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Church, Sex, and Communal Bonds: How Religion and Sexual Activity Affect the Mental Health of Older Adults

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How does physical, emotional, and spiritual intimacy affect the mental health of older adults? Can participation in collective religious gatherings or sexual activity provide older adults with a sense of acceptance and belonging to a community? Due to the potential ability of these two activities to spark an individual's spirit through social interaction, I analyze how both religion and sexual activity affect states of depression among older adults. I propose that church attendance and sexual activity negatively correlate with levels of depression because they both provide meaning and a sense of belonging in relation to the ideas of collective effervescence as proposed by Emile Durkheim. To probe this hypothesis, I analyze data from NSHAP, the National Social Life, Health, and Aging Project, a nationally representative survey of adults ages 57-85 about their overall mental, physical, and sexual health and practices. I found that those who attend church services often and those who engage in sexual activity in combination with other forms of intimacy lower depression. These results suggest that both religious attendance and sexual activity can tie an individual to a larger community in similar ways.

America's aged population often suffers from symptoms of low to acute depression. Many older adults experience an increase of physical ailments, a decrease of mobility, and loss of friends, family members and/or spouse due to age or sickness. Such hardships may tax their states of mental health, leading to anxiety, depression, and even suicide. The Surgeon General reports that 8-20% of older adults suffer depressive symptoms (Surgeon General 2009). Similarly alarming, this depression can lead to suicide as adults 65 and older have the highest rates of suicide in the United States. (Surgeon General 2009). Yet, these national statistics remain low; depression is under-diagnosed among the elderly. Many primary-care physicians perceive depression as a normal effect of aging and therefore, "the majority of people aged 65 or older struggling to cope with moderate to severe depression go undiagnosed and untreated (Bower 1991).

Although under-diagnosed, researchers still note the prevalence of depressive symptoms among older adults and look for any activities that could counteract or mediate the existence or degree of depression or other mental health issues among the elderly.

Attempting to find solutions, many researchers have focused upon the role of religion in helping older people cope with mental health issues. According to a recently conducted survey of 35,000 adults by the Pew Research Center (2009), 69% of adults ages 65 and older find religion important in their lives in comparison with 54% of the total population. 53% of older adults attend religious services at least once a week in comparison with 38% of the total population (Religious Landscape Survey 2009). Because many older Americans believe in the importance of religion, they tend to retain their ties to religious communities above all other social commitments (Ardelt 2006). Experts exploring this topic have posited many suggestions as to why religion, whether through communal practices or individual beliefs, influence mental well-being. The majority concludes religion has the ability to decrease depression but this body of research has not arrived at any consensus on why or how (Cohen and Koenig 2003: 217).

Unlike for religion, most researchers do not acknowledge an association between sexual activity and older adults' mental health. This is perhaps due to the stigma that older people do not frequently participate in sexual activities nor have the desire to (Gott and Hinchliff 2003:1617). Researchers and the public often assume the importance of sex decreases with age and does not influence the elderly in ways it might younger people (Weeks 2002:233). However, many experts have formed a connection between sex and mental health for younger adults. For example, one 2003 study of the well-being of 1000 employed women found that they rated sex as providing the largest amount of happiness out of any other activity, including socializing, relaxing, and eating meals (Kahneman et al 2003: 432). Another much larger survey of 27,500 men and women ages 40-80 all over the world similarly found that "there is consistent evidence and association

between sexual activity and satisfaction, on the one hand, and aspects of emotional well-being, partner satisfaction and overall quality of life on the other" (Rosen and Bachman 2008: 492). Therefore, due to this potential link between sex and well-being in general, studying the sexuality and sexual activity of older Americans is an essential component to understanding issues of mental health affecting that population.

I propose that religion and sexual activity both serve to decrease depression in older adults. I hypothesize this is because both can provide a sense of union with other human beings and promote a feeling of belonging through group or physical intimacy. Due to the self-rated importance of religion in the lives of many older adults, a natural desire for human companionship, and the common occurrence of depressive symptoms among the elderly population, I am interested in studying how religion and sexual activity influence states of mental health. To examine these potential relationships, I analyze a recent large-scale, cross-sectional data set, the *National Social Life Health, and Aging Project (NSHAP)* (2005).

