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Review article

Religiosity and depressive symptoms in older adults compared to younger adults: Moderation by age☆

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ABSTRACT

Background: Previous research has suggested that individuals tend to become more religious with age. Research has also shown that as individuals become more religious, they report decreases in depressive symptoms, suggesting that increased levels of religiosity might help to improve one's mental health. The following study aimed to examine the effect of age on the relation between religiosity and depressive symptoms.

Methods: Data was gathered using a religiosity questionnaire and depression questionnaire. The sample consisted of 201 adults, ranging from 21–67 years of age, recruited through the Amazon Mechanical Turk (MTURK) marketplace.

Results: Hays' PROCESS model for SPSS (Hayes, 2013) was used to test age as a moderator between depressive symptoms and religiosity. Correlations showed that religiosity was positively correlated with age and negatively correlated with depressive symptoms. Further analysis of the data suggested that age serves as a moderator in the relation between religiosity and depressive symptoms for both middle-aged and younger adults.

Limitations: Participants included in the study were limited in age, further studies should consider including individuals >67 years of age to better test proposed relations.

Conclusions: High levels of religiosity were related to lower levels of depression in middle-aged and younger adults. Though further research on the development of such evidence-based programs is needed, involvement in religious activities may have a preventative role in both the development and duration of depressive symptoms in middle and older aged adults.

1. Introduction

Since older adults report higher prevalence rates of depressive symptoms than middle-aged adults, identifying possible contributors and protective factors against depressive symptoms is a high priority (Kessler et al., 1992; Evans et al., 2017). Previous research has shown that religious adults are less likely to suffer from depressive symptoms and to report having a positive life view, possibly due to the social support offered by faith-based groups and activities (Blay et al., 2008; Husaini et al., 1999; Wink et al., 2005). Additionally, increased religiosity is negatively correlated with depressive symptoms in older adults (Law and Sbarra, 2009; Payman and Ryburn, 2010). However, age differences within the relation of religiosity and depression have not been thoroughly examined. To this end, the current study examined the effect of age on the relation between religiosity and depressive symptoms.

2. Depressive symptoms and religiosity

Many studies have indicated a positive association between depression and religiosity, suggesting that increased religiosity can help individuals to have better mental health. For example, Dezutter et al. (2006) examined religious involvement and religious attitudes as a way to predict mental health. They found that religious orientations and social-cognitive approaches were significantly related to wellbeing. Moreover, a longitudinal study originating in the 1920s interviewed participants and had them complete questionnaires at multiples points in their lives, asking them questions regarding religiousness, depression, and physical health (Wink et al., 2005). Results indicated that religiousness buffered against the effects of depression, which was associated with worsened physical health.

3. Religiosity and older adults

Although some studies have shown stability in religiosity across

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adulthood, the majority suggest that as individuals age, they tend to become more religious (Moberg, 2001; Seifert, 2002). Specifically, research indicates a positive relationship between age and subjective religiosity, although actual participation in religious services may decline with advanced age due to mobility problems (Idler et al., 2009; Wink & Dillon, 2002; Krause, 2013). More private aspects of religiosity, such as the strength of religious beliefs, do not seem to decline (Krause 2008; Moody, 2006; Sherkat, 2010; Wuthnow, 2010). Some studies even show that religiosity increases until an individual reaches their 60′s or 70′s (Idler et al., 2009; McCullough et al., 2005; Wang et al., 2014; Wink and Dillon, 2002).

One theory is that older individuals engage in religious activities and beliefs because they seek to cope with stress, such as illness, loss of loved ones, and death (Idler et al., 2009; Koenig, 2003). However, Tornstam (1996) proposed that older adults experience a shift in their worldview from when they were young, as they no longer fear death, and that this shift is related to increased religiosity. Whatever the reason, longitudinal evidence suggests that individuals become more religious as they get older (Bengtson et al., 2015). For example, Wink et al. (2007) longitudinal study found that while religiosity declined in early adulthood, and possibly in middle adulthood, it increased in later life. Similarly, Hayward and Krause (2013) examined both aging and cohort effects in religious service attendance across the life course. They determined that religious participation declined in adolescence, stabilized in midlife, and then increased in later life, before finally declining in late old age (e.g., the 80′s).

