SERVICE ATTENDANCE AND DEPRESSION AMONG OLDER ADULTS

College of Arts & Sciences
Department of Sociology
State University Of New York
Albany

Allison Houston MS, CPH
PhD Candidate

BACKGROUND: DEPRESSION

- Depression affects approximately 350 million people worldwide, and is the leading cause of disability globally (WHO, 2012)

- Even mild to moderate depression negatively impacts the ability to perform daily activities. For example, chronically mildly depressed individuals may neglect their health with insufficient sleep, poor diet, and lack of exercise (e.g., Moreh, Jacobs, & Stessman, 2010)

- Depression affects nearly 6.6% of older Americans (e.g., Mojtabai & Olfson, 2004), but a smaller percentage of the oldest population (aged above 85 years) (Zhao et al., 2012)

- Common predictors for depression in diverse elderly populations includes the loss of significant others, poor perceived health, chronic physical illnesses, fewer social contacts, inadequacy and instability of financial resources, poor social support, and financial strains (e.g., Almeida et al., 2012; Chou & Chi, 2000)

BACKGROUND: RELIGIOUS INVOLVEMENT

- Several studies have suggested that religious participation becomes increasingly important as people grow older (e.g., Dillon & Wink, 2007)

- Religious participation as a form of social engagement can have a beneficial impact on people's emotional, social, physical and psychological well-being (e.g., Buck et al., 2009)

- Religious life can regulates behavior and integrate individuals into caring social environments where intimacy, stability, structure and support exist. As a result, stressors, strains and uncertainties of life may be tolerated more easily, which may positively impact health

- Shortage of financial resources can impair mental health (Selenko & Batinic, 2011). However, an often-overlooked component in the religion-health scholarship is the potential important beneficial effects of religious involvement in alleviating the negative effects of financial strain on mental health

RATIONALE OF THE STUDY

- The proportion of depression in older Americans may seem small. But, given the share size of this population, depression is becoming an increasingly important public health problem (AOA, 2011; CDC, 2013)

- Certain social factors are related to the risk of depression, and may also influence its course. For example, studies have suggested that life stresses, such as ongoing financial strain, may be associated with poor self-rated health (Krause, Newsom & Rook, 2008) and depressive symptoms (Lincoln, Chatters & Taylor, 2005)

- Multidimensional measures of religiosity, including both public and private aspects of religion have the capacity to provide health benefits to older people, yet they are often not differentiated in terms of affect

- Moreover, even though a large number of studies have focused on the health consequences of older people's public religiosity (e.g., Hummer, et al, 2004), very few studies have paid attention to private religiosity

OBJECTIVES OF THE STUDY

- The objective of this study was two-fold. First objective was to evaluate relationships between various types of public and private* dimensions of religious activity and depression and to evaluate the distinct confounding and moderating effects of common socioeconomic, demographic and health factors

- Second objective was to assess the role of self-rated physical health and a household-level stressor, financial strain, with the association between any significant relationship between religious involvement and depression

  * Private religious experiences of older adults, such as solitary prayers, Bible reading, and consumption of religious teaching through books and television

METHODS

- The data for this study come from a nationwide survey of 1,500 baseline interviews of older aged (65 and above) men and women enrolled in the 2001 Aging, Religion & Health Study-Wave 1

- The surveys were administered by personal interviews conducted face to face in the homes of the study participants. Elderly Blacks were over sampled, and, as a result, the final sample consisted of 748 Whites and 752 African Americans

- **Dependent Variable**
  - Depressive symptoms: Was assessed by a single item, based on respondents' answers to 'how often you have felt this way (depressed) during the past week'. Four categories were defined: (1) most or all of the time, (2) occasionally or a moderate amount of time, (3) some or little of the time, (4) rarely or none of the time. Reponses were collapsed into a binary indicator of depression, frequently/sometimes versus rarely/never

METHODS CONT'D

- **Independent Variables**
- Religiosity
  - Six indicators of religiosity were assessed. Indicators included two measures of public religious participation (religious affiliation and service attendance) and four measures of private religious participation (solitary prayer, time spent praying per day, frequency of watching or listening to religious service at home, and frequency of Bible reading at home)

  - Service attendance was measured by 9 items. Responders were asked 'How often do you attend religious services'. Reponses were collapsed into a binary indicator of the frequency of service attendance (about weekly versus less often)

  - Respondents' perception of the willingness of fellow congregants to provide support was also assessed. Reponses were categorized as a great deal, some, and a little/none at all

