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The Role of Religion in Shaping Sexual Frequency and Satisfaction: Evidence from Married and Unmarried Older Adults

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The Role of Religion in Shaping Sexual Frequency and Satisfaction: Evidence from Married and Unmarried Older Adults

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This study assesses the role of religion in influencing sexual frequency and satisfaction among older married adults and sexual activity among older unmarried adults. The study proposes and tests several hypotheses about the relationship between religion and sex among these two groups of older Americans, using nationally representative data from the National Social Life, Health, and Aging Project. Results suggest that among married older adults, religion is largely unrelated with sexual frequency and satisfaction, although religious integration in daily life shares a weak, but positive, association with pleasure from sex. For unmarried adults, such religious integration exhibits a negative association with having had sex in the last year among women, but not among men.

Despite longstanding stereotypes to the contrary, sexual interest remains alive among older adults. In data from the National Social Life, Health, and Aging Project (NSHAP), only one in four 75- to 85-year-old men report a complete lack of interest in sex, and only about one half of 75- to 85-year-old women say the same (Lindau et al., 2007). In fact, these numbers are not significantly different than those for 57- to 64- and 65- to 74-year-olds. Furthermore, many older adults are not merely interested in the idea of sex, they are still sexually active, although activity does decrease with age as physical ailments emerge and the death of spouses or partners increase (Lindau et al., 2007). Older adults' satisfaction with their sexual relationships—the physical pleasure and emotional satisfaction they provide—remains relatively high: About one in three place a high value on sex (Laumann et al., 2006). Sexual activity retains benefits for older adults, including increased life satisfaction and marital quality (Yeh, Lorenz, Wickrama, Conger, & Elder, 2006), and research suggests that a satisfying sex life among married couples may, in fact, delay mortality (Seldin, Friedman, & Martin, 2002). Given the continued importance of sex for older adults and its positive implications for them—and considering how little we know about sex among seniors—it seems important to identify factors that shape their sexual activity and satisfaction.

Although Americans over 50 years old will soon make up the largest demographic in the United States,

there has only been modest attention given to their sexual behavior patterns (Delamater & Moorman, 2007). Drawing upon the NSHAP data, scholars have begun to investigate the sexual behaviors and functioning of older Americans ages 57 to 85, revealing that women are significantly less likely than men to report sexual activity at all ages, with 43% of women indicating low desire as their most prevalent sexual problem (Lindau et al., 2007). Gender disparities in having a spouse or romantic partner increase with age, as 78% of men and 40% of women ages 75 to 85 report having a spouse or partner. Those with poor health understandably reported less sexual activity than those in good or very good health. Although these demographic and health factors are important and informative and intuitive, they shed little light on more qualitative aspects of older adults' relationships that may influence their sexual activity and satisfaction.

Studies of sexual satisfaction focus more directly on such qualitative aspects of relationships (Kollock, Blumstein, & Schwartz, 1985). Sexual satisfaction is typically defined quite broadly as the degree to which an individual is satisfied with their sexual relationship; it encompasses both physical pleasure and emotional satisfaction derived from sex. Sexual satisfaction is positively associated with marital quality and duration (Edwards & Booth, 1994; Yeh et al., 2006). Delamater, Hyde, and Fong (2008), using data on sexuality among men and women in their mid-60s, noted that satisfaction is closely linked with marital happiness and sexual frequency, and that the association is bidirectional (Delamater & Moorman, 2007). These findings are consistent with other research on sexuality among younger and middle-aged adults that also suggests the

frequency of sex and satisfaction with it to be closely connected (Young, Luquis, Denny, & Young, 1998). Still, many factors that may explain older adults' sex lives remain unexamined.

Religion, Aging, and Sex

One component of older adults' lives that may influence both sexual decision making and satisfaction is religiosity. Gerontologists suggest that both religion and spirituality tend to become increasingly important to Americans as they age (Koenig, Kvale, & Ferrel, 1988; Wink & Dillon, 2002). Qualitative studies note that religion and spirituality often rise in step with processes of coping with age-related changes in health, functioning, social losses, and with the growing recognition of impending mortality (Dalby, 2006). Because religion holds such an important role in the lives of older adults, its influence may extend to sexual behavior.

Most of the research on religion and aging nevertheless focuses on health and mental health *outcomes* as distinct from *behaviors* (Krause, 1997). For a variety of reasons—including social support, effective coping, and the promotion of healthy behaviors—involvement with a religious organization can help diminish or offset physical and psychological issues that often arise in later adulthood (Ai, Dunkle, Peterson, & Bolling, 1998; Idler & Kasl, 2002; Koenig et al., 1988).

Because the sexual dyad is considered a sacred bond by most religious Americans, exploring the sexual lives of older adults may also provide a window into their religious lives as well. Research connecting sex and religion in older adulthood, however, remains slim. Much more is known about it at earlier stages of the life course. Most of this has been conducted among adolescents, and the majority of these studies find a negative association among heightened religiosity and a variety of sexual outcomes, including the timing of first sex, number of sexual partners, and the propensity to have premarital sex (Regnerus, 2005; Rostosky, Wilcox, Wright, & Randall, 2004; Uecker 2008). Studies of religion and sex among adults are rarer and have tended to focus primarily on retrospective accounts of premarital or extramarital sexual behavior. Evidence from the 1993 to 2002 General Social Surveys (GSS) indicates that never-married adults with higher religiosity report fewer sexual partners than their less religious counterparts (Barkan, 2006). A study of never-married respondents from the 1988 to 1996 GSS suggests that elevated religiosity (church attendance and strength of religious identification) reduces the incidence of premarital sex among Catholics and conservative Protestants, but not among liberal or moderate Protestants (Cochran, Chamlin, Beeghley, & Fenwick, 2004). For liberal Protestants, however, religion still matters: Church

membership and belief in an afterlife reduces premarital sexual activity. A cross-sectional analysis of the religion–sex relationship among married American adults revealed that just under 30% of "very religious" respondents refrained from premarital sex, whereas only about 7% of nonreligious respondents abstained (Janus & Janus, 1993).

