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## **Examining aging sexual stigma attitudes among adults by gender, age, and generational status**

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**Objectives:** Stigma related to later life sexuality could produce detrimental effects for older adults, through individual concerns and limited sexual healthcare for older adults. Identifying groups at risk for aging sexual stigma will help to focus interventions to reduce it. Accordingly, the purpose of this study was to examine cross-sectional trends in aging sexual stigma attitudes by age group, generational status, and gender.

**Method:** An online survey was administered to a national sample of adults via a crowdsourcing tool, in order to examine aging sexual stigma across age groups, generational status, and gender (N=962; 47.0% male, 52.5% female, and .5% other; mean age = 45 yrs.). An aging sexual stigma index was formulated from the attitudinal items of the Aging Sexual Knowledge and Attitudes Scale.

**Results:** This sample reported moderately permissive attitudes toward aging sexuality, indicating a low level of aging sexual stigma. Though descriptive data showed trends of stigma attitudes increasing with age and later generations, there were no significant differences between age groups or generations in terms of aging sexual stigma beliefs. Men, regardless of age and/or generation, were found to espouse significantly higher stigmatic beliefs than women or those reporting “other” gender.

**Conclusions:** Aging sexual stigma beliefs may not be prevalent among the general population as cohorts become more sexually liberal over time, though men appear more susceptible to these beliefs. However, in order to more comprehensively assess aging sexual stigma, future research may benefit from measuring explicit and implicit aging sexual stigma beliefs.

**Keywords:** aging, sexuality, stigma, attitudes

## **Introduction**

Later life sexuality has received increased attention in research and popular media, as older adults live healthier and longer and many indicating sex as a “critical” component to a good relationship, their quality of life, and successful aging (AARP, 2010; Thompson et al., 2011). There are significant benefits to sexual expression across the lifespan, including increased cardiovascular health, increased relaxation, decreased pain sensitivity, decreased depression, and increased self-esteem (Cyranski, Bromberger, Youk, Matthews, Kravitz, & Powell, 2004; Jannini, Fischer, Bitzer, & McMahon, 2009; Levin, 2007). Along with the benefits, sexual health risks are relevant as we age, with rates of HIV and other sexually transmitted infections (STIs) increasing in older cohorts (Centers for Disease Control and Prevention [CDC], 2013). Despite mounting evidence for the importance of sexuality across the lifespan, it continues to be the target of societal stigma through ageism in general and aging sexual stereotypes that include asexual, undesirable, and incapable older adults (Hillman, 2012; Huffstetler, 2006).

### ***Aging sexuality***

Data reflect that older adults are sexual beings that continue to engage and be interested in sexual and intimate behaviors. In fact, the majority of adults continue to be sexually active in some form through age 74—often at similar levels as earlier adulthood—with a decline in sexual behaviors occurring after age 75 (Waite, Laumann, Das, & Schum, 2009). Notably, older adults engage in sexual and intimate behaviors across living settings, including dependent care settings (Doll, 2013; Tabak & Shemesh-Kigli, 2006). However, there is often a shift in the type of sexual and intimate behaviors in later life (e.g., intercourse to fondling, external stimulation, kissing), as access to sexual partners, partner’s health, older adult’s health, and other complications may

change the form, but not the function, of sexual expression (DeLamater, 2012; Syme, Cordes, Cameron, & Mona, in press).

Sexual functioning concerns often complicate sexual expression as individuals age, with approximately half of older adults reporting at least one sexual concern (Lindau et al., 2007). This does not imply that older adults are incapable of sexual expression when problematic symptoms occur. Only 22 to 34.3 percent of sexually active older adults indicated that they avoid sex because of sexual problems (Waite et al., 2009). Unfortunately, older adults often avoid seeking help for sexual concerns due to sexual stigma, including lack of knowledge about their sexual problems, embarrassment or discomfort with talking about sex, and stigma-related beliefs such as sex in older age is inappropriate (AARP, 2010; Hinchliff & Gott, 2011; Taylor & Gosney, 2011).

### ***Aging sexual stigma***

Stigma permeates later life sex, often perpetuated by societal myths about both aging and sexuality (Hillman, 2012; Huffstetler, 2006; Weeks, 2002). In Western society, sex is for the young, beautiful, healthy, often married, and often heterosexual, illustrating what feminist theorists have termed the “charmed circle” of sexuality (Rubin, 1984). In contrast, sex among older adults is seen as shameful, disgusting, laughable, and nonexistent, which can lead to internalized stigma and increased sexual problems for older adults (Kaas, 1981; Walz, 2002; Weeks, 2002). As with other stereotypic beliefs, cultural ageism impacts what the individual sees as acceptable within his or her society. It can, in turn, cause “irrational prohibitive feelings” about aging sexuality that negatively affect sexual experiences and relationships (Weeks, 2002).

