

# Religious Influence on Older Americans' Sexual Lives: A Nationally-Representative Profile

James Iveniuk<sup>1,3</sup> · Colm O'Muircheartaigh<sup>2</sup> · Kathleen A. Cagney<sup>1</sup>

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**Abstract** This study investigated the relationship between religious influence and sexual expression in older Americans, with specific attention to gender. Using the National Social Life, Health, and Aging Project, a nationally-representative survey of older adults, we created a composite measure of religious influence on sexual expression using Latent Class Analysis. We found more variability within denominations than between in terms of membership in the high-influence class; this indicated that religious influence on sexual expression was diverse within faiths. We show that religious influence was associated with higher self-reported satisfaction with frequency of sex, as well as higher physical and emotional satisfaction with sex, but only for men. Men were also significantly more likely than women to report that they would only have sex with a person they love. These results persisted in the presence of controls for demographic characteristics, religious affiliation, church attendance, intrinsic religiosity, political ideology, and functional health.

**Keywords** Sexuality · Religion · Older adulthood · Latent class analysis

## Introduction

Religion can have a strong impact on an individual's normative orientation towards sex, that is, his or her ideas about where, how, and with whom sex should take place (Laumann, Gagnon,

Michael, & Michaels, 1994). Sociologists of religion often describe these normative orientations as constraints on sexual expression, producing greater control over sexual impulses (DeLamater, 1989; Granger & Price, 2009; Gyimah, Tenkorang, Takyi, Adjei, & Fosu, 2010; Haglund & Fehring, 2010; Simons, Burt, & Peterson, 2009). Researchers and popular writers may make a stronger claim, that religion's relationship to sexuality is basically antagonistic, and that Christian religions in particular are especially anti-sex (Hitchens, 2007; Shea, 1992). It is rarer to consider the positive aspects of religion and religiosity for sexual expression, and to ask whether religion and religiosity ever improve the quality of sexual life (McFarland, Uecker, & Regnerus, 2011).

We explored this topic using a nationally-representative sample of older adults (aged 57 and older). We focused on older adults for several reasons. First, while research on the role of religion in shaping adolescents' sexual expression is well-studied (McCree, Wingwood, DiClemente, Davies, & Harrington, 2003; Miller & Gur, 2002; Thornton & Camburn, 1989; Woodroof, 1985), older adults are not often considered, potentially leading to a focus on risk-taking in the literature on religion and sexuality (Granger & Price, 2009; Gyimah et al., 2010; Haglund & Fehring, 2010; Simons et al., 2009). In addition, the relationship between religion and sexuality in longer-term relationships among older adults is not well-understood. In order to situate our inquiry in exiting scholarship, we begin by reviewing literature on the impact of religiosity on sexual expression, with a focus on older couples and variation by gender.

## Religion's Normative Influence on Sexuality

We conceptualized religious influence as configurations of behavior and attitudes that reflect the normative teachings of a religion. Note that being influenced by a religion does not require the individual to identify with that religion or to be actively participating in that religion's organizations. Individuals may

✉ James Iveniuk  
iveniukj@gmail.com

<sup>1</sup> Department of Sociology, University of Chicago, Chicago, IL, USA

<sup>2</sup> Harris School of Public Policy, University of Chicago, Chicago, IL, USA

<sup>3</sup> 254 Castlefield Ave., Toronto, ON M4R 1G7, Canada

have attitudes or practices that accord with the normative teachings of religion, for instance, encountered through his or her upbringing or contacts, without necessarily being religious themselves. Within sociology this kind of religious influence was first described by Weber (1905/2002), who identified the persistent influence of a Protestant ethic on the economy of an apparently secularizing Europe. This foundational perspective has been used in more modern studies, to document the impact of religious influence on morality (Joas, 2007) and delinquent behavior (Regnerus, 2003). Following this conceptualization, we now outline religious influence on sexuality, before discussing sexuality in older adulthood.

Religious norms generally channel sexual expression into monogamous sexual relationships, and researchers studying religion and quality of life have commonly described religiosity as reducing the frequency of extramarital sex (Drum, Shiovitz-Ezra, Gaumer, & Lindau, 2009; Koenig, George, Meador, Blazer, & Ford, 1994; Room, 1990). However, religious normative codes may also be pro-sex, but dedicated to organizing sexual expression in normatively-appropriate ways. Early sexual debut, for instance, may not be problematic when accompanied by marriage because it demonstrates that the individual has accepted certain moral guidelines and religiously-prescribed avenues of sexual expression (i.e., that sex should take place within a marriage relationship (Freitas, 2008) and is typified by love between the two partners (Laumann et al., 1994).