Theory and Literature Review

Older people often turn to religion to cope with physical or emotional problems associated with age. These problems include loss of a spouse, decreased mobility, and loss of independence. As earlier stated, analysts found that 69% of older Americans say religion is very important in their lives (Religious Landscape Survey 2009). Also older people "choose and regulate their social interactions more carefully than younger people" and tend to hold on to the interactions within their religious communities (Ardelt 2006:187). Because older adults tend to elevate the importance of religion, and because

they maintain their ties to religious communities, much literature focuses on how and in what capacities older adults employ religion to cope with problems associated with aging.

Most of the literature discussing religion and mental health find positive associations between the two (Cohen and Koenig 2003:217). The authors of a major literature review on religion and mental health in the elderly stated they "believe that the evidence for positive religion-health effects is much more persuasive than evidence for negative effects, of which there is very little, especially in older adults" (Cohen and Koenig 2003:). However, researchers differ on how and to what extent this association occurs. Some focus on the power of individual prayer and belief, others on the social and communal aspect.

When emphasizing more individual aspects of religion, experts concentrate on the coping power of belief and prayer. In a study conduced in 1997, 60% of chronic care nursing home residents who participated used religion to a large extent as a coping mechanism for their ailments. In 1998, in a sample of medical patients over 60, 90% said they employed religion to help them cope with illness to at least a moderate extent. Some of this coping includes emotional comfort, understanding illness or physical suffering, and acceptance of death (Cohen and Koenig 2003:).

When underlying the social aspects of religion, the literature highlights church community and support as key components of religion's mental health benefits. For example, one researcher finds that "the importance of shared religious activities is indicated by the fact that older people retain church memberships longer than memberships in other community organizations, and they perceive significant social and psychological benefits to religious participation" (Ardelt 2006:185). Being part of a

religious community may provide worshippers with emotional support, avenues for friendship, activities in which to participate, and a feeling of belonging to a group outside the family. Also in a study conducted in 1991, well-being of older adults was associated with family and church support (Ardelt 2006:186). Likewise, researchers found that among Catholics, Protestants, and Jews, "social support obtained through religious sources correlated to a similar extent with measures of happiness and life satisfaction" (Cohen and Koenig 2003:232).

While researchers have previously tested multiple religious variables, the power of sexual activity for mediating depression among the elderly has not often been discussed due to the assumption of decreasing relevance of sex with age (DeLamater 2005). Yet contrary to some stereotypes, many adults engage in sexual activity throughout their older years, some very frequently. In recognition of both the lack of research and prevailing stereotypes on older adults sexual lives, the American Association of Retired Persons (AARP) investigated this issue discovering "that sex contributes to general well-being and happiness, even in older Americans, and is an important element of quality of life for older adults" (Rosen and Bachmann 2008:238). 66% of men and 48% of women admitted that a satisfying sex life correlated with their quality of life. This study provides evidence for the importance of this topic, yet still stands as one of the few to explore it.

Much of the research that does exists connecting sex and well-being addresses the connection between marriage and sexual activity for older adults. Many older adults view sexual intimacy as most fitting in a married relationship and "marriage is the most common social arrangement within which normative sexual activity takes place"

(DeLamater 2005:141). Furthermore, one researcher found that "adult psychological health was clearly associated with sexual pleasure, and very consistently with marital sexual compatibility" (Weeks 2002:235). Because of the connection between love and sex for many married couples, sex is assumed to be an indication of the intimacy and union of the married partners. It can also be a physical sign of emotional support and connection that spouses provide each other. In addition, a large-scale data set collected from the US General Social Surveys (1982–91) showed a significant relation between marital status and perceived happiness and well-being (Weeks 2002:237). However, concentrating exclusively on marriage can pose problems; only focusing on marital sexual relationships excludes the many non-married or widowed older adults who still engage in sexual activity as well as married couples who do not participate in much or any sexual activity.