The Geriatric Sexuality Breakdown Syndrome (Kaas, 1981) delineates a mechanism by which societal ageism becomes a sexual problem among older adults. The seven-step process

begins with: a) feeling susceptible by identifying with stereotypical sexual problems (e.g., sexual dysfunctions, body changes), b) being dependent on the cues of society (e.g., myths and stereotypes) due to lack of sex-positive aging role models, c) direct labeling of the older adult as asexual, indecent, d) adoption of the “sick role” by the older adult as dirty, shameful, asexual (i.e., internalized societal attitudes), e) learning of behaviors and skills to distance from shame and guilt (e.g., disavow sexual desire, underreport sexual dysfunction), f) loss of sexual enjoyment, interest, and performance skills due to distancing and shame, and g) self-identifying as the sexual stereotype (e.g., dirty old man). In this way, older adults internalize these damaging societal attitudes and beliefs, which negatively affects their behaviors and capacity for sexual satisfaction.

### ***Societal impact of stigma***

The impact of aging sexual stigma is also apparent at a societal level via policies and practices that affect healthcare services (Angus & Reeve, 2006). The consistent ignorance or ambivalence toward sexuality for older adults coincides with trends such as recent increases in rates of STIs such as HIV (CDC, 2013). The United States Preventative Services Task Force (USPSTF) recommendations for screening sexually transmitted infections (STIs) cease after age 55 (n.d.). This is likely, in part, due to limited research data on older adults. In addition, the US Center for Prevention and Disease Control (CDC) recommends routine STI screenings through age 64, although there is concession for subgroups that are currently sexually active, have new partners, and other sexual health risks (n.d.). However, for healthcare providers to determine risk, they would need to ask older adults about their sexual practices, which does not often occur (Ports, Barnack-Tavlaris, Syme, Perera, & Lafata, 2014). At an individual provider level, the effect of stigma is also observed in reported lack of knowledge about older adult sexuality,

embarrassment and avoidance of the topic, and the assumption of asexuality (Bouman, Arcelus, & Benbow, 2006; Hinchliff & Gott, 2011; Taylor & Gosney, 2011). The result is lack of assessment and treatment of sexual health issues for the older adult, as structural stigma interacts with internalized stigma.

### ***Research on aging sexuality attitudes***

The majority of research on aging sexuality issues has been conducted with healthcare providers who serve an aging population, including long-term care staff. Although more recent studies have shown mixed results on permissive/restrictive attitudes of staff (Bouman et al., 2006; Di Napoli, Breland, & Allen, 2013; Gilmer, Meyer, Davidson, & Koziol-McLain, 2010), restrictive attitudes are often associated with strong religious beliefs, less education, less vocational training, less work experience, and lower socioeconomic status. In long-term care settings, restrictive attitudes can lead to suppression of sexual and intimate acts for residents, even in the absence of evidence that the older adult is unable to participate safely and willingly (Hajjar & Kamel, 2004; Hillman, 2001). Providing education has been shown to increase permissive attitudes toward aging sexuality among providers (Bauer, McAuliffe, Nay & Chenco, 2012; Walker & Harrington, 2002).

Research on attitudes toward older adult sexuality extends beyond healthcare providers to explore attitudes in specific age groups of the general population. A small number of studies have focused on college students' attitudes toward aging sexuality, with results ranging from restrictive to permissive. Of note, permissive attitudes were associated with factors such as closeness to grandparent, grandparent contact, being female, and cognitive and physical health of the older adult in question (Allen, Petro, & Phillips, 2009; Bouman et al., 2006; Freeman, Sousa, & Neufeld, 2013; Hillman & Stricker, 1996). There are few studies on older adult themselves,

with some mixed results depending on the attitudes measured, gender, and cohort (Bouman et al., 2006; Waite et al., 2009). Brecher (1984, as cited in Bouman et al., 2006) surveyed a large sample of older adult ( $N=4246$ ) men and women age 50-93 and found the majority of older adults had positive attitudes toward aging sexuality. In a large, national study of community-dwelling older adults Waite and colleagues (2009) reported specific sexual attitudes for older adults by age group and gender. They found a gender effect, in that older adult men had more positive attitudes toward sexual expression than older adult women. Researchers also found cohort effects in that older old age groups were generally more conservative in their attitudes than younger old age groups (e.g., more likely to report sex outside marriage is always wrong) (Waite, et al, 2009). There are few studies conducted on older adult nursing home residents, which have limited sample sizes and are often conducted in one facility. Overall, nursing home residents indicate generally positive attitudes toward sexual and intimate expression, although this differed depending on the sexual behavior in question (e.g., masturbation seen as less acceptable, especially for women) and the cohort, with older olds reporting more conservative attitudes (Spector & Femeth, 2008; Wasow & Loeb, 1979).