Qualitative research on religion and marital sex provides insight in how such social processes might unfold. Gardner (2011), in a study of abstinence campaigns, showed how the rhetoric of religious leaders included a promise that chastity will actually mean improved sexual satisfaction, as a divine reward for according with religious codes of conduct. Herzog (2008) analyzed hundreds of Christian sex guides for long-term couples in order to describe a transformation in American religious discourses on sex, similar to what Gardner (2011) described. Herzog argued that highly-religious Americans are encouraged to organize their pleasure in religious ways without reducing their sexual quality of life. Thus, suffusing sexual activity with spiritual meaning may improve satisfaction, in the same manner as religiosity can provide sacred significance for worldly experiences in general (Underwood & Teresi, 2002).

While the media that Herzog and Gardner reviewed was largely created by Protestants, other groups also imbue sexual activity with religious significance. For instance, one might expect that highly-religious Catholics would be more likely to be more sexually unsatisfied because Catholic dogma seemingly prohibits sex for reasons besides procreation. In an important work of Catholic apologetics, however, Anscombe (1972/2008) argued that, in fact, sex in marriage was not only permissible, but good so long as the desire for sex is not “in command” of the person’s morality or reason. And Hirsch (2008), in an interview study of Mexican

Catholics, found that many of the subjects understood sexual activity with their partners as commensurate with the Catholic principle that husbands and wives should be sexually available to one another.

Therefore, older adults may appropriate different elements of religious teachings, to use them in a way which does not necessarily reflect the expectations of religious leaders (Gardner, 2011). Additionally, religious influence may be more important for differences in behavior than religious affiliation in terms of the effect on sexual belief or practice (Regnerus, 2007). In short, there is ample reason to believe that older adults may appropriate religious norms in a manner that improves sexual expression.

### Sexuality at Older Ages

Several previous studies have shown that sexual activity continues into older ages (Corona et al., 2010; Herbenick et al., 2010; Lindau et al., 2007; Palacios-Cena et al., 2012). Even in the presence of health problems, older adults may change their sexual behaviors to downplay intercourse in sexual expression so they can still engage in reciprocal and pleasurable activity (Corona et al., 2010; Waite, Laumann, & Das, 2008). Such activity at older ages tends to be in the context of long-term relationships (Laumann et al., 1994; Laumann & Michael, 2001; Mahay & Laumann, 2004), and so the challenges that older adults face to their quality of sexual life tend to emerge from psychosocial dynamics within the marital dyad.

For instance, research suggests that sexual ideation and desire seems to decline with age (DeLamater & Sill, 2005; Herbenick et al., 2010; Laumann, Glasser, Neves, & Moreira, 2009; Palacios-Cena et al., 2012). While both men and women experience such a decline on average, the rate over time may differ by gender with men typically experiencing higher sexual desire than women at older ages (Herbenick et al., 2010; Palacios-Cena et al., 2012). This may lead to asymmetries between men and women in terms of how satisfied they are with the frequency of sex in their lives. In a study using Finnish data, older men were significantly more likely to be satisfied with coital frequency compared to women (Kontula & Haavio-Mannila, 2009). In the US, low sexual desire is also much more common among women than men—43 % of women and 27 % of men over the age of 57 report a lack of interest in sex (Laumann, Das, & Waite, 2009).

Older adulthood also creates new contexts for sexual satisfaction. Sexual satisfaction tends to be high in older adults’ romantic and sexual relationships, in part because the normative commitments of partners to one another encourage them to develop partner-specific skills for improving one another’s satisfaction (DeLamater, Hyde, & Fong, 2008; Laumann et al., 1994; Matthias, Lubben, Atchison, & Schweitzer, 1997). However, there is also considerable variability in satisfaction at older ages (DeLamater

et al., 2008; Matthias et al., 1997). For instance, health problems may lower sexual desire (Palacios-Cena et al., 2012), leading to lower enjoyment of sexual activity (DeLamater et al., 2008).

A good-quality sex life at older ages will therefore often mean maintaining a level of coital frequency acceptable to two people in a long-term relationship, appropriate to their levels of sexual desire, where both partners feel that they are happy, physically and emotionally, with their sexual experiences. Religious norms may help to encourage sexual expression and improve the quality of older adults' sexual lives, by valuing the exclusive availability of sexual partners to each other and by spiritualizing monogamous sexual expression. However, religious norms may prescribe different codes of conduct depending on gender, and men and women may not benefit equally from the influence of religious norms.

### Gender, Religion, and Sexual Expression

According to one body of literature, religious romantic and sexual partnerships are more likely to create an advantage for the man than the woman because traditional religious norms emphasize that women should submit to their husbands (Levitt & Ware, 2006). Based on this perspective, we would expect that men would benefit more than women because they are normatively permitted to set the frequency of sexual activity per their prerogative as head of household. Hirsch's (2005) study also claimed that women may feel pressured into sex in order to prevent their husbands from initiating extra-marital affairs (Hirsch, 2008), and, if so, women may experience less enjoyment from sex.

