the analysis, I recoded all the nominal level dichotomous knowledge variables to reflect correct and incorrect answers. All correct answers received one point and all incorrect answers received zero points. I recoded all nonresponses as incorrect. I also reverse coded all appropriate attitude and behavior responses; therefore, higher scores on the attitudes items represent more permissive attitudes and higher scores on the behaviors items represent more supportive or appropriate behaviors.

In his book on scale development, DeVellis (2012) recommends beginning analysis by reviewing item performance, including a review of correlations, means, and variances. Initially, I attempted to review the correlations first, but due to low response rates there were only 52 valid

cases for the Attitudes subscale and 39 valid cases for the Behaviors subscale. Because of the small number of valid cases, I reviewed the means and variance prior to reviewing correlations. I eliminated all knowledge questions in which less than 25% or more than 75% of respondents answered the question correctly. This required eliminating items with a mean less than .25 or more than .75. I removed all attitude and behavior questions in which the mean was less than 2 or more than 4, this eliminated items in which most respondents agreed or disagreed strongly.

Next, I reviewed the correlations and removed knowledge items with an inter-item correlation less than .100, because this meant the items did not correlate significantly with more than 90% of the other items. I removed attitude items with inter-item correlation less than .300 because this meant the items did not correlate significantly with more than 70% of the other attitude items. I used the same inter-item correlation cutoff for the behavior items. I selected the lower cutoff point for the knowledge items, because correlation between correct and incorrect items is less important than correlation between subjective items on a Likert scale. In all of the subscales, I eliminated items with negative inter-items correlations that could not be explained by reverse scoring.

Lastly, I qualitatively reviewed the items. Some participants in the study sent an email in response to the survey, and I was able to frame parts of the qualitative review based on these comments. Much of the feedback reported difficulty completing the survey due to its length. A few respondents reported that they found the wording of some questions difficult to understand or not applicable to their profession, particularly if the question had a medical focus. In the qualitative review, I looked for items with redundancy, unclear wording, and lack of relevance to healthcare providers of all professions.

Knowledge

At testing, the Knowledge subscale consisted of 110 items, in 14 topic areas: continuity of sexuality throughout the lifecycle; benefits of continued sexual expression; relationship status; masturbation; changes in male sexual functioning and treatments; changes in female sexual functioning and treatments; relationship between disease and sexual functioning; dementia; influence of medications on sexual functioning; LGBT and aging; sexually transmitted infections (STIs); HIV/AIDS; safer sex practices; and rights. Applying preset values below .25 and above .75, after reviewing the mean for all items in the Knowledge subscale, I eliminated 67 items. For items with a mean of exactly .25 or .75, I analyzed the results to an additional decimal place to determine if the item should be removed (see Appendix O for a full list of items removed and mean values). I ran correlational analysis for the remaining 43 items. Applying a preset value below .100 and negative correlations, I eliminated an additional 11 items (see Appendix O for a full list of items removed and correlations).

In qualitatively reviewing the remaining 32 items for redundancy, clarity, and appropriateness, I eliminated seven additional items. I eliminated three relationship status questions, because they were linked to a fourth question that I removed due to poor performance in the correlations. That question stated, "The majority of older lesbian women are partnered (F)." The linked questions asked about older gay men, older heterosexual men, and older heterosexual women. In addition, I eliminated a question that asked about federal rights for same sex couples: "Same-sex partners are covered by the Family Medical Leave Act (F)." I eliminated this question because it is no longer false because of the recent Supreme Court Case of the United States v. Windsor (2013). Other items were eliminated because they were repetitive, unclear, and not essential information (see Appendix O for a full list of qualitative

reasons for elimination). The initial review of item performance resulted in a 25-item Knowledge subscale, with items in 12 of the topic areas. The review resulted in removal of all masturbation items because of means outside of the preset values and STI items because of means and correlations outside of the preset values (see Appendix P for the full list of remaining items can).

Attitude

The Attitude subscale initially consisted of 47 items, in 13 categories. All categories represented in the Attitude subscale were included, except HIV/AIDS. With preset values below 2.0 and above 4.0, after reviewing the mean for each item in the Attitude subscale, I eliminated 22 items (see Appendix O for a full list of item means and eliminated items). I ran correlational analysis for the remaining 25 items. Due to respondents skipping questions, there were 55 valid cases that could be included in the correlation. This was a slight increase from the 52 valid cases if I ran correlational analysis prior to reviewing means. Applying a preset value below .300 and negative correlations, I eliminated an additional six items (see Appendix O for the eliminated items and correlations).

In reviewing the remaining 19 items, I eliminated an additional six items. I decided to eliminate a continuity of sexuality throughout the lifecycle item due to redundancy. The similar questions stated, "If an older adult patient of the opposite sex made sexual advances toward me, I would be disgusted." and "If an older adult patient of the same sex made sexual advances toward me, I would be disgusted." Because these questions were alike and significantly correlated (r = .730, $p < .001$) with each other, I decided to eliminate one, and I propose combining the two items into one question that does not specify the sex of the client. I removed additional items because of their medical focus, redundancy, or unclear wording (see Appendix O for a full list of

qualitative reasons for elimination). The initial review of item performance resulted in a 13-item Attitude subscale, with items in seven of the topic areas. The review resulted in elimination of all items about the benefits of continued sexual expression, relationship status, and rights because of means outside of the preset values; all items about changes in male sexual functioning and treatments and sexually transmitted infections (STIs) because of correlations outside the preset values; and all items about changes in female sexual functioning and treatments because they were repetitive or medically focused (see Appendix P for the full list of remaining items).

Behavior

The Behavior subscale initially consisted of 74 items, in 12 categories. All categories represented in the Behavior subscale were included, except relationship status and rights. With preset values below 2.0 and above 4.0, after reviewing the mean for each item in the Behavior subscale, I eliminated 23 items (see Appendix O for a full list of item means and eliminated items). After eliminating items based on means, 51 items remained. Because many respondents skipped the behavior questions in the changes in female sexual functioning and treatments section, I ran the correlational analysis without the items from that topic area. This resulted in a correlational analysis of 40 behavior items. Because of this change, there were 53 valid cases that could be included in the correlation. If the female behavior questions remained, there would have been 47 valid cases. The 53 valid cases was an increase from the 39 valid cases if I ran correlational analysis prior to reviewing the means. Applying a preset value below .300 and negative correlations, I eliminated an additional 17 items. I then ran correlational analysis on the remaining items with the female behavior items to review the performance of the female items. No female items performed below .300 for elimination (see Appendix O for the eliminated items and correlations).

In reviewing the remaining 34 items, I eliminated an additional 20 items. I decided to eliminate nine changes in female sexual functioning and treatment items due to their medical focus. I eliminated an additional female behavior question due to redundancy with another item within the topic. The low number of responses to the female behavior questions also influenced my decision to remove the items. Although I removed these items primarily due to the medical focus and feedback through email that people skipped the questions because they were not applicable, it is possible that people left them blank because of gender bias. I removed additional behavior items due to redundancy, medical focus, and questionable relevance. On closer examination, some of the behavior questions appeared more affective in quality. For example, "If an older adult patient of the opposite sex made sexual advanced toward me, I would laugh." Since laughing may represent discomfort, which is attitudinal, I eliminated these types of items (see Appendix O for a full list of qualitative reasons for elimination). The initial review of item performance resulted in a 14-item Behavior subscale, with items in 9 of the topic areas. The review resulted in elimination of all items in the topic areas of masturbation, HIV/AIDS, and safer sex practices because of means and correlations outside the preset values (see Appendix P for the full list of remaining items).

Draft of Scale

In total, after initial review of item performance, the draft scale has 52 items in three subscales that include items from all 14-topic areas determined to be important through a review of the literature and qualitative interviews with experts. The Knowledge subscale consists of 25 items (see Appendix P). A score for this subscale is calculated by assigning one point for each correct answer and then adding the points for a score out of 25. Higher scores indicate greater knowledge. The Attitude subscale consists of 13 items (see Appendix P). A score for this

subscale is calculated by reverse scoring negatively worded items as indicated and then adding the points for a score out of 65. Higher scores indicate more permissive attitudes. The Behavior subscale consists of 14 items (see Appendix P). A score for this subscale is calculated by reverse scoring negatively worded items as indicated and then adding the points for a score out of 70. Higher scores indicate more supportive or appropriate behaviors. According to the mixed method scale development approach (Bowen et al., 2004; Bowen & Guo, 2012), the next step is to test the scale with a larger sample. I will test the scale with a larger sample as part of my future research agenda. Using the initial sample, I continued the proposed approach with factor analysis and reliability and validity tests.

Factor Analysis

Factor analysis is appropriate for determining commonality between items and underlying variables (DeVellis, 2012). Since factor analysis is not appropriate with dichotomous variables, I did not include knowledge items in the analysis. I initially ran an exploratory factor analysis (EFA) with the 27 items in the Attitude and Behavior proposed subscales combined. This resulted in 52 valid cases included in the analysis and eight factors. See Table 3 for high-loading variables and rotated factor loadings. I named the factors based on review of the items. Three of the factors included only behavioral items, and one of the factors included only attitudinal items. Two other factors included a mix of behavioral and attitude items, but each specific to a particular topic area. The remaining two factors mixed items from the Attitudes and the Behaviors proposed subscales and a common theme could not be determined.

Due to poor performance in the EFA, I ran a confirmatory factor analysis (CFA) based on the theory that proposed separate subscales of Attitudes and Behaviors. For the Attitudes subscale, this resulted in 81 valid cases included in the analysis and four factors. See Table 4 for

Table 3

Summary of an EFA of Attitude and Behavior Items

Factor Names and the High-Loading Variables	High-Loading Variables	Factor Loadings
Factor 1: Behavioral Discussions/Assessments		
	BeneBeh1	.858
	BeneBeh2	.817
	LGBTBeh1	.461
	DementiaBeh1	.415
Factor 2: Medication Related		
	MedsBeh4	.845
	MedsAtt1	.663
	MaleBeh1	.654
Factor 3: Attitudinal Comfort & STI Testing		
	MastAtt1	.748
	ContSexAtt1	.714
	STIBeh1	.592
	MastAtt4	.535
Factor 4: Attitude Items		
	DementiaAtt2	.847
	DementiaAtt3	.748
	ContSexAtt8	.663
	SaferAtt1	.540
Factor 5: LGBT Related		
	LGBTAtt3	.738
	LGBTAtt6b	.699
	LGBTAtt5a	.662
	LGBTBeh2	.563
Factor 6: Arthritis Recommendations & Kissing		
	DiseaseBeh2c	.726
	DiseaseAtt2	.705
	ContSexAtt6	.698
Factor 7: Behavior Items I		
	ContSexBeh1c	.752
	DiseaseBeh1	-.499
Factor 8: Behavior Items II		
	ContSexBeh1a	.737
	FemaleBeh2b	.626
	ConstSexBeh3c	.441

high-loading variables and rotated factor loadings for the attitude items. I named the factors based on review of the items. Two of the factors included items that discussed comfort or discomfort in particular situations, so I named those factors Comfort/Discomfort I and Comfort/Discomfort II. I found no major qualitative difference between the items in the two categories. Another factor included all of the LGBT related questions, so I named that factor LGBT Items. The final factor included items with strong affective wording, such as "morally wrong" and "disgusted." I named this factor Strongly Worded Items. All four factors included conceptually appropriate items for inclusion to measure the variable attitudes and will therefore remain in the subscale.

Table 4

Summary of a CFA of Attitude Items

Factor Names and the High-Loading Variables	High-Loading Variables	Factor Loadings
Factor 1: Comfort/Discomfort I		
	ContSexAtt6	.748
	ContSexAtt1	.721
	DiseaseAtt2	.703
Factor 2: Strongly Worded Items		
	DementiaAtt3	.877
	DementiaAtt2	.843
	ContSexAtt8	.603
Factor 3: Comfort/Discomfort II		
	MedsAtt1	.791
	MastAtt1	.612
	MastAtt4	.545
	SaferAtt1	.520
Factor 4: LGBT Items		
	LGBTAtt5a	.785
	LGBTAtt6b	.725
	LGBTAtt3	.619

For the Behavior subscale, CFA of behavior items only resulted in 64 valid cases included in the analysis and four factors. See Table 5 for high-loading variables and rotated

factor loadings for the behavior items. I named the factors based on review of the items. Two of the factors included items that revolved around discussions with clients, so I named those factors Discussions I and Discussions II. I found no major qualitative difference between the items in the two categories. Another factor included items that involved ignoring an issue, so I named that factor Non-Action. The final factor included items that involved not taking action or assessing or, alternatively, taking action. I named this factor Action and Non-Action. All four factors included conceptually appropriate items for inclusion to measure the variable behaviors and will therefore remain in the subscale.

Table 5

Summary of a CFA of Behavior Items

Factor Names and the High-Loading Variables	High-Loading Variables	Factor Loadings
Factor 1: Discussions I		
	MedsBeh4	.818
	MaleBeh1	.750
	FemaleBeh2b	.667
	DementiaBeh1	.615
	LGBTBeh1	.521
Factor 2: Discussions II		
	BeneBeh1	.876
	BeneBeh2	.860
	DiseaseBeh2c	
Factor 3: Non-action		
	ContSexBeh1a	.827
	ContSexBeh3c	.689
Factor 4: Action & Non-action		
	DiseaseBeh1	.624
	ContSexBeh1c	-.610
	LGBTBeh2	.595
	STIBeh1	.520

Reliability

For each subscale, I tested the internal consistency reliability. Because all items in the Knowledge subscale are dichotomous, I used Kuder-Richardson formula 20 instead of

Cronbach's alpha. The reliability for the Knowledge subscale was undesirable (*KR-20* = .625, *n* = 155). The low reliability for the Knowledge subscale may be due to the decision to code all nonresponses as incorrect. The reliability for the Attitude subscale was very good (α = .825, *n* = 81). The reliability for the Behavior subscale was also very good (α = .837, *n* = 64).

Validity

Content validity. I developed the initial pool of items and topic categories with expert healthcare providers in an iterative process to ensure content validity. Through the qualitative interviewing process and review of the literature, I identified 14 substantive areas for inclusion in the scale. These topics are continuity of sexuality throughout the lifecycle; benefits of continued sexual expression; relationship status; masturbation; changes in male sexual functioning and treatments; changes in female sexual functioning and treatments; relationship between disease and sexual functioning; dementia; influence of medications on sexual functioning; LGBT and aging; sexually transmitted infections (STIs); HIV/AIDS; safer sex practices; and rights. Although one question from each category is not in every subscale, at least one item from each of the topic areas is included in the draft scale. Content validity may be in question due to the elimination of items proposed by experts.

Criterion-related validity. In order to determine criterion-related validity, I reviewed the relationship between the subscales in the new scale and the response of healthcare providers to a question about their previous training specific to older adult sexuality. I expected that participants who never received training would have lower scores on all subscales. I additionally predicted that the more types of trainings participated in would correlate with higher scores on each subscale.

For the Knowledge subscale, there was not a significant difference ($t = .738$, $df = 153$, $p = .462$) in knowledge scores for those who had sexuality training specific to older adults ($M = 14.35$, $SD = 3.63$) and those who never had such a training ($M = 13.90$, $SD = 3.88$). There was also no significant correlation between knowledge and number of types of training received ($r = -.019$, $p = .818$). The lack of criterion-related validity in the Knowledge subscale may be due to the decision to treat all nonresponses as incorrect or because the sample that completed the survey had more training specific to older adult sexuality to begin with.

For the Attitude subscale, there was a significant difference ($t = 3.759$, $df = 79$, $p < .001$) in attitude scores for those who had sexuality training specific to older adults ($M = 50.62$, $SD = 6.47$) and those who never had such a training ($M = 45.07$, $SD = 6.75$). These results indicate that respondents who completed a sexuality training specific to older adults displayed more permissive attitudes on the current scale compared to those who never had such training. There was also a significant correlation between attitude scores and number of types of training received ($r = .406$, $p < .001$). These results indicate that the more types of trainings specific to older adult sexuality participated in by the respondent, the more permissive their attitudes.

For the Behavior subscale, there was a significant difference ($t = 3.03$, $df = 62$, $p = .004$) in behavior scores for those who had sexuality training specific to older adults ($M = 49.41$, $SD = 7.03$) and those who never had such a training ($M = 43.97$, $SD = 7.31$). These results indicate that respondents who completed a sexuality training specific to older adults displayed more supportive or appropriate behaviors on the current scale compared to those who never had such training. There was also a significant correlation between behavior scores and number of types of training received ($r = .358$, $p = .004$). These results indicate that the more types of trainings

specific to older adult sexuality participated in by the respondent, the more supportive or appropriate their behaviors.

Construct validity. Construct validity involves convergent and discriminant validity (Hudson, 1982), which are typically determined by correlating the new scale with another validated scale. In order to approximate convergent validity, I reviewed the relationship between the subscales in the new scale and the response of healthcare providers to a question about their perceived comfort with older adult sexuality. I expected that participants who were more comfortable with older adult sexuality to have higher scores on all subscales. To approximate discriminant validity, I reviewed the relationship amongst the subscales to determine if they measure separate concepts.

For the Knowledge subscale, there was no significant correlation between knowledge and perceived comfort (r = -.001, p = .989). The lack of a significant correlation between comfort and knowledge is not surprising, because they are conceptually separate ideas. As predicted for discriminant validity, there is no significant relationship between the knowledge scores and the attitude (r = .177, p = .114) or behavior (r = .159, p = .210) scores.

For the Attitudes subscale, there was a significant correlation between attitudes and perceived comfort (r = .569, p <.001). These results indicate that the more comfortable the respondents rate themselves with older adult sexuality, the more permissive their attitudes. As predicted for discriminant validity, there is no significant relationship between the attitude scores and the knowledge scores (r = .177, p = .114). On the other hand, there was a significant relationship between the attitude scores and the behavior scores (r = .722, p < .001). This significant correlation between attitudes and behaviors is not surprising because of the close relationship between the concepts.

For the Behaviors subscale, there was a significant correlation between behaviors and perceived comfort ($r = .293$, $p = .019$). These results indicate that the more comfortable the respondents perceive themselves, the more supportive or appropriate their behaviors. As predicted for discriminant validity, there is no significant relationship between the behavior scores and the knowledge scores ($r = .159$, $p = .210$). On the other hand, there was a significant relationship between the behavior scores and the attitude scores ($r = .722$, $p < .001$). This significant correlation between attitudes and behaviors is not surprising because of the close relationship between the concepts.

Proposed Scale

Initial review of item performance resulted in a 52-item scale with three subscales: a 25-item Knowledge subscale, a 13-item Attitude subscale, and a 14-item Behavior subscale. Review of the factor analysis by subscale resulted in keeping all items in the draft scale. Reliability testing resulted in very good internal consistency for attitudes ($\alpha = .825$, $n = 81$) and behaviors ($\alpha = .837$, $n = 64$), but undesirable internal consistency for knowledge (*KR-20* = .625, $n = 155$). The draft scale has questionable content validity. Although the Knowledge subscale did not perform well, the Attitude and Behavior subscales may have criterion-related validity. Similarly, the Attitude and Behavior subscales may have convergent validity, but the Knowledge subscale again did not perform well. The Knowledge subscale may have discriminant validity from the Attitude and Behavior subscales, but the Attitude and Behavior subscales are significantly correlated and need further testing to justify keeping them separate.

Despite questions of reliability and validity, in order to rectify confusing language and format issues, I reviewed all remaining items and edited them for clarity. The items are also reordered to separate similar wording and topics in the proposed scale for future analysis (see

Appendix Q). This proposed scale has two sections. The first section directs respondents to "Respond to each question T for True or F for False." These 25 items are the knowledge questions. The key provides the correct answers for scoring purposes. The scoring directions will remain the same with one point for each correct answer and higher scores indicating more knowledge. The second section directs respondents to "Respond to these statements on a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree." These 27 items are a combination of the attitude and behavior questions. Although the attitude and behavior items are combined in the same section with one set of directions, the key identifies the appropriate subscale and if the response requires reverse scoring. The scoring directions will remain the same with directions to reverse score as noted and then add points by subscale. Higher scores on the Attitude subscale indicate more permissive attitudes, while higher scores on the Behavior subscale indicate more supportive or appropriate behaviors. More research is needed before the proposed scale should be used in further studies.

CHAPTER IX: DISCUSSION AND CRITIQUE

In this chapter, I review the initial study goals and the extent to which these goals were met. Because the study failed to produce a viable scale to measure health worker practice with older adults, I discuss the study limitations and analyze the methods employed at each stage of the process. Because of methodological and analytic issues throughout, the proposed scale lacks reliability and validity. The results need to be considered in this context, and further research will be necessary to produce a scale that meets the objectives before it is used in future studies.

Discussion

The primary goal of this dissertation was to develop a new scale to measure the dimensions of knowledge, attitudes, and behaviors of healthcare providers towards older adult sexuality. The methods used for developing this scale included: 1) reviewing the literature about older adult sexuality to generate a pool of items across these three dimensions; 2) evaluating the appropriateness of items from existing scales; 3) generating additional items through key informant interviews; 4) evaluating the appropriateness of items in the subscales; 5) conducting tests of validity and reliability; and 6) demonstrating the predictive ability of the resulting scale. This resulted in a 52-item proposed scale, with Knowledge, Attitude, and Behavior subscales. Although the dissertation successfully argued the need for an updated scale, flaws in the methods and analysis made the 52-item proposed scale conceptually unsound.

Critique

Generating a Pool of Items

The first three goals of the study involved generating a pool of items through a literature review, review of existing scales, and interviews with key informants. Based on these methods, I developed items in the dimensions of knowledge, attitudes, and behaviors. The knowledge and

attitude subscales mirrored the format of existing scales about practice with older adult sexuality, such as the Aging Sexual Knowledge and Attitudes Scale (ASKAS) (White, 1982a) and the Knowledge and Attitudes toward Elderly Sexuality (KATES) (Walker & Ephross, 1999; Walker et al., 1998). Considering my assertion that those scales were no longer valid for research, it was inappropriate not to question the subscales or the format employed in these earlier measures. Hillman and Stricker (1996b) even claim that the attitude subscale in the ASKAS is not appropriate and propose a two-factor solution that includes a permissive/restrictive dimension and an empathic/indifferent dimension.

The previous scales only included knowledge and attitude subscales, and I added the dimension of behaviors based on scripting theory (Gagnon & Simon, 2005; Simon & Gagnon, 1969; Simon & Gagnon, 1986). These scholars originally applied this theory to the interactions that occur between sexual partners. I extrapolated from their theory of sexual scripting to compare the interactions of older adult patients and their health workers. I applied intra-psychic scripts to knowledge, cultural scripts to attitudes, and interpersonal scripts to the behaviors of older adults and health workers in addressing issues of sexuality. Experts in the qualitative interviews also suggested interplay between knowledge, attitudes, and behaviors, which supported my initial decision to organize the pool of items among these three dimensions. Nevertheless, applying scripting theory to healthcare provider interactions with older adults about sexuality may not be an appropriate application of the theory.

Consequently, I based the generation of items through a review of the literature and expert interviews on a conceptualization of subscales that may not have been appropriate. In addition to problems with the dimensions used, establishing three domains in advance did not allow important concepts to emerge from the literature and experiences the experts described.

Instead of using preconceived dimensions, I should have let the literature and interviews drive the development of the items and allowed the factors emerge in the analysis.

Literature review. For the review of the literature, I examined 64 empirical and practice-based articles, books, legal decisions, and websites to develop an initial universe of items related to older adult sexuality. I reviewed the majority of the literature prior to scheduling expert interviews. Scheduling conflicts extended the time it took to complete Phase I; I conducted the first interview on October 2, 2011 and the last interview January 16, 2013. Although I continued to review literature that appeared after 2011, the majority of the empirical and practical literature that informed the study items was from 2011 and earlier. Because older adult sexuality is a dynamic, rapidly changing topic and new legal decisions and medical information may alter attitudes and practices, I should have considered publications after 2011 in more depth to ensure the currency of the items.