### ***Study rationale***

Aging sexual stigma can produce detrimental consequences for older adults, whether through internalized sexual stigma and sexual problems or restrictive policies and procedures that affect sexual expression and health. Ultimately, the goal is for older adults to feel safe and secure to pursue sexual well-being in a society that understands their needs and supports sexual expression across the lifespan. Therefore, we must understand aging sexual stigma and identify groups that are at risk for stigma-related attitudes and reduce stigma through targeted interventions. Although there is information related to general attitudes toward aging sexuality,

studies show mixed results, and are often limited to specific populations (e.g., healthcare providers, college students, select samples of older adults) consisting of small, local samples. Therefore, questions remain, such as is aging sexual stigma prevalent? Are older adults the most susceptible group? Do previously identified gender and cohort effects remain relevant? The purpose of this study was to answer these questions by examining stigma-related attitudes toward aging sexuality in a large, national sample of adults across age groups. Thus allowing for an examination of cross-sectional trends in aging sexual stigma attitudes by age group, generation, and gender.

## **Method**

### ***Recruitment and procedures***

In an attempt to increase the likelihood of a representative and diverse convenience sample, the researchers utilized Amazon's Mechanical Turk (AMT) for participant recruitment. AMT is an online crowdsourcing tool composed of "workers" (participants) who complete various tasks (e.g., research studies, marketing questionnaires) for reimbursement and "requesters" (employers/researchers) from a variety of disciplines, social science and otherwise. Workers are able to access a variety of short-term "HIT's", or tasks to complete online and view the associated payment available. Workers can stop working at any time, however compensation is based on completion of the task. Individuals who agreed to complete the current survey were compensated \$1.00 for their participation. Determination of the \$1.00 payment was based on the typical reimbursement rate for questionnaires, with this "HIT" averaging 20-25 minutes (Buhrmeister et al., 2011).

A number of researchers have evidenced the legitimacy and validity of using AMT in research across disciplines (Buhrmester, et al., 2011; Mason & Suri, 2012; Ranard et al., 2013).



This includes the ability of AMT to reach a more demographically diverse sample (e.g., race/ethnicity, income, age), which has resulted in more representative convenience samples (Buhrmester et al., 2011; Crump et al., 2013;). Furthermore, AMT samples have been found to be comparable across many categories to national probability samples in the social sciences (Berinsky et al., 2012). Mason and Suri (2012) highlight the importance of AMT in recruiting participants that otherwise may prove difficult, if not impossible, to recruit, including older adults or individuals who represent marginalized classes. In particular, the use of AMT for the current study was essential in order to assess a diverse group of participants in different age-related cohorts. Additional findings reflect confidence in the validity and accuracy of information reported from participants (Mason & Suri, 2012; Peer, Vosgerau, & Acquisti, 2014). These and other studies have provided a comprehensive examination of the use of AMT as a legitimate recruitment and research tool (see Buhrmesiter et al., 2011, Crump et al., 2013, and Mason & Suri, 2012 for further details).

Participants were recruited from AMT via three “HIT’s” or jobs, each identical in nature but designated for a specific age group in order to guarantee age groups would be represented: a) 18-34 (n=250), b) 35-54 (n=250), and c) 55-85+ (n=400). The oldest age group was oversampled as the parent project was designed to study older adult sexuality. After accepting the “HIT”, participants completed the online survey administered through SurveyMonkey. Quality assurance mechanisms were utilized both within the AMT specifications for the sample (e.g., US participants only, one participation allowed per worker) and built into the survey (e.g., reported birthdate, reported code survey end matched to AMT code to ensure complete data). Upon completion and review, participants were reimbursed for their participation.

### ***Participants***

A total of 962 participants, 18 years and older, (47.0% male, 52.5% female and .5% other) who registered as “workers” in Amazon’s Mechanical Turk (AMT), participated. All participants were administered the same items regardless of age or other identifying factors. Table 1 provides descriptive and demographic information on the sample based on generational categories and the full sample.

With regard to race, 77% of participants identified as White, 7% as Black or African American, 7% as Asian, 6% as Native Hawaiian or Pacific Islander, 2% as American Indian or Alaskan Native and .2% as more than one race/ethnicity. Mean age for the sample was 45 years (SD = 15.5). Ninety-one percent of the sample endorsed being “primarily heterosexual,” 3.5% endorsed being “primarily homosexual” and 5.4% endorsed being “primarily bisexual.” The majority of the sample had either attended some college (29.6%), or had completed college with an associate’s (9.5%), Bachelor’s (34.7%), master’s (10.5%), doctorate (2.0 %) or professional degree (2.2%). Only 11.5% of the sample had a high school or equivalent education. With regard to income, almost half (48.4%) of the sample reported income equal to or less than \$40,000. Eighteen percent of the sample reported income less than \$20,000, 18% of the sample with \$20-30,000 and, 13% with \$31-40,000. Twenty percent of the sample reported income of \$41-60,000, 13.7% reported with \$61-80,000, 8.3% with \$81-\$100,000, and 8% with over \$100,000. Approximately 2% of the sample reported that they did not know their household income. Forty three percent of participants reported being married, 24% single, 12% divorced, 13% living with a significant other, 6% partnered but not living with that person, and 1% separated. When asked about physical health, the majority of the sample (35.9%) endorsed very good health, 32.7% good, 16.7% excellent, 12.1% fair, 2.2% poor and .4% very poor.