However, the competing hypothesis, that women would benefit more from religious norms, is also plausible. Other work has argued that religiosity and religious norms actually empower women in subtle ways (Bartkowski, 1997; Burke, 2012; Pevey, Williams, & Ellison, 1996). While highly-religious women may be instructed by church leaders to submit to their husbands, women may reinterpret these instructions in an empowering manner (Denton, 2004; Pevey et al., 1996). Furthermore, religious leaders sometimes encourage women to be more sexually expressive, as a way to prevent their husbands from being tempted to seek sexual satisfaction outside of the marriage (Bartkowski, 2001). The spiritualization of the sexual relationship may also lead to greater satisfaction for women than men, as the effects of religiosity on behavior and attitudes are usually stronger for women (de Vaus & McAllister, 1987; Krause, Ellison, & Marcum, 2002; Miller & Hoffmann, 1995). Women across faiths, or even those who do not identify with a faith, may therefore maintain an active sexual relationship while seeing this sexual activity as spiritually meaningful (Bartkowski & Read, 2003).

In sum, previous research suggests two contradictory expectations about what we might find in our analyses of religion and its influence on sexual expression. This work will arbitrate between these perspectives with a focus on gendered associations between religious influence and normative orientations toward sexuality.

## Method

### Participants

The data come from the National Social Life, Health, and Aging Project (NSHAP), a nationally-representative survey of older adults, comprising 1455 men and 1550 women over the age of 57, with data collected in 2005–2006.<sup>1</sup> NSHAP's large sample, targeted at older adults, makes it an ideal dataset for examining sex at older ages. It also asks numerous questions about sexual attitudes, religious attitudes, and religious participation (McFarland et al., 2011). Ten percent of the sample was non-Hispanic Black and seven percent Hispanic. About a third of the sample was having sex once a week or more, and most participants were satisfied with the amount of sex they were having (physically satisfied = 70.6 %; emotionally satisfied = 70.5 %).

### Analytic Procedure

We used Latent Class Analysis (LCA) to describe religious influence on sexual expression, following our conceptualization of religious influence as configurations of behavior and attitudes that reflect the normative teachings of a religion. LCA classifies cases into mutually-exclusive categories and facilitates descriptive and exploratory analysis by allowing one to compare classes on key variables (Nylund, Asparouhov, & Muthén, 2007). It also includes numerous measures of model fit for establishing the number of latent categories that best fit the data. We selected six variables for inclusion in the LCA, five dichotomous and one ordinal. These variables stemmed from the following questions: (1) "My religious beliefs have shaped and guided my sexual behavior" with four response options: strongly disagree, disagree, agree, strongly agree; (2) Whether the participant has not had sex recently because "Your religious beliefs do not allow sex outside of marriage?"; (3) Whether the participant answered "never" to the question "On average, in the past 12 months how often did you masturbate?"; (4) Whether the participant never had a same-sex partner; (5) Whether the participant answered "always wrong" to the question "A married person having sexual relations with someone other than their marriage partner. Is this...?" and (6) Whether the participant reported never having been divorced, if he or she had ever been married.<sup>2</sup> In addition, these items were deliberately chosen to be

<sup>1</sup> NSHAP's sampling frame involved probability proportionate to size selection of U.S. Metropolitan Statistical Areas, random sampling of area segments within primary units, and a complete listing and screening of all housing units within the area segment. This approach included an oversampling of African-American and Hispanic participants, as well as the oldest old (85 and up). All results were weighted according to the probability weights derived from this sampling frame.

<sup>2</sup> We selected these questions based on whether religions and religious denominations in the United States often provide normative injunctions which regulate these activities or attitudes, in part because they depart

a mix of attitudes and behaviors. While many religions also forbid the use of prostitutes, the LCA did not include this variable since the number of women who ever paid for sex in the sample was very small compared to men (male, 25.2 %; female, 0.3 %). We also did not include any variable on the use of prophylactics, since most of the participants were a long-term relationship (61.9 %) and only two female participants of the 1371 who answered the question reported that they were still menstruating (0.2 %).

The LCA was fit in MPlus 6.1 statistical software using Full Information Maximum Likelihood (FIML) in order to assuage problems with missing data (Muthen & Muthen, 1998–2010).<sup>3</sup> FIML accomplishes this by using all information which is available for every participant without imputing values (Enders, 2001; Raykov, 2005). Unless a participant was missing information on all six variables, the LCA will attempt to classify him or her using whatever information is available. In simulations, FIML also has proven to be a more consistent estimator of model parameters than listwise deletion or pairwise deletion, recommending it for use here (Enders, 2001).