The University of Chicago study of Americans' (ages 18–59) sexual behavior suggests that religion can shape sexual attitudes and behavior, even after marriage (Laumann, Gagnon, Michael, & Michaels, 1994). Laumann et al. (1994) noted that religious individuals were less likely to think about sex, masturbate, have oral or anal sex, or have multiple partners. Evangelical Protestant adults reported the highest frequency of sex, the highest levels of satisfaction with sex, and the lowest frequency of oral and anal sex. Moreover, they were more likely to have had only one sex partner in the last year. Their study suggested that religion can and does continue to influence people's sexual lives well into adulthood and marriage.

Theoretical Framework

Sociologist Robert Merton (1968) asserted that reference groups provide people with a ready group by which to evaluate their own circumstances, behaviors, and to form new attitudes. He elaborated on two types of reference groups: the comparison and the normative. Comparison reference groups provide a frame of reference that individuals use to compare themselves with others, whereas normative reference groups set and provide standards for the individual. Religious groups are thought to provide more of the normative type than the comparative type. For example, religious norms typically define the appropriate contexts in which people are to engage in sexual activity.

Religious institutions provide informal scripts for when sexual activity is and is not appropriate. Between married couples, for instance, sexual activity is accepted, and perhaps promoted, for the purpose of increasing and maintaining marital intimacy and quality, as well as for the generation of children. Unmarried individuals, however, are subtly or overtly discouraged from engaging in sexual activity, or at least feel pressure to hide information about their sexual activity. Belonging to a group that uses a normative reference frame of course does not ensure that individuals will adhere to that frame of reference (Merton, 1968). People use multiple frames of reference in their lives and experience competing claims upon their behavior and allegiances. Whether they are significantly influenced by their religious reference group is typically determined by its salience in their lives, both cognitively via beliefs and practically in their religious service attendance habits.

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Religious institutions foster a range of relationship-related values, norms, and social supports that serve to promote a greater stake in marriage and discourage behavior harmful to marriage (Christiano, Swatos, & Kivisto, 2002; Wilcox, Chaves, & Franz, 2004). Most religious traditions in America give a privileged place to marriage as the optimal context for sexual activity, and can—but do not always—socially stigmatize actions that indicate nonmarital sex (Christiano et al., 2002; Stolzenberg, Blair-Loy, & Waite, 1995). Both sexual frequency and satisfaction have been found to be positively associated with marital quality. Explicit connections between religious faith and sexual behavior also can occur. A recent *New York Times* story highlighted a Baptist megachurch in Dallas that actively promoted more frequent sex among its married couples, or as they called it, "congregational copulation" (Kovack, 2008), in the hopes that marital intimacy would be enhanced.

Based upon previous research and the reference group framework outlined here, we propose three pathways by which religion may influence sexual outcomes for married older adults. Religion may influence sexual outcomes through relationship quality, social support, or explicit norms and scripts that advocate marital intimacy and sexual involvement. The link between religious involvement and marital quality has been well-documented in past research (Call & Heaton, 1997; Lehrer, 2004; Wilcox & Wolfinger, 2008). Social support networks tend to be especially important for older Americans as functional mobility and their level of social interaction declines (Krause, 2008). Social support is often given in the form of "marriage work" or interactions with friends to achieve or sustain stability in marriage. Marriage work is positively related to marital quality in other studies (Helms, Crouter, & McHale, 2003), which suggests that social support can improve marital quality. Religiosity is also proposed to have a direct effect on sexual frequency and satisfaction. This direct effect will likely be a result of norms and scripts communicated to religious adherents regarding marital intimacy and sexual involvement. This model contends that religious involvement promotes informal scripts that advocate sexual intimacy as necessary to maintain and build marital intimacy. These scripts may promote sexual activity as both the means to building marital intimacy and the fruits of marital intimacy. Hence, our model suggests that religiosity will have a direct effect on sexual outcomes, as well as an indirect effect that works through marital satisfaction.

We speculate that the importance of religion in an individual's life will be more closely associated with marital quality and sexual outcomes than religious attendance. We favor hypotheses about religious integration in daily life over attendance because individuals with strong beliefs will be more likely to take the social scripts of religion and apply them in their marital routine. Based on these and previous arguments, we developed the following hypotheses about older married adults in the United States:

H1: Individuals that have higher levels of religious integration will report a higher frequency of sex and higher levels of physical and emotional satisfaction from sex.

H2: The effect of religious integration on sexual frequency and satisfaction will be partially explained by social support.

H3: The effect of religious integration on sexual frequency and satisfaction will be partially explained by spousal support and overall happiness of the marital relationship.

Although we posit that religion will influence sexual behavior and satisfaction among married adults, there are several reasons why religion may not have an important role in sexual issues. First, nonreligious adults may receive similar informal scripts through other channels (e.g., marriage and family counselors or the media) that emphasize prosocial marital norms also advocated by religious intuitions—that is, religious institutions may not be prescribing a sexual script that substantially deviates from the ones advocated by secular institutions. Second, more proximal antecedents, such as psychological and biological factors, may hold more importance for an aging population. Kontula and Haavio-Mannila (2009) found that good health, good sexual functioning, positive sexual self-esteem, and a sexually skillful partner are essential for maintaining sexual desire among older adults. The influence of these factors on sexual issues may far outweigh the influence of religion. Third, people may favor other normative reference frames in regards to sexuality within marriage. For example, the cultural logics of American individualism suggest that the building of marital intimacy is a matter of preference and not a requisite for religious life (Bellah, Madsen, Sullivan, Swidler, & Tipton 1985).