**Sample representativeness.** Notably, convenience samples collected via AMT have been often been found to be superior in terms of representativeness when compared to other convenience samples, those collected online and locally (Buhrmeister, Kwang, & Gosling, 2011; Crump, McDonnell, & Gureckis, 2013; Mason & Suri, 2012). They have also been found to be similar in many categories when compared to national probability samples (Berinsky, Huber & Lenz, 2012). In order to characterize the current sample; it was compared to the (US) Census (2012) data on key demographic variables. Overall, the study sample is fairly representative of the US population, It has comparable rates of gender (52.5% female vs. 50.8% Census; 47% male vs. 49.2% Census), and it was also fairly similar with regard to race, (White: 77% vs. 72.4% Census; Asian American: 7% vs. 4.8% Census; American Indian-Alaska Native: 2.1% vs. 0.9% Census; Native Hawaiian-Pacific Islander 0.2% vs. 0.2%), with the exception of Black/African American individuals being underrepresented in this sample (7% vs. 12.6% Census). The mean age in the United States per US Census was 37.3 years (45 years for the current sample); however it should be noted that that mean US Census age includes individuals under the age of 18, an age-range that was excluded from this study.

The US Census does not query respondents about sexual orientation. However, the National Health Interview Survey (NHIS), a national survey funded by the Centers for Disease Control and Prevention, concludes that 96.6% of individuals 18 years and old identify as straight/heterosexual, 1.6% identify as gay/lesbian/homosexual, .7% identify as bisexual, and 1.1% identify as “something else,” or “I don’t know the answer” or refused to provide an answer (Ward, Dahlhamer, Galinsky, & Joest, 2014). The current sample has representation by slightly more sexual minorities (3.5% homosexual, 5.4% bisexual).

With regard to education, this sample was notably more highly educated, with more individuals with a Bachelor's degree (34.7% vs. 19.4% Census) and some college (29.6% vs. 16.8% Census), and fewer with a high school diploma (11.5% vs. 31.2% Census). With regard to income, the current sample appears to be less affluent than the general population. To illustrate, the US Census reports a median household income of \$49,777, whereas 48.4% of the current sample report annual incomes at or under \$40,000. Furthermore the current sample has less representation at the top earning categories with Census data showing 11.5% of the population earning \$75,000 to \$99,999 (vs. 8.3% current sample earning \$80-100,000) and 20.1% earning over \$100,000 (vs. 8% current sample). For marital status, when categories overlap with the Census they suggest fairly similar rates of divorced (12% vs. 10.2% Census) and separated (1.4% vs. 2.2% Census) individuals, with slightly less married (43% vs. 50.5% Census), and single (24% vs. 31.4%) individuals, though some of the difference may be due to dissimilar categorization of marital status in this study as compared to the Census. National data on level of self-rated physical health reflect representativeness with the current sample: 18.6% of the national sample report "excellent" health, 33.5% "very good," 30.9% "good," 12.5% "fair," and 4.4% "poor" (CDC, 2013). In general, the current sample seems to reflect the population, with exception to education and income.

### ***Measures***

Data for the current research was collected as part of a larger study examining sexual wellness, attitudes, and experiences, which included questions derived from research literature and standard measures. The questionnaire posed 160 questions, including demographic items and supplemental questions that explored the factors hypothesized to correlate with aging sexual stigma, including marital status, perceived emotional health, and perceived physical health.

### *Age groups and generational categories*

The CDC established the Behavioral Risk Factor Surveillance System (BRFSS) in 1984 to collecting data to understand the health of the nation (n.d.). As part of the survey, the BRFSS was established as a standardized means of categorizing age groups, which has been adopted at the state and federal level to organize prevalence data. The representation of BRFSS age groups in the full sample (compared to the 2013 BRFSS national sample) were: 18-24 years (111; 11.5% vs. 13% BRFSS); 25-34 (184; 19.1% vs. 17.2% BRFSS); 35-44 years (193; 20.1% vs. 16.1% BRFSS); 45-54 years (100; 10.4% vs. 18% BRFSS); 55-64 years (282; 29.3% vs. 16.9% BRFSS) and; 65 and older (92; 9.6% vs. 19.2% BRFSS).

Of note, generational status of the sample was determined using age at time of data collection, which occurred in April of 2013. Strauss and Howe (1992) proposed generational categories in their book, *Generations: The History of America's Future, 1584 to 2069*. The Pew Research Center adopted these categories in order to explain a variety of differences between and within generations (Zickuhr, 2010). The categories include: Millennials (Born 1977-1992; currently 18-32 years old); Generation X (Born 1965-1977; currently 33-48 years old); Boomers (Born 1945-1965; currently 49-67 years old) and; Silent (Born 1937-1945; currently 68-85 years old). Although The Pew Research Center has further sub-divided the Boomer generation, arguing that there are two distinct cohorts, for the purpose of this study, Boomers are treated as one discrete cohort. In the present study, 26.7% (257) of the sample were considered Millennials; 28% (268) Generation X; 40.5% (390) Boomers and 5% (48) were Silent.