After identifying the best-fitting LCA model, and assigning participants to classes, we then proceeded through two stages. First, we predict membership in the latent classes in order to examine whether religious factors predict membership in high-influence classes. We controlled for self-reported conservative political orientation, age, gender, race, education, and marital status, since these may confound the relationship between other religious factors and class membership. We also included a control for functional health since one of our variables, never masturbating, could also be the result of deficits in health. Our measure of functional health was a composite measure of difficulties with activities of daily living (Lawton & Brody, 1969). The variable was a count of the number of difficulties with any of the following: walking across a room; walking one block; dressing oneself; bathing; eating; getting in and out of bed; using the toilet; driving a car during daytime; driving a car at night.

Following this exercise, we used class membership to predict a number of outcomes related to sexual well-being. These outcomes included whether the participant found his or her current relationship physically pleasurable, and whether he or she found the relationship emotionally satisfying. We also examined whether the participant had sex with his or her partner at least once a week (coital frequency), whether the participant was having sex as often as he or she would like, and if the participant

thought about sex every day or more. Also, we predicted the participant's agreement with the statement "I would not have sex with someone unless I was in love with them." The logistic regression used in this analysis included controls for gender, race, years of education, conservative political orientation, age, marital status, denomination, functional health status, attendance at services, and intrinsic religiosity. We also included an influence-gender interaction term. Our key independent variable will be latent class membership. All analyses used NSHAP sampling weights. Because of the difficulties with interpreting a large number of outcomes at once, we will use the "clarify" software package for Stata (Tomz, Wittenberg, & King, 1999). As its name suggests, the "clarify" package is meant to render the effect sizes in models more intelligible, by turning odds ratios into changes in the predicted probability of some outcome.<sup>4</sup>

## Results

### Descriptive Statistics

Table 1 shows descriptive statistics for the variables used in this analysis. For the question of whether religion affected the participant's sexual behavior, we show the overall mean and SD for the entire scale (ranging from 1 to 4 where 1 is "strongly disagree"), then the proportion of participants who chose each option. We can see that responses were clustered near the high end of the scale. Most participants either agreed or strongly agreed with the statement and less than thirty percent disagree. Of those who were asked whether they refused sex for religious reasons, only 11.8 % said yes. The proportions for the other variables in the LCA were much higher, with 96 % of the sample reporting never having a same sex partner. The number of people who never masturbated in the sample was also quite high, at over 60 % (47.9 % of men and 75.6 % of women said that they did not masturbate, results not shown).

Turning to predictors and controls, it can be seen that the proportions are what we might expect for this age range. The mean age was 68, and about one third of the sample was politically conservative. The religiosity variables provide some insight into

Footnote 2 continued  
from treating sex as a procreational rather than recreational activity (Laumann et al., 1994).

<sup>3</sup> Only 1440 participants answered whether they refused sex for the sake of their religious beliefs because only participants who had not had sex in the past 3 months were asked this question. We would not want to limit our analysis only to those participants who have not had sex in the past three months; FIML allows us to include all participants in our LCA, regardless of whether they were asked this question.

<sup>4</sup> The package does this by drawing simulations of the model parameters from their asymptotic sampling distribution. When the regression has a logit link function, the distribution is a multivariate normal with a mean equal to the parameter estimates and a variance equal to the variance-covariance matrix of the parameter estimates. It then creates multiple simulations in order to produce distributions for these parameter estimates, and thus confidence intervals. Then the program converts the simulated parameters into predicted probabilities and first differences in order to simplify the interpretation of the model. The only restriction is that all variables in the model must be set to specific values. Because predicted probabilities have to be computed after setting the controls to some value, these probabilities refer only to a certain portion of the population. These are the modal values for each of the variables. Years of education was set to 12 because this is the median value for this variable.