The literature review resulted in 13 topic categories: continuity of sexuality throughout the lifecycle; benefits of continued sexual expression; relationship status; masturbation; changes in male sexual functioning and treatments; changes in female sexual functioning and treatments; relationship between disease and sexual functioning; dementia; influence of medications on sexual functioning; LGBT and aging; sexually transmitted infections (STIs); HIV/AIDS; and safer sex practices. Based on the literature, I developed knowledge, attitude, and behavior items in each of these categories. Instead of focusing on these subscales, I should have focused on developing items that included a variety of important themes highlighted in the literature.

Expert interviews. I conducted qualitative interviews with nine experts in the areas of sexuality, aging, and healthcare, including two sex educators, two nurses, one social worker, two doctors, an art therapist, and a gerontologist. Because I recruited these experts through snowball

sampling, other expert informants or professionals in the field identified these informants as having expertise and interest in the area of older adult sexuality. Additionally, when I asked later expert informants for additional recommendations, they often suggested the same experts.

Because of the renown of these informants, the interviews tended to focus on their professional experience in the field, particular area of specialization, and record of publication. In the beginning, I allowed the experts to direct the interview too much. As interviewing progressed, I tailored the interview guide to focus on specific feedback about the ASKAS (White, 1982a) and asked the informants to propose items. Although the decision to focus on the ASKAS and request specific items resulted in some useful feedback on existing items and suggested new questions, topics, and situations to include in the universe of items, this strategy closed off the opportunity to concentrate on their experiences with older adult clients.

Because I interviewed experts known for their scholarship, they tended to focus more on their research interests and less on their practical experience. The experts with less research experience and more current practice experience provided interesting stories and vignettes that I used in developing items. Instead of focusing primarily on experts with scholarly renown, additional interviews with healthcare providers with current practical experience with older adults would have been useful in developing items relevant to healthcare providers today. The focus on informants with research expertise may not have produced items related to the experience of everyday practitioners.

In addition, I excluded an entire group of expert informants—older adults. Instead of using an inductive process for developing items, I used a top down approach, focusing only on expert healthcare providers and their view of what is important to older adult sexuality. Although my aim was to develop a scale that would encourage healthcare providers to address

older adult sexuality, I unintentionally disempowered older adults and "subjugated" their own views by only focusing on the professionals as experts (Hartman, 1992). By excluding the voices of older adults, I was not able to consider items that they might consider central to their experiences with health care workers around sexuality. Interviews with older people should be included to increase the value of a new scale. Other researchers (Tolman & Porche, 2000) have used an approach to scale development that involves diverse individuals from the target group in developing items. This is consistent with social justice approach to scale development that would include the perspectives of older adults and what they believe to be important.

Development of items. I developed items based on the literature and expert interviews. As the experts reviewed items that I developed from the literature review and earlier interviews, many provided feedback on wording, format, and grammar. I accepted these suggestions and used these recommendations uncritically in the pool of items for testing. As a result, many of the items were unclear or too specific. Instead, I should have taken control of the item development based on the stories and experiences the experts described during the interviews.

Another major limitation of this strategy was although the informants were experts in older adult sexuality, they were not experts in scale development and item construction. Because of their lack of expertise in scale development and my acceptance of their items, the item structure and anchors were inappropriate. Social work research textbooks (Grinnell, 2001; Rubin & Babbie, 2008) outline a number of guidelines for constructing measurement instruments. These include ensuring items are clear, using simple language, avoiding double-barreled questions, including only relevant questions, keeping items short, avoiding negative items, avoiding socially desirable items, and limiting sensitive questions. Because I followed the item recommendations of expert healthcare providers, items that contradict each of these guidelines

were included in the pool of items. Additionally, I used dichotomous True/False items to measure knowledge and continuous Likert-type items to measure attitudes and behaviors. Because there are at two different levels of measurement, I could not statistically analyze the questions together. By consulting with a specialist in scale development, such as a psychometrician, I could have avoided many of the issues with the items.

The mixed method approach to scale development (Bowen et al., 2004; Bowen & Guo, 2012) suggests cognitively testing the items with potential respondents. This would have involved reviewing the items for feedback with healthcare providers who work with older adults. I decided to not include a separate cognitive testing step, because I assumed the experts mirrored the characteristics of the intended respondents. Because many of the experts focus on research and not on practice, they may not have been similar enough to the intended respondents to justify excluding cognitive testing. By reviewing the pool of items with healthcare providers in the field, I might have been able to remove confusing items that they did not understand or thought were unnecessary.

Subscales. I created items from the literature and expert interviews focusing on the subscales of knowledge, attitudes, and behaviors. In order to test healthcare provider knowledge about older adult sexuality, I created true and false items. To test attitudes and behaviors, I developed five-point Likert scale items. Attitude questions asked mainly about a subject's comfort addressing issues related to older adult sexuality, and behavior items focused on the likelihood that a subject would act in a certain manner when faced with a particular practice situation with an elderly client. Because of this focus on subscales in developing items for the scale, the content of the items became secondary. Instead, I should have avoided these *a priori* subscales, which had been criticized when employed in earlier measurement tools, such as the

ASKAS (White, 1982a) and the KATES (Walker & Ephross, 1999; Walker et al., 1998). By scraping the preconceived subscales, the content could have driven the development of the items and dimensions or subscales could result from evaluation of item performance.

In an effort to determine if this process would have worked, I combined the items and conducted exploratory factor analysis (EFA). I could not include the items developed for the knowledge subscale because they were not continuous items. Because of the low number of valid items (n = 30) due to missing responses, I reviewed the responses to items. There were 121 continuous items for analysis, but only 11 of the questions had a 100% response rate (n = 155). The lowest response rate on any item was 57.42% (n = 89). In order to deal with missing responses, I replaced missing data with the mean for the item before conducting further analysis. The EFA, using principle component analysis for extraction and Varimax rotation, resulted in 33 factors for review. Five of the factors only included one item, so I could not determine a common theme. An additional five factors included a combination of items with no clear theme. Of the remaining 23 factors, 11 included items based on a single preconceived theme from the literature and interviews, such as LGBT issues, continued sexuality, safer sex practices, and changes in female sexual functioning and treatments. The remaining 12 factors contained items from multiple topic categories, but the majority of items focused on one theme. On further analysis of the items in those factors, it appeared items mainly grouped together by topic. For example, one of the factors contained three items about STIs and one item about HIV. The HIV item asked about testing for HIV in older adults, which is close to the idea of STI testing. Another factor included four items on continued sexuality throughout the lifecycle and one item on safer sex practices. The safer sex questions actually suggested a means of remaining sexually active while using a condom, which is consistent with remaining sexually active. Items that

were developed in line within certain topic areas may overlap in other areas and create conceptually valid dimensions. The EFA did not produce perfect results, but the initial review supports the notion that items may cluster around topics, instead of using *a priori* subscales.

Evaluate Items

The fourth goal of the dissertation was to evaluate the appropriateness of the items. In order to evaluate items, I recruited healthcare providers to respond to the proposed pool of items. Using quantitative methods, I determined which items should remain and removed inappropriate items. Because of issues with sampling and analysis, items that were conceptually important may have been eliminated.

Sampling. I initially proposed a sample of 300 participants, because DeVellis (2012) suggested this size for typical scale development. Despite aggressive efforts to recruit healthcare providers to complete the survey, it was difficult to recruit 300 healthcare providers. I ultimately decided to decrease the sampling goal to 150 participants, but this was too small of a sample to test the psychometric properties of the scale.

Although I sent the survey to over 3,904 healthcare providers throughout the five boroughs of New York and an announcement soliciting participation in the survey was posted through various national organizations and social media outlets, only 279 people clicked the survey link, and only 232 of those people started the survey. The survey announcement told potential participants that the survey would take approximately 30 minutes to complete. The length likely deterred participation. In contrast, subjects who decided to click on the link and start the survey may have already been experienced or interested in the topic and consequently may have had a greater knowledge base about older adult sexuality than healthcare workers in

general. The sample was likely not representative of healthcare providers throughout the country.

Additionally, 77 people who started the survey did not complete it to the end. This resulted in 155 cases for analysis. They may have stopped due to the length, lack of interest, or confusing language in the items. Despite no major demographic differences between those who completed the survey and those who stopped, those who completed the survey through to the end may have been more familiar, interested, and committed to the topic. Additionally, most of the participants who continued to the end skipped questions, which resulted in an even smaller valid sample for analysis.

The sampling methods yielded too few usable cases for analysis and, therefore, I cannot conclude that the scale is viable, reliable, or valid. Items that I eliminated due to poor performance may not have actually been bad items. Instead, it is possible that that the poor performance was due to a biased sample. Although DeVellis (2012) reported conflicting opinions about the necessary number of subjects for a useful factor analysis, he is clear that more respondents are necessary as the number of items in the scale increases. He reported that 100 subjects are too few for a factor analysis of 20 items. Considering the initial universe of items was 231 and the proposed scale is 52 items, 155 cases are too few for a more meaningful analysis of items.

Analysis. Sampling issues, including size and representativeness affected the ability to analyze the items appropriately. Nevertheless, after collecting a sample of 155 completed surveys through a widely distributed online instrument, I reviewed item performance and eliminated items with outlier means and poor correlation with other items. I preset values for means and correlations and removed items that fell outside the preset values. Additionally, I

removed items that were inappropriate based on qualitative review due to specificity or medical focus.

I thought that unclear and poorly worded items would be eliminated based on item performance in Phase II, but instead, confusion based on poor item structure may have led to high attrition rates. I ultimately eliminated items due to poor performance in Phase II that may have been conceptually important and may have excluded important content due to the preset values. These items may have performed poorly because of a biased sample of subjects with more knowledge about the topic, not because they were unimportant. The values for exclusion should have been more flexible to retain essential items.

This process of culling items resulted in a 25-item Knowledge subscale, a 13-item Attitude subscale, and a 14-item Behavior subscale. Using factor analysis, I evaluated the appropriateness of items. I initially performed EFA on the attitude and behavior items, but did not find common themes. Instead, I conducted confirmatory factor analysis (CFA) in the subscales of Attitudes and Behaviors separately. Instead of switching from EFA to CFA, I should have conducted a critical appraisal for finding no common themes in the EFA. The poor results of the analysis were due to the elimination of items that were essential earlier in the analysis.

Validity and Reliability Testing

The fifth and sixth goals of this dissertation were to establish reliability and validity or the scale and demonstrate its predictive ability. Although the Attitude and Behavior subscales appeared to have strong reliability, the items may still have been inappropriate for inclusion and the subscales inappropriate. The lack of validation items and inability to demonstrate predictive ability additionally support the need for revisiting the scale items.

Reliability. In order to establish the reliability of the proposed scale, I reviewed the internal consistency within the proposed subscales. The Knowledge subscale displayed low internal consistency, putting its reliability in question. This may have been because of the decision to code all non-responses in the knowledge section as incorrect. I still believe it is appropriate to code blanks in the knowledge section as incorrect for conceptual reasons. In addition to this possible explanation for low internal inconsistency, a biased sample may have affected reliability. I eliminated knowledge items in which more than 75% of participants answered correctly. It is possible that these were conceptually important items, but the majority of participants responded correctly because they were more knowledgeable than healthcare providers in general.

Although the internal consistency for the Knowledge subscale was undesirable, the Attitude and Behavior subscales displayed good internal consistency. Despite reliable results, the proposed scale is still not viable due to conceptual and analytic issues.

Although I tested for internal consistency, I did not test for consistency over time. I did not perform test-retest reliability due to the time intensity of completing the universe of items. I experienced considerable difficulty recruiting the initial subjects, so that requesting additional time for retest would have been prohibitive.

Validity. I attempted to evaluate three types of validity for the proposed scale: content validity, criterion-related validity, and construct validity. I concluded that the scale had content validity because it includes at least one item from each of the 14 topic areas that resulted from the literature review and qualitative interviews. However, the content validity is in question because items that may have been more appropriate in those topic areas might have been removed based on the culling of the items and others remained that may be less useful.

To determine criterion-related validity, I used a concurrent method to evaluate the correlation with prior training specific to older adult sexuality. I hypothesized that respondents with training would have more knowledge, more permissive attitudes, and more appropriate practices. Knowledge did not significantly correlate with prior trainings. Again, this may have been because the sample was more knowledgeable about older adult sexuality than the population of healthcare providers overall. Alternatively, it may mean that the knowledge items were not appropriate. Although the Attitude and Behavior subscales correlated significantly with trainings, I should have used a more appropriate criterion measure.

In order to establish construct validity, a scale is typically correlated with other existing scales. This would have added to an already unwieldy survey, so I did not add additional items. Instead, I correlated the subscales with respondent self-report of comfort related to older adult sexuality in order to test convergent validity. Knowledge did not significantly correlate with comfort, which may be due to higher knowledge in the sample than is typical. Although the Attitude and Behavior subscales correlated significantly with self-reported comfort, this is not a typical or accepted method for established convergent validity.

I tested discriminant validity between the subscales, but again did not include additional validated scale items for the analysis. Nevertheless, attitudes and behaviors failed to discriminate, which indicates that they may not be conceptually different. This further supports the notion that preconceived subscales of knowledge, attitudes, and behaviors may have been inappropriate.

Predictive ability. In the present dissertation, I did not include any methods for testing predictive ability of the proposed scale. The predictive ability of the scale is closely related to the concept of criterion-related validity, but uses an outside predictive measure, rather than self-

report. Before trying to establish predictive ability of the proposed scale, I need to correct the issues discussed here through a process I propose in the final chapter.

Summary

Despite reviewing 64 relevant articles, books, chapters, websites, and legal decisions, interviewing nine experts, producing 231 items, and testing the items with 155 healthcare providers, I was not able to meet the dissertation goals because of flaws throughout the process. Major limitations in generating the pool of items, evaluating items, and testing reliability and validity make the proposed scale unviable. Issues around generating a pool of items included the literature being outdated, expert interviews that were too centered on critiquing the ASKAS (White, 1982a) and developing items, and lack of interviews with older adults. The items based on the review of the literature and expert interviews were too focused on preset subscales and structure based on the ASKAS (White, 1982a) and the KATES (Walker & Ephross, 1999; Walker et al., 1998), which was inappropriate. Additionally, the items lacked clarity, which might have been avoided if a psychometrician reviewed the items. The pool of items could not be effectively evaluated because of a small sample that might not have been representative of healthcare professionals as a whole. Due to the small, non-representative sample, items were removed that preformed outside of expected means and correlations. Additionally, the focus on the subscales resulted in an ineffective factor analysis. Lastly, the resulting proposed scale is not reliable or valid because there was no test of temporal consistency, and there is no internal consistency for the knowledge questions. Even though, content validity was present for the pool of items, important concepts may have been lost during analysis. Criterion-related and construct validity were not effectively tested. As a result, I propose a redesigned study for establishing a viable scale for use in research around healthcare providers and older adult sexuality.

CHAPTER X: PROPOSED REDESIGN AND IMPLICATIONS FOR FUTURE RESEARCH

Introduction

Because of the issues discussed in the previous chapter and the poor performance of all subscales, I propose a revision of the methods I used throughout this study. In this chapter, I will present a fresh approach to developing a scale to measure health care practice regarding older adult sexuality. The proposed redesign will more closely follow the mixed method approach to scale development proposed by Bowen and colleagues (Bowen et al., 2004; Bowen & Guo, 2012).

My critique of the process used to develop the scale presented in this study suggests various correctives that should produce a more appropriate measure. I will return to the literature and theory and interview additional practitioners about older adult sexuality. After creating a pool of items, I will review these items with experts in the fields of older adult sexuality, healthcare, and scale development. I will then review the items with intended respondents to ensure understanding of the items and clarity. I will seek additional feedback from experts on any revisions. Once I complete the process of developing and revising a pool of items, I will test the items with a pilot sample and conduct initial statistical analysis to determine item performance. If necessary, I will return to the literature and experts for additional revisions. I will then test the proposed scale, with a larger sample for additional analysis using factor analysis and reliability and validity testing.

Redesign

Literature Review

The first step of scale development involves reviewing theory and literature. I will return to the 64 articles, books, chapters, websites, and legal decisions I reviewed for the present dissertation and search medical and social science databases for additional recent articles. Recent legal developments may also require scrutiny, because the policy implications of the Supreme Court's overturning the Defense of Marriage Act are currently unfolding. Many of these policy decisions affect elderly gay and lesbian couples. By including recent literature, I will ensure the items are relevant and accurate. As I review these articles together, I will suspend any preconceived notions of subscales. In reviewing the literature, I developed items similar in format to the Aging Sexual Knowledge and Attitudes Scale (ASKAS) (White, 1982a). Because the ASKAS has a number of limitations, including poor subscales and structure, I will avoid developing items based on this structure.

Qualitative Interviews

The next step in the mixed method approach to scale development (Bowen et al., 2004; Bowen & Guo, 2012) involves interviews with experts about the construct. In the present dissertation, I focused on having reputational experts about older adult sexuality review the ASKAS (White, 1982a) as a starting point for critique and for developing new items. I also requested informants propose specific items, instead of employing a less structured interview protocol that focused on the experiences of these experts. In the redesign, I will return to the interviews for reanalysis focusing on the sections of the interviews where informants gave examples of their experiences with health care workers and older adults around sexual practices.

I will also recruit addition reputational experts and conduct interviews that focus on practices as opposed to research findings or scholarship.

Review dissertation interviews. In the present dissertation, I interviewed nine experts in the areas of older adult sexuality and healthcare. Many of these experts were people whose primary contribution was scholarship, but the majority also had practice experience. In addition to analyzing the ASKAS (White, 1982a) and suggesting specific items for the universe of items, they discussed their experiences working with older adult in the field. At times, I used these stories to develop items, but I will return to the transcripts and focus on the practices and experiences, rather than the research, critique, and suggested items.

Healthcare provider interviews. Because practice experience is important for developing a scale about healthcare providers and their role in older adult sexuality, I will conduct additional interviews with healthcare providers, after receiving Institutional Review Board (IRB) approval. Instead of focusing exclusively on experts in the field who conduct research, I will interview healthcare providers who directly with older adults. I will include informants from a variety of disciplines, including doctors, social workers, nurses, nurse practitioners, geriatric care managers, physical therapists, occupational therapists, and personal care aides. The interview protocol will guide healthcare providers to discuss in detail their experiences with older adults when addressing sexuality and sexual health. By focusing on healthcare practitioners instead of experts, I will gain a different perspective on the phenomenon.

Older adult interviews. In addition to interviewing healthcare practitioners, interviews and focus groups with older adults, will provide an additional perspective on the intersection of health care and sexuality. The voices and experiences of older adults themselves are missing from the proposed scale in this dissertation. Older adults will have positive and negative

experiences with healthcare providers to share. They will also be able to address the issues that they would like to be the focus of healthcare providers in their own care. After receiving IRB approval, I will recruit older adults in a number of locations in order to create a diverse sample. Recruitment sites will include local doctors' offices, senior centers, assisted living facilities, and nursing homes, and I will post information about the research and their participation in the study. By sampling from a number of locales with individuals with varying levels of functioning, I will gain a better understanding of experiences of different groups of older adults. This addition of interviews with older adults has the potential to add a social justice perspective to the new scale.

Analysis. Instead of analyzing the interviews for specific items in the dimensions of knowledge, behavior, and, attitudes, I will approach the analytic process without preconceived ideas about subscales or domains. Using qualitative data analysis (QDA) software, such as ATLAS-TI, I will employ thematic analysis to look for patterns and themes in the data (Braun & Clarke, 2006; Padgett, 2008). Using QDA software will allow me to categorize the stories from experts, healthcare providers, and older adults into themes based on higher order concepts. This inductive process of searching for themes will allow important aspects of the concept to emerge.

Item Development

After reanalyzing the literature and interviews from this dissertation, new literature, and healthcare practitioner and older adult interviews for themes and important concepts, I will create a pool of items. The themes and concepts will lead to the development of items based on content, not preset subscales. No preset subscales will be applied in developing the items, but I will ensure inclusion of items from each of the themes found using ATLAS-TI. Unlike the universe of items in the present dissertation, all items will be ordinal level variables using a Likert-type scale in order to allow for proper statistical analysis. Additionally, the scale will

have fewer items to allow for completion within a reasonable period. The draft scale will not take longer than ten minutes to complete.

In order to avoid structurally inappropriate items that lack clarity, I will work with experts to review the proposed pool of items. I will first have a psychometrician review the items to ensure the wording and structure are appropriate. Next, I will cognitively test the items with healthcare practitioners and older adults who were not involved in the earlier parts of the study. These healthcare practitioners will be demographically similar to the intended sample that will complete the survey in future research. This step will ensure subjects will be able to understand the items. I will revise the items as necessary based on the feedback of these subjects. Lastly, I will return to the experts for review of the revisions. These experts will include the psychometrician and the healthcare practitioners and older adults who I initially interviewed about the concept. This process will ensure that items are clear and appropriate for a new scale.

Evaluate Items

In order to evaluate the proposed items, I will use quantitative analysis. Prior to testing the proposed scale with a large sample, I will pilot test the items with a smaller sample of healthcare practitioners who work with older adults, after receiving IRB approval. In order to develop the sample, I will target specific organizations, such as the American Geriatrics Society (AGS), where the membership consists of geriatric health professionals working in the field, not in research. I will send the proposed scale to 200 practitioners to determine the response rate and to conduct initial statistical analysis. I aim to obtain 50 completed surveys in the pilot test. This will allow me to determine if practitioners are completing the survey and evaluate if the items are performing as expected. If necessary, I will return to the experts for additional feedback if the

items need revision. Following the pilot test and revisions, I will test the proposed scale with a larger sample.

Sampling strategy. In an effort to obtain a representative sample of healthcare providers who are similar to those who will actually be using the scale, I will target specific groups in an effort to increase response rate. These groups will include primary care physicians from the American College of Physicians (ACP), social workers from the National Association of Social Workers (NASW), nurses and nurse practitioners from the American Nurses Association (ANA), geriatric care managers from the Nation Association of Professional Geriatric Care Managers (NAPGCM), physical therapists from the American Physical Therapy Association (APTA), and occupational therapists from American Occupational Therapy Association (AOTA). After receiving IRB approval, I will contact these organizations to request mailing lists and purchase lists when necessary. Depending on whether the lists are of mailing addresses or email addresses, I will send appropriate recruitment materials. This will account for the possibility that not all professional organizations maintain email lists of members, and that some potential subjects may not have email access. For mailing addresses, I will send a recruitment letter, consent form, and paper copy of the proposed survey and a self-addressed stamped envelope for returning the survey. For email address, I will send a recruitment email with a link to an online version of the survey with electronic consent form. In order to reach at least 300 healthcare professionals, I will continue recruitment until that goal is met. By targeting specific membership groups, I hope to increase response rates and recruit appropriate respondents.

Factor analysis. Because all items will be continuous, they can be analyzed together using exploratory factor analysis (EFA) via SPSS. EFA is often used in scale development to determine the scale structure and item performance (Bowen & Guo, 2012). Without preset

subscales, EFA will determine which items cluster together; this will enable me to identify themes or subscales inductively. If subscales become evident, I will run confirmatory factor analysis (CFA) to confirm the applicability of items in measuring the constructs in the subscales. This analysis will employ SPSS.

Reliability. At this phase of the proposed redesign, I will test for the internal consistency of the scale. If subscales arise, I will run internal consistency analysis at the level of the subscale. Cronbach's coefficient alpha, α, will be used to test the correlations between items, since all items will be at the same level of measurement. Additional research would be necessary to determine temporal reliability using test-retest methods.

Validity. In addition to internal consistency reliability, at this stage of the research, I will assess the scale for content validity. Content validity is typically determined by having experts review the measure to ensure all important concepts are included (DeVellis, 2003). Because the items will be developed in an iterative process and reviewed by experts prior to quantitative testing, the proposed scale is expected to have content validity. In order to ensure content validity, I will review the items again to ensure the appropriate themes and concepts remain included. Additional research would be necessary to determine criterion-related validity and construct validity.