### *Aging Sexual Knowledge and Attitudes Scale*

As noted earlier, participants completed a number of standardized measures, including the Aging Sexual Knowledge and Attitudes Scale (ASKAS, White, 1982). The ASKAS was

designed to measure both knowledge and attitudes related to sexuality among older adults, and is divided into those two sections. The first is composed of 35 items with response types: *true*, *false*, or *don't know* focusing on knowledge about sexuality among older adults. Low scores on the knowledge portion of the scale reflect less knowledge. The second section is composed of 26 items focused on attitudes toward sexuality among older adults and uses a 7-point Likert scale with anchors of *strongly disagree* to *strongly agree*. Higher scores on this scale reflect more negative or restrictive attitudes toward sexuality among older adults. White (1982) reported data on the reliability of the instrument, with alpha reliability scores ranging between .76 and .93 and test-retest scores ranging between .72 and .92.

### *Stigma index score*

Based on the ASKAS instrument, 12 of the 25 attitude items proposed by White (1982), were selected based on potential to reflect aging sexual stigma attitudes, both for overall aging sexuality and attitudes specific to long-term care (e.g., living in a nursing home, dementia). “An aged person who shows sexual interest brings disgrace to himself/herself” and “Institutions such as nursing homes ought not to encourage or support sexual activity of any sort in its residents” are examples of items that the researchers identified as sex-negative or more stigma-related thinking about older adults. Items from the ASKAS (White,1982) instrument that were included in the index measure of stigma were: 36, 37, 39, 40, 44, 45, 48, 51, 52, 55, 57, and 60. A 7-point Likert scale was used with anchors of *disagree* = 1 and *agree* = 7 for the stigma index. Scores could range from 12 to 84, with lower scores reflecting more permissive, less stigmatic attitudes. Internal consistency for this index score was = .81.

## **Results**

### ***Demographic categories***

Differences among demographic categories by generational groups were analyzed via chi-square comparisons (see Table 1 for chi-square statistics). Results showed expected differences in income, education, and marital status across generations. In addition, differences between racial categories across generations were found.

### ***Stigma descriptives***

The mean score on the stigma scale was calculated for the full sample,  $M = 29.30$ ,  $SD = 11.14$ . This is reflective of approximately a 2.44 average on a single item. Mean scores on the stigma scale were also calculated for each generational category Millennials (M), Generation X (GX), Boomers (B), Silent (S). Mean scores for each of the generational groups on the measure of stigma were (M) = 28.7,  $SD = 10.8$ ; (GX) = 29,  $SD = 11.4$ ; (B) = 29.4,  $SD = 11.2$ ; (S) = 31.5,  $SD = 10.8$ . On average, it appeared that individuals in the Silent generation (ages 68-85), had slightly higher levels of stigmatic beliefs than those in the other three categories. Using age groups as developed for BRFSS, participants 18-24 years old scored a mean index score of 29.5,  $SD = 11.2$ ; 25-34 years old mean of 28.2,  $SD = 10.4$ ; 35-44 years old mean of 29.5,  $SD = 11.7$ ; 45-54 years 30.5,  $SD = 12.1$ ; 55-64 years old 28.6,  $SD = 10.7$ ; 65 and older a mean of 31.3,  $SD = 11.4$ . When examined by gender, men ( $M = 30.2$ ,  $SD = 11.4$ ) scored slightly higher than women ( $M = 28.5$ ,  $SD = 10.9$ ), and those reporting “other” gender status had a much lower average score ( $M = 18.83$ ,  $SD = 0.96$ ) on levels of stigma.

### ***Associations between stigma, gender, and age***

As noted, the researchers were interested in determining whether stigma scores were significantly different by age group, generational cohort, and gender. Stigma belief scores were subjected to two mixed-design analyses of variance. The first having three levels of gender (male, female, and other) and six levels of age (18-24; 25-34; 35-44; 45-54; 55-64; 65+).

Levene's test indicated equal variances ( $F= 1.45, p = .12$ ), so degrees of freedom were not adjusted. Gender as a main effect was found to be significant  $F(2, 895) = 3.87, p = .02, h_p^2 = .009$ , with men ( $M = 30.2, SD = 11.1$ ) scoring slightly higher than women ( $M = 28.5, SD = 10.9$ ), and those reporting other gender status scoring the lowest ( $M = 18.75, SD = 0.96$ ) on levels of stigma. Although preliminary analysis revealed a slightly "U-shaped" pattern in distribution for stigma by age group, the main effect for age group was not significant  $F(5, 895) = .913, p = .47, h_p^2 = .005$ . These main effects were not qualified by an interaction between gender and age on stigma  $F(8, 895) = .824, p = .581, h_p^2 = .007$ .