Although religious expectations regarding marital sexuality may be somewhat ambiguous, the expectation that sex only belongs in the confines of marriage is explicit. The stigma traditionally placed upon nonmarital childbearing, extramarital sex, and cohabitation (Christiano et al., 2002; Stolzenberg et al., 1995) suggests that unmarried sexually active individuals will not receive social support from the religious community for their romantic relationships, especially if they are perceived as sexual. The norm against nonmarital sex may act as a form of social control, especially for regular churchgoers. Studies exploring the sexual engagements of adolescents suggest that indeed this is the case. Religious service attendance and religious salience appear to directly affect premarital sexual behavior—that is, at least some religious adolescents and young adults internalize and live by a religious

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sexual script (Uecker, 2008). Although religiosity—or religious commitment—is associated with more sexually restrictive behavior, religious traditions do not appear to uniquely influence sexual behavior. Adolescents from different religious traditions do not exhibit widely varying sexual behavior; religiosity within any religious tradition is what matters (Regnerus, 2007).

Religion may influence sexual behavior (or lack thereof) more for women than men. Many studies find that women are more religious than men and that their religiosity has a stronger impact on their behavior than their male counterparts (De Vaus & McAllister, 1987; Krause, Ellison, & Marcum, 2002; Miller & Hoffman, 1995). Gender socialization suggests that boys are socialized to be competitive, aggressive, and independent, whereas girls are taught to be obedient, sociable, and nurturing. Indeed, Beit-Hallahmi and Argyle (1997) argued that women are more likely to be attracted to religion because many of the traits valued in religion are considered feminine traits, such as obedience to God and the nurturing of others. Gender socialization, and the roles associated with it, may partially explain why women may be more prone to adhere to the sexual scripts emphasized by their religious community than men. Studies of adolescent sexuality regularly find that religiosity is more likely to delay sexual activity among girls than boys (Crockett, Bingham, Chopak, & Vicary, 1996; Rostosky et al., 2004). Also, among older adults, women tend to be disproportionately single. Sexual activity may not be a viable option if opportunities for it are diminished. As a result, adhering to religious prohibitions on sex outside of marriage may be easier.

Based upon these arguments, we hypothesized that religious integration will affect whether unmarried older adults will engage in sexual intercourse. Older adults that have higher levels of religious integration will likely be more apt to accept the normative reference frame of their religious institution than those with lower levels. Also, women may be more likely to hear of and internalize religious scripts that prohibit sexual activity than men. Therefore, we present the following hypotheses concerning unmarried older adults:

H4: Unmarried people reporting higher levels of religious integration will be less likely to have engaged in sexual activity in the last year.

H5: The proposed inverse relationship between religious integration and likelihood of sexual activity among unmarried people will be much stronger for women compared to men.

Although the predominate religious traditions in the United States all emphasize marriage as the appropriate context for sexual intercourse, the level of social sanctions (among the unmarried) regarding sexual abstinence may vary by religious tradition. In particular, mainline Protestants and modern Catholics tend to have more permissive attitudes toward straying from religiously derived scripts than Evangelical Protestants. The messages communicated to Evangelical Protestants regarding the avoidance of sex outside of marriage may be more conservative and less permissive than other traditions. Accordingly, we present our final hypothesis regarding unmarried people over and above the influences of religious attendance and integration in daily life:

H6: Those affiliated with the Evangelical tradition will be less likely to have engaged in sexual activity in the last year than mainline Protestants or Catholics.

Data and Methods

Survey

The 2005 through 2006 NSHAP is a nationally representative probability sample of U.S. community-dwelling adults aged 57 to 85, funded by the National Institutes on Health and conducted by the National Opinion Research Center at the University of Chicago. The study involved 3,005 non-institutionalized older adults and was conducted between fall 2005 and spring 2006. In addition to in-home interviews and take-home questionnaires, anthropometric measurements and blood, salivary, and vaginal mucosal specimens were taken. The survey had an unweighted response rate of 75% and a weighted response rate of 76%. After using listwise deletion of missing values to deal with item non-response, complete data was available for 1,238 married and 791 unmarried individuals. The sample size varies slightly due to missing cases in the dependent variable of interest. The NSHAP data uses a complex survey design to account for oversamples of Blacks, Hispanics, men, and individuals aged 75 to 85. Accordingly, all samples used in this study are weighted to reflect the current demographic landscape of older Americans.

Dependent Variables

Information on the frequency of sex was collected during the in-home interviews. Respondents were first asked the following: "In what month and year did you most recently have sexual activity with (spouse or partner)?" Those who indicated their most recent sexual encounter occurred within 12 months of the interview were asked a follow-up question: "During the last 12 months, about how often did you have sex with (spouse or partner)?" Those indicating that they did not know or refused to answer either of these items were dropped from analyses. Based upon these items, an ordinal sex frequency variable was constructed that varied from

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0 (*no sexual encounters in the last 12 months*) to 5 (*once a day or more*). To obtain a sufficient number of cases in each category, the two highest scores—"3 to 6 times per week" and "once a day or more"—were collapsed into a single category. For unmarried respondents, we analyzed a binary variable measuring sexual activity in the last year (1 = had sex in last year). When asking respondents about the last time they had sex, 131 did not provide sufficient data, and 60 refused to answer the question. These cases may present response bias, although the percentage of people that did not answer this question (6%) is low compared to other surveys asking about sexual behavior (Catania, Gibson, Marin, Coates, & Greenblatt, 1990).