Future Research

Once I test the proposed scale in the redesign, I will need to conduct additional research to establish the psychometric properties of the proposed scale. Using an appropriate sample, I will administer the survey again later for a smaller sample to determine test-retest reliability. I will also add additional items for testing criterion validity and validated items to ensure construct validity of the scale.

Proposed Sampling Plan

In addition to DeVellis's (2012) recommendation of 300 participants, Tinsely and Tinsely (1987) review recommendations for sample size in factor analysis. They report that many researchers recommend 5 to 10 subjects per variable, with the ratio being less crucial with samples larger than 300. With 52 items, the ratio would result in a recommended sample between 260 and 520. Based on recommendations that more than 300 is not essential (Tinsely & Tinsely, 1987), a minimum of 300 fully completed surveys is the goal.

Consequently, in future research, I plan to recruit a sample of at least 300 subjects after obtaining IRB approval. I will use purposive sampling to recruit students in various healthcare training programs. By using students, there will be a wider range of prior experience with older adult sexuality. In addition, I have access to students in graduate programs from various disciplines, including medicine, social work, nursing, physicians assistance, physical therapy, and occupational therapy at my university. I will offer an incentive, such as an opportunity to win a gift certificate to the bookstore through a raffle, to encourage participation. Fifty individuals from the pool of 300 cases will be contacted two weeks later to complete the scale again for test-retest reliability.

Proposed Analysis of Data

In order to determine the efficacy of the proposed scale, I will perform CFA, as well as tests of reliability and validity on the 300 completed surveys. The larger sample will allow for a more accurate factor analysis with meaningful factors. By collecting data at a second administration, I will be able to conduct test-retest reliability. Additionally, I will add validation items to allow for additional psychometric testing.

Confirmatory factor analysis. Confirmatory factor analysis (CFA) is an essential part of the scale development process (Bowen & Guo, 2012). By conducting CFA, I will be able to determine the overall quality of the scale, including the dimensions of the construct that form subscales, the applicability of the items in measuring the construct, and the relationship between items and subscales. Structural equation modeling (SEM) is a specialized analysis approach to performing CFA that used when the concept being measured is abstract. Because SEM offers a number of statistical advantages, I will consider using Mplus to perform SEM for this stage of data analysis if a complicated conceptual structure arises in earlier analysis. Using SEM or traditional statistical analysis, I will perform CFA in order to determine the psychometric properties of the proposed scale and assist in establishing construct validity.

Reliability. Reliability testing is extremely important in scale development. In order to establish internal consistency, I will use Cronbach's coefficient alpha, α, because all items will be measured using a ordinal level Likert-type scale. With a large, diverse sample, the results should provide more support for asserting reliability.

Test-retest reliability is necessary to determine temporal stability by comparing scores on two occasions (DeVellis, 2003). Participants who agree to be contacted again will be sent the scale two weeks later for completion. I will correlate the scores from the first administration with the scores on the second occasion (DeVellis, 2012). Because the scale should be measuring a stable construct, the correlation should be high, unless subjects receive training on older adult sexuality between the two administrations.

Validity. Validity testing of a new scale is important because it supports the idea that the scale measures what it is supposed to test (Hudson, 1982). Although I will have already established content validity, I will review any new literature to ensure that the items remain

relevant. In addition, I will focus on criterion-related and construct validity in future research. To measure criterion-related validity, I will ask respondents to report the number of hours of training on sexuality they received and the number of hours specific to older adult sexuality. It is expected that students with more hours of training will yield higher scores on the survey. In future studies, I will compare scores before and after receiving general sexuality trainings and sexual trainings specific to older adults to establish additional criterion-related validity.

I propose establishing construct validity by determining the correlation between the proposed scale and other existing scales. I will test convergent validity by including scales with similar constructs. I expect the Attitudes Toward Sexuality Scale (ATSS) (Fisher, 2010) and Sexual Attitude Scale (SAS) (Hudson & Murphy, 2010) to correlate moderately with the proposed scale. Although these scales measure sexual attitudes, they do not focus on older adults; therefore, they are not expected to correlate strongly. The General Knowledge part of the HIV/AIDS Knowledge and Attitudes Scales for Teachers (Koch & Singer, 2010) and the Sexual Knowledge and Attitudes Test for Adolescents (SKAT-A) (Fullard & Scheier, 2010) are expected to also correlate moderately with the scale. These scales measure sexual knowledge, but focus on teachers and adolescents, so they are not expected to correlate strongly. I will test discriminant validity by including scales that I do not expect to correlate highly. I will use a short form of the Marlowe-Crowne Social Desirability Scale (Reynolds, 1982) to ensure the new scale is not measuring social desirability. Additionally, I will test discriminant validity between any subscales that arise. Additional testing will allow for the development of a psychometrically sound scale with stringent reliability and validity testing. Despite methodological difficulties that resulted in a scale that was not viable, this dissertation supports the importance of a contemporary scale that has a number of important implications.

Implications

There are a number of important research, practice, and policy implications for creating a new scale for use in research with healthcare providers around older adult sexuality. Although there is research on the knowledge and attitudes of physicians (Bauer et al., 2007; Burd et al., 2006; Dunn, & Cutler; Jacobson, 2010; Kligman, 1991; Mona et al., 2010), nurse practitioners (Maes & Louis, 2011), and nurses (Bouman et al., 2007; Mahieu et al., 2011; Quinn-Krach & Van Hoozer, 1988; Rheaume & Mitty, 2008) about older adult sexuality, that research remains limited. Additionally there is a paucity of research about other healthcare professionals, including social workers. The literature that does exist uses an outdated scale (White, 1982a). A new scale would allow researchers to understand better what healthcare providers practices around sexuality when they work with older clients.

Information obtained through research with healthcare providers using an updated scale with rigorous psychometric testing will be useful in developing educational programs. Because the scale will include a number of topics determined to be important by experts, practitioners, and older adults, researchers and practitioners will be able to identify the areas they should focus on in developing trainings. Although trainings specific to older adult sexuality do exist, effectiveness testing has used invalidated scales. The new scale can test the success of trainings in pre-test post-test studies. If educational and continuing education programs can develop trainings that increase knowledge, improve attitudes, and encourage more appropriate behaviors in relation to older adult sexuality, there will be major practice ramifications, because healthcare professionals, including social workers, will be able to offer trainings with known implications.

Moreover, if trainings modify healthcare provider practices as measured on a new scale, there may be opportunities for advocacy and policy change. Dr. Lavalleur, one of the expert

informants in Phase I of the dissertation, noted the time dedicated to teaching sexuality in medical school education is shrinking. More research on the importance of older adult sexuality and effective training programs may stop the diminishing resources dedicated to this important topic in medical schools and highlight the importance in all healthcare fields. In addition to curriculum change among educational programs for a broad range of healthcare professionals, agencies serving older adults may be encouraged to provide trainings if they are tested and successful.

Summary

The reluctance among healthcare providers to acknowledge and discuss sexuality and sexual health with older adult clients is well documented (Dogan et al., 2008; Dunn & Cutler, 2000; Gerbert et al., 1990; Mona et al., 2010; Skiest & Keiser, 1997; Tangredi et al., 2008). Although the Aging Sexuality Knowledge and Attitudes Scale (ASKAS) (White, 1982a) is often used to study these issues (Bouman et al., 2007; Dogan et al., 2008; Goldstein-Lohman & Aiken, 1995; Langer-Most & Langer, 2010; Luadzers, 1995; Quinn-Krach & Van Hoozer, 1988; Snyder & Zweig, 2010; White & Catania, 1982), the scale is outdated (Snyder & Zweig, 2010). This dissertation created a new proposed scale to study healthcare providers and their work in relation to older adult sexuality. The mixed method approach allowed theory, empirical literature, and experts in the field to inform the development of the scale. Because of methodological failures, this study did not produce a viable scale. I present a critique of the process and plans for a redesign and future research to create a psychometrically sound scale. An updated scale is potentially a valuable tool for understanding healthcare providers and their experiences with older adult sexuality and may be useful in measuring the effectiveness of training programs.

APPENDICES

Appendix A: Aging Sexual Knowledge and Attitudes Scale (ASKAS)

Knowledge Questions

True/False/Don't Know (Correct answer is show in parentheses)

1. Sexual activity in aged persons is often dangerous to their health. (F)*
2. Male over the aged of 65 typically take longer to attain an erection of their penis than do younger males. (T)
3. Males over the age of 65 usually experience a reduction in intensity of orgasm relative to younger males. (T)
4. The firmness of erection in aged males is often less than that of younger persons. (T)
5. The older female (65+ years of age) has reduced vaginal lubrication secretion relative to younger females. (T)
6. The aged female takes longer to achieve adequate vaginal lubrication relative to younger females. (T)
7. The older female may experience painful intercourse due to reduced elasticity of the vagina and reduced vaginal lubrication. (T)
8. Sexuality is typically a lifelong need. (T)
9. Sexual behavior in older people (65+) increases the risk of heart attack. (F)
10. Most males over the age of 65 are unable to engage in sexual intercourse. (F)*
11. The relatively most sexually active younger people tend to become the relatively most sexually active older people. (T)
12. There is evidence that sexual activity in older persons has beneficial physical effects on the participants. (T)
13. Sexual activity may be psychologically beneficial to older person participants. (T)
14. Most older females are sexually unresponsive. (F)*
15. The sex urge typically increases with age in males over 65. (F)
16. Prescription drugs may alter a person's sex drive. (T)
17. Females, after menopause, have a physiological-induced need for sexual activity. (F)*
18. Basically, changes with advanced age (65+) in sexuality involve a slowing of response time rather than a reduction of interest in sex. (T)
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. (T)
20. Older males and females cannot act as sex partners as both need younger partners for stimulation. (F)*
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. (T)
22. Barbiturates, tranquilizers, and alcohol may lower the sexual arousal levels of aged persons and interfere with sexual responsiveness. (T)
23. Sexual disinterest in aged persons may be a reflection of a psychological state of depression. (T)
24. There is a decrease in frequency of sexual activity with older age in males. (T)
25. There is a great decrease in male sexuality with age than there is in female sexuality. (T)
26. Heavy consumption of cigarettes may diminish sexual desire. (T)

* Indicates that the scoring should be reversed such that 2 = 1, and 1 = 2 (i.e., a low score indicates high knowledge).

27. An important factor in the maintenance of sexual responsiveness in the aging male is the consistency of sexual activity throughout his life. (T)
28. Fear of the inability to perform sexually may bring about an inability to perform sexually in older males. (T)
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. (T)
30. Excessive masturbation may bring about an early onset of mental confusion and dementia in the aged. (F)*
31. There is an inevitable loss of sexual satisfaction in post-menopausal women. (F)*
32. Secondary impotence (or non-physiologically caused) increases in males over the aged of 60 relative to young males. (T)
33. Impotence in aged males may literally be effectively treated and cured in many instances. (T)
34. In the absence of severe physical disability males and females may maintain sexual interest and activity well into their 80s and 90s. (T)
35. Masturbation in older males and females has beneficial effects on the maintenance of sexual responsiveness. (T).

Attitude Questions

7-point Likert-type scale, where disagree = 1, agree = 7

36. Aged people have little interest in sexuality. (Aged = 65+ years of age.)
37. An aged person who shows sexual interest brings disgrace to himself/herself.
38. Institutions, such as nursing homes, ought not to encourage or support sexual activity of any sort in their residents.
39. Male and female residents of nursing homes ought to live on separate floors or separate wings of the nursing home.
40. Nursing homes have no obligation to provide adequate privacy for residents who desire to be alone, either by themselves or as a couple.
41. As one becomes older (say, past 65) interest in sexuality inevitably disappears.

For Items 42, 43, and 44:

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.
43. Move my relative from this institutions.
44. Stay out of it as it is not my concern.-
45. If I knew that a particular nursing home permitted and supported sexual activity in residents who desired such, I would not place a relative in that nursing home.
46. It is immoral for older persons to engage in recreational sex.
47. I would like to know more about the changes in sexual functioning in older years.+
48. I feel I know all I need to know about sexuality in the aged.+
49. I would complain to the management if I knew of sexual activity between any residents of a nursing home.

---

* Indicates that the scoring should be reversed such that 2 = 1, and 1 = 2 (i.e., a low score indicates high knowledge).

- Reverse scoring on these items. A low score indicates a permissive attitude.

50. I would support sex education courses for aged residents of nursing homes.[-]
51. I would support sex education courses for the staff of nursing homes.[+]
52. Masturbation is an acceptable sexual activity for older males.[+]
53. Masturbation is an acceptable sexual activity for older females.[+]
54. Institutions, such as nursing homes, ought to provide large enough beds for couples who desire such to sleep together.[+]
55. Staff of nursing homes ought to be trained or educated with regard to sexuality in the aged and/or disabled.[+]
56. Residents of nursing homes ought not to engage in sexual activity of any sort.
57. Institutions, such as nursing homes, should provide opportunities for the social interaction of men and women.[+]
58. Masturbation is harmful and ought to be avoided.
59. Institutions, such as nursing homes, should provide privacy such as to allow residents to engage in sexual behavior without fear of intrusion or observation.[+]
60. If family members object to a widowed relative engaging in sexual relations with another resident of a nursing home, it is the obligation of the management and staff to make certain that such sexual activity is prevented.
61. Sexual relations outside the context of marriage are always wrong.

[-] Reverse scoring on these items. A low score indicates a permissive attitude.

Appendix B: Initial Participation Request Letter to Conference Organizer

To _____:

I am a doctoral candidate in the Department of Social Welfare at the CUNY Graduate Center, conducting my dissertation research about older adult sexuality. I am excited to be attending the conference Sexuality, Intimacy, and Aging: What Every Professional Needs to Know. I am especially interested in attending because my dissertation work focuses on creating a reliable and valid scale for measuring the role of healthcare providers in older adult sexuality.

I am hoping that you would be interested in meeting to discuss my research and to be an expert in the first phase of my study. During the first phase, I will be interviewing experts in the field of older adult sexuality to create a pool of items that will be tested in later phases. Participation in the first phase would involve participating in an interview that will last approximately one hour. In addition to developing potential items for inclusion in the scale, you will be asked to review an existing scale and provide feedback. At a later date, you will be asked to complete a sample protocol containing items developed in the interview process and provide feedback.

I am asking for your participation because of your vast expertise in this area. The interview would last approximately 1 hour and I would be happy to schedule it around the conference or at a later date in person or by teleconference. Please inform me if you would be interested in participating in this study.

Because of your role in the field and your involvement in organizing the conference, I would also like to ask for your assistance in identifying other experts for participation in this phase of the study. I would like to identify experts whom I could interview while at the conference in the evenings or during free time. In addition, I would be happy to obtain recommendations of key informants whom I could arrange interviews with at another time.

If you have any questions, please feel free to contact me by phone at 516-528-3831 or by e-mail at scohen1@gc.cuny.edu.

Sincerely,
Stephanie Jacobson, LCSW

Appendix C: Participation Request Script for Sexuality and Aging Conference Experts

Hello, my name is Stephanie Jacobson and I am a doctoral candidate in the Department of Social Welfare at the CUNY Graduate Center.

Do you have a moment to speak now?

As my dissertation work, I am developing a scale to measure the role of healthcare providers in older adult sexuality.

I am looking for people to participate in an interview that will last approximately one hour to develop potential items for inclusion in the scale and to review an existing scale and provide feedback.

Since you are an expert in the field, I am wondering if you would be interested in meeting during the conference at a location of your choosing. Alternatively, we can schedule an interview either in person or by teleconference in the future.

You can contact me by phone at 516-528-3831 or by e-mail at scohen1@gc.cuny.edu.

Thank you for your time.

Appendix D: Participation Request Letter for Phase I

To _____:

I am a doctoral candidate in the Department of Social Welfare at the CUNY Graduate Center, conducting my dissertation research about older adult sexuality. I am contacting you because you were identified as a potential expert informant for my dissertation work, which focuses on creating a reliable and valid scale for measuring the role of healthcare providers in older adult sexuality.

I am hoping that you would be willing to discuss my research and to be an expert in the first phase of my study. During the first phase, I will be interviewing experts in the field of older adult sexuality to create a pool of items that will be tested in later phases. Participation in the first phase would involve participating in an interview that will last approximately one hour. In addition to developing potential items for inclusion in the scale, you will be asked to review an existing scale and provide feedback. At a later date, you will be asked to complete a sample protocol containing items developed in the interview process and provide feedback.

I am asking for your participation because you are a healthcare provider or researcher who has expertise in this area. The interview would last approximately 1 hour and I would be happy to schedule at your convenience in person or by teleconference. Participation in this study is voluntary, and refusal to participate will involve no penalty or loss of benefits to which you are entitled. Please inform me if you would be interested in participating in this study.

If you have any questions, please feel free to contact me by phone at 516-528-3831 or by e-mail at scohen1@gc.cuny.edu.

Sincerely,
Stephanie Jacobson, LCSW

Appendix E: Thank You for Agreeing to Participate Letter

To _____:

Thank you for agreeing to participate in my doctoral study to create a scale to measure the role of healthcare providers in older adult sexuality. I am looking forward to meeting with you. You can contact me by phone at 516-528-3831 or by e-mail at scohen1@gc.cuny.edu with your availability so that we can arrange a time and place to meet. Please keep in mind that the interview will last approximately 1 hour. Thank you again for agreeing to work with me on this exciting project.

Sincerely,
Stephanie Jacobson, LCSW

Appendix F: Thank You for Your Consideration Letter

To _____:

Thank you for your time and consideration regarding participation in my doctoral study to create a scale to measure the role of healthcare providers in older adult sexuality. Although you are unable to participate at this time, please inform me if you can suggest any other experts who might be interested in participating. If your circumstances change and you are able to contribute, please feel free to contact me by phone at 516-528-3831 or by e-mail at scohen1@gc.cuny.edu.

Sincerely,
Stephanie Jacobson, LCSW

Appendix G: IRB Approved Key Informant Interview Guide

Introduction: As we discussed earlier, I am interested in speaking with you as an expert to get your guidance in developing a scale that researchers can use to measure knowledge, attitudes, and other important dimensions when conducting studies of the role of healthcare providers in older adult sexuality. I am going to ask some questions about your own experience with older adults and their sexuality. Then, I will ask for your analysis of an existing scale, its subscales, specific questions, format, and length. I also want your suggestions about specific items you would like to see in such a scale. After I develop a draft of scale based on your interview and interviews with others, I will contact you again to see if you are available to review it and make additional suggestions. I am going to start by asking a few questions about you.

1. I am interested in speaking to you because you are a well-known expert in older adult sexuality. Can you tell how you became involved in this area in the first place? Tell me about your experience in this field.

2. Not all healthcare providers are comfortable having discussions with their older adult clients about sexuality. What barriers do you think prevent them from discussing sexuality with their older adults?
   - Lack of knowledge
   - Questions about relevance
   - Stereotypes
   - Attitudes
   - Communication issues
   - Poor relationship with patients

Now that we have covered your own experience, I am going to ask you to for your opinions about the Aging Sexual Knowledge and Attitudes Scale (ASKAS) (see attached). I sent you this scale before we met. Do you want a few minutes to look at it again?

3. Were you aware of the ASKAS before I sent it to you? Have you ever completed this scale in a study? What were your reactions to the scale at that time?

4. Looking at the scale now, what are your thoughts about it?
   - Length
   - Language
   - Format of the questions
   - Appropriateness for community practice
   - Currency? Items that address Viagra or other medications developed since the scale was developed?

5. Do you think these questions reflect issues in current practice?
   - Are there questions you think need to be added?
   - A lot has changed in the 30 years since the scale was developed. Do you think this instrument captures issues that affect older people sexual health concerns today?
   - What issues would you include based on current health concerns among the elderly?

6. The ASKAS has two subscales, Knowledge and Attitudes. Do you believe these two dimensions are important aspects that influence communication about sexuality between healthcare providers and older adults?
   - Are there questions about "knowledge" you would like to see added?
   - Are there questions about "attitude" you would like to see added?

7. How would you measure knowledge in a new scale?
   - What topics would you include to measure knowledge?
   - Can you give me some specific questions you would like to include to measure knowledge?

8. How would you measure attitudes in a new scale?
   - What topics would you include to measure knowledge?
   - Can you give me some specific questions you would like to include to measure knowledge?

9. Are there other dimensions you think influence healthcare provider communication with older adults about sexuality? What would you consider ideal dimensions or subscales?
   - Do you think relationship style with patients is important?
   - Do you think communication style is important?
   - Do you think other dimensions are important? What are they? Why are they important?

10. How would you measure relationship or communication style?
    - What questions would you ask?
    - How would you word the questions?
    - Can you give me some specific questions you would like to include to measure those dimensions?

11. How would you measure the other dimensions you recommended?
    - What questions would you ask?
    - How would you word the questions?
    - Can you give me some specific questions you would like to include to measure those dimensions?

12. Do you have any thoughts about the best subjects to test the scale with?
    - Healthcare providers in specific hospitals
    - Professional organizations
    - Specific medical specialties

13. Do you have any thoughts about the best way for me to distribute the scale once I have developed a prototype?

That covers the things I wanted to ask. What should I have asked you that I didn't?

I am looking for additional healthcare providers or researchers to act as expert informants. Do you know anyone who would be appropriate to interview? Whom do you think I should talk to?

Appendix H: Participation Request Script for GSA Participants

Hello, my name is Stephanie Jacobson and I am a doctoral candidate in the Department of Social Welfare at the CUNY Graduate Center.

As my dissertation work, I am developing a scale to measure the role of healthcare providers in older adult sexuality. Today I am presenting on the preliminary findings from the first phase of my dissertation.

I am looking for people to participate in the second phase, which involves testing the potential items for inclusion in the scale.

Since you are a healthcare provider in the field, I am wondering if you would be interested in participating. I am asking for you to provide your business card and/or e-mail address, so that I can send you the items at some point after the conference. It is expected that your participation will take 30 to 60 minutes.

You can contact me by phone at 516-528-3831 or by e-mail at scohen1@gc.cuny.edu.com. Thank you for your time.

Appendix I: Participation Request Letter for GSA Participants

Hi GSA Conference Attendee,

I am a doctoral candidate in the Department of Social Welfare at the CUNY Graduate Center conducting my dissertation research about older adult sexuality. You may remember me from the GSA Conference in November 2012, where we discussed the scale I am developing to measure the role of healthcare professionals in older adult sexuality. In furtherance of that goal, I am now looking for healthcare professionals to complete the survey and I am contacting you because you previously expressed interest in participating. It is expected that your participation will take approximately 30 minutes. You can access the survey by clicking the link: https://cunyhunter.us2.qualtrics.com/SE/?SID=SV_3UF0ZjFXZcFeBFP.

As a thank you for your participation and your involvement in development of this scale, you will be entered into a lottery for an iPad mini, if you wish!

If you have any questions, you can contact me by phone at 516-528-3831 or by e-mail at scohen1@gc.cuny.edu. Please feel free to forward this e-mail to other healthcare professionals who may be interested in participating. I appreciate your participation in my dissertation research.

Sincerely,
Stephanie A. Jacobson, LCSW

Appendix J: Participation Request Letter for Phase II

Hi,

I am a doctoral candidate in the Department of Social Welfare at the CUNY Graduate Center conducting my dissertation research about older adult sexuality. I am developing a scale to measure the role of healthcare professionals in older adult sexuality. In furtherance of that goal, I am looking for healthcare professionals to complete the survey and I am contacting you because you may be interested in participating. It is expected that your participation will take approximately 30 minutes. You can access the survey by clicking the link: https://cunyhunter.us2.qualtrics.com/SE/?SID=SV_3UF0ZjFXZcFeBFP.

As a thank you for your participation and your involvement in development of this scale, you will be entered into a lottery for an iPad mini, if you wish!

If you have any questions, you can contact me by phone at 516-528-3831 or by e-mail at scohen1@gc.cuny.edu. Please feel free to forward this e-mail to other healthcare professionals who may be interested in participating. I appreciate your participation in my dissertation research.