**Table 1** Descriptive statistics (n = 3005)

Variable list	Range	M	SD
Variables in the latent class analysis			
Religion affects sexual behavior	1–4	3.00	0.97
Strongly disagree	(1)	0.08	–
Disagree	(2)	0.21	–
Agree	(3)	0.31	–
Strongly agree	(4)	0.38	–
Refused sex for religious reasons	0 or 1	0.11	0.32
Never masturbates	0 or 1	0.61	0.48
Never had a same-sex partner	0 or 1	0.96	0.19
Infidelity is always wrong	0 or 1	0.81	0.39
Never had a divorce	0 or 1	0.65	0.47
Predictors and controls			
Female	0 or 1	0.51	0.50
Race/ethnicity	1–3		
Non-Hispanic White	(1)	0.80	0.39
Non-Hispanic Black	(2)	0.09	0.29
Hispanic	(3)	0.06	0.25
Politically conservative	0 or 1	0.30	0.46
Years of education	0–32	13.03	3.66
Age	57–85	68.02	7.69
Married	0 or 1	0.66	0.47
Functional health problems	0–9	0.83	1.57
Religion			
Services at least once a week	0 or 1	0.44	0.49
Carries rel. beliefs into other areas of life	0 or 1	0.79	0.40
Catholic	0 or 1	0.27	0.44
Baptist	0 or 1	0.19	0.39
Lutheran	0 or 1	0.07	0.26
Outcomes			
Finds current relat. physically pleasurable	0 or 1	0.70	0.45
Finds current relat. emotionally satisfying	0 or 1	0.70	0.45
Has sex with partner at least once a week	0 or 1	0.33	0.47
Sex not as often as preferred	0 or 1	0.35	0.47
Sex is more often than preferred	0 or 1	0.07	0.26
Thinks about sex every day or more	0 or 1	0.16	0.37
Would not have sex unless in love	0 or 1	0.75	0.42

the religious lives of adults at older ages. A little less than half of these adults attended church at least once a week. Almost 80 % of the participants agreed with the statement that they carry their religious beliefs into other areas of their lives. Furthermore, regarding denomination, the modal denomination was Catholic (85.16 % of the sample was Christian, and 51 participants, or 1.7 %, were Jewish). Regarding the outcomes of interest in this analysis, like other age groups in the United States, the sample appeared to be happy with their relationships (Laumann et al., 1994). About 70 % each said that their current relationship was very or extremely physically pleasurable, and almost exactly the

same number said that they found their relationships emotionally satisfying (the correlation between these two variables is 0.58). Finally, note that about three-quarters of these participants said they would not have sex unless they were in love.

### Latent Class Analysis

In selecting the correct number of latent classes, we relied on the Bayesian Information Criterion (BIC), which is considered the most reliable test of model fit (Nylund et al., 2007). We settled on two classes, which we show in Table 2. The

most striking finding in this component of the analysis was that the attitudinal and behavioral variables move together, and that there was no class which is typified by religious attitudes without religious behavior. Almost two-thirds of the first class strongly agreed with the statement that his or her religion affects sexual behavior, and all of the other variables in the LCA suggested that this influence of religion on sexual expression extended to both attitudes and behavior. The odds of refusing sex for religious reasons were 77 times greater in the first class compared to the second. The odds of never masturbating were 10 times greater, and 26 times greater for saying that infidelity was always wrong. Three quarters of the first class were never divorced (note that individuals who were never married would have had their values set to missing, and so were excluded from the risk pool). Overall, it appears that the U.S. population of older adults could be bifurcated into two classes: one for whom religion seems to play a large role in influencing their normative orientation towards sexual expression, and another for whom the influence was much reduced. Accordingly, we label the first class as the “high influence” class and the second “low influence.” Note as well that there were almost twice as many people in the high influence class, further solidifying our impression of this age group as highly religious in their sexual expression.<sup>5</sup>

We can break down membership in the high influence class according to denomination in order to see whether any denomination has an exclusive or overwhelming claim on class membership. In Fig. 1, denominations were arrayed from left to right in terms of the proportion within each denomination that was placed in the high influence class. While there was a clear difference between the very lowest and the very highest bars, many of the intermediate denominations have confidence interval bars which overlap, indicating that we cannot easily distinguish between them in terms of how strongly their members’ religions influenced their sexual expression. Some of this is a matter of small sample size, because there were only 50 Mormons in the sample. However, for others with larger proportions of the sample, such as Lutherans, there was some reason to suspect that they really are no different from Methodists, Catholics, Congregationalists or Presbyterians. Given that most of the bars’ confidence intervals intersected the gridlines at 0.60, it appears rare that more than 60 % of any denomination in the United States, within this age range, was highly-influenced by religion in their sexual expression.<sup>6</sup>

<sup>5</sup> Because we wanted to ensure that we were measuring religious influence, we also re-estimated the LCA excluding masturbation and divorce. This LCA also produced two classes of high and low religious influence, and 97.3 % of cases that were classified as “high influence” in the above LCA were classified as “high influence” in the second LCA. Furthermore, we re-ran all analyses in this article using results from the second LCA, and the results were very similar.

<sup>6</sup> In fact, we find that if the overall proportion of the sample in the high influence class is 0.63, the SD of this proportion is 0.48, decomposable into a between-denomination SD of 0.19, and a within-denomination

In Table 3, we predicted membership in the high influence class in three models. The first model included demographic variables, political identification, and functional health problems. The second model included religious variables, and the third introduced both sets of variables into the same model. We approached modeling in this manner to see whether the religious variables reduced the demographic variables to non-significance.