4. Depression, religiosity, and older adults

Given that many studies have suggested older individuals report increased religiosity and that religiosity is associated with better mental health, it is likely that older religious individuals may be less liable to experience depression. For example, in a population of older Jewish individuals, a change in religious identity (decrease in religiosity) was associated with more depression (Cohen-Mansfield et al., 2016). Moreover, a longitudinal study shows that adults from Australia who attended church were less likely to develop mood problems later in life (Wink et al., 2005; Law and Sbarra, 2009). Similarly, in the United States, older adults who reported limited participation in church activities also reported more symptoms of depression and poorer mental health (Mitchell and Weatherly, 2000; Roff et al., 2004).

5. Current study

Previous studies have indicated a connection between religiosity and positive mental health (Wink et al., 2005), as well as religiosity and old age (Moberg, 2001). Additionally, religiosity, old age, and depressive symptoms are associated with each other (Roff et al., 2004). Thus, levels of religiosity and old age both appear to effect depressive symptoms levels, but no studies have examined the specific role that age plays in this relation. The present study addresses this gap within the literature by examining the relation between religiosity, age, and depressive symptoms. Based on previous research, we predicted that age would moderate the relation between religiosity and depressive symptoms.

Specifically, it was hypothesized that (1a) there would be a negative correlation between religiosity and depressive symptoms, (1b) religiosity and age would be positively correlated, and (1c) depressive symptoms and age would be negatively correlated. We further hypothesized that (2) there would be an interaction between religiosity and age predicting depressive symptoms, such that older individuals would be higher in religiosity and lower in depressive symptoms than younger individuals.

6. Method

6.1. Participants and procedure

A nation-wide sample of participants was recruited through the Amazon Mechanical Turk (MTURK) marketplace. Demographic information was collected to ensure the target participants were identified, and attention and data quality checks were utilized. There were a total of 230 participants in this sample, but 29 were removed due to discrepancies in reported age. Thus, the final sample consisted of 201 adults reporting a mean age of 38.6 years (SD = 8.7), ranging in age from 21 – 67. For the analyses comparing groups, the sample was broken up into 119 younger adults (M = 32.8, SD = 4.4) and 82 middle-aged and older adults (M = 46.9, SD = 6.2). Gender of the overall sample was 65.7% female. Racially, 86.1% of participants endorsed being White or Caucasian, 6.5% Black or African American, 1% Native Hawaiian or Pacific Islander, 2% two or more races, and 4.5% other. Participants provided informed consent and received financial compensation for their completion of the survey.

7. Measures

7.1. Center for epidemiological studies depression scale

The CESD-R is a 20-item measure of depressive symptoms within the past two weeks, using a 4-point Likert scale (Eaton et al., 2004). The current study used the CESD-R as a sum of depressive symptoms, though it can be broken into the subscales of sadness, loss of interest, appetite, sleep, thinking/concentration, guilt, tired, movement, and suicidal ideation. The CESD-R has been found to have a Cronbach's alpha of 0.923 to 0.928, indicating excellent internal consistency (Van Dam and Earleywine, 2011).

7.2. Stearns–McKinney assessment of religious traits

The Stearns–McKinney Assessment of Religious Traits (SMART) was developed as a new scale designed to measure various dimensions of religiosity (Stearns and McKinney, submitted for publication). The overall scale includes 53 statements describing religious activities, feelings, and beliefs and is scored on a Likert scale from 0 = *not true* to 7 = *very true*. Factor analysis indicated a higher order Religiosity factor which consists of 5 lower order factors: private religiosity (e.g., *I try to live my life according to my religious beliefs*), social support (e.g., *I consider myself active in my faith or church*), coping (e.g., *I find comfort in my religion or spirituality*), conviction (e.g., *I will always believe in a divine being/God*), and conservative religiosity (e.g., *I strictly follow my religious beliefs in regard to my appearance)*. Factor loadings of the five factors onto the overall Religiosity factor ranged from 0.75 to 0.99 and item loadings onto each of the five factors ranged from 0.65 to 0.84. Internal consistency for the five factors ranged from 0.88 to 0.95.