METHODS CONT'D

- **Self-rated health**
  - Self-rated health was assessed by a single item. Participants were asked whether they would judge their present state of health as (1) excellent, (2) good, (3) fair, or (4) poor

- **Financial strain**
  - Financial strain was assessed by a single item based on respondents' answers to 'How much difficulty do you have in meeting the monthly payments on your or your family's bills'. This item was scored in the following manner: a great deal, some, only a little, or none. Reponses were collapsed into a binary indicator of financial strain (i.e., payment difficulty), a great deal or some versus only a little or none

- Other variables assessed were: race, gender, age, education, marital status, family income, cigarette use and alcohol use

DATA ANALYSIS

- All data analyses were carried out using SAS 9.2 (Cary, NC) Univariate analysis was performed to explore sociodemographics factors, health characteristic, and religiosity measures

- Bivariate analyses (Chi-square tests) were employed to separately test association between all six religiosity dimensions and depression

- Stratified Odd Ratios (OR) were examined to screen for effect modifiers. The inclusion criterion for meaningful effect modifiers required that stratum-specific odds ratios differ by 10 percent or more. No variable met this criterion

- Manual backward selection using α= 0.05 was performed to select a base model from the covariates identified as significantly associated with depression in the bivariate analysis

- Logistic regression was employed to estimate OR and 95% confidence intervals (CIs) for the association between service attendance and depression

RESULTS: TABLE I

Characteristic of Participants in the 2001 Aging& Religion & Health (N=1500)

Characteristics	N(%)	Characteristics	N(%)
Age		**Support**	
65-74	777(52.3)	A Great Deal	568(55.0)
75-84	546(36.7)	Some	298(29.5)
>84	163(11.0)	A little/None at all	166(16.1)
Gender		**Religious Attendance**	
Male	573(38.2)	About weekly	659(43.9)
Female	927(61.8)	Less often	841(56.1)
Race		**Time spent praying per day**	
White Americans	728(51.2)	30 Minutes or more	399(26.6)
Black Americans	698(46.7)	Less than 30 minutes	1,101(73.4)
Education		**Solitary prayers**	
High School Diploma	877(59.0)	Daily or more often	1155(78.0)
No High School Diploma	609(41.0)	Less often	326(22.0)
Marital Status		**Watch/listen to Religious service**	
Married	710(47.7)	Daily/weekly/monthly	424 (57.9)
Separated/Divorced/Widowed	710(47.7)	Never	628(43.1)
Never married	68(4.6)		
Financial strain		**Bible reading at home**	
Yes	400(25.0)	Daily or more/Less Often	1,000(74.9)
No	1,065(71.0)	Never	335(25.1)
Total Family income ($)		**Self-Rated Health**	
Less than 20,000	595(54.9)	Excellent	212(14.2)
20,000 to 39,999	310(28.6)	Good	638(42.7)
40,000 to 59,999	87(8.0)	Fair	472(31.6)
60,000 and above	92(8.5)	Poor	174(11.6)
Cigarette use		**Frequency of depression**	
Yes	156(10.4)	Frequently/Sometimes	562(37.6)
No	1,342 (89.5)	Rarely/never	932(62.4)
Alcohol use		**Religious Affiliation**	
Yes	468(31.2)	Catholic or Roman Catholic	282(20.5)
No	1,030 (68.7)	Protestant	1095(79.5)

RESULTS: TABLE 2

Table 2. Significant Bivariate associations between depression and covariates

Characteristics	Weekly Depressive symptom		P
	Frequently/Occasionally	Rarely/Never	
Education			
High School Diploma	19.4	39.0	*<.0001
No High School Diploma	18.2	23.4	
Marital Status			
Married	16.3	31.3	*0.0097
Not married	21.4	31.0	
Financial strain			
Yes	20.1	23.2	*<.0001
No	18.1	38.6	
Total Family income ($)			
Less than 20,000	1.7	4.5	
20,000 to 39,999	1.6	4.2	*0.0067
40,000 to 59,999	7.2	13.5	
60,000 and above	27.2	40.2	
Religious Attendance			
About weekly	13.6	30.4	* <.0001
Less often	24.0	32.0	
Self-Rated Health			
Excellent	2.7	11.4	
Good	13.6	29.0	*<.0001
Fair	13.9	17.7	
Poor	7.4	4.2	
Alcohol use			
Yes	9.6	21.7	*0.0002
No	28.0	40.8	

RESULTS: TABLE 3

Table 3. Relationship between Church Attendance and Depressive Symptoms: 2001 survey of Aging, Religion and Health wave 1 survey