Mixed designed analysis of variance was also conducted for differences of stigma based on gender (male, female, other) and generational categories (Millennials, Generation X, Boomers, Silent). Levene's test indicated equal variances ( $F= 1.57, p= .11$ ), so degrees of freedom were not adjusted. Gender as a main effect was not found to be significant, but did approach significance,  $F(2, 900) = 2.70, p = .07, h_p^2 = .006$ , with men ( $M = 30.2, SD = 11.4$ ) scoring slightly higher than women ( $M = 28.5, SD = 10.9$ ), and those reporting other gender status scoring lowest ( $M = 18.8, SD = 0.96$ ) on levels of stigma. Additionally, the main effect of generational category on stigma was not significant  $F(3, 900) = .56, p = .64, h_p^2 = .002$ .

## **Discussion**

This study examined stigma-related attitudes toward aging sexuality in a large, national sample of adults. Stigma attitudes were examined overall and by age group, generational cohort, and gender in order to describe trends and any significant differences among groups on stigmatic attitudes toward aging sexuality.

Stigmatic attitudes often develop from societal myths or stereotypes about a particular group, in this case older adults as sexual beings. Myths will obscure a realistic understanding of



aging sexuality, may shape the sexual behavior of older adults to conform to stereotypes, and can reinforce inequalities and discrimination within societal structures (Angus & Reeve, 2006; Kaas, 1981; Weeks, 2002). Though studies on attitudes toward aging sexuality have not included nationally representative samples across several age groups, separate studies on younger, middle-aged, and older adults have shown mixed results on whether individuals have more restrictive or permissive attitudes toward aging sexuality. Often, the few studies showing restrictive attitudes are either older studies or are examining healthcare providers (Bouman et. al., 2006). Stigmatic beliefs regarding older adult sexuality were relatively low among this national sample of adults. The average stigma index score for the sample was 29.30 (SD = 11.14), which corresponds to approximately a 2.44 average for any one item (on the 7-point scale). This is reflective of a general disagreement with stigmatic beliefs and moderately permissive attitudes toward aging sexuality for the sample. This finding is contrary to the ample evidence of aging sexual stigma within institutional policies, healthcare practices, and historically limited research on aging sexuality. Moreover, it is commonly agreed upon among experts and the literature on ageism and aging sexual stigma suggest that older adults continue to be viewed according to myths of incompetence, asexuality, and other less complimentary stereotypical beliefs (Cuddy, Norton & Fiske, 2005; Huffstetler, 2006; Weeks, 2002). However, when reviewing empirical research on attitudes toward aging sexuality, many studies report moderately permissive and positive attitudes, when examining specific age groups (Allen et al., 2009; Bouman et. al., 2006; Hillman & Stricker, 1996; Spector & Femeth, 2008; Steinke, 1994).

In contrast to previous studies, this sample allows us to look at a cross-section of age groups and generational cohorts simultaneously, thus better facilitating group comparisons on aging sexual stigma attitudes. In this study, though the average scores on stigmatic beliefs

slightly increased with age and generational status, no significant differences in levels of stigma were found by either age group or generational cohort. This is contrary predictions from the Geriatric Sexuality Breakdown Syndrome (Kaas, 1981), which suggests that as individuals age they increasingly internalize stigmatic sexual beliefs as they identify with stereotyped labels (e.g., dirty old man) and experience a breakdown in their sexual functioning and behaviors. However, these results are consistent with several studies on aging sexuality that reported moderately permissive and positive attitudes toward older adult sexuality among college-age, middle-age, and older adult samples (Allen et al., 2009; Bouman et. al., 2006; Hillman & Stricker, 1996; Spector & Femeth, 2008; Steinke, 1994). Also, given the relatively low level of stigma espoused by this sample, it is not surprising that there were not significant differences between age or generational groups.

Despite the low levels of aging sexual stigma in this sample, differences were observed between gender groups when examined across age groups. The general pattern indicated that men had the highest aging sexual stigma scores, women with slightly lower scores, and those reporting “other” gender status with the lowest levels of aging sexual stigma. This gender effect appears to persist regardless of age, as no significant interaction was found. A similar pattern of aging sexual stigma by gender was observed when examined across generational groups, though it only approached significance and indicated a consistent trend. Gender differences in stigmatic attitudes toward aging sexuality have been described by a few studies examining specific beliefs such as the acceptability of masturbation (Spector & Femeth, 2008), inappropriateness of sex outside of marriage (AARP, 2010; Waite et al., 2009), and sex is only for younger people (AARP, 2010). Of note, in almost every case in these descriptive studies, stigmatic attitudes are more prevalent among women than men, which is in contrast to our findings that men, across age

groups, appear to be less comfortable with aging sexuality and endorse slightly more stigma.

This may be reflective of an internalized societal value around men as virile, strong, and healthy sexual beings. Thus, when presented with aging sexuality, men may associate that with weakness and sexual problems, and want to create distance between themselves and that stereotype.