Yet regardless of marital status, sexual activity can indicate emotional love and connection with another human. Due to the current pace of life, many people feel a lack of social connectedness. This is exasperated in older adults who also lack opportunities for sexual expression and activity, making them feel "a lack of tenderness, insufficient loving bodily contact and loneliness" (Weeks 2002:234). Therefore, we can ask if an increase in sexual activity and expression would relieve their loneliness and allow them to feel tenderness through contact with another individual.

These two independent variables, sexual activity and religious activity, may be drawn together with existing theory in a few ways, but I find that the connection most salient is that they both provide practitioners with a connection to a greater communal whole. Emile Durkheim's theories on rituals and *collective effervescence* accurately

describe the capacity of both activities to decrease depression. In much of his writing, Durkheim explores the social meaning of religion and notes that religious practices draw one away from the strict individualistic world one would otherwise occupy to unite one into a community (Durkheim 2001). Durkheim posits that adhering to common beliefs through the sharing of rituals unites people into a group of shared religious belonging. This union may spark a state of passion, enthusiasm, selfless commitment, and intimacy which he terms collective effervescence (Durkheim 2001:159).

This collective effervescence "bring[s] all those who share them into a more intimate and more dynamic relationship" with each other (Olaveson 2001:100). It "increases the intimacy of human relationships, and makes them more human, as opposed to the partisan, self interested nature of material existence that can develop in social structure" (Olaveson 2001:110). The individual is taken outside himself and his own desires to unite with the community around him and with a spiritual force (Olaveson 2001:101). In addition, Durkheim describes this group effervescence as a source of energy much like "contact with a source of heat or electricity to warm or electrify it" (Durkheim 2001:314). In summary, ritual can lead to collective effervescence: a state of passion and enthusiasm in which an individual is united in a more intimate spiritual, physical, and emotional relationship with those around him/her.

Both the themes of intimate union and communal electricity can also apply to the examination of the power of sexual activity. Sexual activity, while certainly providing for physical pleasure of the body, can allow one to leave behind his or her individual identity to experience union with another human and *perhaps* commitment to a greater human community. In other words, for an older individual, who may feel an increase of isolation

from the outside world or former social networks, participating in sexual intimacy with another person may provide him or her with a sense of acceptance and belonging to society. This is different than religious participation in the obvious way that a religious service includes a multitude of people and sexual intercourse usually only involves a pair. However, both religious participation and sexual activity serve to unite an individual with a greater whole.

Emphasizing this idea, one author writes, "the experience of collective effervescence... is a fundamental human need which acts to counterbalance this alienation" (the alienation inherent in societal structure) (Olaveson 2001:107). Hence, because many older individuals become more alienated from society as they leave the workforce, become less mobile, and lose family and friends, an experience of collective effervescence, whether initiated by religious or sexual means, can counteract alienation from society. In addition, sexual activity can form a spark in someone's spirit, much like the spark Durkheim describes in collective effervescence. It can energize someone's spirit as much as his or her body, and make him or her feel alive and thus part of society.

Therefore given the previous research I outlined above, the limitations of this research, and Durkheim's theories on ritual practices and collective effervescence, I propose that both religious attendance and sexual activity decrease levels of depression. I hypothesize also that the positive effects of religious involvement will decrease with controls for social support, since much of the benefits of church attendance may perform the same function of larger social networks. I imagine that the collective aspects of religion measured in church attendance will have a greater effect than the salience of beliefs, which is a more individualistic aspect of the religious experience. I would also

hypothesize that the more affectionate variables of sexual activity, such as hugging and kissing, will have a greater effect than just the physical pleasure associated with sex because these affectionate actions may give the individual a greater sense of belonging.

Methods

The *National Social Life, Health, and Aging Project* (NSHAP) gathered by researchers at the University of Chicago between 2005 and 2006, provides data for this analysis[1]. The data covers possible relationships between aging and mental, physical, and sexual health. Although NSHAP is a longitudinal study, the second stage will not be completed until 2011, thus, I use the data cross-sectionally. This national study surveys 3,005 adults ages 57-85 and is set up in three stages: an in-depth in-person questionnaire interview, biomeasure collection, and a follow-up self-administered questionnaire. The questions asked in the interview survey demographics, religion, social networks, physical health, sexual activity and health, medical history, and mental health. Following the interview, each respondent was given a questionnaire containing additional questions on social relationships, sex, physical health, emotional health, and physical contact to be filled in and returned at a later date. 84% of the respondents returned it, which is a remarkably high response rate.

