

# Religion, Life Expectancy and Active Life Expectancy in the United States

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## BACKGROUND

- Many studies have documented a positive link between religion and physical and mental health and survival.
- These studies have tended to find that the link is stronger for public religious activity compared to private religious expression or beliefs.
- A limitation of this research is that much of it has been cross-sectional and/or examined health outcomes or mortality separately, but not in combination.

## PURPOSE

- To examine the effect of different aspects of religion on health and mortality jointly by estimating total, active and inactive life expectancy among older adults in the United States.

## DATA

- Analysis of data from the 1998-2014 waves of the Health and Retirement Study (HRS), a longitudinal study of health, economic, and family issues concerning adults over age 50 in the United States.
- Participants (~20,000) are interviewed every two years and followed until they die. Deaths are ascertained through reports by next of kin and NDI matches.
- Response rates range from 70-82% at baseline and from 87-89% in each follow-up wave.
- HRS is funded by a grant (U01 AG009740) from the National Institute on Aging, with supplemental support from the Social Security Administration.

## RELIGION MEASURES

**Religious affiliation** (from 1998 wave)

- What is your religious preference; is it Protestant, Catholic, Jewish, some other religion, or do you have no preference?
- Coded as: any vs. no affiliation

**Religious activity** (from 2004 wave)

- About how often have you attended religious services during the past year?
- Coded as: at least once a week, 2-3 times a month or less, never

**Importance of religion** (from 1998 wave)

- How important would you say religion is in your life; is it very important, somewhat important, or not too important?
- Coded as: very, somewhat or not too important.

## MEASURE OF ACTIVE VS. INACTIVE LIFE EXPECTANCY

**Activities of Daily Living (ADL)**

- Dressing, bathing, eating, walking across a room, getting in/out of bed, using a toilet

**Instrumental Activities of Daily Living (IADL)**

- Preparing meals, shopping for personal items, using a telephone, taking medications, managing money

Respondents who have any difficulty performing at least one ADL or IADL are defined as *inactive*; otherwise as *active*.

## ANALYSIS METHODS

- Analysis sample is comprised of 7,705 men and 9,900 women who were age 55 or older and living in the community in 1998.
- SPACE (Stochastic Population Analysis for Complex Events) software used to estimate total, active and inactive life expectancy, using a multistate life table method, with inputs being transitions between states (e.g., active to inactive).
- Models are stratified by sex and control for education, race/ethnicity, household composition, number of chronic conditions and smoking status.

## SAMPLE DESCRIPTIVES

### Transitions by Sample Persons

Baseline	Follow-up			Total
	Active	Inactive	Dead	
Active	56,722	9,437	3,010	69,169
Inactive	5,364	15,327	5,313	26,004
Total	62,086	24,764	8,323	95,173

- There are a total of 95,173 transitions in health status (including 8,323 deaths) between two successive survey waves from 1998-2014.
- 76 percent of the transitions begin and end in the same state (n=56,722 active to active, n=15,327 inactive to inactive).
- Excluding deaths, the number of transitions indicative of recovery is a little over one-half the number indicative of decline.

## SAMPLE DESCRIPTIVES, CONT.

### Life Expectancy at Age 65 Comparisons: Published vs. Estimated from HRS

Source	Male	Female
2006 published	17.0	19.7
HRS (1998-2014)	16.8	19.5

- Estimates of total life expectancy based on HRS data from 1998-2014 are very close to those based on published life tables for the mid-year of 2006.

### Percentage Distributions for Religion Measures (weighted)

Religious affiliation	%	Frequency of attendance	%	Importance of religion	%
Protestant	63.2	More than once a week	14.4	Very important	62.7
Catholic	27.7	Once a week	25.8	Somewhat important	25.4
Jewish	2.7	2-3 times a month	11.5	Not too important	11.9
Other	1.1	One or more times a year	21.9		
No affiliation	5.3	Never	26.4		

- The vast majority report some religious affiliation, with most identifying as Protestant.
- Two-fifths attended religious services at least once a week during the past year, whereas just over one-quarter never attended in the past year.
- Most individuals consider religion to be very or somewhat important.

## RESULTS

### Total, Active and Inactive Life Expectancy at Age 65, by Religion Indicators

Sex	Religiosity Measure	Total LE (se)	Active LE (se)	Inactive LE (se)
Male	<b>Religious Affiliation</b>			
	Any affiliation	16.7 (0.082)	12.3 (0.082)	4.4 (0.049)
	No affiliation	16.4 (0.317)	12.2 (0.287)	4.2 (0.250)
Female	Any affiliation	19.5 (0.162)	13.2 (0.138)	6.4 (0.184)
	No affiliation	19.0 (0.563)	12.7 (0.743)	6.3 (0.553)
Male	<b>Religious Importance</b>			
	Very important	17.1 (0.163)	12.5 (0.218)	4.6 (0.153)
	Somewhat important	16.4 (0.208)	12.2 (0.266)	4.2 (0.146)
Female	Not important	16.3 (0.295)	12.1 (0.239)	4.2 (0.214)
	Very important	19.7 (0.167)	13.2 (0.117)	6.5 (0.108)
	Somewhat important	19.1 (0.294)	13.1 (0.330)	6.3 (0.264)
Male	Not important	18.2 (0.594)*	12.3 (0.306)*	5.9 (0.357)
	<b>Religious Attendance</b>			
	At least once a week	18.1 (0.310)	13.3 (0.281)	6.4 (0.116)
Female	> 2-3 times a month	17.5 (0.295)*	12.9 (0.254)*	6.1 (0.150)
	Never	15.9 (0.328)*	11.6 (0.262)*	5.6 (0.213)
	At least once a week	20.9 (0.364)	14.3 (0.166)*	8.6 (0.292)
Female	> 2-3 times a month	19.3 (0.441)*	12.7 (0.249)*	8.6 (0.315)
	Never	17.4 (0.307)*	11.2 (0.278)*	7.8 (0.200)

\* p < .05

## SUMMARY OF KEY FINDINGS

- Religious affiliation measured as any versus no affiliation is not significantly related to total, active or inactive life expectancy.
- Women who view religion as very important have significantly higher total and active life expectancy than those for whom religion is not very important. There is no difference for men.
- More frequent attendance at religious services is significantly associated with higher total and active life expectancy but not inactive life expectancy. This is true for both men and women.
- The above findings hold after controlling for key demographic, SES and health covariates and regardless of baseline health state (active vs. inactive).

## NEXT STEPS

- Future work will investigate the mechanisms through which religiosity affects health expectancy.

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