8. Results

Hayes' PROCESS module for SPSS (Hayes, 2013) was used to test the hypothesis that age moderated the relation between religiosity (i.e., measured by the SMART) and depressive symptoms (i.e., measured by the CESD-R). See Tables 1–3 for correlations and Fig. 1 for a summary of the regression analyses.

Correlations were used to examine hypothesis 1. Contrary to hypothesis 1a, there was no correlation between religiosity and depressive symptoms. However, confirming hypothesis 1b and 1c, religiosity was positively correlated with age and age was negatively correlated with depressive symptoms.

Moderation analyses were conducted to examine hypothesis 2. A significant interaction (see Fig. 2) between religiosity and age was found to predict depressive symptoms, such that older individuals

Table 1
Correlations among variables in overall sample.

Variables		1.	2.	3.	M	SD	A
1.	Age	1			38.62	8.61	–
2.	Depressive Symptoms	−0.15	1		11.89	11.46	0.82
3.	Religiosity	ns	ns	1	210.10	110.61	0.99

Note. All *ps* < 0.05 unless noted as ns.

Table 2
Correlations among variables for older individuals (= >38.62).

Variables		1.	2.	3.	M	SD	α
1.	Age	1	ns	ns	45.55	6.50	–
2.	Depressive Symptoms	−0.15	1		10.08	10.09	0.75
3.	Religiosity	ns	ns	1	218.26	109.21	0.99

Note. All *ps* < 0.05 unless noted as ns.

Table 3
Correlations among variables for younger individuals (<38.62).

Variables		1.	2.	3.	M	SD	α
1.	Age	1			32.02	4.05	–
2.	Depressive Symptoms	ns	1		13.59	12.43	0.85
3.	Religiosity	−0.19	ns	1	202.32	111.91	0.99

Note. All *ps* < 0.05 unless noted as ns.

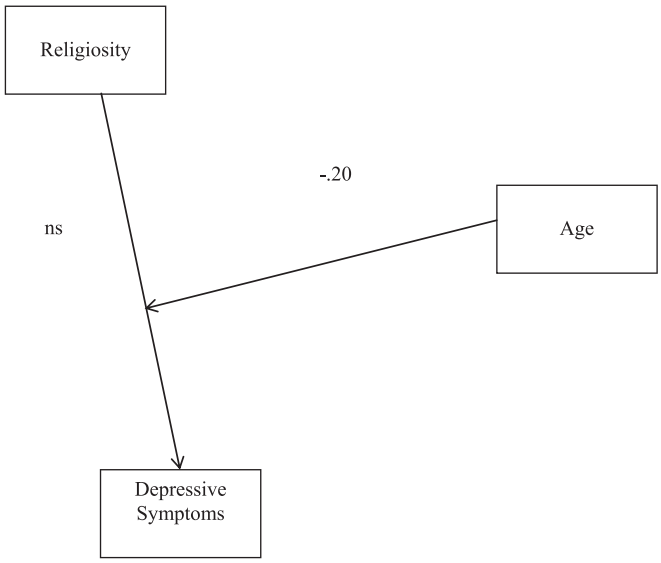

Fig. 1. Model of moderation by age.

reported greater religiosity and less depressive symptoms t (1, 202) = −2.97, p = 0.003. Looking at the conditional effects, religiosity was not predictive of depressive symptoms for younger adults aged 18–38 (p = 0.06) but was predictive for middle-aged and older adults (p < 0.02).