This data sample applies well to my research question both in size and content. First of all, it is a large, national sample composed of a diversity of respondents and demographics. Secondly, it asks a wide variety of questions concerning religion, sexuality, mental health, physical stress, and social networks. Finally, it employs the CES-D scale, an established measure of depression considered reliable (Radloff 1977:1).

[1] http://www.norc.org/nshap

NSHAP allows me to combine desired variables unlike any other data set I have come across because it is composed of so many elements relating to my topic, giving me the ability to explore the difference in impacts of religious beliefs and participation and sexual physical and emotional satisfaction on depression.

Variables

Depression

To calculate mental health, I rely on the Center for Epidemiology Studies depression scale (CES-D), comprised of 11 items, each measuring a symptom of depression.[2] While the study includes other measures of mental health, I focus exclusively on the CES-D due to its established reliability. It is normally distributed.

Religion

I use two measures of religiosity: frequency of religious attendance and the extent to which the individual carries over his/her beliefs into other dealings of life. I measure religious attendance with a series of dummy variables, comparing those who attend religious services often (at least once a week), occasionally (once a month), and rarely (a few times a year) to those who have not attended religious services in the past year. Religious importance in everyday life was measured with the statement, "I try hard to carry my religious beliefs into all my other dealings of life…" I measure this with a series

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[2] Each of the 11 symptoms were measured in "never", "hardly ever", "some of the time", or "most of the time" during the last week. "Never" was given one point, while "most of the time" was given four points.

- I felt depressed.
- I felt that everything I did was an effort.
- My sleep was restless.
- I was happy.
- I felt lonely.
- People were unfriendly.
- I enjoyed life.
- I did not feel like eating. My appetite was poor.
- I felt sad.
- I felt that people disliked me.
- I could not get going.

of dummy variables, comparing those who strongly agree, agree, disagree, or strongly disagree with the above statement.

Sexual Activity

I analyze sexual activity by one main variable initially, and then examine how other sexual variables affect it. This main variable measures whether or not the respondent had sex in the past year, which was coded 1 for "yes" and 0 for "no". This question was not asked directly, but was coded by the researchers from the responses to questions in the survey probing specific sexual partners.

Controls

I include in this analysis the usual controls of age, gender, race (using a series of dummy variables with white as the reference group), education, household income (as measured by dummy variables with income between $25,000 and $50,000 as the reference group and including a dummy variable for respondents who did not provide a household income measure) and marital status.

I incorporate also two other controls important to studying both religion and sexuality: social support and functional health. While many questions attempted to measure the degree of the respondents' social support, two questions serve as single item measures: the number of family members and number of friends[3]. These were measured 0 "none" to 3 "four or more". This control is necessary because I hypothesize most benefits of religion and sexual activity come from close contact with others. Functional health was measured in both self-assessment of physical health and assessment of mobility by the ability to walk around the block. Physical health was measured between 0 "poor" and 5

[3] I tested many other variables of social support, including that of friends, family, and spouse before running the multiple regression, but I found that only having four or more friends or family significantly related to mental health, and thus only included these measures of social support. No multi-item scale was sufficiently better.

"excellent", which I recode between 0 "poor" and 1 "good" in which any answer "fair" to "excellent" was labeled "good". Mobility was measured by 0 "easy" to 3 "unable", which I recode into 0 "easy" or 1 "hard". This control accounts for people whose physical condition limits them from social gathering or sexual activity.

Finally I include two controls for sexual behavior. First I look at whether or not the respondent sleeps in the same bed with another person to determine whether physical closeness explains for the effect of sexual intimacy on lowering depression. Then I use another sexual variable, how often caressing, kissing, or hugging was involved in the sexual intercourse. I recode these responses, which range from always to never, into dummy variables and analyze how never/ rarely doing either or both of these things associated with levels of depression. This control accounts for less self-focused, more mutual sexual behavior.