The low stigmatic beliefs reported across age, generation, and gender groups may also reflect a growing acceptance of aging sexuality with new, emerging cohorts. As the Baby Boomers move into older adulthood and replace previous generations, they bring a more sexually liberal belief system that also places a higher importance on sexual well-being (AARP, 2010; Hillman, 2012). Thus, the “flattening” of aging sexual stigma seen in this sample may be due to a cohort effect that may continue to make positive changes to the sexual health landscape for older adults.

The results of this study do not imply that aging sexual stigma does not exist among adults. Stigma may be impacting other constructs not assessed in this study, but nonetheless present. For example, internalized stigma among older adults may emerge as body image concerns, lack of knowledge about sexual health, and/or incorrect or misinformation about aging sexuality (Huffstetler, 2006; Weeks, 2002). Current research and healthcare policies also suggest that aging stigma is present within healthcare institutions where aging sexual concerns are often underreported, ignored, and left untreated (Hajjar & Kamel, 2003; Hinchliff & Gott, 2011; Ports et al., 2014). Further, individuals may also hold implicit aging sexual stigma attitudes, which are typically linked with associated behaviors (Bargh, Chen, & Burrows, 1996 as cited in Hillman, 2012, p. 61). In order to assess implicit stigmatic beliefs, future research should focus on priming aging sexual stereotypes and observing associated behaviors as well as utilizing assessments such as the Implicit Associations Test (Greenwald, Nosek, & Banaji, 2003).

### ***Limitations and future directions***

Limitations should be considered when interpreting and evaluating the results. First, the measurement of aging sexual stigma in this study may not fully represent levels of stigma among individuals. As mentioned, there are several indicators of aging sexual stigma, including institutional policies, healthcare practices, implicit attitudes, and specific beliefs not assessed on the ASKAS (White, 1982) (e.g., body image dissatisfaction, appropriateness of sex outside of marriage) that would contribute to a more comprehensive understanding of aging sexual stigma. Although the ASKAS is a widely accepted measure of general attitudes about aging sexuality, when examining aging sexual stigma specifically, researchers should consider multiple aspects of stigma in order to more fully assess stigmatic beliefs. Future research in this area would benefit from the use of more implicit measures, perhaps utilizing the IAT (Greenwald et al., 2003) or other standard procedures such as priming and subsequent behavioral observations.

In addition, this was a descriptive, cross-sectional study examining differences between cohorts, which limits the type of conclusions that can be drawn. The majority of the research on attitudes toward aging sexuality has been descriptive, examining specific, separate groups within a study (e.g., college students from one university). This study has extended the knowledge base by utilizing a large convenience sample that is fairly representative of the general adult population. However, in order to continue to advance the research, future studies should employ more sophisticated research designs that broaden the types of conclusions made about societal stereotypes, aging sexual stigma, and resultant behaviors. Initially, panel studies would allow for an examination of both changes in aging sexual stigma over time as well as cohort effects. This could include building more complex models of prediction that account for several factors simultaneously as well as possible demographic confounds that were not statistically controlled

for in this study (e.g., income, education, marital status, and race). Also, researchers should utilize experimental studies to test causal links between societal stereotypes and resultant aging sexual stigma, or between sexual stigma beliefs and subsequent behaviors.

This study utilized a convenience sample of the general population that was recruited via an online crowdsourcing tool (AMT). Although samples from this source have been found to be comparable to other convenience samples and larger probability samples across several demographic categories (Buhrmeister et al., 2011; Berinsky et al., 2012), this non-probability sample is limited in generalizability. As mentioned above, the current sample is less affluent and more highly educated than the general population. Notably, higher levels of education are associated with more liberal attitudes about sexual morality (e.g., premarital sex)(Smith & Son, 2013). With regard to aging sexuality, higher levels of education are associated with more permissive attitudes toward aging sexuality among long-term care staff (Di Napoli et al., 2013). Taken together, this provides a context for low levels of aging sexual stigma among this more highly educated sample.

Characteristics of the sample that were not measured (e.g., computer use rates) may also affect the generalizability of these results. Although a number of studies support the representative nature of using AMT in research, collecting data from older adults, using an online-based survey requires sensitivity to cohort effects. Findings from The Pew Research Center on technology and the internet (Zickuhr, 2010) reflect that, as expected, younger generations are more likely to access the internet: 35% of the Millennials, 21% of Gen X, 20% Younger Boomers and 13% older Boomers, and 5% Silent. In 2010, the fastest growing segment of the population going online was composed of individuals 74 years and older, which saw an increase from 4% to 16% between 2008 and 2010, respectively. Zickuhr and Madden (2012)

noted that in 2012, 53% of adults in the United States 65 years and older used the internet or email, and 70% of those individuals 65 and older accessed the internet or email on a daily basis. Despite the increasing computer use among older age groups, older adults who do go online tend to be younger and more affluent (Zuckuhr & Madden, 2012). In this sample, the oldest age groups were underrepresented as compared to the general population, which is likely in part due to their lower rates of computer use. This could have affected the results, in that the stigmatic beliefs of the oldest olds may not be fully represented.