Respondents' self-reported sexual satisfaction was ascertained among married respondents through two ordinal response items. The first asked the respondent if they experienced pleasure from sex: "How physically pleasurable did/do you find your relationship with (spouse) to be?" The second inquired about emotional satisfaction in their current or most recent sexual relationship: "How emotionally satisfying did/do you find your relationship with (spouse) to be?" The responses to these items were "don't know," "not at all," "slightly," "moderately," "very," and "extremely." Those indicating they did not know or refused to answer were dropped from the analysis.

Independent Variables

We consider two dimensions of religion: religious attendance and religious integration in daily life. The measure of religious attendance comes from an item in the interview questionnaire that asked how often respondents attended religious services within the last 12 months: "Thinking about the past 12 months, about how often have you attended religious services?" Responses were rated on an ordinal-level scale ranging from 0 (*never*) to 6 (*several times a week*). Because the religious attendance variable is an ordinal—not an interval—one, religious attendance was collapsed into three dummy variables (low, moderate, and high attendance). Those with low religious attendance attend services less than one time per year; those with moderate levels attend services between once or twice per year up to once per month, and those with the highest religious attendance attend services every week or more.

Religious integration in daily life was measured using an item in the interview questionnaire that asked respondents how much they agree with the following statement: "I try hard to carry my religious beliefs over into all my other dealings in life." Responses ranged from 1 (*strongly disagree*) to 4 (*strongly agree*), with higher numbers reflecting higher levels of agreement. Those that did not answer this question were omitted from the analysis.

A scale measuring social support was constructed using four items. Items asked respondents how often they can be open with and also rely upon both friends and family regarding worries and problems. These items were administered with take-home response questionnaires given after the in-home interview. Each respondent identified each of the four items as "often," "some of the time," or "hardly ever." The item pertaining to openness with family contained an additional category of "no family." Those responding "don't know," those who did not provide answers, or those who did not return the questionnaires were omitted from the analysis. The metric for all four items differed; therefore, z scores of each item were obtained prior to the summation of the items. The alpha coefficient for the scale was .77 ($N = 1{,}238$).

To measure positive and negative spousal interactions, two scales were created, each consisting of two items originating from the take-home questionnaire. Items asking respondents (a) how much they can be open and (b) how much they can rely upon their spouse regarding worries and problems were summed to create a variable for positive spousal interaction. The alpha coefficient for the scale was .79 ($N = 1{,}238$). Items asking respondents if their spouse is too (a) critical and (b) demanding were summed to create a variable for negative spousal interaction. Responses for all questions ranged from "often" to "hardly ever." The alpha coefficient for the negative spousal interaction scale was .71 ($N = 1{,}238$).[1]

A measure of the overall happiness the respondent had with their current marital relationship was obtained by asking respondents how they would describe their current relationship overall. Responses varied from 1 (*very unhappy*) to 7 (*very happy*). Those that indicated "did not know" or who did not provide a response were omitted from the analysis.

The NSHAP data do not allow for fine-grained distinctions among religious traditions. However, we were able to differentiate Evangelical Protestants, mainline Protestant, Catholics, and all others. Dummy variables indicating if a respondent was Evangelical Protestant, mainline Protestant, Catholic, and "other" were created through an item that asked respondents the following: "What is your current religious preference?: Is it Protestant, Catholic, Jewish, or some other religion, or no religion at all?" Catholics were given their own category, and those indicating an "other" religion or no religion at all were coded as "other." Among those identifying as Protestant, another item asked for their denomination. Those indicating Baptist or nondenominational Christian were coded as Evangelical Protestant, and those indicating other protestant denominations

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[1]Due to the categorical nature of the items making up social support, positive spousal support, and negative spousal support, polychoric correlations were used to calculate the alpha values.

(Episcopalian, Methodist, etc.) were coded as mainline Protestant.[2]

Control Variables

Previous research suggests that an individual's health has a strong impact upon both sexual frequency and enjoyment (Delamater et al., 2008). Among married respondents, we created a dummy variable that collectively measured the health of a couple. If the respondent indicated that both partners have very good or excellent health, they were considered a healthy couple. Among unmarried respondents, we controlled for the effects of individual health by including a measure of self-reported health that varied from 1 (poor) to 5 (excellent). An individual's inclination to engage in sex and the extent to which they feel pleasure and emotional satisfaction from it may be affected by their functional limitations. A scale measuring functional limitations was constructed using seven items that asked respondents the level of difficulty they encounter when performing activities of daily living such as walking, dressing, bathing, and so forth. A similar measure for the respondent's spouse was not available. Responses varied from 0 (no difficulty) to 3 (unable to do). Cronbach's alpha for this scale was .95 ($N = 1,238$). The indicators of religious traditions (mentioned earlier) also served as control variables for analyses among the married sample. Covariates for age, gender, and race were also included. Analyses concerning "pleasure" and "emotional satisfaction" included "frequency of sex" as an additional predictor.