Analysis

I use ordinary least square regression to analyze the effects of the independent variables on mental health as measured by the CES-D scale. I first test my hypothesis that religious participation lowers depression and does so to a greater extent than beliefs. To do so I analyze how religious participation and beliefs associate with depression and then add a number of control variables for socio-demographic characteristics, physical health, and social support. I also test the interaction between physical health and religious attendance to see if physical well-being correlates with the ability to attend services or the benefits received. Results are reported in Table One. I also test the second part of my hypothesis that sexual activity lowers depression especially due to intimate physical contact and emotional closeness. I then analyze how sexual activity associates with

depression using the above controls. These results are modeled in Table Two. Finally I analyze both sexual activity and religion in the same model, as well as the interaction between sexual activity and religious attendance, to explain if each variable performs a unique function, or if they share a causal influence, i.e. if levels of depression depend on the relationship/interaction of both religion and sex together. These results are shown in Table Three.

Results

In the first model, I assess the effects of religion on levels of depression. Simply by themselves, these two variables correlate highly with lowering depression. Attending services often, attending occasionally, and agreeing strongly with carrying over beliefs were all significant.

Model two adds sociodemographic controls, which results in a modest increase of the effects of attending church often. On the other hand, carrying over beliefs decreases by 43% in this same model. Also in this model, being male and making more than $50,000 a year decreases depression, while having less than a bachelors' degree and making less than $25,000 decreases depression.

Model three demonstrates that social support, including having a partner, accounts for some of the relationship between religion and depression, since the effect of frequent religious attendance decreases by over 20% for attending often and 15% for attending occasionally. Therefore having the support of four or more family members, four or more friends, and a partner are associated with decreased depression. The coefficient of carrying over religious beliefs however did not change in value. Therefore, social support is certainly part of the relationship between religious attendance and depression, but does

not account for as much of it as I expected. Oppositely, carrying over beliefs is not affected, showing that social ties do not influence religious belief to the same extent as religious attendance.

Model four tests controls for physical health and mobility. This test increases the overall fit of the equation and substantially affects the association between religious participation and depression. The effects of religious attendance drop by 32% and carrying over beliefs becomes non-significant. The regression analysis shows physical health and mobility as very significant factors in determining levels of depression. Poor self-rated health increases levels of depression by 3 points, and ease of mobility decreases depression by about one-and-a- half points on the CES-D scale. The positive effects of religion are eliminated for all but those people who participate most often in religion services, and even for those individuals the effects of religious participation decrease greatly.

Because adding physical health is highly significant, I finally test the interaction between self-rated health and church attendance to further explore this connection. The interaction between these two variables is also highly significant, suggesting that people with poor physical health who attend services often receive additional mental health benefits of attendance. In summary, after testing religious variables on levels of depression, religious participation decreases levels of depression and most of the bivariate association is due to the effects of social networks and physical health.

For the second part of testing, I examine the effects of sexual activity on mental health. In model one, the sexual variable of whether or not the respondent had engaged in sexual intercourse in the last year was significant without any controls. In model two

after controlling for socio-demographics, the effect of sexual activity on lowering depression decreases by 25% to a little over one- and-one-half points on the CES-D scale.

In model three, controlling for existence of a partner, which should account for a majority of the older people having sex according to the literature (Weeks 2002), does not greatly influence sexual activity's ability to decrease depression. Adding the control for partner only decreases the effect by 11%, suggesting that sexual activity has an effect independent of having a committed partnership or marriage. It could also imply that even individuals with partners are not necessarily engaging in sexual activity.

Next in model four, controlling for social networks decreases the effect of sexual activity by 12%. This is also not as large of a decrease as I expected according to my hypothesis that controlling for social support would explain a person's connectedness to society. I figured it would account for more of sexual activity's positive association with mental health than it did.

In model five, physical health accounts for much of the association (48%) between sexual activity and mental health, which comes as little surprise since people with better physical health probably have more of an ease and enjoyment of sexual intercourse. However, sex remains significant, which is important to note.