Independent samples t-tests indicated that older adults (aged 40 and older; M = 10.00, SD = 10.05) were significantly less depressed than younger adults (aged 18–39; M = 13.00, SD = 12.10, t (1, 202) = −2.08, p = .049). No differences occurred between older and younger adults on religiosity.

9. Discussion

To address a significant gap in the literature, the current study examined the manner in which age affects the relation between religiosity and depressive symptoms. We found that age significantly moderated this relation, such that high levels of religiosity was associated with significantly lower amounts of depressive symptoms for middle-aged and older adults (those aged 40 and above). However, religiosity levels were not significantly related to depressive symptoms for younger adults (those under the age of 40). Overall, we found that our older group reported both significantly higher levels of religiosity, and significantly lower depressive symptoms than our younger group.

These results are consistent with previous research that finds that although religiosity levels increase with age, that they tend to fluctuate across the lifespan. For example, Wink, and colleagues' longitudinal results indicated that participants' religiosity dipped from childhood through early adulthood, and did not increase until past midlife (Wink et al., 2007). Depressive symptoms follow a similar U-shaped pattern, with rates being the highest in young adulthood, the lowest at midlife, and then increasing again past the age of 75 (Sutin et al., 2013). As older age group has a mean age of approximately 47 years, it may be that they have reached an age where they have begun the uptick in religiosity levels, but have not yet reached the point of increased depressive symptoms associated with being in the "oldest-old" category.

10. Limitations and future directions

Although we have achieved a sample that is geographically representative of the nation, our participants are relatively limited in age (21–67 years). Future studies are encouraged to obtain a sample rich in not only middle-aged but older adults, through the oldest-old category, to more fully test the proposed relations. Despite these limitations, however, the study has made an essential contribution by specifically examining the role age plays in the relation between religiosity and depressive symptoms. Our results show that age significantly moderates this role, and indicate that middle-aged and older adults high in religiosity are at significantly lower associated risk for depressive symptoms. These findings may be used in the design of interventions seeking to lower depressive symptoms for those aged 40 and older. Evidence-based programs should next be developed which test whether increasing participation in religious activities can be used to ameliorate signs of depression for middle-aged and older adults.

Conflicts of interest

None.

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Authors' statement

All authors have approved the final article should be true and included in the disclosure.

Contributors:

- Melanie Stearns wrote the introduction and did the results/methods.
- Danielle Nadorff wrote the discussion and edited the manuscript as mentor.
- Ethan Lantz did the references section.
- Ian McKay wrote the abstract.

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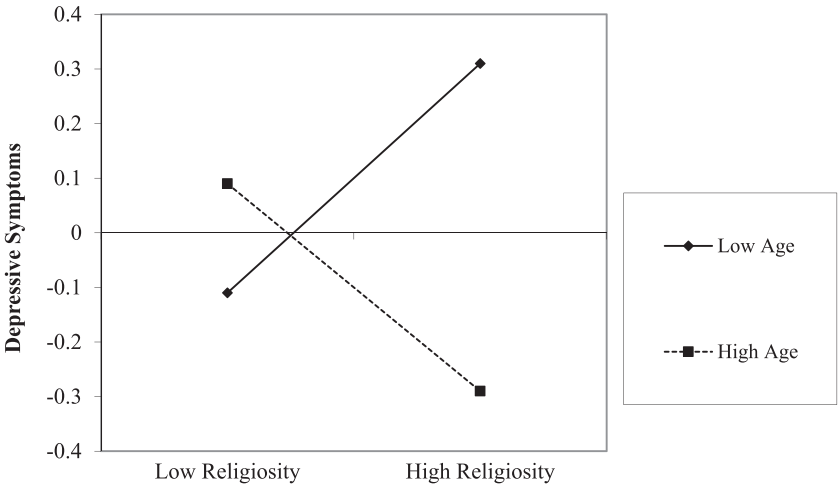

Fig. 2. Age moderates the relation between religiosity and depressive symptoms.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.jad.2018.05.076.

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