Analytic Strategy

Expectations and norms relating to sexual activity are different for married and unmarried individuals in American religious traditions; therefore, these analyses include separate analyses for married and unmarried individuals. We begin by describing bivariate correlations among married individuals between sexual frequency, pleasure, and emotional satisfaction with religious attendance, integration, social support, and relationship characteristics. These correlations were intended to highlight the pathways by which religion may influence sexual frequency and satisfaction. Next, we implemented ordinary least squares (OLS) regression models to estimate the main effects that religious attendance and integration have on each of the three dependent variables of interest—frequency of sex, physical pleasure from sex, and emotional satisfaction with sex.[3] All models included control variables. We then tested how the effects of the religion variables on sexual frequency and quality are explained by social support (in Model 2), and then by positive and negative spousal support and by relationship happiness (in Model 3). Next, we turn to analyses concerning sexual engagement among unmarried respondents. First, we highlighted the bivariate relationship that religious attendance and integration share with the likelihood of having engaged in sex in the last year. Then we used logistic regressions to test how these relationships hold up in multivariate analyses and how gender moderates this relationship. We tested for the moderating effect of gender by the use of a split-sample t test.

Results

The descriptive statistics in Table 1 reveal that the majority of married respondents had engaged in sexual activity at least once in the last year, and they also indicated elevated levels of sexual satisfaction. Percentage breakdowns of sexual frequency (not shown) indicated that roughly 30% of married respondents did not have sex in the last year, 25% had sex once per month or less, and 24% had sex more than once per month. Finally, over 20% of respondents indicated that they engaged in sexual intercourse once per week or more. Regardless

Table 1. *Weighted Means and Standard Deviations Among Individuals Aged 57 to 85*

Variable	Married[a]		Unmarried[b]		Range
	M	SD	M	SD	
Frequency of sex	1.406	1.163	–	–	0–4
Sex last year	–	–	0.174	0.379	0–1
Physical satisfaction	3.011	0.908	–	–	0–4
Emotional satisfaction	3.087	0.860	–	–	0–4
Healthy couple	0.300	0.457	–	–	0–1
Health	3.407	1.041	3.188	1.161	1–5
Age	66.941	7.148	70.252	8.127	57–85
Female	0.442	0.497	0.709	0.544	0–1
Black	0.063	0.242	0.117	0.322	0–1
Number of friends	3.511	1.091	3.239	1.276	0–5
Function limitations	0.134	0.312	0.198	0.367	0–3
Evangelical Protestant	0.180	0.384	0.213	0.410	0–1
Catholic	0.288	0.453	0.251	0.434	0–1
Mainline Protestant	0.291	0.455	0.251	0.434	0–1
Other	0.241	0.428	0.285	0.452	0–1
Low religious attendance	0.232	0.422	0.262	0.440	0–1
Moderate religious attendance	0.291	0.454	0.306	0.461	0–1
High religious attendance	0.477	0.500	0.432	0.496	0–1
Religious integration	3.067	0.841	3.093	0.830	1–4
Social support (z score)	0.047	2.726	–	–	−7.4–3.9
Positive spousal support	5.590	0.783	–	–	2–6
Negative spousal support	3.025	1.107	–	–	2–6
Relationship happiness	6.313	1.128	–	–	1–7

[a]$N = 1,221.$
[b]$N = 791.$

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[2]Supplementary analyses using alternative religious tradition schemas resulted in the same pattern of findings presented here.

[3]Supplementary analyses were run on all models using ordinal regressions, which resulted in the same pattern of findings presented here.

of frequency, the average married NSHAP respondent found sex to be very physically and emotionally satisfying. Nearly 48% of the married sample attended religious services once or more per week. The average respondent also tended to agree (but not strongly agree) that they try hard to carry their religious beliefs over into all other dealings in life. The average respondent was very happy in their marriage. Among married respondents, 18.0% were Evangelical Protestant, 29.1% were mainline Protestant, 28.8% were Catholic, and 24.1% fell into the "other" category. Over 30% of the sample indicated that both they and their spouse had "very good" or "excellent" health. The average age in these samples was 67; 42% were women and 6% were Black. Among unmarried respondents, nearly 17% indicated having at least one sexual encounter in the last 12 months. The average unmarried respondent had good health and was 70.3 years old; 21.2% were Evangelical Protestant, 25.1% were mainline Protestant, 25.1% were Catholic, and 28.5% fell into the "other" category. Notably, females made up 71% of this sample.

A correlation matrix (see Table 2) shows the relationship among sexual outcomes, religious attendance, religious integration, social support, and relationship characteristic variables. This matrix is consistent with the proposed pathways, detailing how religion is associated with sexual frequency and satisfaction, but the magnitudes of these coefficients are somewhat weak. Religious integration was positively related to social support, which, in turn, was associated with positive spousal support and relationship happiness. Both positive spousal support and relationship happiness were associated with greater sexual frequency and satisfaction. High levels of religious attendance were associated with more social support, positive spousal support, and relationship happiness, which were, in turn, associated with sexual frequency and satisfaction.

Table 3 introduces OLS regression models predicting the frequency of sex among married respondents. Model 1 (net of controls) reveals that high levels of religious attendance were not significantly associated with more frequent sex, although the coefficient was positive and tending toward significance ($p < .10$). Model 2 shows social support was unrelated to sexual frequency. Model 3 tests for the mediating effect of the relationship characteristic variables in the association between attendance and sexual frequency. Because religious integration was unrelated to sexual frequency, there was no support for this mediating relationship. Negative spousal support decreased sexual frequency, whereas overall relationship happiness boosted it. Overall, this analysis found that high religious attendance was unrelated to sexual frequency, although it was tending toward significance ($p < .10$). Religious integration was unrelated to sexual frequency; this finding provides no support for H1 or H2.

Table 4 presents OLS regression models predicting the level of physical pleasure and emotional satisfaction an individual received from his or her spouse. In the models predicting pleasure, religious integration was significantly associated with greater reported physical pleasure.