Then I also test if the effects of sexual activity can be accounted for a general close physical relationship, so I test if sleeping in the same bed accounts for part of the correlation between sex and depression levels. This result demonstrates that sharing a bed accounts for 20% of sex's ability to decrease depression, indicating that other forms of close intimate physical contact are essential to sexual relationships. This finding supports

my hypothesis that the connectedness sexual relationships provide between an older individual and another human being is significant in sex's ability to decrease depression.

Following the above test of physical closeness, I analyze a lack of an intimate touching contact of caressing, kissing, and hugging during sex. This variable becomes very significant and actually boosts the effects of sex by 60% from the previous test of sharing a bed. This signifies that while only 10% of the respondents who had engaged in sexual activity did not also hug and kiss, not accounting for these people suppressed the effect of sex, and in fact, there is a substantial increase in depression among this 10%. This finding highlights the loving, touching aspects of sexual activity are essential, not just the physical pleasure.

Finally, I analyze religion and sexual activity together in the same model. When placed together, both variables have similarly negative correlations with depression, and neither becomes insignificant or decreases much in effect from their individual models. I also test the interaction between having sex in the last year and church attendance, which is not significant. Hence, going to church often and having sex will not necessarily lower depression levels more that just doing either one or the other. This could suggest that while neither action can replace the other because they are very distinct activities, they perform similar functions for their practitioners and for this reason combining them will not decrease depression more.

Conclusions

In summary, religious belief and attendance reduce depression among older adults, but the effects of belief decrease with subsequent controls and finally become non-significant with the introduction of physical health variables. The negative

correlation between religious attendance and depression decreases but remains significant throughout the tests. Social networking accounts for 20% of this relationship, which is not as considerable as I expected, but still considerable. Physical health greatly determines religion's salutary associations with mental health, potentially because those who have poor physical health are less likely to attend church but more likely to benefit if they do attend.

Sexual intercourse also has positive effects on older adults' mental health. Especially accounting for this correlation is sleeping in the same bed and being gently intimate by caressing, kissing and hugging during sex. This shows that varied forms of physical closeness and sexual intimacy, especially tender affection, act as essential components in sex's ability to decrease depression.

Therefore, Durkheim's theories on ritual and collective effervescence can certainly relate to both religion and sexual activity. As shown in the results, because religious attendance has a greater effect on lowering depression than carrying over religious beliefs, the communal aspects of religion should be emphasized for their power to promote mental health. Based on my findings that social support controls did decrease the dependent variables' effects on depression, it is possible that religious attendance can unite an individual to a community, making him or her feel a part of a whole. Also because not simply sexual activity, which may denote more individual physical pleasure, but also sleeping in the same bed and even more importantly kissing, hugging, and touching, decrease depression, a sense of union with another person and connectedness holds an important role in sexual relationships of older adults.

I conclude my research by noting the importance of this study in understanding the mental state of older adults and how we can assist them in relieving and preventing depressive symptoms. I can now agree with previous research that religion, especially religious attendance, has a positive association with mental health. Because attendance determines well-being more than belief, I would suggest emphasis be placed on the benefits to gain from communal gather and worship. Knowledge of this can assist religious workers to help older adults maintain ties to their religious communities, socialize with other members of their faith, and provide ways for them to attend services despite physical limitations. Also, because I have shown the ability of sexual activity to lower levels of depression among older adults, especially due to intimate touching and contact, researchers and social service workers should not hesitate to speak about sex and encourage physical contact. If such relations allow the elderly to feel a sense of belonging to a larger community, effort should be made to make sure sexual activity or at least speaking about it among older adults becomes no longer taboo. Older adults should not be stigmatized as incapable or disinterested in engaging in sex, especially because it can so greatly influence their mental well-being.

Finally, the fact that the NSHAP data set includes a multitude of survey questions on sex and sexuality implies some researchers have begun to see the importance of sexual activity among the aging. But researchers must address and test this issue more frequently to gain an understanding of the variety of benefits that sex and physical intimacy can provide for older adults.