Sincerely,
Stephanie A. Jacobson, LCSW

Appendix K: Participation Request Posting for Listservs, Blogs, and Facebook

Stephanie Jacobson is doctoral candidate in the Department of Social Welfare at the CUNY Graduate Center conducting her dissertation research about older adult sexuality. She is developing a scale to measure the role of healthcare professionals in older adult sexuality and is looking for healthcare professionals to complete the survey. It is expected that your participation will take approximately 30 minutes. You can access the survey by clicking the link: https://cunyhunter.us2.qualtrics.com/SE/?SID=SV_3UF0ZjFXZcFeBFP.

As a thank you for providing valuable feedback and completing the survey, you will be entered into a lottery for an iPad mini, if you wish!

If you have any questions, you can contact Stephanie by phone at 516-528-3831 or by e-mail at scohen1@gc.cuny.edu. Please feel free to forward this e-mail to other healthcare professionals who may be interested in participating. As always, thank you for supporting student research efforts.

Appendix L: Informed Consent for Phase I

I, Stephanie Jacobson, am a doctoral candidate in the Ph.D. Program in Social Welfare at the CUNY Graduate Center. I am conducting a study about healthcare provider role in older adult sexuality. You are being asked to participate in a study that aims to inform the development of a reliable and valid scale to measure the role of healthcare providers in older adult sexuality. You have been identified as a possible participant because you are a healthcare provider or researcher who has expertise in this area. It is anticipated that approximately 20 individuals will participate in this phase of the study. Participation in this study is voluntary, and refusal to participate will involve no penalty or loss of benefits to which you are entitled.

You are being asked to participate in an interview, either in person or by phone. During the interview you will be asked questions about your experience discussing sexuality with older adult patients. You will be asked to review an existing scale that measures knowledge and attitudes toward older adult sexuality. You will also be asked to propose items for the development of a new scale. The interview will take place at a mutually agreed upon time and will take about 1 hour. You will be re-contacted in the future to review items and critique the scale. At that time, I will ask for your consent again for that portion of the study.

The potential risk for participation in this study is no greater than that of everyday life. There are no known benefits to participation. However, your expert knowledge will assist in the development of an instrument for measuring the role of healthcare providers in older adult sexuality. You may be exposed to stress and anxiety related to your practices as a healthcare provider or researcher. You can choose to not answer any particular question. You may also stop the interview process at any time.

I will audio record the interview with your permission. The audio recordings will be stored in an encrypted file. The data will be stored for a minimum of three years. Transcripts may be saved for future use in similar research. As long as the data exists it will be kept secured. The information will be used to produce a dissertation and future publications. I am asking you to waive your right to confidentiality, so that your name can be associated with the scale as an expert. I am mandated to report to the proper authorities suspected child abuse, and any indications that you are in imminent danger of harming yourself or others.

You may discontinue participation at any time without penalty or loss of benefits to which you are entitled.

If you have any questions, you can contact me at 516-528-3831 or by e-mail at scohen1@gc.cuny.edu or my dissertation chair Harriet Goodman at 212-396-7559 or by e-mail at hgoodman@hunter.cuny.edu. You should contact the Hunter College Human Research Protection Program Office (HRPP) at 212-650-3053 or by e-mail at hrpp@hunter.cuny.edu, if you have questions regarding your rights as a subject or if you feel you have experienced a research-related injury.

As part of this project, with your permission, an audio recording will be made of you during your participation in this research project. I agree that you can audio record the interview. Please circle: Yes No

You are being asked to waive your right to confidentiality, so that your name can be associated with this scale in future publications. I agree that you can reveal my identity in association with this scale. Please circle: Yes No

You are being asked to allow the data from this interview to be stored and possibly analyzed for future use in similar research. I agree that you can store this data for future use. Please circle: Yes No

I have read (or have had read to me) the contents of this consent form and have been encouraged to ask questions. I have received answers to my questions. I give my consent to participate in this study. I have received (or will receive) a copy of this form for my records and future reference. Please circle: Yes No

Participant's Name: _____ Signature: _____ Date: ____
Researcher's Name: _____ Signature: _____ Date: ____

Appendix M: Informed Consent for Phase II

You are invited to participate in a research study. The study is conducted under the direction of Stephanie Jacobson, a doctoral candidate in the Ph.D. Program in Social Welfare at the CUNY Graduate Center. The purpose of this research study is to develop a reliable and valid scale to measure the role of healthcare providers in older adult sexuality.

Approximately 300 individuals are expected to participate in this study. Each subject will participate in one online survey. The time commitment of each participant is expected to be 30 minutes. You can complete the online survey at your preferred time and location.

Your participation in this study has no greater risk than that of everyday life. There are no known benefits to participation in this study. However your participation will assist in the development of an instrument for measuring the role of healthcare providers in older adult sexuality. You may experience some embarrassment or anxiety related to your practices as a healthcare provider.

Your participation in this study is voluntary and you may choose to not answer any particular question. You may also discontinue participation at any time by stopping the survey without penalty or loss of benefits to which you are entitled.

Participation in this study will involve no cost to you. For your participation in this study you will be entered into a lottery for an iPad mini after completion of the survey, if you wish. If you choose to participate in the lottery, I will ask you to send your email address to me after you complete the survey, which may compromise your confidentiality. If you win the raffle, you will be contacted six weeks after the completion of the study.

The data obtained from you will be collected via online survey responses. The collected data will be accessible to the Principal Investigator Stephanie Jacobson, her dissertation chair Harriet Goodman, and the IRB Members. The researcher will protect your confidentiality and will secure all data in an encrypted file. The data will be stored for a minimum of three years. Data may be saved for future use in similar research. As long as the data exists it will be kept secured. The information will be used to produce a dissertation and future publications.

If you have any questions about the research now or in the future, you should contact the Principal Investigator, Stephanie Jacobson at 516-528-3831 or by e-mail at scohen1@gc.cuny.edu or her dissertation chair Harriet Goodman at 212-396-7559 or by e-mail at hgoodman@hunter.cuny.edu. If you have any questions concerning your rights as a participant in this study, you may contact the Hunter College Human Research Protection Program Office (HRPP) at 212-650-3053 or by e-mail at hrpp@hunter.cuny.edu.

I have read the above description of this research and I understand it. I have been informed of the risks and benefits involved. I understand that any future questions that I may have will also be answered by the principal investigator of the research study.

I voluntarily agree to participate in this study.

- ☐ Yes
- ☐ No

Appendix N: All Items Developed in Phase I and Tested in Phase II

Demographics:	Proposed Dimension (X = reverse code)
What is your age? _____	
What is the gender? _____	
What is your racial identity? _____	
On a scale from 1 (not at all) to 5 (very), how religious are you? _____	
What is your sexual orientation? _____	
What is your highest level of education? ☐ Some High School ☐ High School Graduate ☐ Some College ☐ College Graduate ☐ Graduate Degree	
What is your profession? ☐ Administrator ☐ Doctor ☐ Nurse ☐ Nurse Practitioner ☐ Occupational Therapist ☐ Personal Care Aide ☐ Physical Therapist ☐ Physician Assistant ☐ Sex Educator ☐ Sex Therapist ☐ Social Worker ☐ Other _____ (describe)	
What kind of agency do you work in? ☐ Private Practice ☐ Outpatient Hospital Setting ☐ Inpatient Hospital Setting ☐ Long-term Care Facility ☐ Senior Center ☐ Other _____ (describe)	
For the purposes of this survey, when we refer to older adult consider this to mean 65 or older.	
I received sexuality training specific to older adults _____ (check all that apply): ☐ as part of my professional education. ☐ at the agency where I work. ☐ outside of my place of employment. ☐ never.	
Older adult sexuality makes me uncomfortable. _____	For validity (X)

Appendix N Continued:

Demographics (continued):	Proposed Dimension (X = reverse code)
Which of the following activities do you consider sexual activity? (check all that apply) ☐ Holding Hands ☐ Kissing ☐ Hugging ☐ Fondling ☐ Oral Sex ☐ Vaginal Intercourse ☐ Anal Intercourse ☐ Masturbation ☐ Other _____ (describe)	
Continuity of Sexuality throughout the Lifecycle:	
Respond to each question T for True or F for False.	
Sex remains an essential part of life throughout the lifespan. _____ (T)	Knowledge
If one enjoyed sex in their younger years, one is more likely to enjoy sex as an older adult. _____ (T)	Knowledge
It is normal for sexual desire to change as one ages. _____ (T)	Knowledge
It is normal for sexual behavior to change as one ages. _____ (T)	Knowledge
As people age, physical intimacy becomes more important than penetrative sex. _____ (T)	Knowledge
For older adults who remain sexually active, the frequency of sexual activity significantly declines after age 60. ____ (F)	Knowledge (X)
Most older adults want to discuss sexual activity with their healthcare provider. _____ (T)	Knowledge
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:	
I am comfortable discussing older adult clients' sexuality into their later years. ____	Attitude
Older adults are unable to participate in sexual activity. _____	Attitude (X)
Healthcare providers should give accurate information on sexual activity to older adults. ____	Attitude
Most older adults are no longer interested in sexual activity. _____	Attitude (X)
After a person loses their partner, it is healthy for them to seek out new sexual relationships. _____	Attitude

Appendix N Continued:

Continuity of Sexuality throughout the Lifecycle (continued):	Proposed Dimension (X = reverse code)
If I were working in a long-term care facility and saw a couple kissing passionately in front of other people, I would:	
• feel uncomfortable addressing it. _____	Attitude (X)
• ignore it. _____	Behavior (X)
• tell them that their behavior is inappropriate. _____	Behavior (X)
• help them find a private area. _____	Behavior
• inform their family about the behavior. _____	Behavior (X)
• talk to them about it in a private place. _____	Behavior
If I were working in a long-term care facility and knocked on the door of a room and found a couple having sexual intercourse, I would:	
• be disgusted. _____	Attitude (X)
• ask them to stop. _____	Behavior (X)
• make them get out of bed. _____	Behavior (X)
• leave and talk to them later. _____	Behavior
• inform their family of their behavior. _____	Behavior (X)
If an older adult patient of the opposite sex made sexual advances toward me, I would:	
• be disgusted. _____	Attitude (X)
• laugh. _____	Behavior (X)
• think it was cute. _____	Behavior (X)
• ignore it. _____	Behavior (X)
• ask them to stop. _____	Behavior
• refuse to work with them. _____	Behavior (X)
• talk about it with them. _____	Behavior
If an older adult patient of the same sex made sexual advances toward me, I would:	
• be disgusted. _____	Attitude (X)
• laugh. _____	Behavior (X)
• think it was cute. _____	Behavior (X)
• ignore it. _____	Behavior (X)
• ask them to stop. _____	Behavior (X)
• refuse to work with them. _____	Behavior (X)
• talk about it with them. _____	Behavior (X)
Benefits of Continued Sexual Expression:	
Respond to each question T for True or F for False.	
Sexual activity in older adults has health benefits. _____ (T)	Knowledge
Experiencing an orgasm helps older adults sleep better. _____ (T)	Knowledge
Experiencing an orgasm helps relieve pain in older adults. _____ (T)	Knowledge

Appendix N Continued:

Benefits of Continued Sexual Expression (continued):	Proposed Dimension (X = reverse code)
Sexual activity reduces stress. ____ (T)	Knowledge
Sexual activity is associated with increased rates of heart disease. _____ (F)	Knowledge (X)
Frequent sexual activity may cause stroke. _____ (F)	Knowledge (X)
Having an orgasm boosts the immune system. _____ (T)	Knowledge
A hormone released when people have orgasms produces feelings of happiness. _____ (T)	Knowledge
There is a link between continued sexuality and lower rates of depression. _____ (T)	Knowledge
Orgasms help reduce bowel and bladder incontinence. ____ (T)	Knowledge
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:	
I discuss the benefits of sexual activity with an older adult patient who complains of chronic pain. _____	Behavior
I discuss the benefits of sexual activity with an older adult patient who complains of insomnia. _____	Behavior
There are social benefits to continued sexual relationships. _____	Attitude
Continued sexual expression increases social engagement. _____	Attitude
Relationship Status:	
Respond to each question T for True or F for False.	
There are three times as many single older women than older men. _____ (T)	Knowledge
Older adults who are partnered tend to have less sexual activity than single older adults. _____ (F)	Knowledge (X)
Having a partner is the primary predictor of sexual behavior amongst older adults. _____ (T)	Knowledge
The majority of older heterosexual men are married. _____ (T)	Knowledge
The majority of older gay men are partnered. _____ (F)	Knowledge (X)
The majority of older heterosexual women are married. _____ (F)	Knowledge (X)
The majority of older lesbian women are partnered. ____ (F)	Knowledge (X)
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:	
I would be uncomfortable if an older widowed woman decided to live with a new male partner. ____	Attitude (X)
I would be uncomfortable if an older widowed woman decided to live with a new female partner. _____	Attitude (X)

Appendix N Continued:

Relationship Status (continued):	Proposed Dimension (X = reverse code)
I would be uncomfortable if an older widowed man decided to live with a new female partner. _____	Attitude (X)
I would be uncomfortable if an older widowed man decided to live with a new male partner. _____	Attitude (X)
Masturbation:	
Respond to each question T for True or F for False.	
Masturbation in older adults can be detrimental to their health. _____ (F)	Knowledge (X)
Masturbation is normal throughout all age groups. _____ (T)	Knowledge
Older adults may masturbate when other forms of sexual activity are not available. ____ (T)	Knowledge
More than a quarter of older men report masturbating in the past year. _____ (T)	Knowledge
More than a quarter of older women report masturbating in the past year. _____ (F)	Knowledge (X)
Even when they have partners, older adults may masturbate to supplement their sex life. ____ (T)	Knowledge
Masturbation may encourage continued sexual desire. ____ (T)	Knowledge
Masturbation helps maintain vaginal health in older women. _____ (T)	Knowledge
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:	
I am comfortable talking with an older adult patient about masturbation. _____	Attitude
Masturbation is a healthy sexual activity for older men. _____	Attitude
Masturbation is a healthy sexual activity for older women. _____	Attitude
If I were working in a long-term care facility and saw a resident masturbating in front of other people, I would:	
• feel uncomfortable addressing it. _____	Attitude (X)
• ignore it. _____	Behavior (X)
• tell them that their behavior is inappropriate in public. _____	Behavior
• tell them that masturbating is inappropriate in general. _____	Behavior (X)
• help them find a private area. ____	Behavior
• inform their family about their behavior. _____	Behavior (X)
• arrange for them to get cognitive testing. _____	Behavior (X)

Appendix N Continued:

Changes in Male Sexual Functioning and Treatments:	Proposed Dimension (X = reverse code)
Respond to each question T for True or F for False.	
Riding a bicycle can cause problems with sexual response in older men. _____ (T)	Knowledge
As men age, it takes longer for them to get an erection. _____ (T)	Knowledge
As men age, their erection is not as firm. _____ (T)	Knowledge
Older men have less control over the timing of their ejaculation. _____ (F)	Knowledge (X)
Older men have a less forceful orgasm. ____ (T)	Knowledge
The time a man has to wait before becoming aroused again after having an orgasm lengthens in older men. ____ (T)	Knowledge
For men, testosterone levels are highest in the morning. _____ (T)	Knowledge
Prolonged periods without sexual activity can foster erectile dysfunction. ____ (T)	Knowledge
As men age, they require more direct stimulation of the penis to achieve erections than when they were younger. ____ (T)	Knowledge
As men age, erections are lost soon after orgasm. _____ (T)	Knowledge
Most men who take an oral medication for erectile dysfunction, such as Viagra, Levitra, or Cialis, continue using it until they are no longer interested in sexual activity. _____ (F)	Knowledge (X)
Oral medications for erectile dysfunction, such as Viagra, Levitra, or Cialis, enhances sexual desire in men. _____ (F)	Knowledge (X)
Continuing sexual activity keeps the tissue in the penis healthy. _____ (T)	Knowledge
When men begin taking pills to enhance their erection, they have new expectations for more sexual intercourse than their partners may be prepared for. _____ (T)	Knowledge
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:	
I am comfortable recommending having sex in the morning to an older man who is having difficulty with sexual functioning. _____	Attitude
Older men are able to enjoy sex if they don't have an erection. _____	Attitude
When I have an older patient who is starting a pill to enhance his erection, I discuss how it might change their sexual relationship. _____	Behavior
I am uncomfortable discussing the need for good timing of sex when using an oral medication for erectile dysfunction, such as Viagra, Levitra, or Cialis, with my older patients. _____	Attitude (X)
When men begin taking an oral medication for erectile dysfunction, such as Viagra, Levitra, or Cialis, I discuss it with their partner. _____	Behavior

Appendix N Continued:

Changes in Female Sexual Functioning and Treatments:	Proposed Dimension (X = reverse code)
Respond to each question T for True or F for False.	
It takes older women more time to become sexually aroused as they age. _____ (T)	Knowledge
Vaginal and vulvar dryness in older women can make intercourse uncomfortable/painful for women and their partners. _____ (T)	Knowledge
Reduced vaginal elasticity in older women can make intercourse uncomfortable/painful for women and men. _____ (T)	Knowledge
Prolonged periods without sexual activity can negatively affect vaginal health. ____ (T)	Knowledge
Older women take longer to lubricate vaginally. ____ (T)	Knowledge
Older women produce the same amount of vaginal lubrication as they did when they were younger. _____ (F)	Knowledge (X)
As women age, they experience less pleasure from their clitoris. ____ (T)	Knowledge
As women age, they experience less pleasure from their nipples. _____ (T)	Knowledge
After menopause, women experience more intense orgasms. ____ (F)	Knowledge (X)
Post-intercourse urinary tract infections are common with older women. ____ (T)	Knowledge
Continued sexual activity improves vaginal lubrication. ____ (T)	Knowledge
Continued sexual activity maintains the elasticity of vaginal tissue. ____ (T)	Knowledge
Older women no longer want to have sex because of decreased lubrication. _____ (F)	Knowledge (X)
Women who remain sexually active experience less vaginal atrophy after menopause. _____ (T)	Knowledge
Women who remain sexually active are more likely to lubricate sufficiently after menopause. _____ (T)	Knowledge
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:	
When I am working with older patients with vaginal atrophy, I recommend ____	
• using vaginal dilators. _____	Behavior
• trying vaginal massage. _____	Behavior
• using vaginal estrogen. _____	Behavior
• using vaginal moisturizers. _____	Behavior
• trying other forms of sexual expression. ____	Behavior
• I am uncomfortable discussing treatment options. _____	Attitude (X)

Appendix N Continued:

Changes in Female Sexual Functioning and Treatments (continued):	Proposed Dimension (X = reverse code)
For older women with pain during intercourse, I recommend:	
• using lubricants. _____	Behavior
• trying other forms of sexual expression. ____	Behavior
• trying different positions. _____	Behavior
• to stop having intercourse. _____	Behavior (X)
• I am uncomfortable discussing options.	Attitude (X)
In order for an older woman to maintain sexual functioning,	
• I am comfortable discussing prescription treatments. _____	Attitude
• I recommend hormone therapy. _____	Behavior
• I recommend moisturizing the vagina. _____	Behavior
• I recommend massaging the inner walls of the vagina. _____	Behavior
• I recommend having an orgasm weekly. _____	Behavior
Relationship between Disease and Sexual Functioning:	
Respond to each question T for True or F for False.	
Men with diabetes often develop erectile dysfunction. _____ (T)	Knowledge
Men with diabetes often experience problems having an orgasm. ____ (F)	Knowledge (X)
Women with diabetes often have difficulty attaining orgasm. ____ (T)	Knowledge
Women with diabetes experience difficulty with lubrication. ____ (T)	Knowledge
Treatment for prostate cancer can decrease the firmness of erection in older men. _____ (T)	Knowledge
Arthritis has no impact on sexual desire. ____ (F)	Knowledge (X)
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:	
I think that older adults with severe health problems can remain sexually active. ____	Attitude
When faced with critical health issues, I put sexual health issues on the back burner. _____	Behavior (X)
If an older adult patient reports arthritis pain during sex,	
• I am comfortable discussing ways to make sex more pleasurable. _____	Attitude
• I recommend taking a nonsteroidal pain relieving medication prior to sex. _____	Behavior
• I recommend timing sex during low pain periods. _____	Behavior
• I discuss trying alternate sexual positions. _____	Behavior
• I recommend taking a warm bath before sex. _____	Behavior
• I recommend discontinuing sexual activity. _____	Behavior (X)

Appendix N Continued:

Relationship between Disease and Sexual Functioning (continued):	Proposed Dimension (X = reverse code)
If an older adult patient reports arthritis pain during sex (continued),	
• I don't discuss it. _____	Behavior (X)
Dementia:	
Respond to each question T for True or F for False.	
People with dementia are unable to consent to sexual activity. ____ (F)	Knowledge (X)
No matter their level of dementia, older adults are able to have sex with their long-term partner. ____(F)	Knowledge (X)
People with dementia may become more interested in sex. ____ (T)	Knowledge
When somebody with dementia and somebody who is cognitively intact begin a sexual relationship, it is important to assess for elder abuse. _____ (T)	Knowledge
People with dementia are no longer interested in sexual activity. _____ (F)	Knowledge (X)
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:	
If a patient with dementia begins a sexual relationship with somebody who is cognitively intact, I assess for elder abuse. _____	Behavior
I think it is morally wrong for someone who is married and has dementia to begin a sexual relationship with somebody in their long-term care facility. _____	Attitude (X)
If my patient, whose partner has dementia and no longer remembers the relationship, begins a sexual relationship with a neighbor, I would think it is morally wrong. _____	Attitude (X)
It is morally wrong for someone with dementia to be sexually active with another person. ____	Attitude (X)
If I have a patient whose partner has dementia, I encourage my patient to explore their sexual needs outside of the relationship, if it is something that they want. _____	Behavior
If I have a patient with dementia, I would feel comfortable addressing the conflict the caregiver might have in anticipating a sexual relationship. _____	Attitude
Influence of Medications on Sexual Functioning:	
Respond to each question T for True or F for False.	
Prescribed medications may affect a person's sex drive. _____ (T)	Knowledge
Over the counter medications do not affect a person's sex drive. _____ (F)	Knowledge (X)

Appendix N Continued:

Influence of Medications on Sexual Functioning (continued):	Proposed Dimension (X = reverse code)
There are antihypertensive medications available that are free of sexual side effects. _____ (F)	Knowledge (X)
Nearly all antidepressant medications cause changes in sexual functioning. _____ (T)	Knowledge
Naproxen (trade name Aleve) can cause erectile dysfunction. ____ (T)	Knowledge
Antacids have no sexual side effects. _____ (F)	Knowledge (X)
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:	
If a patient complains about sexual difficulties, I discuss their medications with them to see if they might be a factor. _____	Behavior
When I have a patient on an antihypertensive medication, I discuss the possible sexual side effects. _____	Behavior
When I have a patient on an antidepressant, I discuss the possible sexual side effects. _____	Behavior
I have an open discussion about medications and sexual functioning to prevent older adult patents from discontinuing medications. _____	Behavior
I am comfortable discussing the possible sexual side effects of medications. _____	Attitude
LGBT and Aging:	
Respond to each question T for True or F for False.	
A lot of LGBT older adults go back in the closet when they enter a long-term care facility. _____ (T)	Knowledge
A lot of LGBT older adults do not disclose their sexual orientation to their healthcare providers. _____ (T)	Knowledge
Caregivers of LGBT older adults have some unique caregiving needs relative to heterosexual caregivers. _____ (T)	Knowledge
Older adults in a same-sex relationship may not identify as gay or lesbian. _____ (T)	Knowledge
In long-term care facilities, LGBT persons experience greater discrimination. _____ (T)	Knowledge
All older people who are transgender identify as gay or lesbian. _____ (F)	Knowledge (X)
LGBT older adults have higher rates of depression than heterosexual older adults. _____ (T)	Knowledge
Lesbian older adults have lower rates of reproductive cancers than heterosexual older adults. _____ (F)	Knowledge (X)
Gay older men have higher rates of anal cancer than heterosexual older adults. _____ (T)	Knowledge

Appendix N Continued:

LGBT and Aging (continued):	Proposed Dimension (X = reverse code)
Most LGBT older adults report being LGBT prepared them for aging. _____ (T)	Knowledge
Same-sex partners _____	
• receive survivors benefits from Social Security _____ (F)	Knowledge (X)
• are eligible for Medicare based on their partner's work history. _____ (F)	Knowledge (X)
• are eligible for Social Security based on their partner's work history. _____ (F)	Knowledge (X)
• are covered by the Family Medical Leave Act. _____ (F)	Knowledge (X)
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:	
I ask my older patients about their sexual orientation. _____	Behavior
Unless told otherwise, I assume my older patients are heterosexual. _____	Behavior (X)
If I were working in a long-term care facility, I would be comfortable caring for an LGBT older resident. _____	Attitude
LGBT older adults should be able to fully express their sexuality. _____	Attitude
A man dressing as a woman makes me uncomfortable. _____	Attitude (X)
I think it is okay for two widowed women in their seventies to begin a sexual relationship. _____	Attitude
If I were working in a long-term care facility with a woman who I thought was heterosexual, I would feel uncomfortable if she _____:	
• regularly cuddled with her female roommate. _____	Attitude (X)
• had a female sex partner. _____	Attitude (X)
With LGBT older adults, I discuss the increased need for:	
• a living will. _____	Behavior
• a financial power of attorney. _____	Behavior
• a healthcare proxy or decision maker in the case of losing capacity. _____	Behavior
• I don't think LGBT older adults have an increased need for these documents. _____	Attitude (X)
• I don't have any LGBT patients. _____	Attitude (X)
If I were working in a long-term care facility and staff members complained that a resident was cross-dressing, I would:	
• inform the family of this behavior. _____	Behavior (X)
• talk to the resident about the cross-dressing. _____	Behavior
• test the resident for dementia. _____	Behavior (X)

Appendix N Continued:

LGBT and Aging (continued):	Proposed Dimension (X = reverse code)
If I were working in a long-term care facility and staff members complained that a resident was cross-dressing, I would (continued):	
• consider the need for a medication to decrease libido. _____	Behavior (X)
• explain to staff that this is a normal behavior. _____	Behavior
• feel uncomfortable dealing with the situation. _____	Attitude (X)
Sexually Transmitted Infections (STIs):	
Respond to each question T for True or F for False.	
Older adults have a low risk of acquiring sexually transmitted infections. _____ (F)	Knowledge (X)
Older adults are regularly tested for sexually transmitted infections. _____ (F)	Knowledge (X)
Older adults have more complications from sexually transmitted infections than younger adults _____ (T)	Knowledge
Gay older men have higher rates of HPV infection than heterosexual older men. _____ (T)	Knowledge
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:	
Older adults should receive regular tests for sexually transmitted infections. _____	Attitude
I recommend that my older adult patients receive regular tests for sexually transmitted infections. _____	Behavior
Older adults would benefit from STI education. _____	Attitude
HIV/AIDS:	
Respond to each question T for True or F for False.	
Older adults are rarely newly infected by HIV/AIDS. _____ (F)	Knowledge (X)
Approximately a quarter of persons living with HIV/AIDS are aged 50 and older. _____ (T)	Knowledge
Older adults are more likely than those who are younger to adopt HIV prevention techniques. _____ (F)	Knowledge (X)
Most older adults know that condoms can prevent HIV. _____ (F)	Knowledge (X)
Older adults have fewer options for getting tested for HIV. _____ (F)	Knowledge (X)
HIV is typically caught in the early stage in older adults because they have frequent doctor visits. _____ (F)	Knowledge (X)
The early signs of HIV often imitate signs of normal aging. _____ (T)	Knowledge
The early symptoms of HIV are often confused with dementia. _____ (T)	Knowledge

Appendix N Continued:

HIV/AIDS (continued):	Proposed Dimension (X = reverse code)
The early symptoms of HIV are often confused with chronic illnesses. _____ (T)	Knowledge
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:	
I recommend that my older adult patients be regularly tested for HIV. _____	Behavior
I recommend testing an older patient for HIV at their yearly physical if they report risky sexual behavior. _____	Behavior
Safer Sex Practices:	
Respond to each question T for True or F for False.	
Maintenance of an erection is more difficult for older adults when using a condom. _____ (T)	Knowledge
Most single heterosexual older women report their partner uses a condom when they have sex. _____ (F)	Knowledge (X)
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:	
I recommend that my older adult patients, who are not in a monogamous relationship, use condoms when they have sexual intercourse. _____	Behavior
If an older adult patient told me that they didn't use condoms because poor lubrication made it uncomfortable, I would feel awkward recommending a good lubricant. _____	Attitude (X)
If an older man reports that he has difficulty maintaining an erection when using a condom, I recommend:	
• not worrying about using a condom. _____	Behavior (X)
• using a bigger condom. _____	Behavior
• using a female condom. _____	Behavior
Rights:	
Respond to each question T for True or F for False.	
Long-term care residents have a federal right to privacy. _____ (T)	Knowledge
Federal guidelines give long-term care residents the right to share a room with their spouse if both partners consent. _____ (T)	Knowledge
Federal regulations give long-term care residents the right to sexual activity. _____ (F)	Knowledge (X)

Appendix N Continued:

Rights (continued):	Proposed Dimension (X = reverse code)
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:	
Older adults have the right to sexual pleasure. _____	Attitude
The families of residents in long-term care facilities should be able to make decisions about their family members sexual activity. _____	Attitude (X)
Long-term care facilities should give residents privacy to participate in sexual activity. _____	Attitude

Scoring note:
Reverse score knowledge questions as noted, then give 1 point for each True answer. Higher scores indicate higher knowledge.
Reverse score attitude questions as noted, then add up the points. Higher scores indicate more permissive attitudes.
Reverse score behavior questions as noted, then add up the points. Higher scores indicate more supportive/appropriate behaviors.

Appendix O: Reasons for Item Exclusion in Phase II

Continuity of Sexuality throughout the Lifecycle:	**Mean**	**Correlation**	**Qualitative Reason**
Respond to each question T for True or F for False.			
ContSexKnow1 - Sex remains an essential part of life throughout the lifespan. _____ (T)	.97 eliminated		
ContSexKnow2 - If one enjoyed sex in their younger years, one is more likely to enjoy sex as an older adult. _____ (T)	.74	.184	
ContSexKnow3 - It is normal for sexual desire to change as one ages. _____ (T)	.84 eliminated		
ContSexKnow4 - It is normal for sexual behavior to change as one ages. _____ (T)	.92 eliminated		
ContSexKnow5 - As people age, physical intimacy becomes more important than penetrative sex. _____ (T)	.70	.136	
ContSexKnow6 - For older adults who remain sexually active, the frequency of sexual activity significantly declines after age 60. ____ (F)	.55	-.113 eliminated	
ContSexKnow7 - Most older adults want to discuss sexual activity with their healthcare provider. _____ (T)	.44	.121	
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:			
ContSexAtt1 - I am comfortable discussing older adult clients' sexuality into their later years. ____	3.85	.658	
ContSexAtt2 - Older adults are unable to participate in sexual activity. _____	4.69 eliminated		
ContSexAtt3 - Healthcare providers should give accurate information on sexual activity to older adults. ____	4.73 eliminated		
ContSexAtt4 - Most older adults are no longer interested in sexual activity. _____	4.41 eliminated		
ContSexAtt5 - After a person loses their partner, it is healthy for them to seek out new sexual relationships. _____	4.04 eliminated		

Appendix O Continued:

Continuity of Sexuality throughout the Lifecycle (continued):	Mean	Correlation	Qualitative Reason
If I were working in a long-term care facility and saw a couple kissing passionately in front of other people, I would:			
• **ContSexAtt6** - feel uncomfortable addressing it. _____	3.37	.353	
• **ContSexBeh1a**[a] - ignore it. _____	3.14	.439	
• **ContSexBeh1b** - tell them that their behavior is inappropriate. _____	3.85	.052 eliminated	
• **ContSexBeh1c** - help them find a private area. _____	3.66	.316	
• **ContSexBeh1d** - inform their family about the behavior. _____	4.17 eliminated		
• **ContSexBeh1e** - talk to them about it in a private place. _____	3.72	.353	eliminated – repetitive with ContSex Beh1c
If I were working in a long-term care facility and knocked on the door of a room and found a couple having sexual intercourse, I would:			
• **ContSexAtt7** - be disgusted. _____	4.16 eliminated		
• **ContSexBeh2a** - ask them to stop. _____	4.33 eliminated		
• **ContSexBeh2b** - make them get out of bed. _____	4.47 eliminated		
• **ContSexBeh2c** - leave and talk to them later. _____	3.77	.058 eliminated	
• **ContSexBeh2d** - inform their family of their behavior. _____	4.14 eliminated		
If an older adult patient of the opposite sex made sexual advances toward me, I would:			
• **ContSexAtt8** - be disgusted. _____	3.63	.528	
• **ContSexBeh3a** - laugh. _____	3.61	.371	eliminated – more affective than behavioral
• **ContSexBeh3b** - think it was cute. _____	3.66	.238 eliminated	
• **ContSexBeh3c** - ignore it. _____	3.58	.347	

Appendix O Continued:

Continuity of Sexuality throughout the Lifecycle (continued):	**Mean**	**Correlation**	**Qualitative Reason**
If an older adult patient of the opposite sex made sexual advances toward me, I would (continued):			
• **ContSexBeh3d** - ask them to stop. _____	3.81	.038 eliminated	
If an older adult patient of the opposite sex made sexual advances toward me, I would (continued):			
• **ContSexBeh3e** - refuse to work with them. _____	4.11 eliminated		
• **ContSexBeh3f** - talk about it with them. _____	4.08 eliminated	.	
If an older adult patient of the same sex made sexual advances toward me, I would:			
• **ContSexAtt9** - be disgusted. _____	3.70	.542	eliminated – repetitive with ContSex Att8; significant correlation so combined
• **ContSexBeh4a** - laugh. _____	3.65	.322	eliminated – more affective than behavioral
• **ContSexBeh4b** - think it was cute. _____	3.88	.178 eliminated	
• **ContSexBeh4c** - ignore it. _____	3.57	.197 eliminated	
• **ContSexBeh4d** - ask them to stop. _____	3.82	.091 eliminated	
• **ContSexBeh4e** - refuse to work with them. _____	4.12 eliminated		
• **ContSexBeh4f** - talk about it with them. _____	4.03 eliminated		
Benefits of Continued Sexual Expression:			
Respond to each question T for True or F for False.			
BeneKnow1 - Sexual activity in older adults has health benefits. _____ (T)	.99 eliminated		

Appendix O Continued:

Benefits of Continued Sexual Expression (continued):	**Mean**	**Correlation**	**Qualitative Reason**
BeneKnow2 - Experiencing an orgasm helps older adults sleep better. _____ (T)	.88 eliminated		
BeneKnow3 - Experiencing an orgasm helps relieve pain in older adults. _____ (T)	.85 eliminated		
BeneKnow4 - Sexual activity reduces stress. ____ (T)	.99 eliminated		
BeneKnow5 - Sexual activity is associated with increased rates of heart disease. _____ (F)	.95 eliminated		
BeneKnow6 - Frequent sexual activity may cause stroke. _____ (F)	.94 eliminated		
BeneKnow7 - Having an orgasm boosts the immune system. _____ (T)	.65	.106	
BeneKnow8 - A hormone released when people have orgasms produces feelings of happiness. _____ (T)	.98 eliminated		
BeneKnow9 - There is a link between continued sexuality and lower rates of depression. _____ (T)	.95 eliminated		
BeneKnow10 - Orgasms help reduce bowel and bladder incontinence. ____ (T)	.48	.171	
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:			
BeneBeh1 - I discuss the benefits of sexual activity with an older adult patient who complains of chronic pain. _____	2.46	.502	
BeneBeh2 - I discuss the benefits of sexual activity with an older adult patient who complains of insomnia. _____	2.55	.607	
BeneAtt1 - There are social benefits to continued sexual relationships. _____	4.16 eliminated		
BeneAtt2 - Continued sexual expression increases social engagement. _____	4.06 eliminated		
Relationship Status:			
Respond to each question T for True or F for False.			
RelatKnow1 - There are three times as many single older women than older men. _____ (T)	.83 eliminated		

Appendix O Continued:

Relationship Status (continued):	**Mean**	**Correlation**	**Qualitative Reason**
RelatKnow2 – Older adults who are partnered tend to have less sexual activity than single older adults. _____ (F)	.79 eliminated		
RelatKnow3 – Having a partner is the primary predictor of sexual behavior amongst older adults. _____ (T)	.43	.135	
RelatKnow4 - The majority of older heterosexual men are married. _____ (T)	.67	.130	eliminated - RelatKnow7 removed & repetitive with RelatKnow3
RelatKnow5 - The majority of older gay men are partnered. _____ (F)	.57	.108	eliminated - RelatKnow7 removed & repetitive with RelatKnow3
RelatKnow6 - The majority of older heterosexual women are married. _____ (F)	.65	.156	eliminated - RelatKnow7 removed & repetitive with RelatKnow3
RelatKnow7 - The majority of older lesbian women are partnered. ____ (F)	.39	-.008 eliminated	
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:			
RelatAtt1 - I would be uncomfortable if an older widowed woman decided to live with a new male partner. ____	4.53 eliminated		
RelatAtt2 - I would be uncomfortable if an older widowed woman decided to live with a new female partner. _____	4.46 eliminated		
RelatAtt3 - I would be uncomfortable if an older widowed man decided to live with a new female partner. _____	4.49 eliminated		

Appendix O Continued:

Relationship Status (continued):	**Mean**	**Correlation**	**Qualitative Reason**
RelatAtt4 - I would be uncomfortable if an older widowed man decided to live with a new male partner. _____	4.45 eliminated		
Masturbation:			
Respond to each question T for True or F for False.			
MastKnow1 – Masturbation in older adults can be detrimental to their health. _____ (F)	.95 eliminated		
MastKnow2 – Masturbation is normal throughout all age groups. _____ (T)	.96 eliminated		
MastKnow3 – Older adults may masturbate when other forms of sexual activity are not available. ____ (T)	.95 eliminated		
MastKnow4 – More than a quarter of older men report masturbating in the past year. _____ (T)	.94 eliminated		
MastKnow5 – More than a quarter of older women report masturbating in the past year. _____ (F)	.23 eliminated		
MastKnow6 – Even when they have partners, older adults may masturbate to supplement their sex life. ____ (T)	.93 eliminated		
MastKnow7 – Masturbation may encourage continued sexual desire. ____ (T)	.96 eliminated		
MastKnow8 – Masturbation helps maintain vaginal health in older women. _____ (T)	.85 eliminated		
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:			
MastAtt1 – I am comfortable talking with an older adult patient about masturbation. _____	3.10	.553	
MastAtt2 – Masturbation is a healthy sexual activity for older men. _____ (Masturbation is a healthy sexual activity for older adults.)	4.12 eliminated		
MastAtt3 – Masturbation is a healthy sexual activity for older women. _____	4.11 eliminated		

Appendix O Continued:

Masturbation (continued):	**Mean**	**Correlation**	**Qualitative Reason**
If I were working in a long-term care facility and saw a resident masturbating in front of other people, I would:			
• **MastAtt4** – feel uncomfortable addressing it. _____	3.40	.610	
• **MastBeh1a** – ignore it. _____	4.32 eliminated		
If I were working in a long-term care facility and saw a resident masturbating in front of other people, I would (continued):			
• **MastBeh1b** - tell them that their behavior is inappropriate in public. _____	4.13 eliminated		
• **MastBeh1c** - tell them that masturbating is inappropriate in general. _____	4.58 eliminated		
• **MastBeh1d** - help them find a private area. _____	4.07 eliminated		
• **MastBeh1e** - inform their family about their behavior. _____	3.85	.264 eliminated	
• **MastBeh1f** - arrange for them to get cognitive testing. _____	3.51	-.052 eliminated	
Changes in Male Sexual Functioning and Treatments:			
Respond to each question T for True or F for False.			
MaleKnow1 - Riding a bicycle can cause problems with sexual response in older men. _____ (T)	.31	.158	
MaleKnow2 - As men age, it takes longer for them to get an erection. _____ (T)	.90 eliminated		
MaleKnow3 - As men age, their erection is not as firm. _____ (T)	.76 eliminated		
MaleKnow4 - Older men have less control over the timing of their ejaculation. _____ (F)	.31	-.014 eliminated	
MaleKnow5 - Older men have a less forceful orgasm. ____ (T)	.52	.219	eliminated – not essential information
MaleKnow6 - The time a man has to wait before becoming aroused again after having an orgasm lengthens in older men. ____ (T)	.92 eliminated		

Appendix O Continued:

Changes in Male Sexual Functioning and Treatments (continued):	**Mean**	**Correlation**	**Qualitative Reason**
MaleKnow7 - For men, testosterone levels are highest in the morning. _____ (T)	.81 eliminated		
MaleKnow8 - Prolonged periods without sexual activity can foster erectile dysfunction. ____ (T)	.35	.247	
MaleKnow9 - As men age, they require more direct stimulation of the penis to achieve erections than when they were younger. ____ (T)	.72	.215	
MaleKnow10 - As men age, erections are lost soon after orgasm. _____ (T)	.80 eliminated		
MaleKnow11 - Most men who take an oral medication for erectile dysfunction, such as Viagra, Levitra, or Cialis, continue using it until they are no longer interested in sexual activity. _____ (F)	.43	.172	
MaleKnow12 – Oral medications for erectile dysfunction, such as Viagra, Levitra, or Cialis, enhances sexual desire in men. _____ (F)	.64	.095 eliminated	
MaleKnow13 – Continuing sexual activity keeps the tissue in the penis healthy. _____ (T)	.72	.270	
MaleKnow14 – When men begin taking pills to enhance their erection, they have new expectations for more sexual intercourse than their partners may be prepared for. _____ (T)	.77 eliminated		
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:			
MaleAtt1 – I am comfortable recommending having sex in the morning to an older man who is having difficulty with sexual functioning. _____	3.59	.267 eliminated	
MaleAtt2 – Older men are able to enjoy sex if they don't have an erection. _____	3.32	.168 eliminated	
MaleBeh1 – When I have an older patient who is starting a pill to enhance his erection, I discuss how it might change their sexual relationship. _____	3.67	.598	
MaleAtt3 – I am uncomfortable discussing the need for good timing of sex when using an oral medication for erectile dysfunction, such as Viagra, Levitra, or Cialis, with my older patients. _____	3.42	.147 eliminated	

Appendix O Continued:

Changes in Male Sexual Functioning and Treatments (continued):	**Mean**	**Correlation**	**Qualitative Reason**
MaleBeh2 – When men begin taking an oral medication for erectile dysfunction, such as Viagra, Levitra, or Cialis, I discuss it with their partner. _____	2.58	.050 eliminated	
Changes in Female Sexual Functioning and Treatments:			
Respond to each question T for True or F for False.			
FemaleKnow1 – It takes older women more time to become sexually aroused as they age. _____ (T)	.74	.225	
FemaleKnow2 - Vaginal and vulvar dryness in older women can make intercourse uncomfortable/painful for women and their partners. _____ (T)	1.00 eliminated		
FemaleKnow3 - Reduced vaginal elasticity in older women can make intercourse uncomfortable/painful for women and men. _____ (T)	.92 eliminated		
FemaleKnow4 - Prolonged periods without sexual activity can negatively affect vaginal health. ____ (T)	.61	.189	
FemaleKnow5 - Older women take longer to lubricate vaginally. ____ (T)	.97 eliminated		
FemaleKnow6 - Older women produce the same amount of vaginal lubrication as they did when they were younger. _____ (F)	.99 eliminated		
FemaleKnow7 - As women age, they experience less pleasure from their clitoris. ____ (T)	.19 eliminated		
FemaleKnow8 - As women age, they experience less pleasure from their nipples. _____ (T)	.245 eliminated		
FemaleKnow9 - After menopause, women experience more intense orgasms. ____ (F)	.83 eliminated		
FemaleKnow10 - Post-intercourse urinary tract infections are common with older women. ____ (T)	.748	.251	
FemaleKnow11 - Continued sexual activity improves vaginal lubrication. ____ (T)	.80 eliminated		
FemaleKnow12 - Continued sexual activity maintains the elasticity of vaginal tissue. ____ (T)	.83 eliminated		

Appendix O Continued:

Changes in Female Sexual Functioning and Treatments (continued):	**Mean**	**Correlation**	**Qualitative Reason**
FemaleKnow13 - Older women no longer want to have sex because of decreased lubrication. _____ (F)	.52	.010 eliminated	
FemaleKnow14 - Women who remain sexually active experience less vaginal atrophy after menopause. _____ (T)	.83 eliminated		
FemaleKnow15 - Women who remain sexually active are more likely to lubricate sufficiently after menopause. _____ (T)	.67	.272	
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:			
When I am working with older patients with vaginal atrophy, I recommend ____			
• **FemaleBeh1a**[b] - using vaginal dilators. _____	2.93	.577	eliminated – medically focused question
• **FemaleBeh1b** - trying vaginal massage. _____	3.10	.680	eliminated – medically focused question
• **FemaleBeh1c** - using vaginal estrogen. _____	3.58	.427	eliminated – medically focused question
• **FemaleBeh1d** - using vaginal moisturizers. _____	3.77	.501	eliminated – medically focused question
• **FemaleBeh1e** - trying other forms of sexual expression. ____	3.54	.781	eliminated – medically focused question
• **FemaleAtt1** - I am uncomfortable discussing treatment options. _____	3.62	.568	eliminated – medically focused question

Appendix O Continued:

Changes in Female Sexual Functioning and Treatments (continued):	**Mean**	**Correlation**	**Qualitative Reason**
For older women with pain during intercourse, I recommend:			
• **FemaleBeh2a** - using lubricants. _____	4.26 eliminated		
• **FemaleBeh2b** - trying other forms of sexual expression. ____	3.80	.636	
• **FemaleBeh2c** - trying different positions. _____	3.80	.588	eliminated – repetative with Female Beh2c and Disease Beh2c
• **FemaleBeh2d** - to stop having intercourse. _____	4.03 eliminated		
• **FemaleAtt2** - I am uncomfortable discussing options.	3.78	.666	eliminated – repetitive with DiseaseAtt2
In order for an older woman to maintain sexual functioning,			
• **FemaleAtt3** - I am comfortable discussing prescription treatments. _____	3.62	.451	eliminated – medically focused question
• **FemaleBeh3a** - I recommend hormone therapy. _____	3.13	.526	eliminated – medically focused question
• **FemaleBeh3b** - I recommend moisturizing the vagina. _____	3.95	.625	eliminated – medically focused question
• **FemaleBeh3c** - I recommend massaging the inner walls of the vagina. _____	3.25	.631	eliminated – medically focused question
• **FemaleBeh3d** - I recommend having an orgasm weekly. _____	2.95	.641	eliminated – medically focused question

Appendix O Continued:

Relationship between Disease and Sexual Functioning:	**Mean**	**Correlation**	**Qualitative Reason**
Respond to each question T for True or F for False.			
DiseaseKnow1 - Men with diabetes often develop erectile dysfunction. _____ (T)	.90 eliminated		
DiseaseKnow2 - Men with diabetes often experience problems having an orgasm. ____ (F)	.18 eliminated		
DiseaseKnow3 - Women with diabetes often have difficulty attaining orgasm. ____ (T)	.65	.370	eliminated – repetitive with Disease Know4
DiseaseKnow4 - Women with diabetes experience difficulty with lubrication. ____ (T)	.67	.370	
DiseaseKnow5 - Treatment for prostate cancer can decrease the firmness of erection in older men. _____ (T)	.91 eliminated		
DiseaseKnow6 - Arthritis has no impact on sexual desire. ____ (F)	.755 eliminated		
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:			
DiseaseAtt1 - I think that older adults with severe health problems can remain sexually active. ____	3.93	.272 eliminated	
DiseaseBeh1 - When faced with critical health issues, I put sexual health issues on the back burner. _____	2.54	.397	
If an older adult patient reports arthritis pain during sex,			
• **DiseaseAtt2** - I am comfortable discussing ways to make sex more pleasurable. _____	3.67	.537	
• **DiseaseBeh2a** - I recommend taking a nonsteroidal pain relieving medication prior to sex. _____	3.68	.610	eliminated – medically focused question
• **DiseaseBeh2b** - I recommend timing sex during low pain periods. _____	3.82	.712	eliminated – repetitive with Disease Beh2C