Table 2. *Correlations Between Key Independent and Dependent Variables*

Variable	Religious Integration	Low Attendance	Moderate Attendance	High Attendance	Social Support	Positive Spousal Support	Negative Spousal Support	Relationship Happiness
Daily religious integration	1							
	1,246							
Low religious attendance	−0.357*	1						
	1,246	1,246						
Moderate religious attendance	−0.184*		1					
	1,246		1,246					
High religious attendance	0.465*			1				
	1,246			1,246				
Social support	0.138*	−0.093*	−0.053	0.126*	1			
	1,246	1,246	1,246	1,246	1,246			
Positive spousal support	0.031	−0.036	−0.069*	0.093*	0.201*	1		
	1,246	1,246	1,246	1,246	1,246	1,246		
Negative spousal support	−0.042	−0.005	0.03	−0.023	−0.109*	−0.206*	1	
	1,246	1,246	1,246	1,246	1,246	1,246	1,246	
Relationship happiness	0.022	−0.018	−0 058*	0.068*	0.067*	0.417*	−0.292*	1
	1,246	1,246	1,246	1,246	1,246	1,246	1,246	1,246
Frequency of sex	0.009	−0.068*	0.023	0.036	0.099*	0.163*	−0.119*	0.175*
	1,246	1,246	1,246	1,246	1,246	1,246	1,246	1,246
Pleasure	0.017	0.003	0.012	−0.014	0.132*	0.346*	−0.206*	0.437
	1,229	1,229	1,229	1,229	1,229	1,229	1,229	1,229
Emotional satisfaction	0.028	−0.012	−0.006	0.016	0.098*	0.447*	−0.294*	0.520*
	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242

Note. Number of valid observations are shown below correlation coefficient.
*$p < .05$.

Table 3. *Estimates of Ordinary Least Squares Models on Frequency of Sex Among Married Individuals Aged 57 to 85*

	Frequency of Sex		
Variable	Model 1	Model 2	Model 3
Healthy couple	0.420*** (0.066)	0.418*** (0.065)	0.362*** (0.064)
Age	−0.049*** (0.005)	−0.048*** (0.005)	−0.046*** (0.005)
Female	−0.249*** (0.051)	−0.278*** (0.052)	−0.276*** (0.056)
Black	0.053 (0.131)	0.072 (0.133)	0.152 (0.127)
Number of friends	0.035 (0.028)	0.027 (0.029)	0.009 (0.026)
Functional limitations	−0.543*** (0.080)	−0.546*** (0.081)	−0.563*** (0.077)
Catholic[a]	−0.011 (0.090)	0.005 (0.060)	0.024 (0.084)
Mainline Protestant	0.014 (0.086)	0.021 (0.060)	0.017 (0.082)
Other	0.002 (0.103)	0.012 (0.103)	−0.018 (0.099)
Moderate religious attendance	0.073 (0.108)	0.069 (0.106)	0.093 (0.103)
High religious attendance	0.217 (0.115)	0.207 (0.114)	0.200 (0.114)
Religious integration in daily life	0.022 (0.041)	0.018 (0.041)	0.012 (0.041)
Social support	—	0.079 (0.048)	0.052 (0.048)
Positive spousal support	—	—	0.071 (0.037)
Negative spousal support	—	—	−0.116*** (0.032)
Relationship happiness	—	—	0.078* (0.033)
Constant	4.431*** (0.310)	4.399*** (0.302)	3.829*** (0.504)
R^2	0.197	0.199	0.228

Note. $N = 1,238$. Standard errors in parentheses.
[a]Evangelical Protestants serve as the reference category.
*$p \leq .05$. ***$p \leq .001$.

Table 4. *Estimates of Ordinary Least Squares Models on Sexual Satisfaction Among Married Individuals Aged 57 to 85*

	Pleasure[a]			Emotional Satisfaction[b]		
Variable	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Healthy couple	0.265*** (0.068)	0.258*** (0.063)	0.112* (0.056)	0.270*** (0.047)	0.266*** (0.046)	0.109*** (0.035)
Age	−0.017*** (0.004)	−0.014*** (0.004)	−0.004 (0.004)	−0.011** (0.004)	−0.009* (0.004)	0.000 (0.003)
Female	−0.378*** (0.057)	−0.450*** (0.059)	−0.310*** (0.053)	−0.339*** (0.051)	−0.384*** (0.054)	−0.252*** (0.043)
Black	−0.245 (0.149)	−0.199 (0.144)	−0.093 (0.099)	−0.218 (0.137)	−0.189 (0.133)	−0.046* (0.091)
Number of friends	0.039 (0.032)	0.019 (0.032)	−0.018 (0.027)	0.064* (0.026)	0.051 (0.026)	0.005 (0.019)
Function limitations	0.004 (0.129)	−0.002 (0.125)	0.065 (0.091)	0.087 (0.085)	0.083 (0.085)	0.095 (0.080)
Catholic[c]	−0.178 (0.102)	−0.140 (0.106)	−0.092 (0.104)	−0.164* (0.075)	−0.140 (0.076)	−0.086 (0.076)
Mainline Protestant	−0.025 (0.095)	−0.007 (0.094)	−0.018 (0.081)	−0.013 (0.094)	0.024 (0.094)	0.016 (0.074)
Other	−0.116 (0.074)	−0.093 (0.074)	−0.116 (0.074)	−0.069 (0.077)	−0.053 (0.079)	−0.080 (0.071)
Moderate religious attendance	−0.030 (0.074)	−0.040 (0.073)	−0.001 (0.060)	−0.016 (0.078)	−0.022 (0.079)	0.026 (0.062)
High religious attendance	−0.033 (0.082)	−0.057 (0.080)	−0.122* (0.060)	0.034 (0.077)	0.019 (0.075)	−0.049 (0.062)
Religious integration in daily life	0.090* (0.045)	0.080 (0.045)	0.074 (0.038)	0.051 (0.036)	0.044 (0.036)	0.040 (0.028)
Social support	—	0.193*** (0.041)	0.118** (0.036)	—	0.125** (0.039)	0.021 (0.030)
Positive spousal support	—	—	0.150** (0.049)	—	—	0.272*** (0.032)
Negative spousal support	—	—	−0.058** (0.022)	—	—	−0.110*** (0.017)
Relationship happiness	—	—	0.255*** (0.040)	—	—	0.265*** (0.035)
Frequency of sex	—	—	0.142*** (0.023)	—	—	0.086*** (0.021)
Constant	3.942*** (0.328)	3.864*** (0.321)	0.872* (0.411)	3.558*** (0.249)	3.510*** (0.250)	0.117*** (0.327)
R^2	0.101	0.119	0.325	0.093	0.101	0.421