In Model 1, the largest odds ratio predicting membership in the high influence class was being female. Functional health problems were not significant and neither was Hispanic ethnicity. Note that not all of these variables were on the same scale; while the odds ratio for years of education seems small, it will quickly compound with each year of education to produce large differences. Most of the coefficients were highly significant as well, including a report that one was politically conservative.

In Model 2, attending services at least once a week and agreeing that one carries one’s religious beliefs into other areas of one’s life were also very strong predictors of membership in the high influence class. Being a Lutheran was not significantly associated with membership in the high influence class, but being Catholic and Baptist, in particular, was, net of religious participation and intrinsic religiosity. Denominations therefore predict membership in the high influence class, but the effects were still notably smaller than participation and intrinsic religiosity.

Adding the two sets of variables together reduced race to non-significance, and lessened the effect of political conservatism. The religious variables all remained large and highly significant, as did gender. We tested whether or not the religious variables’ coefficients were significantly different from all the other variables in the model using adjusted Wald tests. We found that the coefficient for frequently attending services was significantly different from every other coefficient at  $p < .05$ , except intrinsic religiosity. Intrinsic religiosity was also significantly different from every other coefficient, except attendance. These findings suggest that membership in the LCA is a matter of religious influence and that this influence was not confined to any particular denomination.

## Analysis of Outcomes

Table 4 is divided into two panels. Panel A shows differences between those in the low and the high influence classes for men. Panel B shows the same for women. Both panels were generated using the same model, which included an interaction term between high influence class membership and gender (female). We also explored whether there were any interactions by age, but did not find any for these outcomes. Additionally, we re-ran

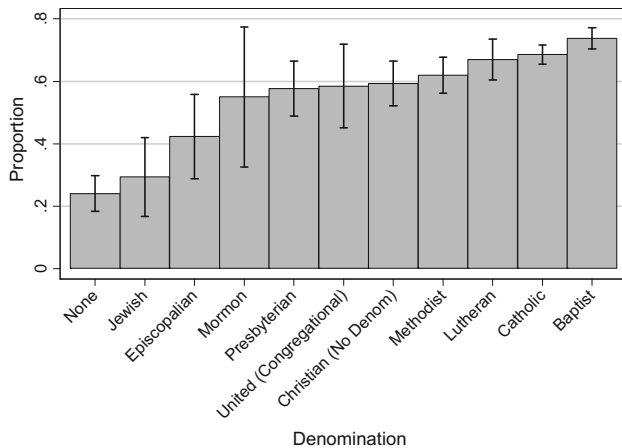
Footnote 6 continued  
standard deviation of 0.46. These data suggest a great deal of within-denomination variability.

**Table 2** Religious influence on normative orientation toward sex, expressed as proportions within latent classes

Count / (Percent of Sample)	High Influence	Low Influence	Odds Ratio High to Low
	1903 (63.3%)	1102 (36.7%)	
	Proportion w/in Class	Proportion w/in Class	
<b>Religion Affects Sexual Behavior</b>			
Strongly Disagree	0.001	0.208	0.004
Disagree	0.032	0.503	0.033
Agree	0.331	0.288	1.223
Strongly Agree	0.636	0.001	1745.505
Refused Sex for Religious Reasons	0.189	0.003	77.449 ***
Never Masturbates	0.813	0.319	9.281 ***
Never Had a Same-Sex Partner	0.977	0.932	3.100 ***
Infidelity is Always Wrong	0.971	0.561	26.201 ***
Never Had a Divorce	0.742	0.515	2.708 ***

The significance stars associated with the odds ratios in this table were determined by *t* test for the dichotomous items, but a Chi square test for the ordinal item

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$



**Fig. 1** Proportion in high influence class by denomination, with 95 % confidence interval bands

these analyses only for participants who reported a romantic/sexual partner and also found very similar results.

Turning attention towards gender differences between the two panels, men in the high influence class were more likely to say that they found their current relationship to be physically pleasurable and emotionally satisfying compared to men in the low influence class. This was not true for women, and class

membership did not significantly distinguish between women in terms of these outcomes. While the gains for men on physical pleasure were modest, gains on emotional satisfaction were almost twice as large, starting from approximately the same baseline probability of agreement. Men also were less likely to say that they think about sex every day if they were members of the high influence class. Finally, note the enormous effect of class membership on whether men agreed with the statement that they would only have sex if they were in love with their partners—an increase of 25%. There was a similar increase for women, but it is less than half the size. Other effect sizes were modestly large in comparison.