Appendix O Continued:

Relationship between Disease and Sexual Functioning (continued):	**Mean**	**Correlation**	**Qualitative Reason**
If an older adult patient reports arthritis pain during sex (continued),			
• **DiseaseBeh2c** – I discuss trying alternate sexual positions. _____	3.78	.545	
• **DiseaseBeh2d** – I recommend taking a warm bath before sex. _____	3.48	.596	eliminated – repetitive with Disease Beh2C
• **DiseaseBeh2e** – I recommend discontinuing sexual activity. _____	3.95	.034 eliminated	
• **DiseaseBeh2f** – I don't discuss it. _____	3.57	.741	eliminated – repetitive with Disease Beh2C
Dementia:			
Respond to each question T for True or F for False.			
DementiaKnow1 – People with dementia are unable to consent to sexual activity. ____ (F)	.70	.209	
DementiaKnow2 – No matter their level of dementia, older adults are able to have sex with their long-term partner. ____ (F)	.54	.151	
DementiaKnow3 – People with dementia may become more interested in sex. ____ (T)	.81 eliminated		
DementiaKnow4 – When somebody with dementia and somebody who is cognitively intact begin a sexual relationship, it is important to assess for elder abuse. _____ (T)	.92 eliminated		
DementiaKnow5 – People with dementia are no longer interested in sexual activity. _____ (F)	.96 eliminated		
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:			
DementiaBeh1 - If a patient with dementia begins a sexual relationship with somebody who is cognitively intact, I assess for elder abuse. _____	3.77	.481	

Appendix O Continued:

Dementia (continued):	**Mean**	**Correlation**	**Qualitative Reason**
DementiaAtt1 - I think it is morally wrong for someone who is married and has dementia to begin a sexual relationship with somebody in their long-term care facility. _____	3.34	.197 eliminated	
DementiaAtt2 - If my patient, whose partner has dementia and no longer remembers the relationship, begins a sexual relationship with a neighbor, I would think it is morally wrong. _____	3.52	.401	
DementiaAtt3 - It is morally wrong for someone with dementia to be sexually active with another person. ____	3.92	.345	
DementiaBeh2 - If I have a patient whose partner has dementia, I encourage my patient to explore their sexual needs outside of the relationship, if it is something that they want. _____	2.95	.071 eliminated	
DementiaAtt4 - If I have a patient with dementia, I would feel comfortable addressing the conflict the caregiver might have in anticipating a sexual relationship. _____	3.60	.624	eliminated – repetitive Dementia Att2
Influence of Medications on Sexual Functioning:			
Respond to each question T for True or F for False.			
MedsKnow1 – Prescribed medications may affect a person's sex drive. _____ (T)	.99 eliminated		
MedsKnow2 – Over the counter medications do not affect a person's sex drive. _____ (F)	.94 eliminated		
MedsKnow3 – There are antihypertensive medications available that are free of sexual side effects. _____ (F)	.32	.037 eliminated	
MedsKnow4 – Nearly all antidepressant medications cause changes in sexual functioning. _____ (T)	.78 eliminated		
MedsKnow5 – Naproxen (trade name Aleve) can cause erectile dysfunction. ____ (T)	.45	.172	
MedsKnow6 – Antacids have no sexual side effects. _____ (F)	.52	.134	

Appendix O Continued:

Influence of Medications on Sexual Functioning (continued):	**Mean**	**Correlation**	**Qualitative Reason**
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:			
MedsBeh1 – If a patient complains about sexual difficulties, I discuss their medications with them to see if they might be a factor. _____	4.21 eliminate		
MedsBeh2 – When I have a patient on an antihypertensive medication, I discuss the possible sexual side effects. _____	3.75	.545	eliminated – medically focused
MedsBeh3 – When I have a patient on an antidepressant, I discuss the possible sexual side effects. _____	4.09 eliminate		
MedsBeh4 – I have an open discussion about medications and sexual functioning to prevent older adult patents from discontinuing medications. _____	3.79	.611	
MedsAtt1 – I am comfortable discussing the possible sexual side effects of medications. _____	3.93	.460	
LGBT and Aging:	**Mean**	**Correlation**	**Qualitative Reason**
Respond to each question T for True or F for False.			
LGBTKnow1 - A lot of LGBT older adults go back in the closet when they enter a long-term care facility. _____ (T)	.70	.405	
LGBTKnow2 - A lot of LGBT older adults do not disclose their sexual orientation to their healthcare providers. _____ (T)	.90 eliminated		
LGBTKnow3 - Caregivers of LGBT older adults have some unique caregiving needs relative to heterosexual caregivers. _____ (T)	.72	.319	eliminated – unclear question
LGBTKnow4 - Older adults in a same-sex relationship may not identify as gay or lesbian. _____ (T)	.88 eliminated		
LGBTKnow5 - In long-term care facilities, LGBT persons experience greater discrimination. _____ (T)	.84 eliminated		
LGBTKnow6 - All older people who are transgender identify as gay or lesbian. _____ (F)	.89 eliminated		

Appendix O Continued:

LGBT and Aging (continued):	Mean	Correlation	Qualitative Reason
LGBTKnow7 - LGBT older adults have higher rates of depression than heterosexual older adults. ____ (T)	.755 eliminated		
LGBTKnow8 - Lesbian older adults have lower rates of reproductive cancers than heterosexual older adults. _____ (F)	.64	-.024 eliminated	
LGBTKnow9 - Gay older men have higher rates of anal cancer than heterosexual older adults. _____ (T)	.57	.119	
LGBTKnow10 - Most LGBT older adults report being LGBT prepared them for aging. ____ (T)	.24 eliminated		
Same-sex partners _____			
LGBTKnow11a - receive survivors benefits from Social Security _____ (F)	.90 eliminated		
• **LGBTKnow11b** - are eligible for Medicare based on their partner's work history. _____ (F)	.90 eliminated		
• **LGBTKnow11c** - are eligible for Social Security based on their partner's work history. _____ (F)	.89 eliminated		
• **LGBTKnow11d** - are covered by the Family Medical Leave Act. _____ (F)	.70	.188	eliminated – due to DOMA ruling
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:			
LGBTBeh1 - I ask my older patients about their sexual orientation. _____	3.15	.633	
LGBTBeh2 - Unless told otherwise, I assume my older patients are heterosexual. _____	3.14	.345	
LGBTAtt1 - If I were working in a long-term care facility, I would be comfortable caring for an LGBT older resident. _____	4.38 eliminated		
LGBTAtt2 - LGBT older adults should be able to fully express their sexuality. _____	4.43 eliminated		
LGBTAtt3 - A man dressing as a woman makes me uncomfortable. _____	3.72	.395	

Appendix O Continued:

LGBT and Aging (continued):	Mean	Correlation	Qualitative Reason
LGBTAtt4 - I think it is okay for two widowed women in their seventies to begin a sexual relationship. _____	4.16 eliminated		
If I were working in a long-term care facility with a woman who I thought was heterosexual, I would feel uncomfortable if she _____:			
• **LGBTAtt5a** - regularly cuddled with her female roommate. _____	3.99	.386	
• **LGBTAtt5b** - had a female sex partner. _____	4.04 eliminated		
With LGBT older adults, I discuss the increased need for:			
• **LGBTBeh3a** - a living will. _____	4.35 eliminated		
• **LGBTBeh3b** - a financial power of attorney. _____	4.33 eliminated		
• **LGBTBeh3c** - a healthcare proxy or decision maker in the case of losing capacity. _____	4.38 eliminated		
• **LGBTAtt6a** - I don't think LGBT older adults have an increased need for these documents. _____	4.35 eliminated		
• **LGBTAtt6b** - I don't have any LGBT patients. _____	3.80	.338	
If I were working in a long-term care facility and staff members complained that a resident was cross-dressing, I would:			
• **LGBTBeh4a** - inform the family of this behavior. _____	3.80	.377	eliminated – questionable relevance
• **LGBTBeh4b** - talk to the resident about the cross-dressing. _____	3.41	-.017 eliminated	
• **LGBTBeh4c** - test the resident for dementia. _____	3.53	.097 eliminated	
• **LGBTBeh4d** - consider the need for a medication to decrease libido. _____	4.20 eliminate		
• **LGBTBeh4e** - explain to staff that this is a normal behavior. _____	3.32	.375	eliminated – questionable relevance

Appendix O Continued:

LGBT and Aging (continued):	**Mean**	**Correlation**	**Qualitative Reason**
If I were working in a long-term care facility and staff members complained that a resident was cross-dressing, I would (continued):			
• **LGBTAtt7** - feel uncomfortable dealing with the situation. _____	3.69	.596	eliminated – unclear question
Sexually Transmitted Infections (STIs):			
Respond to each question T for True or F for False.			
STIKnow1 - Older adults have a low risk of acquiring sexually transmitted infections. _____ (F)	.90 eliminated		
STIKnow2 - Older adults are regularly tested for sexually transmitted infections. ____ (F)	.94 eliminated		
STIKnow3 - Older adults have more complications from sexually transmitted infections than younger adults _____ (T)	.76 eliminated		
STIKnow4 - Gay older men have higher rates of HPV infection than heterosexual older men. _____ (T)	.50	.078 eliminated	
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:			
STIAtt1 - Older adults should receive regular tests for sexually transmitted infections. _____	3.77	-.008 eliminated	
STIBeh1 - I recommend that my older adult patients receive regular tests for sexually transmitted infections. _____	3.38	.369	
STIAtt2 - Older adults would benefit from STI education. _____	4.27 eliminated		
HIV/AIDS:			
Respond to each question T for True or F for False.			
HIVKnow1 - Older adults are rarely newly infected by HIV/AIDS. ____ (F)	.77 eliminated		

Appendix O Continued:

HIV/AIDS (continued):	**Mean**	**Correlation**	**Qualitative Reason**
HIVKnow2 - Approximately a quarter of persons living with HIV/AIDS are aged 50 and older. _____ (T)	.92 eliminated		
HIVKnow3 - Older adults are more likely than those who are younger to adopt HIV prevention techniques. _____ (F)	.74	.088 eliminated	
HIVKnow4 - Most older adults know that condoms can prevent HIV. _____ (F)	.43	.113	
HIVKnow5 - Older adults have fewer options for getting tested for HIV. _____ (F)	.62	-.100 eliminated	
HIVKnow6 - HIV is typically caught in the early stage in older adults because they have frequent doctor visits. _____ (F)	.83 eliminated		
HIVKnow7 - The early signs of HIV often imitate signs of normal aging. _____ (T)	.76 eliminated		
HIVKnow8 - The early symptoms of HIV are often confused with dementia. _____ (T)	.57	.062 eliminated	
HIVKnow9 - The early symptoms of HIV are often confused with chronic illnesses. _____ (T)	.91 eliminated		
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:			
HIVBeh1 - I recommend that my older adult patients be regularly tested for HIV. _____	3.24	.294 eliminated	
HIVBeh2 - I recommend testing an older patient for HIV at their yearly physical if they report risky sexual behavior. _____	4.14 eliminated		
Safer Sex Practices:			
Respond to each question T for True or F for False.			
SaferKnow1 - Maintenance of an erection is more difficult for older adults when using a condom. _____ (T)	.54	.192	
SaferKnow2 - Most single heterosexual older women report their partner uses a condom when they have sex. _____ (F)	.86 eliminated		

Appendix O Continued:

Safer Sex Practices (continued):	**Mean**	**Correlation**	**Qualitative Reason**
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:			
SaferBeh1 - I recommend that my older adult patients, who are not in a monogamous relationship, use condoms when they have sexual intercourse. _____	4.06 eliminated		
SaferAtt1 - If an older adult patient told me that they didn't use condoms because poor lubrication made it uncomfortable, I would feel awkward recommending a good lubricant. _____	3.82	.491	
If an older man reports that he has difficulty maintaining an erection when using a condom, I recommend:			
• **SaferBeh2a** - not worrying about using a condom. _____	4.18 eliminated		
• **SaferBeh2b** - using a bigger condom. _____	2.67	-.209 eliminated	
• **SaferBeh2c** - using a female condom. _____	3.12	.070 eliminated	
Rights:			
Respond to each question T for True or F for False.			
RightsKnow1 - Long-term care residents have a federal right to privacy. _____ (T)	.93 eliminated		
RightsKnow2 - Federal guidelines give long-term care residents the right to share a room with their spouse if both partners consent. _____ (T)	.86 eliminated		
RightsKnow3 - Federal regulations give long-term care residents the right to sexual activity. _____ (F)	.252	.158	
On a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree, respond to these statements:			
RightsAtt1 - Older adults have the right to sexual pleasure. _____	4.59 eliminated		

Appendix O Continued:

Rights (continued):	**Mean**	**Correlation**	**Qualitative Reason**
RightsAtt2 - The families of residents in long-term care facilities should be able to make decisions about their family members sexual activity. _____	4.10 eliminated		
RightsAtt3 - Long-term care facilities should give residents privacy to participate in sexual activity. _____	4.42 eliminated		

[a] Correlations for Behavior were run without Female Behavior questions, as many respondents did not respond to the Female questions.
[b] Correlations for Female Behavior questions were calculated with the remaining items after initial correlation review.

Appendix P: Items Remaining for Reliability and Validity Testing

Knowledge:

1 - ContSexKnow2 - If one enjoyed sex in their younger years, one is more likely to enjoy sex as an older adult. _____ (T)
2 - ContSexKnow5 - As people age, physical intimacy becomes more important than penetrative sex. _____ (T)
3 - ContSexKnow7 - Most older adults want to discuss sexual activity with their healthcare provider. _____ (T)
4 - BeneKnow7 - Having an orgasm boosts the immune system. _____ (T)
5 - BeneKnow10 - Orgasms help reduce bowel and bladder incontinence. ____ (T)
6 - RelatKnow3 - Having a partner is the primary predictor of sexual behavior amongst older adults. _____ (T)
7 - MaleKnow1 - Riding a bicycle can cause problems with sexual response in older men. _____ (T)
8 - MaleKnow8 - Prolonged periods without sexual activity can foster erectile dysfunction. ____ (T)
9 - MaleKnow9 - As men age, they require more direct stimulation of the penis to achieve erections than when they were younger. ____ (T)
10 - MaleKnow11 - Most men who take an oral medication for erectile dysfunction, such as Viagra, Levitra, or Cialis, continue using it until they are no longer interested in sexual activity. _____ (F)
11 - MaleKnow13 - Continuing sexual activity keeps the tissue in the penis healthy. _____ (T)
12 - FemaleKnow1 - It takes older women more time to become sexually aroused as they age. _____ (T)
13 - FemaleKnow4 - Prolonged periods without sexual activity can negatively affect vaginal health. ____ (T)
14 - FemaleKnow10 Post-intercourse urinary tract infections are common with older women. ____ (T)
15 - FemaleKnow15 - Women who remain sexually active are more likely to lubricate sufficiently after menopause. _____ (T)
16 - DiseaseKnow4 - Women with diabetes experience difficulty with lubrication. ____ (T)
17 - DementiaKnow1 - People with dementia are unable to consent to sexual activity. ____ (F)
18 - DementiaKnow2 - No matter their level of dementia, older adults are able to have sex with their long-term partner. ____ (F)
19 - MedsKnow5 - Naproxen (trade name Aleve) can cause erectile dysfunction. ____ (T)
20 - MedsKnow6 - Antacids have no sexual side effects. _____ (F)
21 - LGBTKnow1 - A lot of LGBT older adults go back in the closet when they enter a long-term care facility. _____ (T)
22 - LGBTKnow9 - Gay older men have higher rates of anal cancer than heterosexual older adults. _____ (T)
23 - HIVKnow4 - Most older adults know that condoms can prevent HIV. _____ (F)
24 - SaferKnow1 - Maintenance of an erection is more difficult for older adults when using a condom. _____ (T)
25 - RightsKnow3 - Federal regulations give long-term care residents the right to sexual activity. _____ (F)

Attitude:
1 - ContSexAtt1- I am comfortable discussing older adult clients' sexuality into their later years. ____
2 - ContSexAtt6 – If I were working in a long-term care facility and saw a couple kissing passionately in front of other people, I would feel uncomfortable addressing it. ___
3 - ContSexAtt8 – If an older adult patient of the opposite sex made sexual advances toward me, I would be disgusted. ___
4 - MastAtt1 - I am comfortable talking with an older adult patient about masturbation. _____
5 - MastAtt4 - If I were working in a long-term care facility and saw a resident masturbating in front of other people, I would feel uncomfortable addressing it. ___
6 - DiseaseAtt2 – If an older adult patient reports arthritis pain during sex, I am comfortable discussing ways to make sex more pleasurable. ___
7 - DementiaAtt3 - It is morally wrong for someone with dementia to be sexually active with another person. ____
8 - DementiaAtt2 - If my patient, whose partner has dementia and no longer remembers the relationship, begins a sexual relationship with a neighbor, I would think it is morally wrong. _____
9 - MedsAtt1 - I am comfortable discussing the possible sexual side effects of medications. _____
10 - LGBTAtt3 - A man dressing as a woman makes me uncomfortable. _____
11 - LGBTAtt5a – If I were working in a long-term care facility with a woman who I thought was heterosexual, I would feel uncomfortable if she regularly cuddled with her female roommate.
12 - LGBTAtt6b – With LGBT older adults, I discuss the increased need for . . . I don't have any LGBT patients. ___
13 - SaferAtt1 - If an older adult patient told me that they didn't use condoms because poor lubrication made it uncomfortable, I would feel awkward recommending a good lubricant. _____

Behavior:
1 - ContSexBeh1a – If I were working in a long-term care facility and saw a couple kissing passionately in front of other people, I would ignore it. ___
2 - ContSexBeh1c – If I were working in a long-term care facility and saw a couple kissing passionately in front of other people, I would help them find a private area. ___
3 - ContsexBeh3c – If an older adult patient of the opposite sex made sexual advances toward me, I would ignore it. ___
4 - BeneBeh1- I discuss the benefits of sexual activity with an older adult patient who complains of chronic pain. _____
5 - BeneBeh2 - I discuss the benefits of sexual activity with an older adult patient who complains of insomnia. _____
6 - MaleBeh1 - When I have an older patient who is starting a pill to enhance his erection, I discuss how it might change their sexual relationship. _____
7 - FemaleBeh2b – For older women with pain during intercourse, I recommend trying other forms of sexual expression. ___
8 - DiseaseBeh1 - When faced with critical health issues, I put sexual health issues on the back burner. _____

9 - DiseaseBeh2c – If an older adult patient reports arthritis pain during sex, I discuss trying alternate sexual positions. _____
10 - DementiaBeh1 - If a patient with dementia begins a sexual relationship with somebody who is cognitively intact, I assess for elder abuse. _____
11 - MedsBeh4 - I have an open discussion about medications and sexual functioning to prevent older adult patents from discontinuing medications. _____
12 - LGBTBeh1 - I ask my older patients about their sexual orientation. _____
13 - LGBTBeh2 - Unless told otherwise, I assume my older patients are heterosexual. _____
14 - STIBeh1 - I recommend that my older adult patients receive regular tests for sexually transmitted infections. _____

Appendix Q: Proposed Scale for Future Analysis

Jacobson Attitudes and Knowledge about Elderly Sexuality (JAKES)

For the purposes of this survey, when we refer to older adult consider this to mean 65 or older.

Section 1:
Respond to each question T for True or F for False.

1) A person, who enjoyed sex in their younger years, is more likely to enjoy sex as an older adult. _____
(T - Knowledge)

2) Older men who have sex with men have higher rates of anal cancer than older adult men who only have female partners. _____
(T - Knowledge)

3) Prolonged periods without sexual activity can foster erectile dysfunction. _____
(T - Knowledge)

4) It takes women more time to become sexually aroused as they age. _____
(T- Knowledge)

5) Antacids have no sexual side effects. _____
(F - Knowledge)

6) Having an orgasm boosts the immune system. _____
(T - Knowledge)

7) Having a partner is the primary predictor of continued sexual intimacy amongst older adults. _____
(T - Knowledge)

8) Riding a bicycle can cause problems with sexual response in older men. _____
(T – Knowledge**)**

9) Post-intercourse urinary tract infections are common among older women. _____
(T - Knowledge)

10) As people age, physical intimacy becomes more important than penetrative sex. _____
(T - Knowledge)

11) Orgasms help reduce bowel and bladder incontinence. _____
(T - Knowledge)

12) People with dementia are unable to consent to sexual activity. _____
(F – Knowledge)

13) Prolonged periods without sexual activity can lead to vaginal atrophy. _____
(T- Knowledge)

14) Most men who take an oral medication for erectile dysfunction, such as Viagra, Levitra, or Cialis, continue to take it until they are no longer interested in sexual activity. _____
(F – Knowledge)

15) Most older adults want to discuss sexual health issues with their healthcare provider. _____
(T - Knowledge)

16) Most older adults know that condoms can prevent HIV. _____
(F - Knowledge)

17) Women who remain sexually active are more likely to lubricate sufficiently when sexually aroused after menopause. _____
(T - Knowledge)

18) Continuing sexual activity keeps the tissue in the penis healthy. _____
(T – Knowledge)

19) No matter their level of dementia, older adults are able to consent to sex with a long-term partner. _____
(F – Knowledge)

20) Naproxen (trade name Aleve) can cause erectile dysfunction. _____
(T - Knowledge)

21) Many LGBT older adults go back into the closet when they move to a long-term care facility. _____
(T - Knowledge)

22) Federal regulations give long-term care residents the right to sexual activity. _____
(F - Knowledge)

23) Women with diabetes experience difficulty with vaginal lubrication. _____
(T - Knowledge)

24) As men age, they require more direct stimulation of the penis to achieve erections than when they were younger. _____
(T - Knowledge)

25) Maintaining an erection is more difficult for older men when using a condom. _____
(T - Knowledge)

Section 2:
Respond to these statements on a scale of 1-5, 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral or don't know, 4 = somewhat agree, and 5 = strongly agree:

26) I would feel uncomfortable if I were working in a long-term care facility and saw a couple kissing passionately in front of other people. _____
(Attitude – reverse score)

27) I don't think I have any older clients who identify as LGBT. _____
(Attitude – reverse score)

28) I recommend sexual activity to my older clients who complain of insomnia. _____
(Behavior)

29) I am comfortable talking with an older adult client about masturbation. _____
(Attitude)

30) I think it is morally wrong for an older adult, who's partner has severe dementia to begin a new sexual relationship. _____
(Attitude – reverse score)

31) When I have an older client who is starting an oral medication for erectile dysfunction, such as Viagra, Levitra, or Cialis, I discuss how it might change a couple's sexual relationship. _____
(Behavior)

32) If I were working in a long-term care facility, I would feel uncomfortable if I saw two female roommates cuddling with each other. _____
(Attitude – reverse score)

33) If an older female client reports experiencing pain during intercourse, I recommend trying other forms of sexual pleasure. _____
(Behavior)

34) If I were working in a long-term care facility and saw a couple fondling each other in front of other people, I would help them find a private area. _____
(Behavior)

35) When a client is facing critical health issues, I put sexual health issues on the back burner.