Note. Standard errors in parentheses.
[a]$N = 1,221$.
[b]$N = 1,234$.
[c]Evangelical Protestants serve as the reference category.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

Table 5. *Percentage of Unmarried Respondents Having Sex by Religiosity, Aged 57 to 85*

Variable	Sex in the Last Year[a]	
	Women[b]	Men[c]
Religious attendance		
Low	7.89	45.90
Moderate	13.62	43.62
High	3.93	31.78
"I carry my religious beliefs into daily life"		
Strongly disagree	18.03	55.46
Disagree	18.51[d]	36.15
Agree	7.16[d]	49.63
Strongly agree	4.45	29.27

Note. All values are weighted.
[a]$N = 791$.
[b]$N = 559$.
[c]$N = 232$.
[d]The overall percentages of women and men that had sex in the last year are significantly different at $p > .05$.

Religious attendance was not significantly related to pleasure. Model 2 suggests that social support partially explains this association. Social support was likewise associated with sexual pleasure, and it too was statistically significant. With the addition of social support, the magnitude of the religious integration coefficient drops from .090 to .080 and is no longer significant ($p < .10$). This decline in magnitude suggests that the effect of religious integration on pleasure was partially explained by social support. Model 3 incorporates the spousal support and relationship characteristic variables into the model, which were positively associated with pleasure. The effect of social support on pleasure also

decreased substantially, but still remained statistically significant. This finding suggests that the effect of social support on pleasure was partially explained by spousal support and relationship happiness and also had a direct effect on sexual pleasure. The inclusion of spousal support, relationship happiness, and sexual frequency into the equation increased the model fit substantially, confirming that these variables were likely the most proximate and important predictors of sexual pleasure.

Table 4 also presents the OLS regression models predicting emotional satisfaction with the sexual relationship. Religious integration was positively associated with emotional satisfaction, although the relationship was not statistically significant. Catholics had lower levels of emotional satisfaction than Evangelical Protestants. With the inclusion of social support in Model 2, "Catholic" loses significance, suggesting that Evangelicals may receive more emotional satisfaction from sex due to higher levels of social support. Model 3 reveals that the inclusion of spousal support, relationship happiness, and sexual frequency fully explains the effect of social support. This suggests that social support increased relationship quality. Relationship quality then positively impacted emotional satisfaction. Again, the addition of the spousal support, relationship happiness, and sexual frequency variables increased the explained variance dramatically, suggesting that these variables remain the most proximate and important predictors of emotional satisfaction.

Table 5 presents the percentage breakdowns by religiosity of unmarried adults that had sex in the last year. This table reveals two discernable patterns. First, among both men and women, those indicating low

Table 6. *Logistic Regression Estimates on Sex in the Last Year Among Unmarried Respondents by Gender, Aged 57 to 85*

Variable	Women[a]: Model 1	Men[b]: Model 2	t Values Across Models[c]
Health	0.006 (0.265)	0.195 (0.214)	−0.554
Age	−0.092** (0.034)	−0.075** (0.023)	−0.414
Black	0.760 (0.690)	1.172 (0.616)	−0.446
Number of friends	0.411* (0.202)	0.493* (0.199)	−0.289
Catholic[d]	−0.339 (0.855)	0.768 (0.683)	−1.011
Mainline Protestant	0.040 (0.809)	1.083 (0.628)	−1.019
Other	0.439 (0.735)	0.073 (0.603)	0.385
Functional limitations	−0.387 (0.953)	−1.098 (1.052)	0.501
Moderate religious attendance	1.188 (0.688)	−0.273 (0.565)	1.642†
High religious attendance	−0.096 (0.715)	−0.921 (0.647)	0.856
Religious integration in daily life	−0.824*** (0.228)	0.019 (0.246)	−2.516***
Has romantic partner	4.561*** (0.550)	3.425*** (0.460)	1.584
Constant	3.243 (2.600)	1.341 (2.002)	0.580
Pseudo R^2	0.507	0.372	

Note. Standard errors in parentheses.
[a]$N = 559$.
[b]$N = 232$.
[c]Evangelical Protestants serve as the reference category.
[d]Significance levels are from a one-tailed test.
$^*p \le .05$. $^{**}p \le .01$. $^{***}p \le .001$. $^†p \le .10$.

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and moderate levels of attendance and integration were more likely to have had sex within the last year than those with high levels of religiosity. Second, the percentage of unmarried men that had sex in the last year was higher among men regardless of religiosity. A higher percentage of men that had high religious attendance or strongly agreed that they carry their religious beliefs into their everyday lives had sex in the last year than did women indicating the lowest levels of religious attendance and integration. This table suggests that religion shared an inverse relationship with sex in the last year, and this relationship was stronger among women.