TABLE ONE: Estimated Effects of Religious Attendance on Depression Levels of Older Americans: National Social Life, Health, and Aging Project (NSHAP)
Dependent Value: CES-Depression Scale

	Model 1	Model 2	Model 3	Model 4	Model 5
Religious Attendance					
Attend often	-1.316***	-1.408***	-1.135***	-.776**	-.596*
	(.258)	(.252)	(.254)	(.245)	(.249)
Attend occasionally	-.819**	-.882**	-.741**	-.521	-.507
	(.302)	(.292)	(.291)	(.425)	(.278)
Religious Salience					
Carry-over Agree Strongly	-1.612***	-.925*	-.939*	-.691	-.673
	(.459)	(.447)	(.443)	(.425)	(.423)
Carry-over Agree	-.321	-.072	-.112	-.010	-.020
	(.321)	(.313)	(.311)	(.425)	(.287)
Controls					
Sociodemographics					
Age		-.005	-.013	-.017	-.020
		(.014)	(.014)	(.014)	(.014)
Male		-.478*	-.303	-.303	-.332
		(.212)	(.218)	(.209)	(.208)
Black		.517	.301	.208	.214
		(.385)	(.386)	(.369)	(.368)
Hispanic		.693	.489	.583	.608
		(.444)	(.444)	(.425)	(.423)
Other		.927	.733	.425	.373
		(.297)	(.636)	(.608)	(.607)
Education					
(compared to college or more)		2.202***	2.069***	1.262***	1.245***
<highschool		(.364)	(.361)	(.350)	(.349)
		.970***	.296**	.612*	-.582*
highschool		(.297)	(.296)	(.283)	(.283)
		.847**	.860**	.738**	-.776**
Vocation/Assoc		(.276)	(.273)	(.262)	(.261)
Income					
(compared to income $25,000-$50,000)		-1.082***	-.978***	-.801**	-.792**
Household income ≥$50,000		(.307)	(.306)	(.293)	(.292)
		1.265***	.947**	.686*	.756**
Household income ≤$25,000		(.327)	(.247)	(.317)	(.316)
Social Support					
Four or more close family mem			-.572**	-.584**	-.561**
			(.220)	(.211)	(.210)

Four or more close friends			-.937***	-.776***	-.777***
			(.247)	(.237)	(.236)
Partner			-1.019***	-.899***	-.874***
			(.261)	(.250)	(.249)
Functional Health					
Difficult to Walk a Block				2.002***	1.982***
				(.245)	(.244)
Poor Physical Health				4.238***	5.417***
				(.437)	(.535)
Interaction					
Poor Physical Health *x* Attend Often					-3.290***
					(.867)
N= 2231					
R2	.013	.178	.186	.196	.202
Adjusted R2	.012	.171	.179	.188	.194

*p<.05 **p<.01 *** p<.001 (two-tailed)

TABLE TWO: Estimated Effects of Sexual Activity On Depression Levels of Older Americans: National Social Life, Health, and Aging Project (NSHAP)
Dependent Value: CES-Depression Scale