_____
(Behavior – reverse score)

36) I am comfortable discussing the possible sexual side effects of medications. _____
(Attitude)
37) If an older adult client made sexual advances toward me, I would ignore it. _____
(Behavior – reverse score)

38) If a client with dementia begins a sexual relationship with somebody who is cognitively intact, I assess for elder abuse. _____
(Behavior)

39) I am comfortable discussing older adult clients' sexuality into their later years. _____
(Attitude)

40) Unless they tell me otherwise, I assume my older clients are heterosexual. _____
(Behavior – reverse score)

41) - I have open discussions with clients about the side effects of medications on sexual functioning. _____
(Behavior)

42) If an older adult client made sexual advances toward me, I would be distressed. _____
(Attitude – reverse score)

43) A man dressing as a woman makes me uncomfortable. _____
(Attitude – reverse score)

44) If an older adult client reports arthritis pain during sex, I discuss trying different positions during intercourse. _____
(Behavior)

45) MastAtt4 – I would feel uncomfortable if I were working in a long-term care facility and saw a resident masturbating in front of other people. _____
(Attitude – reverse score)

46) I discuss the benefits of sexual activity with older adult clients who complain of chronic pain. _____
(Behavior)

47) If I were working in a long-term care facility and saw a couple kissing passionately in front of other people, I would ignore it. _____
(Behavior – reverse score)

48) It is not ethical for someone with dementia to be sexually active with another person. _____
(Attitude – reverse score)

49) If an older adult client reported arthritis pain during sex, I would feel comfortable discussing ways to make sex more pleasurable. _____
(Attitude)

50) I recommend that older adult clients receive regular tests for sexually transmitted infections. _____
(Behavior)

51) I ask my older clients about their sexual orientation. _____
(Behavior)

52) I feel awkward recommending using lubricants to older clients who complain that condoms make sex uncomfortable. _____
(Attitude – reverse score)

Scoring Note:
Assign 1 point for each correct knowledge question, then add points - higher score indicates higher knowledge (total possible score out of 25)
Reverse score attitude questions as noted, then add points – higher score indicates more permissive attitudes (total possible score out of 65)
Reverse score behavior questions as noted, then add points – higher score indicates more supportive/appropriate behaviors (total possible score out of 70)

References

Adam, B.D. (1995). *The rise of a gay and lesbian movement*. New York, NY: Twayne Publishers.

Adams, M.A., Rojas-Camero, C., & Clayton, K. (1990). A small-group sex education/ intervention model for the well elderly: a challenge for educators. *Educational Gerontology, 16,* 601-608.

Agronin, M.E. (2004). Sexuality and aging. In J. Sadavoy, L.F. Jarvik, G.T. Grossbert, & B.S. Meyers (Eds.), In *Comprehensive textbook of geriatric psychiatry* (3rd ed.) (pp. 789-813). New York, NY: W.W. Norton and Company.

Allen, R.S., Petro, K.N., & Phillips, L.L. (2009). Factors influencing young adults' attitudes and knowledge of late-life sexuality among older women. *Aging & Mental Health, 13*(2), 238-245.

Alliance for Aging Research. (2011). *Aging topics.* Retrieved from http://www.agingresearch.org/section/topic

American Association of Retired Persons (AARP). (2005). *Sexuality at midlife and beyond: 2004 update of attitudes and behaviors.* Washington, DC: AARP.

American Cancer Society (ACS). (2010). *American Cancer Society guidelines for the early detection of cancer.* Retrieved from http://www.cancer.org/Healthy/FindCancerEarly/CancerScreeningGuidelines/american-cancer-society-guidelines-for-the-early-detection-of-cancer

American Medical Association (AMA). (2010). *Physician's recognition award and credit system.* Retrieved from http://www.ama-assn.org/resources/doc/cme/pra-booklet.pdf

American Psychiatric Association (APA). (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: American Psychiatric Publishing.

Anderson, G. (2003). Chronic care. *Public Health & Policy, 3*(2), 110-111.

Araujo, A.B., Durante, R., Feldman, A., Goldstein, I., & McKinlay, J.B. (1998). The relationship between depressive symptoms and male erectile dysfunction: Cross-sectional results from the Massachusetts male aging study. *Psychosomatic Medicine, 60*, 458-465.

Austin, D.M. (1983). The Flexner myth and the history of social work. *Social Service Review, 57*, 357-377.

Bailey, B. (1997). Prescribing the pill: politics, culture, and the sexual revolution in America's heartland. *Journal of Social History, 30*(4), 827-856.

Baltes, P.B. (1987). Theoretical propositions of life-span development psychology: on the dynamics between growth and decline. *Developmental Psychology, 23*(5), 611-626.

Baltes, P.B., Reese, H.W., & Lipsitt, L.P. (1980). Life-span developmental psychology. *Annual Review of Psychology, 31,* 65-110.

Barnard, E. (2011a). Reasons to keep your sexual self alive and functioning. In J. Price (Ed.), *Naked at our Age: talking out loud about senior sex* (pp. 139-140). Berkeley, CA: Seal Press.

Barnard, E. (2011b). Aches, pains, positions, and props: an expert responds. In J. Price (Ed.), *Naked at our age: talking out loud about senior sex* (pp. 17-18). Berkeley, CA: Seal Press.

Basson, R. (2000). The female sexual response: a different model, *Journal of Sex & Marital Therapy, 26*(1), 51-65.

Basson, R., Leiblum, S., Brotto, L., Derogatis, L., Fourcroy, J., Fugl-Meyer, K., Graziottin, A., Heiman, J.R., Laan, E., Meston, C., Schover, L., van Lankveld, J., & Weijmar Schultz, W., (2004). Revised definitions of women's sexual dysfunction. *Journal of Sexual Medicine, 1*(1), 40-48.

Bauer, M., McAuliffe, L., & Nay, R. (2007). Sexuality, health care, and the older person: an overview of the literature. *International Journal of Older People Nursing, 2*, 63-68.

Bauer, M., McAuliffe, L., Nay, R., & Chenco, C. (2013). Sexuality in older adults: effect of an education intervention on attitudes and beliefs of residential aged care staff. *Educational Gerontology, 39*(2), 82-91.

Berman, J.R., Berman, L., & Goldstein, I. (1999). Female sexual dysfunction: incidence, pathophysiology, evaluation, and treatment options. *Urology, 54*, 385-391.

Beutel, M.E., Schumacher, J., Weidner, W., & Brahler, E. (2002). Sexual activity, sexual and partnership satisfaction in ageing men-Results from a German representative community study. *Angrologia, 34*, 22-28.

Block, J.D. (2008). *Sex over 50.* New York, NY: Penguin Group.

Bolte, S. (2011). Sex and intimacy after cancer. In J. Price (Ed.), *Naked at our age: talking out loud about senior sex* (pp. 200-203). Berkeley, CA: Seal Press.

Bouman, W.P., & Arcelus, J. (2001). Are psychiatrists guilty of 'ageism' when it comes to taking a sexual history? *International Journal of Geriatric Psychiatry, 16, 27-31.*

Bouman, W.P., Arcelus, J., & Benbow, S.M. (2007). Nottingham study of sexuality and ageing (NoSSA II). Attitudes of care staff regarding sexuality and residents: A study in residential and nursing homes. *Sexual and Relationship Therapy, 22*(1), 45-61.

Bowen, E.A. (2013). AIDS at 30: implications for social work education. *Journal of Social Work Education, 49*, 265-276.

Bowen, N.K. (2008). Cognitive testing and the validity of child-report data from the Elementary School Success Profile. *Social Work Research, 32*, 18-28.

Bowen, N.K., Bowen, G.L., & Woolley, M.E. (2004). Constructing and validating assessment tools for school-based practitioners: The Elementary School Success Profile. In A.R. Roberts & K.R. Yeager (Eds.), *Evidence-based practice manual: research and outcome measures in health and human services* (pp. 509-517). New York: Oxford University Press.

Bowen, N.K., & Guo, S. (2012). *Structural equation modeling*. New York, NY: Oxford University Press.

Branson, B.M, Handsfield, H.H., Lampe, M.A., Janssen, R.S., Taylor, A.W., Lyss, S.B., & Clark, J.E. (2006). *Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings.* Retrieved from Centers for Disease Control and Prevention http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5514a1.htm

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101.

Brecher, E.M. (1984). *Love, sex, and aging: a consumer union report.* Boston, MA: Little, Brown and Company.

Brick, P., Lunquist, J., Sandak, A., & Taverner, B. (2009). *Older, wiser, sexually smarter: 30 sex ed sessons for adults only.* Morristown, NJ: Planned Parenthood of Greater Northern New Jersey.

Burd, I.D., Nevadunsky, N., & Bachman, G. (2006). Impact of physician gender on sexual history taking in a multispecialty practice. *Journal of Sexual Medicine, 3*, 194-200.

Butler, R.N., & Lewis, M.I. (2002). *The new love and sex after 60*. New York, NY: Ballantine Books.

Cahill, S., South, K., Spade, J. (2000). *Outing age: public policy issues affecting gay, lesbian, bisexual, and transgender elders*. Washington, DC: Policy Institute National Gay and Lesbian Task Force.

Capitulo, K.L. (1998). The rise, fall, and rise of nurse-midwifery in America. *The American Journal of Maternal/Child Nursing, 23*(6), 314-321.

Carmines, E.G., & Zeller, R.A. (1979). *Reliability and validity assessment.* Beverly Hills, CA: SAGE Publications.

Carpenter, L.M. (2010). Gendered sexuality over the life course: a conceptual framework. *Sociological Perspectives, 53*(2), 155-178.

Carstensen, L.L. (1995). Evidence for a life-span theory of socioemotional selectivity. *Current Directions in Psychological Science, 4*(5), 151-156.

Castelo-Branco, C., Huezo M.L., & Lagarda, J.L.B. (2008). Definition and diagnosis of sexuality in the XXI century. *Maturitas, 60,* 50-58.

Centers for Disease Control and Prevention. (1996). *Pneumocystic pneumonia – Los Angeles*. Retrieved from http://www.cdc.gov/MMWR/preview/mmwrhtml/00043494.htm.

Centers for Disease Control and Prevention. (2008a). *New estimates of U.S. HIV prevalence, 2006.* Retrieved from http://www.cdc.gov/hiv/topics/surveillance/resources/factsheets/prevalence.htm.

Centers for Disease Control and Prevention. (2008b). *Persons aged 50 and older.* Retrieved from http://www.cdc.gov/hiv/topics/over50 /index.htm.

Centers for Disease Control and Prevention. (2009a). *Questions and answers for professional partners: revised recommendations for HIV testing of adults, adolescents, and pregnant women in health care settings.* Retrieved from http://www.cdc.gov/hiv/topics/testing/resources/qa/qa_professional.htm#section2

Centers for Disease Control and Prevention. (2009b). *2008 Sexually transmitted diseases surveillance.* Retrieved from http://www.cdc.gov/std/stats08/tables/33.htm

Centers for Medicare and Medicaid Services (CMS). (2009). *Cancer Screenings.* Retrieved from https://www.cms.gov/MLNProducts/downloads/cancer_screening.pdf

Chesler, E. (1992). *Woman of valor: Margaret Sanger and the birth control movement in America.* New York, NY: Simon & Schuster Paperbacks.

Clarke, N. (2013). Transfer of training: the missing link in training and quality of adult social care. *Health and Social Care in the Community, 21*(1), 15-25.

CMElist. (2011). *Intensive update with board review in geriatric and palliative medicine CME course.* Retrieved from http://www.cmeinfo.com/store_temp/Intensive_Update_With_Board_Review_In_Geriatric_And_Palliative_Medicine__487.asp

Creti, L., & Libman, E. (1989). Cognitions and sexual expression in the aging. *Journal of Sex & Marital Therapy, 15*(2), 83-101.

Cumming, E., Dean, L.R., Newell, D.S., & McCaffrey, I. (1960). Disengagement: a tentative theory of aging. *Sociometry, 23*(1), 23-35.

Cumming, E., & Henry, W.E. (1961). *Growing old: the process of disengagement.* New York, NY: Basic Books, Inc.

Daniluk, J.C. (1998). *Women's sexuality across the life span: challenging myths, creating meanings.* New York, NY: Guilford Press.

Deacon, S., Minichiello, V., Plummer, D. (1995). Sexuality and older people: revisiting the assumptions. *Educational Gerontology, 21*, 497-513.

De Block, A., & Adriaens, P.R. (2013). Pathologizing sexual deviance: a history. *Journal of Sex Research, 50*(3-4). 276-298.

DeLamater, J.D., & Sill, M. (2005). Sexual desire in later life. *The Journal of Sex Research, 42*(2), 138-149.

DeVellis, R.F. (2012). *Scale development: theory and applications.* Los Angeles, CA: Sage.

DeVellis, R.F. (2003). *Scale development: theory and applications* (2nd ed.). Thousand Oaks, CA: SAGE Publications.

DeVries, B. (2009). Introduction to special issues sexuality and aging: a late-blooming relationship. *Sexuality Research & Social Policy, 6*(4), 1-4.

Diamond, L.M. (2008). *Sexual fluidity: understanding women's love and desire.* Cambridge, MA: Harvard University Press.

Diokono, A.C., Brown, M.B., & Herzog, A.R. (1990). Sexual function in the elderly. *Archives of Internal Medicine, 150*(1), 197-200.

Doll, G.A. (2012). *Sexuality & long-term care: understanding and supporting the needs of older adults.* Baltimore, MD: Health Professions Press.

Dogan, S., Demir, B., Eker, E., & Karim, S. (2008). Knowledge and attitudes of doctors toward the sexuality of older people in Turkey. *International Psychogeriatrics, 20*(5), 1019-1027.

Duberman, M. (1993). *Stonewall*. New York, NY: Dutton.

Dunn, M.E., & Cutler, N. (2000). Sexual issues in older adults. *AIDS Patient Care and STDs, 14*(2), 67-69.

Eaklor, V.L. (2008). *Queer in America: a GLBT history of the 20th century.* Westport, CT: Greenwood Press.

Esterle, M., Munoz Sastre, M.T., Mullet, E. (2011). Acceptability of sexual relationships between elderly people residing in nursing homes. *Sexuality and Disability, 29*, 157-164.

Fabre, L.F. & Smith, L.C. (2012). The effects of major depression on sexual function in women. *Journal of Sexual Medicine, 9*, 231-239.

Fairchild, S.K., Carrino, G.E., & Ramirez, M. (1996). Social workers' perceptions of staff attitudes toward resident sexuality in a random sample of New York state nursing homes. *Journal of Gerontological Social Work, 26*(1-2), 153-169.

Family Planning Association (FPA). (2010). *The Middle-age spread (STIs in the over 50s).* Retrieved From: http://www.fpa.org.uk/campaignsandadvocacy/sexualhealthweek/stisandsafersexover50/professionals

Finger, W.W., Lund, M., & Slagel, M.A. (1997). Medications that may contribute to sexual disorders: a guide to assessment and treatment in family practice. *Journal of Family Practice, 44*(1), 33-43.

Fisher, T.D. (2011). Attitudes toward sexuality scale. In T.D. Fisher, C.M. Davis, W.L. Yarber, S.L., Davis (Eds.), *Handbook of sexuality-related measures* (3rd ed.) (pp. 66-67). New York, NY: Routledge.

Fisher, J.E., Swingen, D.N., & O'Donohue, W. (1997). Behavioral interventions for sexual dysfunction in the elderly. *Behavior Therapy, 28*, 65-82.

Flexner, A. (1960). *Abraham Flexner: an autobiography*. New York, NY: Simon & Schuster.

Foucault, M. (1978). *The history of sexuality, volume 1: an introduction.* New York, NY: Vintage Books.

Frankowski, A.C., & Clark, L.J. (2009). Sexuality and intimacy in assisted living: residents' perspective and experiences. *Sexuality Research & Social Policy: Journal of NSRC, 6*(4), 25-37.

Freud, S. (1962). *Three essays on the theory of sexuality.* New York, NY: Basic Books.

Frey, W.H. (2008). America's regional demographics in the early 21st century: the role of seniors, boomers, and new minorities. *Public Policy & Aging Report, 18*(1), 1-31.

Fullard, W., & Sheier, L.M. (2011). Sexual Knowledge and Attitude Test for Adolescents. In T.D. Fisher, C.M. Davis, W.L. Yarber, S.L. Davis (Eds.), *Handbook of Sexuality-Related Measures* (3rd ed.) (pp. 16-18). New York, NY: Routledge.

Gagnon, J.H., & Simon, W. (2005). *Sexual conduct: the social sources of human sexuality* (2nd ed.). New Brunswick, NJ: Aldine Transaction.

George, L.K., & Weiler, S.J. (1981). Sexuality in middle and late life: the effects of age, cohort, and gender. *Archives of General Psychiatry, 38*(8), 919-923.

Gerbert, B., Maguire, B.T., & Coates, T.J (1990). Are patients talking to their physicians about AIDS? *American Journal of Public Health, 80(4)*, 467-468.

Getzel, G.S. (1992). AIDS and social work: a decade later. *Social Work in Health Care, 17*(2), 1-9.

Getzel, G.S. (1997). A Community-Based Response to the HIV/AIDS Pandemic. In T.S. Kerson (Ed.), *Social work in health setting: practice in context* (2nd ed) (pp. 409-424). Binghamton, NY: Haworth Press, Inc.

Giami, A. (2008). Two facets of the medicalization of sexuality in the late 20th century: AIDS & Viagra. *Tidsskriff For Norsk Psykologiorening, 45*, 671-673.

Glass, J.C., Mustian, R.D., & Carter, L.R. (1986). Knowledge and attitudes of healthcare providers toward sexuality in the institutionalized elderly. *Educational Gerontology, 12*, 465-475.

Glass, J.C., & Webb, M.L. (1995). Health care educators' knowledge and attitudes regarding sexuality in the aged. *Educational Gerontology, 21*(8), 713-733.

Goldman, A., & Carroll, J.L. (1990). Educational intervention as an adjunct to treatment of erectile dysfunction in older couples. *Journal of Sex & Marital Therapy, 16*(3), 127-141.

Goldstein, I. (2008). Sexual dysfunction in women: what can urologists contribute? *Current Urology Reports, 9*, 475-483.

Goldstein-Lohman, H., & Aitken, M.J. (1995). Influence of education on knowledge and attitude toward older adult sexuality. *Physical & Occupational Therapy in Geriatrics, 13*(1/2), 51-62.

Gott, C.M. (2005). *Sexuality, sexual health, and ageing.* Berkshire, England: Open University Press.

Gott, C.M. (2001). Sexual activity and risk-taking in later life. *Health and Social Care in the Community, 9,* 72-78.

Gott, M., & Hichliff, S. (2003). Barriers to seeking treatment for sexual problems in primary care: a qualitative study with older people. *Family Practice, 20*(6), 690-695.

Gott, M., Hinchliff, S., & Galena, E. (2004). General practitioner attitudes to discussing sexual health issues with older people. *Social Science & Medicine, 58*, 2093-2103.

Grinell, R.M. (2001). *Social work research and evaluation: quantitative & qualitative approaches* (6th ed). Itaska, IL: F.E. Peacock Publishers, Inc.

Guba, E.G., & Lincoln, Y.S. (1994). Competing Paradigms in Qualitative Research. In N. Denzin & Y. Lincoln (Eds.), *Handbook of qualitative research.* Newberry Park, CA: Sage.

Haddad, P.M., & Benbow, S.M. (1993). Sexual problems associated with dementia: part 2. aetiology, assessment and treatment. *International Journal of Geriatric Psychiatry, 8*, 631-637.

Hajjar, R.R., & Kamel, H.K. (2003). Sex and the nursing home. *Clinical Geriatric Medicine, 19*, 575-586.

Hart, G. & Wellings, K. (2002). Sexual behaviour and its medicalisation: in sickness and in health. *British Medical Journal, 324*, 896-900.

Hartman, A. (1992). In search of subjugated knowledge. *Social Work, 37*(6), 483-484.

Harvard Medical School. (2011a). Hormone therapy: the next chapter. *Harvard Women's Health Watch, 18*(7), 1-3.

Harvard Medical School. (2011b). *Aging: treatment perspectives and challenges.* Retrieved from http://cme.med.harvard.edu/cmeups/pdf/03114380.pdf

Havighurst, R.J. (1961). Successful aging. *The Gerontologist, 1*(1), 8-13.

Henderson, S.J., Bernstein, L.B., George, D.M., Doyle, J.P., Paranjape, A.S., & Corbie-Smith, G. (2004). Older women and HIV: How much do they know and where are they getting their information? *Journal of the American Geriatrics Society, 52*(9), 1549-53.

Hersh, D. (2011). Erectile dysfunction medication and your relationship. In J. Price (Ed.), *Naked at our age: talking out loud about senior sex* (pp. 222-223). Berkeley, CA: Seal Press.

Herzog, D. (2008). *Sex in crisis: the new sexual revolution and the future of American politics.* New York, NY: Basic Books.

Higgins, A., Sharek, D., Nolan, M., Sheerin, B., Flanagan, P., Slaicuinaite, S., McDonnell, S., & Walsh, H. (2012). Mixed methods evaluation of an interdisciplinary sexuality education programme for staff working with people who have an acquired physical disability. *Journal of Advanced Nursing, 68*(11), 2559-2569.

High, K.P., Brennan-Ing, M.; Clifford, D.B., Cohen, M.H., Currier, J., Deeks, S.G., Deren, S., Effros, R.B., Gebo, K., Goronzy, J.J., Jusice, A.C., Landay, A., Levin, J., Miotti, P.G., Munk, R.J., Nass, H., Shlipak, M.G., Tracy, R.; Valcour, V., Vance, D.E., Walston, J.D., & Volberding, P. (2012). HIV and aging: state of knowledge and areas of critical need for research. A report to the NIH office of AIDS research by the HIV and aging working group. *Journal of Acquired Immune Deficiency Syndromes, 60*(Suppl 1), S1-S18.

Hillman, J.L, & Stricker, G. (1994). A linkage of knowledge and attitudes toward elderly sexuality: not necessarily a uniform relationship. *The Gerontologist, 34*(2), 256-260.

Hillman, J.L., & Stricker, G. (1996a). Predictors of college students' knowledge of and attitudes toward elderly sexuality: the relevance of grandparental contact. *Educational Gerontology, 22*(6), 539-555.

Hillman, J.L., & Stricker, G. (1996b). College students' attitudes toward elderly sexuality: a two factor solution. *Canadian Journal on Aging, 15*(4), 543-558.

Hinchliff, S., & Gott, M. (2011). Seeking medical help for sexual concerns in mid- and later-life: a review of the literature. *Journal of Sex Research, 48*(2-3), 106-117.

Hinrichs, K.L.M., & Vacha-Haase, T. (2010). Staff perceptions of same-gender sexual contacts in long-term care facilities. *Journal of Homosexuality, 57*, 776-789.

Hooyman, N.R., & Kiyak, H.A. (2005). *Social gerontology: a multidisciplinary perspective* (7th ed.). Boston, MA: Pearson Education, Inc.

Hsiao, C., Cherry, D.K., Beatty, P.C., Rechtsteiner, E.A. (2010). Ambulatory medical care survey: 2007 summary. *National Health Statistics Reports, 27*(3), 1-32.

Hudson, W.W. (1982). *The clinical measurement package: a field manual.* Homewood, IL: The Dorsey Press.

Hudson, W.W., & Murphy, G.J. (2011). Sexual Attitude Scale. In T.D. Fisher, C.M. Davis, W.L. Yarber, & S.L. Davis (Eds.), *Handbook of sexuality-related measures* (3rd ed.) (pp. 75-76). New York, NY: Routledge.

Institute of Medicine (IOM). (2008). *Retooling for an aging America: building the health care workforce.* Washington, DC: The National Academies Press.

Jacobson, S.A. (2010, November). *Doctor communication with older adults: sexual activity and sexual health*. Poster presented at the meeting of Society for Social Work Leadership in Healthcare, Tampa, FL.

Johnson, B. (1997). Older adults' suggestions for health care providers regarding discussions of sex: older adults answer a survey about sexuality and aging. *Geriatric Nursing, 18*(2), 65-66.

Johnson, R.B., Onwuegbuzie, A.J., Turner, L.A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research, 1*(2), 112-133.

Joint Commission. (2011). *Advancing effective communication, cultural competence, and patient- and family-centered care for the lesbian, gay, bisexual, and transgender (LGBT) community.* Retrieved from www.jointcommission.org/assets/1/18/LGBTFieldGuide.pdf

Katz, J. (1976). *Gay American history: lesbians and gay men in the U.S.A.* New York, NY: Thomas Y. Crowell Company.

Kellogg Spadt, S. (2011). Vulvar/vaginal irritation?. In J. Price (Ed.), *Naked at our age: talking out loud about senior sex* (pp. 185-186). Berkeley, CA: Seal Press.