Table 6 presents logistic regressions split by gender among unmarried respondents predicting the likelihood of having had sex in the last year. These models show that, for both women and men, having a romantic partner was positively related to the likelihood of having engaged in sex in the last year. For women, religious integration shares a strong, negative relationship with sex in the last year, and this was not found among men. The t test comparing the difference in the magnitude of the regression coefficient indicates that, indeed, the effect of religious integration was larger for women than men ($p < .001$). Religious attendance was not related to the likelihood of having sex, suggesting that one's willingness to incorporate religion into daily life plays a larger role than attending religious services in following religious scripts. After taking into account religious attendance and integration (and controls), the likelihood of sex in the last year did not vary by religious tradition.

Discussion

In this study, we argued that religion provides reference groups that equip individuals with a script to follow that outlines the context in which sex is condoned, encouraged, or proscribed. The extent to which individuals follow these scripts is largely proportional to their level of religiosity; in other words, the value an individual places on their religion will determine how closely they follow religious sexual scripts. Based on these arguments, we proposed three hypotheses concerning married individuals and three concerning unmarried individuals.

Among married individuals, H1 stated that high levels of religious integration in daily life will increase frequency of sex, pleasure from sex, and emotional satisfaction from sex. H1 was generally not supported: Higher levels of religious integration were weakly related or unrelated with sexual frequency and with greater emotional satisfaction, although the positive relationship between religious integration and pleasure from sex provides some support for H1. H2 stated that the effect of religious integration on all of the sex outcomes of married individuals will be explained by the level of social support an individual perceives. H2 received some support in regards to pleasure from sex, but none regarding frequency of sex and

emotional satisfaction. H3 stated that the effect of religious integration will be explained by spousal support and the overall level of perceived happiness in a marriage. H3 was largely unsupported by the data, as the inclusion of the spousal support and happiness variables did not significantly decrease the effect of integration on sexual frequency or satisfaction. This finding may be due to a lack of an association between religious integration and outcomes. Overall, analyses of married older adults showed a weak relationship between religiosity and sexual outcomes.

Among unmarried individuals, both H4 and H5 were strongly supported by our analyses. H4 predicted that religiosity was negatively associated with engagement in sexual activity. A simple cross-tabulation (see Table 5) provided evidence that, indeed, more religious individuals were less likely to engage in sex within the last year. On further inspection in multivariate models, we found that once demographic and social controls were entered into the models, this inverse relationship only existed among women. Therefore, we found support for H5, which predicted higher levels of religious integration will have a stronger effect on the likelihood of having sex for women than men. Evangelical Protestants were no more or less likely to have engaged in sex than mainline Protestants or Catholics. Therefore, we found no support for H6.

Prior research on religion and sex has focused primarily upon adolescents and, to a lesser degree, unmarried adults and found high levels of religiosity to be negatively related to a plethora of sexual outcomes (Barkan, 2006; Regnerus, 2005; Rostosky et al., 2004). This study concludes that religion influences the sex lives of older married adults in another way. Religiously inclined, older married individuals tend to have more pleasurable sex than their nonreligious counterparts, whereas religiously inclined, unmarried adults tend to have less frequent sex than their nonreligious counterparts. Although we have highlighted that those that integrate religion into their daily lives tend to have more pleasurable sex, we note that the magnitude of this relationship is rather weak.

Among unmarried older adults, religion tended to play a similar prohibitive role in regards to sexual activity as it does with young adults. As in young adults (Crockett et al., 1996; Rostosky et al., 2004), religion tended to have a stronger influence on females than among their male counterparts. These findings are consistent with the worldview of many American religious traditions that prohibit sex outside of marriage and accept, or even promote, it within the marital context. Religious beliefs and the institutions that foster these beliefs tend to affect the sexual behavior of individuals dynamically, depending on their stage in the life course.

Sexual activity continues to be valued by older adults and may improve life satisfaction, marital quality, and general health (Seldin et al., 2002; Yeh et al., 2006). Research on the sexual behavior of older adults is in its infancy. We have accentuated the role of religion as one component of social life that impacts sexual behavior

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and deserves further attention. This study is one of the few to investigate the relationship between religion and sex among older adults, and suggests that religion continues to play a large role in shaping the sex lives of older Americans (especially in the decision to abstain from nonmarital sex). Religion becomes more important for adults as they age, and sexual relationships remain so; therefore, understanding the intersection between these two life domains should not be overlooked.

Future research in this area should replicate these findings using longitudinal datasets and ensure that the effects of religion on sexually activity are robust across time. This study only used two measures of religiosity to investigate the predictors of sexual activity and satisfaction. Our measure of religious integration in daily life may also be a limitation of this study. It was created through an item asking the respondents their level of agreement with the following statement: "I try hard to carry my religious beliefs over into all my other dealings in life." This religious integration measure may be subject to one's retrospective assessment of their behavior in light of how their actions line up with the teachings of their religious tradition. Although we acknowledge this measure may introduce measurement error, this was unlikely to be a problem in this study. The question wording ("I try hard") focuses on one's conscious effort and not on the results. Future research may wish to employ more nuanced versions of religiosity, such as the scales measuring organizational and non-organizational religiosity created by Idler et al. (2003). The results of this study are only applicable to older U.S. adults. Future work should investigate how the relationship between religion and sexual behavior may vary by generation, country, or culture.

For married individuals, this study stressed the importance of prosocial and relationship-value norms effervescent in religious communities as an explanation as to why religious beliefs have an influence on sex outcomes. Future studies may wish to ask whether prosocial norms and social support increases marital quality or if religious individuals tend to have access to and engage in formal types of relationship-building classes or therapy offered by their churches. This study presents a baseline toward understanding the connection between religion and sexual outcomes among older adults.

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