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Sexual Activity							
Sex Last Year	-2.177***	-1.626***	-1.449***	-1.333***	-.692**	-.547*	-.814**
		(.212)	(.237)	(.268)	(.268)	(.261)	(.267)
Controls							
Sociodemographics							
Age		-.041**	-.042*	-.037*	-.031*	-.033*	-.034*
		(.015)	(.015)	(.015)	(.014)	(.014)	(.014)
Male		-.478*	-.009	-.085	-.176	-.202	-.186
		(.212)	(.216)	(.216)	(.207)	(.206)	(.206)
Black		.217	.194	.085	.044	.061	.059
		(.381)	(.381)	(.381)	(.365)	(.363)	(.363)
Hispanic		.550	.555	.334	.475	.478	.464
		(.441)	(.441)	(.441)	(.422)	(.420)	(.419)
Other		.511	.453	.529	.293	.349	.272
		(.636)	(.636)	(.634)	(.607)	(.605)	(.603)
Education							
(compared to college or more)		2.234***	2.239***	2.102***	-1.296***	1.316***	1.204***
<highschool		(.361)	(.361)	(.360)	(.349)	(.348)	(.347)
		.974***	.988***	.885**	.619*	.645*	.608*
highschool		(.296)	(.296)	(.295)	(.283)	(.282)	(.281)
		.910***	.921***	.900***	.771**	.743**	.743**
Vocation/Assoc		(.273)	(.273)	(.272)	(.260)	(.259)	(.258)
Income							
(compared to income $25k-$50k)		-.833**	-.818**	-.846**	-.737*	-.695*	-.647*
Household income ≥$50,000		(.308)	(.308)	(.306)	(.293)	(.292)	(.291)
		1.081***	.998**	.947**	.684*	.656*	.653*
Household income ≤$25,000		(.327)	(.332)	(.317)	(.317)	(.315)	(.314)
Partner			-.417	-.381	-.585*	-.480	-.422
			(.296)	(.295)	(283)	(.283)	(282)
Social Support							
Four or more close family mem				-.591**	-.613**	-.575**	-.527*
				(.219)	(.210)	(.209)	(.209)
Four or more close friends							
				-1.036***	-.845***	-.759***	-.742**
				(.244)	(.234)	(.234)	(.233)

Functional Health							
Difficult to Walk a Block					2.070***	2.018***	1.998***
					(.244)	(.244)	(.237)
Poor Physical Health					4.090***	4.140***	4.100***
					(.440)	(.439)	(.475)
Sexual Activity							
Never sleep in the same bed						1.130***	1.086***
						(.257)	(.256)
Not always or usually							2.089***
Caressing, hugging, kissing							(.475)
N= 2231							
R2	.045	.183	.185	.192	.199	.202	.203
Adjusted R2	.044	.177	.178	.185	.182	.194	.194

*p<.05 **p<.01 *** p<.001 (two-tailed)

TABLE THREE: Estimated Effects of Religious Attendance and Sexual Activity on Depression Levels of Older Americans: National Social Life, Health, and Aging Project (NSHAP)
Dependent Value: CES-Depression Scale

	Model 1	Model 2
Religious Attendance		
Attend often	-.707**	-.655*
	(.243)	(.324)
Attend occasionally	-.401	-.378
	(.277)	(.277)
Religious Salience		
Carry-over Agree Strongly	-.658	-.628
	(.421)	(.420)
Carry-over Agree	-.050	-.017
	(.295)	(.294)
Sexual Activity		
Sex Last Year	-.789**	-.916**
	(.267)	(.317)
Controls		
Sociodemographics		
Age	-.031*	-.401*
	(.014)	(.014)
Male	-.243*	-.271
	(.210)	(.209)
Black	.097	.098
	(.367)	(.366)
Hispanic	.571	.605
	(.421)	(.420)
Other	.365	.314
	(.603)	(.602)
Education		
(compared to college or more)	1.142***	.1.122***
<highschool	(.348)	(.347)
	.571*	.539
highschool	(.281)	(.419)
	.694**	.650*
Vocation/Assoc	(.259)	(.259)
Income		
(compared to income $25k-$50k)	-.653*	-.640*
Household income >$50,000	(.291)	(.290)
	.675*	-.749*
Household income <$25,000	(.314)	(.313)
Social Support		
Four or more close family mem	-.480*	-.459*

	(.210)	(.209)
Four or more close friends	-.645**	-.642**
	(.236)	(.235)
Partner	-.414	-.386
	(.282)	(.281)
Functional Health		
Difficult to Walk a Block	1.910***	1.888***
	(.244)	(.243)
Poor Physical Health	4.097***	5.288***
	(.437)	(.536)
Sexuality		
Never sleep in same bed	1.076***	1.094***
	(.256)	(.255)
Not always or usually caressing, hugging, kissing	2.004***	2.048***
	(.475)	(.474)
Interaction		
Poor Physical Health *x* Attend Often		-3.361***
		(.867)
Sex Last Year *x* Attend Often		.254
		(.387)
N= 2231		
R2	.014	.203
Adjusted R2	.012	.194

*p<.05 **p<.01 *** p<.001 (two-tailed)

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