Both men and women in the high influence class were less likely to say that they were not having sex as often as they would like, compared to the low influence class. While this could suggest that both men and women were benefiting, women in the high influence class were also more likely to say that they were having sex *more often* than they would like. In other words, women were probably less likely to say that they are not having enough sex because they were having too much, and possibly not the right amount. While the change in the probability of agreement with this statement was small (0.038), the difference was significant, and because the probability of agreement was itself small for the low influence class (0.034), this means that women in

**Table 3** Predicting membership in high influence class (logit link; odds ratios)

	Model 1	Model 2	Model 3
Female	2.61 ***		2.02 ***
Race/ethnicity			
Non-Hispanic Black	1.94 ***		1.15
Hispanic	1.01		0.85
Politically conservative	2.33 ***		1.75 **
Years of education	0.93 ***		0.93 ***
Age (5 year intervals)	1.21 ***		1.17 ***
Currently married	1.96 ***		1.71 ***
Functional health problems	0.96		0.97
Religion			
Religious participation		3.92 ***	3.62 ***
Intrinsic religiosity		4.17 ***	3.63 ***
Catholic		1.70 ***	1.80 **
Baptist		2.27 ***	2.19 ***
Lutheran		1.36	1.52
Constant	0.60	0.21 ***	0.16 ***
N	2246	2310	2198

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**Table 4** (a) Difference between men in the low influence class (INF = 0) and men in the high influence class (INF = 1) on key outcomes and (b) Difference between women in the low influence class (INF = 0) and women in the high influence class (INF = 1) on key outcomes

Outcome	Pr(Y = 1   INF = 0)	Pr(Y = 1   INF = 1)	$\Delta$ Pr(Y = 1)
Panel (a)			
Current relat. physically pleasurable	0.779	0.843	+0.064*
Current relat. emotionally satisfying	0.790	0.901	+0.111**
Has sex with partner at least once a week	0.349	0.359	+0.010
Sex is not as often as preferred	0.479	0.335	-0.144**
Sex is more often than preferred	0.017	0.024	+0.007
Thinks about sex every day	0.292	0.214	-0.078**
Would not have sex unless in love	0.656	0.904	+0.248**
Panel (b)			
Current relat. physically pleasurable	0.724	0.674	-0.050
Current relat. emotionally satisfying	0.710	0.743	+0.033
Has sex with partner at least once a week	0.397	0.319	-0.078
Sex is not as often as preferred	0.298	0.211	-0.087*
Sex is more often than preferred	0.034	0.072	+0.038*
Thinks about sex every day	0.051	0.053	+0.002
Would not have sex unless in love	0.852	0.963	+0.111**

Probabilities computed for white, Protestant, politically moderate, married persons between 61 and 65 years old, with 12 years of education, no functional health problems who are intrinsically religious and attend church once a week

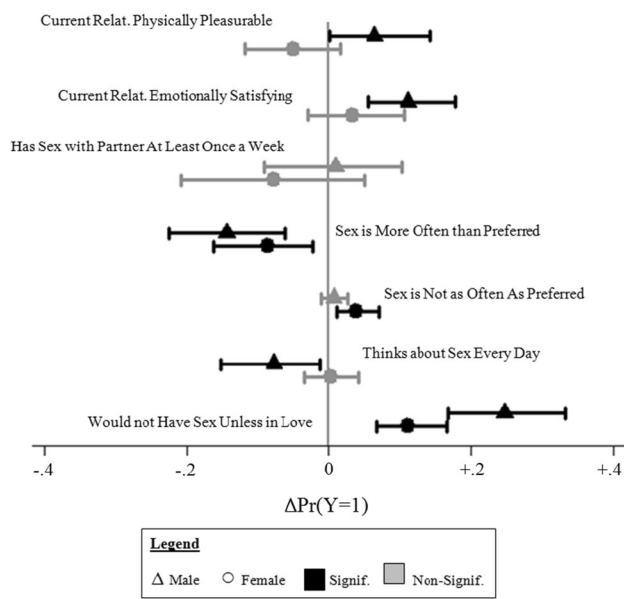
\*  $p < .05$ ; \*\*  $p < .01$

the high-influence class were actually about twice as likely to agree with the statement as women in the low-influence class. However, it should be noted that this was a small effect size, especially when compared to results for whether participants agreed with the

statement that they would only have sex if they were in love with their partners.