### ***Conclusions and implications***

Older adults may be subject to both explicit and implicit sexual stigma beliefs, which are reinforced by stereotypes and myths perpetuated within society. Although the general population may espouse lower levels of aging stigma beliefs, as in this sample, specific groups appear to continue to report stigmatic beliefs related to later-life sexuality (e.g., nursing home staff, healthcare providers). For example, older men may be at an increased risk for developing sexual stigma beliefs due to the importance put on virility and sexual prowess among males. Further, aging sexual stigma persists within societal institutions and has impacted sexual healthcare for older adults at a societal (e.g. lack of screening policies) and individual provider level (e.g. ignoring topic, reporting stereotypic beliefs). This has training implications for healthcare providers, as many report lack of knowledge and skills to address aging sexual healthcare. In order to address aging sexual stigma with this at-risk groups, research on effective training programs to reduce stigma are warranted.

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Table 1. Demographic Data by Pew Generation Categories

Variable	Total Sample		Millennials		GenX		Boomers		Silent	
	N	%	N	%	N	%	N	%	N	%
Gender ( $X^2 = 7.42$ )										
Male	452	47	116	45.13	133	49.81	173	44.39	30	62.50
Female	505	52.5	139	54.09	133	49.81	215	55.13	18	37.50
Other	5	0.5	2	0.78	1	0.37	2	0.51	0	0.00
Race ( $X^2 = 58.16$ )*										
White	759	77.9	182	70.82	210	78.65	322	82.56	35	72.92
Black	70	7.3	18	7	17	6.37	31	7.95	4	8.33
Asian	67	7.0	27	10.51	25	9.36	12	3.08	3	6.25
NH-PI	2	0.2	1	0.39	1	0.37	0	0	0	0.00
AI-AN	20	2.1	5	1.94	4	1.50	5	1.28	6	12.50
Multiracial	54	5.6	24	9.34	10	3.75	20	5.13	0	0.00
Marital status ( $X^2 = 228.61$ )*										
Married	414	43	50	19.46	145	54.31	194	49.74	25	52.08
Divorced	115	12	1	0.39	23	8.61	77	19.74	14	29.17
Separated	13	1.4	1	0.39	3	1.12	9	2.31	0	0.00
Living with SO	128	13.3	62	24.12	35	13.11	30	7.69	1	2.08
SO not living together	60	6.2	34	13.23	14	5.24	11	2.82	1	2.08
Single	232	24.1	109	42.41	47	17.6	69	17.69	7	14.58
Sexual orientation ( $X^2 = 8.54$ )										
Heterosexual	876	91.1	228	88.72	237	88.76	365	93.59	46	95.83
Homosexual	34	3.5	12	4.67	12	4.49	10	2.56	0	0.00
Bisexual	52	5.4	17	6.61	18	6.74	15	3.85	2	4.17
Level of education ( $X^2 = 45.95$ )*										
High school or equivalent	111	11.5	29	11.28	31	11.61	45	11.54	6	12.50
Associate's	91	9.5	15	5.84	33	12.36	42	10.77	1	2.08
Some college	285	29.6	104	40.47	72	26.97	98	25.13	11	22.92
Bachelor's	334	34.7	86	33.46	90	33.71	140	35.9	18	37.50
Master's	101	10.5	14	5.45	33	12.36	48	12.31	6	12.50
Doctorate	19	2.0	3	1.17	5	1.87	7	1.79	4	8.33
Professional	21	2.2	6	2.33	3	1.12	10	2.56	2	4.17
Income ( $X^2 = 54.31$ )*										
Less than \$20,000	173	18.0	67	26.1	28	10.5	71	18.2	7	14.6
\$20,000 to \$30,000	171	17.8	51	19.8	47	17.6	66	16.9	7	14.6
\$31,000 to \$40,000	121	12.6	36	14.0	31	11.6	53	13.6	1	2.1

	\$41,000 to \$60,000	194	20.2	40	15.6	69	25.8	73	18.7	12	25.0
	\$61,000 to \$80,000	132	13.7	26	10.1	41	15.4	57	14.6	8	16.7
	\$81,000 to \$100,000	80	8.3	16	6.2	23	8.6	31	7.9	10	20.8
	Over \$100,000	77	8.0	16	6.2	26	9.7	34	8.7	1	2.1
	I don't know	14	1.5	5	1.9	2	.7	5	1.3	2	4.2
Physical health ( $\chi^2 = 20.15$ )											
	Excellent	161	16.7	39	15.18	53	19.85	60	15.38	9	18.75
	Very good	345	35.9	89	34.63	101	37.83	134	34.36	21	43.75
	Good	315	32.7	91	35.41	85	31.84	127	32.56	12	25.00
	Fair	116	12.1	33	12.84	27	10.11	51	13.08	5	10.42
	Poor	21	2.2	5	1.94	0	0	15	3.85	1	2.08
	Very poor	4	0.4	0	0	1	0.37	3	0.77	0	0.00

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\* Chi-square comparisons significant at  $p < .001$ .