Kennedy, D.M. (1970). *Birth control in America: the career of Margaret Sanger.* New Haven, CT: Yale University Press.

Kim, S., Kang, S., Kim, J. (2011). A sexual health care attitude scale for nurses: development and psychometric evaluation. *International Journal of Nursing Studies, 48*(12), 1522-1532.

Kingsberg, S.A. (2002). The impact of aging on sexual function in women and their partners. *Archives of Sexual Behavior, 31*(5), 431-437.

Kinsey, A.C., Pomeroy, W.B., & Martin, C.E. (1948). *Sexual behavior in the human male*. Philadelphia, PA: W.B. Saunders Company.

Kinsey, A.C., Pomeroy, W.B., Martin, C.E., & Gebhard, P.H. (1953). *Sexual behavior in the human female*. Philadelphia, PA: W.B. Saunders Company.

Kligman, E.W. (1991). Office evaluation of sexual function and complaints. *Clinics in Geriatric Medicine, 7(1), 15-39.*

Kobrin, F.E. (1966). The American midwife controversy: a crisis in professionalization, *Bulletin on the History of Medicine, 40*(4), 350-363

Koch, P.B., & Singer, M.D. (2011). HIV/AIDS knowledge and attitudes scales for teachers. In T.D. Fisher, C.M. Davis, W.L. Yarber, & S.L. Davis (Eds.), *Handbook of sexuality-related measures* (3rd ed.) (pp. 360-363). New York, NY: Routledge.

Kontula, O., & Haavio-Mannila, E. (2009). The impact of aging on human sexual activity and sexual desire. *Journal of Sex Research, 46*(1), 46-56.

Kuehn, B.M. (2008). Time for "the talk" - again. *Journal of the American Medical Association, 300,* 1285-1287.

Kuhn, D. (2011). How does Alzheimer's disease affect sexuality? In J. Price (Ed.), *Naked at our age: talking out loud about senior sex* (pp. 261-262). Berkeley, CA: Seal Press

Lai, Y., & Hynie, M. (2011). A tale of two standards: an examination of young adults' endorsement of gendered and ageist sexual double standards. *Sex Roles, 64,* 360-371.

Langer-Most, O., & Langer, N. (2010). Aging and sexuality: how much do gynecologists know and care? *Journal of Women & Aging, 22,* 283-289.

Laumann, E.O., Das, A., & Waite, L.J. (2008). Sexual dysfunction among older adults: prevalence and risk factors from a nationally representative U.S. probability sample of men and women 57-85 years of age. *Journal of Sexual Medicine, 5,* 2300-2311.

Laumann, E.O., Glasser, D.B., Neves, R.C.S., Moreira, E.D. (2009). A population-based survey of sexual activity, sexual problems and associated help-seeking behavior patterns in mature adults in the United States of America. *International Journal of Impotence Research, 21*, 171-178.

Laumann, E.O., Nicolosi, A., Glasser, D.B., Paik, A., Gingell, C., Moreira, E., & Wang, T. (2005). Sexual problems among women and men aged 40-80 y: prevalence and correlates identified in the global study of sexual attitudes and behaviors. *International Journal of Impotence Research, 17*, 39-57.

Lawrence v. Texas, 539 U.S. 558 (2003).

Le Gall, A., Mullet, E., & Riviere Shafighi, S. (2002). Age, religious beliefs, and sexual attitudes. *The Journal of Sex Research, 39*(3), 207-216.

Levy-Dweck, S. (2005). HIV/AIDS fifty and older: A hidden and growing population. *Journal of Gerontological Social Work, 46*, 37-50.

Libman, E. (1989). Sociocultural and cognitive factors in aging and sexual expression: conceptual and research issues. *Canadian Psychology, 30*(3), 560-567.

Lieberman, L.D. (2012). Relationships and context as a means for improving disease prevention and sexual health messages. *Health Education & Behavior, 39*(3), 255-258.

Lindau, S.T., Leitsch, S.A., Lundberg, K.L., & Jerome, J. (2006). Older women's attitudes, behavior, and communication about sex and HIV: a community-based study. *Journal of Women's Health, 15*(6), 747-753.

Lindau, S.T., Schumm, L.P., Laumann, E.O., Levinson, W., O'Muircheartaigh, C.A., & Waite, L.J. (2007). A study of sexuality and health among older adults in the United States. *The New England Journal of Medicine, 17,* 39-57.

Linsk, N.L. (2011). Thirty years into the HIV epidemic: social work perspectives and prospects. *Journal of HIV/AIDS & Social Services, 10*(3)*,* 218-229.

Livini, M.D. (1994). Nurses' attitudes toward sexuality and dementia. *American Journal of Geriatric Psychiatry, 2*(4), 338-345.

Loe, M. (2004). *The rise of Viagra.* New York, NY: New York University Press.

Lourenco, M., Azevedo, L.P., Gouveia, J.L. (2011). Depression and sexual desire: an exploratory study in psychiatric patients. *Journal of Sex & Marital Therapy, 37*, 32-44.

Luadzer, J.W. (1995). *A study of the knowledge and attitudes of health care providers toward sexuality in institutionalized older person* (Doctoral dissertation). Retrieved from CINAHL. (1999006491).

Luketich, G.F. (1991). Sex and the elderly: what do nurses know? *Educational Gerontology, 17*, 573-580.

Lyons, P., & Doueck, H.J. (2010). *The Dissertation: From Beginning to End.* New York, NY: Oxford University Press, Inc.

Maes, C. & Louis, M. (2011). Nurse practitioners' sexual history-taking practices with adults 50 and older. *The Journal of Nurse Practitioners, 7*(3), 216-222.

Maes, C.A. & Louis, M. (2003). Knowledge of AIDS, perceived risk of AIDS, and at-risk sexual behaviors among older adults. *Journal of American Academic Nurse Practitioners, 15, 509-516.*

Mahieu, L., Van Elssen, Kim, & Gastmans, C. (2011). Nurses' perceptions of sexuality in institutionalized elderly: a literature review. *International Journal of Nursing Studies, 48,* 1140-1154.

Malcolm, A., Aggleton, P., Bronfman, M., Galvao, J., Mane, P., & Verrall, J. (1998). HIV-related stigmatization and discrimination: its forms and contexts. *Critical Public Health, 8*(4), 347-370.

Malhotra, S., Khurshid, A., Hendricks, K.A., & Mann, J.R. (2008). Medical school sexual health curriculum and training in the United States. *Journal of the National Medical Association, 100*(9), 1097-1106.

Marshall, B.L. (2010). Science, medicine and virility surveillance: 'Sexy seniors' in the pharmaceutical imagination. *Sociology of Health and Illness, 32*(2), 211-224.

Masters, W.H., & Johnson, V.E. (1966). *Human sexual response.* Boston, MA: Little, Brown and Company.

The Matthew Shepard and James Byrd, Jr., Hate Crimes Prevention Act of 2009, 18 U.S.C. § 249 (2009).

Matthias, R.E., Lubben, J.E., Atchison, K.A., & Schweitzer, S.O. (1997). Sexual activity and satisfaction among very old adults: results from a community-dwelling Medicare population survey, *The Gerontologist, 37*(1), 6-14

May, E.T. (2010). *America and the pill: a history of promise, peril, & liberation.* New York, NY: Basic Books.

McAuliffe, L., Bauer, M., & Nay, R. (2007). Barriers to the expression of sexuality in the older person: the role of the health professional. *International Journal of Older People Nursing, 2*, 69-75.

McLaren, A. (1999). *Twentieth-century sexuality: a history.* Oxford: Blackwell Publishers Inc.

Miller, W, R., & Lief, H.I. (1979). Sexual knowledge and attitude test (SKAT). *Journal of Sex & Marital Therapy, 5*(3), 282-287.

Mona, L.R., Goldwater, G., Syme, M.L., Cameron, R.P., Clemency, C., Miller, A.R., Lemos, L., & Ballan, M.S. (2010). Assessment and conceptualization of sexuality among older adults. In P.A. Lichtenberg (Ed.), *Handbook of assessment in clinical gerontology* (pp. 331-356). Boston, MA: Elsevier.

Morehouse School of Medicine (MSM). (2013). *The Satcher Health Leadership Institute.* Retrieved from http://www.msm.edu/research/research_centersandinstitutes/SHLI/aboutUs/CESH/programsInitiatives.aspx

Moreira, E.D., Brock, G., Glasser, D.B., Nicolosi, A., Laumann, E.O., Paik, A., Wang, T., & Gingell, C. (2004). Help-seeking behavior for sexual problems: The global study of sexual attitudes and behaviors. *International Journal of Clinical Practice, 59*(1), 6-16.

Moynihan, R. (2003). The making of a disease: female sexual dysfunction. *British Medical Journal, 326*, 45-47.

Mund, P.A., Heller, D., Meissner, P., Matthews, D.W., Hill, M., & Cunningham, C.O. (2008). Delivering care out of the box: the evolution of an HIV harm reduction medical program. *Journal of Health Care for the Poor & Underserved, 19*(3), 944-951.

National Association of Social Workers (NASW). (1996). *Code of ethics.* Washington, D.C.: National Association of Social Workers.

National Center for Health Statistics (NCHS). (2011). *Health, United States, 2010: with special feature on death and dying.* Hyattsville, MD: U.S. Government Printing Office.

National Gay and Lesbian Task Force (2011). *Aging.* Retrieved from www.thetaskforce.org/issues/aging.

New York City Department of Health and Mental Hygiene (NYC-DOH). (2010). *HIV epidemiology & field services semiannual report.* Retrieved from http://www.nyc.gov/html/doh/downloads/pdf/dires/2010_1st_semi_rpt.pdf

Nicolosi, A., Moreira, E.D., Vila, M., & Glasser, D.B. (2004). A population study of the association between sexual function, sexual satisfaction and depressive symptoms in men. *Journal of Affective Disorders, 82,* 235-243.

Nusbaum, M.R., Singh, A.R., & Pyles, A.A. (2004). Sexual healthcare needs of women aged 65 and older. *Journal of the American Geriatrics Society, 52*, 117-122.

O'Donohue, W.T., Swingen, D.N., Dopke, C.A., & Regev, L.G. (1999). Psychotherapy for male sexual dysfunction: a review. *Clinical Psychology Review, 19*(5), 591-630.

Olson, L.A. (2011). What's causing your ED? In J. Price (Ed.), *Naked at our age: talking out loud about senior sex* (pp. 220-221). Berkeley, CA: Seal Press.

Ortega, V., Zubeidat, I., & Sierra, J.C. (2006). Further examination of measurement properties of Spanish version of the Sexual Desire Inventory with undergraduates and adolescent students'. *Psychological Reports, 99*, 147-165.

Padgett, D.K. (2008). *Qualitative methods in social work research* (2nd ed.). Los Angeles, CA: Sage.

Palacios, S. (2008). Advances in hormone replacement therapy: Making the menopause manageable. *BMC Women's Health, 8*(22).

Pan American Health Organization (PAHO). (2000). *Promotion of sexual health recommendations for action.* Retrieved from http://www.paho.org/english/hcp/hca/promotionsexualhealth.pdf

Parascandola, J. (2008). *Sex, sin, and science: a history of syphilis in America.* Westport, CT: Praeger Publishers.

Parker, R. (2010). Reinventing sexual scripts: sexuality and social change in the twenty-first century (the 2008 John H. Gagnon distinguished lecture on sexuality, modernity and change). *Sexuality Research and Social Policy, 7*, 58-66.

Patton, M.Q. (2002). *Qualitative research & evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.

Petersen, J.L., & Hyde, J.S. (2011). Gender differences in sexual attitudes and behaviors: A review of meta-analytic results and large datasets. *Journal of Sex Research, 48*(2-3), 149-165.

Pfeiffer, E., & Davis, G.C. (1972). Determinants of sexual behavior in middle and old age. *Journal of the American Geriatrics Society, 20*(4), 151-158.

Planned Parenthood Federation of America, Inc. (2013). *Morning-after pill (emergency contraception).* Retrieved from http://www.plannedparenthood.org/health-topics/emergency-contraception-morning-after-pill-4363.asp

Price, J. (2011). *Naked at our age: talking out loud about senior sex.* Berkeley, CA: Seal Press.

Quinn-Krach, P., & Van Hoozer, H. (1988). Sexuality of the aged and the attitudes and knowledge of nursing students. *Journal of Nursing Education, 27*(8), 359-363.

Reynolds, K.E., & Magnan, M.A. (2005). Nursing attitudes and beliefs toward human \ sexuality. *Clinical Nurse Specialist, 19*(5), 255-259.

Reynolds, W.M. (1982). Development of reliable and valid short forms of the Marlowe-Crowne social desirability scale. *Journal of Clinical Psychology, 38*(1), 119-125.

Rheaume, C., & Mitty, E. (2008). Sexuality and intimacy in older adults. *Geriatric Nursing, 29*(5), 342-349.

Rockwood, T., & Constantine, M. (2009). Item and instrument development to assess sexual function and satisfaction in outcome research. *International Urogynecology Journal, 20*(S1), S57-S64.

Ross, P., Humble, A.M., & Blum, I. (2013). Sexuality and HIV/AIDS: an exploration of older heterosexual women's knowledge levels. *Journal of Women & Aging, 25*, 165-182.

Rowe, J.W., & Kahn, R.L. (1997). Successful aging. *The Gerontologist, 37*(4), 433-440.

Rubin, A., & Babbie, E.R. (2008). *Research methods for social work* (6th ed.). Belmont, CA: Brooks/Cole.

Sarkadi, A., & Rosenqvist, U. (2001). Contradictions in the medical encounter: female sexual dysfunction in primary care contacts. *Family Practice, 18*, 161-166.

Satcher, D. (2001). *The surgeon general's call to action to promote sexual health and responsible sexual behavior.* Retrieved from http://www.surgeongeneral.gov/library/sexualhealth/call.pdf

Schiavi, R.C. (1999). *Aging and male sexuality.* Cambridge: Cambridge University Press.

Schick, V., Herbenick, D., Reece, M., Sanders, S.A., Dodge, B., Middlestadt, S.E., Fortenberry, D. (2010). Sexual behaviors, condom use, and sexual health of Americans over 50: Implications for sexual health promotion for older adults. *The Journal of Sexual Medicine, 7*(suppl 5), 315-329.

Schultheiss, D., & Glina, S. (2010). Highlights from the history of sexual medicine. *Journal of Sexual Medicine, 7*, 2031-2043.

Schwartz, P. (2007). Good lovin'. *Consumer Reports on Health 19*(2), 6.

Schwartz, P., & Rutter, V. (1998). *The gender of sexuality.* Thousand Oaks, CA: Pine Forge Press.

Shore, D.A., & Pyrce, J.M. (1984). Addressing the sexual needs of patients in health care systems. *Journal of Social Work and Human Sexuality, 2*(1), 21-31.

Shuttleworth, R., Russell, C., Weerakoon, P., & Dune, T. (2010). Sexuality in residential aged care: a survey of perceptions and policies in Australian nursing homes. *Sexuality and Disability, 28*, 187-194.

Simon, W., Gagnon, J. (1969). Psychosexual development. *Society, 35*(2), 60-67.

Simon, W., & Gagnon, J.H. (1986). Sexual scripts: permanence and change. *Archives of Sexual Behavior, 15*(2), 97-120.

Simonds, W., Katz Rothman, B., & Meltzer Norman, B. (2007). *Laboring on: birth in transition in the United States.* New York, NY: Taylor & Francis Group, LLC.

Skiest, D. J. & Keiser, P. (1997). Human immunodeficiency virus infection in patients older than 50 years: a survey of primary care physicians' beliefs, practices, and knowledge. *Archives of Family Medicine, 6, 289-294.*

Skultety, K.M. (2007). Addressing issues of sexuality with older couples. *Generations, 31*(3), 31-37.

Smith, K.P., & Christakis, N.A. (2009). Association between widowhood and risk of diagnosis with a sexually transmitted infection in older adults. *American Journal of Public Health, 99*(11), 2055-2062.

Snyder, R.J., & Zweig, R.A. (2010). Medical and psychology students' knowledge and attitudes regarding aging and sexuality. *Gerontology & Geriatrics Education, 31*, 235-255.

Spector, I.P., & Fremeth, S.M. (1996). Sexual behaviors and attitudes of geriatric residents in long-term care facilities. *Journal of Sex & Marital Therapy, 22*(4), 235-246.

Stall, R. & Catania, J. (1994). AIDS risk behaviors among late middle-aged and elderly Americans: the national AIDS behavioral surveys. *Archives of Internal Medicine, 154*, 57-63.

Stansell, C. (2010). *The feminist promise: 1792 to the present*. New York, NY: The Modern Library.

Starr, P. (1982). *The social transformation of American medicine.* New York, NY: Basic Books, Inc., Publishers.

Steigerwald, D. (1995). *The sixties and the end of modern America.* New York, NY: St. Martin's Press.

Steinke, E. (1994). Knowledge and attitudes of older adults about sexuality in ageing: a comparison of two studies. *Journal of Advanced Nursing, 19*, 477-485.

Steinke, E.E., & Swan, J.H. (2004). Effectiveness of a videotape for sexual counseling after myocardial infarction. *Research in Nursing & Health, 27*, 269-280.

Strug, D.L, Grube, B.A., & Beckerman, N.L. (2002). Challenges and changing roles in HIV/AIDS social work. *Social Work in Health Care, 35*(4), 1-19.

Tangredi, L.A., Danvers, K., Molony, S.L., & Williams, A. (2008). New CDC recommendations for HIV testing in older adults. *The Nurse Practitioner, 33,* 37-44.

Tavares, R., & Lopez, D.J. (1984). Response of the gay community to Acquired Immune Deficiency Syndrome. In S.E. Nichols & D.G. Ostrow (Eds), *Psychiatric implications of Acquired Immune Deficiency Syndrome* (pp. 105-110). Washington, DC: American Psychiatric Press, Inc.

Teddlie, C., Tashakkori, A., & Johnson, B. (2008). (1980). Emergent techniques in the gathering and analysis of mixed methods data. In S. Hesse-Biber, & P. Leary (Eds.), *The Handbook of Emergent Methods in Social Research* (pp. 389-413). New York, NY: Guilford Press.

Thakutra, R.G., Singh, O.P., Bhattacharya, A., Mallick, A.K., Ray, P., Sen, S., & Das, R. (2012). Nature of sexual dysfunctions in major depressive disorder and its impact on quality of life. *Indian Journal of Psychological Medicine, 34*(4), 365-370.

Tiefer, L. (2001). A New View of women's sexual problems: why new? why now? *The Journal of Sexual Research, 38*(2), 89-96.

Tiefer, L. (2010). Still resisting after all these years: an update on sexuo-medicalization and on the New View Campaign to challenge the medicalization of women's sexuality. *Sexual and Relationship Therapy, 25*(2), 189-196.

Tiefer, L, Hall, M., & Tavris, C. (2002). Beyond dysfunction: a New View of women's sexual problems. *Journal of Sex & Marital Therapy, 28*(s), 225-232.

Tinsley, H.E.A., & Tinsely, D.J. (1987). Uses of factor analysis in counseling psychology research. *Journal of Counseling Psychology, 34*(4), 414-424.

Tolman, D.L., & Porche, M.V. (2000). The adolescent femininity ideology scale: development and validation of a new measure for girls. *Psychology of Women Quarterly, 24,*365-376.

U.S. Department of Health and Human Services (HHS). (2010a). *Healthy People 2020.* Retrieved from http://www.healthypeople.gov/2020/TopicsObjectives2020/pdfs/HP2020_brochure.pdf

U.S. Department of Health and Human Services (HSS). (2010b). *Health people 2020 objectives*. Retrieved from http://www.healthypeople.gov/2020/topicsobjectives2020/pdfs/HP2020objectives.pdf

U.S. Preventive Services Task Force (USPSTF). (2011). *Recommendations for adults*. Retrieved from http://www._uspreventiveservicestaskforce.org/adultrec.htm#obstetric

United States v. Windsor, 570 U.S. ___ (2013).

Viana, H.B., Guirardello, E.B., & Madruga, V.A. (2010). Translation and cross-cultural adaptations of the ASKAS – aging sexual knowledge and attitudes scale in Brazilian elderly. *Texto & Contexto Engermagem, 19*(2), 238-245.

Vance, C.S. (1999). Anthropology rediscovers sexuality: a theoretical comment. In R. Parker & P. Aggleton (Eds.), *Culture, society, and sexuality: a reader* (2nd ed.) (pp. 39-54). New York, NY: Routledge.

Vincent, G.K. & Velkoff, V.A. (2010). *The next four decades: the older population in the United States 2010-2050*. Retrieved from U.S. Census Bureau website: http://www.census.gov/prod/2010pubs/p25-1138.pdf

Waite, L.J., Laumann, E.O., Das, A., & Schumm, L. (2009). Sexuality: measures of partnerships, practices, attitudes, and problems in the national social life, health, and aging study. *Journal of Gerontology: Social Sciences, 64B*(S1), i56-i66.

Walker, B.L., & Ephross, P.H. (1999). Knowledge and attitudes toward sexuality of a group of elderly. *Journal of Gerontological Social Work, 31*(1/2), 85-107.

Walker, B.L., & Harrington, D. (2002). Effects of staff training on staff knowledge and attitudes about sexuality. *Educational Gerontology, 28*, 639-654.

Walker, B.L, Osgood, N.J, Richardson, J.P., & Ephross, P.H. (1998). Staff and elderly knowledge and attitudes toward elderly sexuality. *Educational Gerontology, 24*(5), 471-489.

Walz, T.H., & Blum, N.S. (1987). *Sexual health in later life.* Lexington, MA: D.C. Heath and Company.

Wang, T-F, Lu, C-H, Chen, I-J, & Yu, S. (2008). Sexual knowledge, attitudes and activities of older people in Taipei, Taiwan. *Journal of Clinical Nursing, 17,* 443-450.

Weinsberg, E. (2011). Sex after ED. In J. Price (Ed.), *Naked at our age: talking out loud about senior sex* (pp. 227-228). Berkeley, CA: Seal Press.

Westheimer, R.K, & Lehu, P.A. (2005). *Dr. Ruth's sex after 50: revving up the romance, passion, & excitement!* Fresno, CA: Quill Driver Books.

Whipple, B. & Scura, K. W. (1996). The overlooked epidemic: HIV in older adults. *American Journal of Nursing, 96, 123-126.*

White, C.B. (1982a). A scale for the assessment of attitudes and knowledge regarding sexuality in the aged. *Archives of Sexual Behavior, 11*(6), 491-502.

White, C.B. (1982b). Sexual interest, attitudes, knowledge, and sexual history in relation to sexual behavior in the institutionalized aged. *Archives of Sexual Behavior, 11*(1), 11-21.

White, C.B. (2011). Aging sexual knowledge and attitudes scale. In T.D. Fisher, C.M. Davis, W.L. Yarber, & S.L. Davis (Eds.), *Handbook of sexuality-related measures* (3rd ed.) (pp. 49-52). New York, NY: Routledge.

White, C.B., & Catania, J. (1982). Psychoeducational intervention for sexuality with the aged, family members of the aged, and people who work with the aged. *The International Journal of Aging & Human Development, 15*(2), 121-138.

Whyte, W.F. (1984). *Learning from the field.* Newberry Park, CA: Sage.

Willert, A., & Semans, M. (2000). Knowledge and attitudes about later life sexuality: what clinicians need to know about helping the elderly. *Contemporary Family Therapy, 22*(4), 415-435.

Williams, E. & Donnelly, J. (2002). Older Americans and AIDS: some guidelines for prevention. *Social Work, 47,* 105-111.

World Health Organization (WHO). (2002). *Active ageing: a policy framework.* Retrieved from http://whqlibdoc.who.int/hq/2002/WHO_NMH_NPH_02.8.pdf

Zablotsky, D.L. (1998). Overlooked, ignored, and forgotten: older women at risk for HIV infection and AIDS. *Research on Aging, 20(6),* 760-775.

Zeiss, A.M., & Kasl-Godley, J. (2001). Sexuality in older adults' relationships. *Generations, 25*(2), 18-25.