We can describe the gender differences even more clearly in Fig. 2, which plots the effect sizes from Table 4. Around





**Fig. 2** Changes in outcomes, with 95 % confidence interval bands for men and women

each effect size, we placed 95 % confidence interval bands. The point estimates of the effect were marked with triangles for men and circles for women. When the confidence interval bands cross the central vertical axis, zero, we shaded the bands with gray in order to indicate that we could not distinguish this effect from zero at that confidence level. When the confidence interval band for one gender crossed the line at zero, and another did not, we considered this to be a significant gender difference between men and women. This figure demonstrates that some of the apparent gender differences described above were not so easily distinguishable from one another. There appears to be no difference between men and women in agreeing that they are not having sex as often as they would like. However, as we observed, this response may mean something different for men and women. Finally, note the differences between men and women in terms of their probability of saying that they would not have sex with anyone they were not in love with—the confidence interval bands for the effect on women and the effect on men did not overlap, although they were very close.

## Discussion

We initially hypothesized that there would be some intermediary class that would indicate the influence of religion, but only on beliefs and not practices. No such class emerged, and it seems that never having a same-sex partner, condemning infidelity, never divorcing, refusing sex for religious reasons, never masturbating, and agreeing with the statement that religion affects one's sexual behavior all track together. Moreover, no completely “secular” class emerged from the analysis. One-

third of the participants in the low influence class still agreed with the statement that their religion affected their sexual behavior, and few completely disagreed. The very lower proportion of participants who refused sex for religious reasons in the low influence class suggests that older adults are not divided between “religious” and “non-religious,” in terms of the impact of religion on their sexual expression. Rather, the two most salient categories are strong and weak influence.

Figure 1 indicates that while it is rare to find people without a religious affiliation in the high influence class, it is by no means impossible. Nearly twenty percent of people who answered “none” when asked their religious affiliation were also classified as being highly influenced by religion. We should therefore avoid interpreting “none” as “atheist” or “agnostic.” Furthermore, large percentages of people who affiliated themselves with a specific religious tradition were *not* in the high influence class, and subsequent analyses revealed that there is much more variability within denominations than between. Also, our regression analyses showed that denomination mattered less than religious participation or intrinsic religiosity.

We also found that class membership mattered more for men than for women in terms of improving satisfaction, in spite of the fact that more women were in the high-influence class compared to men. While we do not make a causal argument in this paper, as a purely descriptive exercise our findings suggest that women are more likely to be heavily-influenced by religion in their sexual lives, but men are more likely to reap the benefits of that influence. Part of this may be that men are more likely to be risk-takers, and thus step outside the bounds of accepted sexual practice (Miller & Hoffmann, 1995). Religion could provide a counterbalance to antisocial or reckless sexual expression, bringing men and women closer together in terms of their sexual profiles. We consider this to be the key finding of the paper, and a contribution to our understanding of religion and sexual life in older adulthood, as well as religion and sexual life more broadly. Specifically, our literature review suggested two contradictory expectations about the extent to which the relationship between religious influence and sexual expression would differ by gender, one which emphasized greater benefits for men, and another that emphasized greater benefits for women. Our results indicate that the benefits of long-term relationships may be greater for men.

Important for this finding, neither men nor women in the high influence class seem to be having more sex than men and women in the low influence class, but men are more likely to be happy with the amount of sex they are having, while women are more likely to feel as if it is too much. It could be the case that women in the high influence class would prefer to be having less sex than women in the low influence class, but are less able to avoid or refuse sex because religious norms typically dictate that women should be compliant with their husbands (Levitt & Ware, 2006). However we have no information on whether highly-influenced women are partners with highly-influenced

men. We cannot ascertain which account is correct, but our data indicate that women in the high-influence class think about sex as often as women in the low-influence class (so women in the high-influence class do not have more subdued sex drives).

Why men in the high influence class would be more satisfied with the same amount of sex as men in the low influence class requires further explication. We see that men in the high influence class are less likely to say that they think about sex every day or more. While this could be social desirability bias, if we take them at their word then it could be that individuals who are highly influenced by religion in their sexual expression are also influenced by it in terms of sexual ideation. Individuals with high religiosity may think differently about the world, and come to see it suffused with spiritual meaning (Underwood & Teresi, 2002). If so, sex may not be on the male participants' minds as much, and the desire for sex felt less strongly than less-religious men. Men in the high influence class also may feel that there is a proper place for sex, namely when it is motivated by genuine love for their partners. Note that we saw a very large effect of high-influence class membership on whether men would only have sex with those they love. This corresponds with the mechanism laid out in our literature review, that religious influence focuses sexual affection on the marital dyad.

## Conclusions

This paper was concerned with the role of religious influence on quality of sexual life. Our major finding was that this influence, where it exists, varies by gender. The gender differences not only conform to previous findings, but also suggest a broader influence of religion on sexuality, compared to previous, risk-focused studies. We concentrated on aspects of religion which provide particular, doctrine-bound guidelines for conduct. Other studies interested in examining religious social processes may benefit from attention to these guidelines and the extent to which they shape social choices and social interaction.

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