Covariates	Odd Ratios 95% CI	P
Service Attendance		
About Weekly	Referent	0.0004*
Less often	1.51(1.20, 1.89)	
Self-Rated Health		
Excellent	Referent	
Good	1.94 (1.32, 2.86)	0.0001*
Fair	2.91 (1.96, 4.34)	0.0001*
Poor	6.10 (3.78, 9.84)	0.0001*
Financial strain (payment difficulty)		
No	Referent	0.0003*
Yes	1.52 (1.21, 1.91)	

Note: CI, confidence limits
*Significance at $P \leq 0.05$ based on confidence interval excluding 1.0.

RESULTS CONT'D

- Fewer participants (44%) reported that they attended religious service weekly or more often than those that attended services less often (56%)

- The majority of responders (62%) reported never or rarely being depressed in the previous two weeks, while a smaller portion (38%), reported being depressed sometimes or frequently

- A small portion (14%) of the respondents reported being in excellent health, 43% had good health, 32% had fair health and 12% had poor health

- Smaller percentages of respondents were drinkers (31%) and smokers (11%) compared to non-drinkers (69%) and non-smokers 89%)

- With regards to participant's perceptions of congregational support, 55% felt they would receive a great deal of support from fellow congregants if needed, 30% felt they would receive some support, and 16% felt they would receive little or no support

RESULTS CONT'D

- Of the six indicators of private and public religious participation, only service attendance was statistically associated with depression.

- Bivariate associations in table 2, covariates including education, marital status, household income, financial strain, self-rated health and alcohol use were associated with depression, whereas age, gender, race, smoking status, and perception of support were not

- Less service attendance was associated with increased odds of depression. In the crude model, participants who reported service attendance less often had one and two thirds times the odds of having depressive symptoms compared with those who reported attending about weekly or more often ([OR]=1.68; 95% [CI]=1.36, 2.08)

- In the multivariable model, respondents who reported attending religious services, 'less often' had one and a half times the adjusted odds of depression compared with those who reported attending weekly or more often OR=1.51; 95% CI=1.15-1.99

RESULTS CONT'D

- Financial strain and self-related health were also associated with depressive symptoms

- Participants who reported difficulty making financial monthly payments had more than one and half times the odds of depressive symptoms compared with those who did not report difficulty making financial monthly payments (OR=1.52; 95% CI=1.21, 1.91)

- Participants who rated their health less well had increased odds of depressive symptoms. Individuals who reported poor health had over six times the odds of depressive symptoms compared with those who reported excellent health (OR=6.10; 95% CI=3.78-9.84)

- Likewise individuals who reported fair health were 2.91 (95% CI 1.92-4.34) more likely than those who reported excellent health to report depression; and individuals in good health were 1.94 (95% CI 1.32-2.89) times more likely than those in excellent health to also report depression

DISCUSSION: STRENGTHS

- This study represents one of the few examinations of multiple religious factors (i.e., both private and public measures) affecting late-life depression

- Results provide empirical evidence that is needed to better understand the complex association between religious activity and depression in older people such as the role of self-rated physical health and financial strain

- Results show public religious activities (service attendance) is protective against depression while involvement in several types of private religious activities are not
  - The absence of associations between the private measures of religiosity and health, in light of a significant association found between service attendance, and depression, also offers credibility to the importance of the social aspects of religiosity

DISCUSSION: LIMITATIONS

- The service attendance variable was dichotomized to about weekly versus less often (i.e., form a 9-item scale to a 2-item scale

- The cross-sectional nature of the analysis prohibits determination of a causal direction for the relationship
  - People may attend services more often while they are sick or under stressful situations
  - Conversely, a poor health status could decrease the capacity to attend a religious meeting

- Finally, it is important to also acknowledge that this study dealt only with participants' self-reports of religious activities and depression

CONCLUSION

- Although the rationale and value for adopting a more comprehensive approach to examining religion and health was useful, findings only supported the importance of public religious participation

- However, in the process of exploring additional issues involving service attendance and depression, meaningful health and financial strain differences were discovered

- Older people who are in fair or poor health face a greater risk of depression (Fischer et al., 2003), while at the same time, they have less resources and access to mental health services

- Public religious involvement is a source of strength and resilience for many older people. But good physical health is needed for full participation

- Therefore, attempts to create and sustain healthy aging through the use of social engagement such as public religious activities, may need to consider the overall health and financial well-being of the aging population of interest

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THE END!!!

Thank You!!!