

Predictors of Perceptions of Aging in Young Adults:

An Exploratory Study

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Abstract

This study investigated whether religious affiliation and level of religiosity affect perceptions of aging among Millennials. I predicted that religiously-affiliated Millennials would have more positive views of aging than religiously-unaffiliated Millennials and that level of religiosity among religiously-affiliated Millennials would be positively related to perceptions of aging. A sample of 197 Christian, Jewish, Muslim, Atheist, and Agnostic Millennial participants completed questionnaires assessing their perceptions of aging and level of religiosity. Those who reported a religious affiliation had more positive perceptions of socio-emotional domains of aging than those who were religiously unaffiliated. Among the religiously affiliated subgroup, level of religiosity also was positively related to perceptions of several socio-emotional aspects of aging. Although no causal connections may be drawn, religious affiliation and religious teachings may promote more positive views of aging among Millennials. As religious decline is a continued phenomenon in the United States and, therefore, may lead to the loss of positive ideas about aging, this study calls for the implementation of programs within educational systems that not only educate individuals on aging but also promote positive ideas.

It has been widely established that greater longevity in the developed world has led to a rapidly growing older adult population (individuals aged 65 years and older). In fact, by the year 2060, the U.S. older adult population is predicted to double compared to 2016 (Administration on Aging, 2018). Such a phenomenon is expected to bring about major societal and economic changes (World Health Organization, 2011; Zaino & College, 2005) and has, therefore, been referred to as a “demographic revolution” (Zaino & College, 2005). Analysts agree that to effectively adapt to these demographic and societal shifts, making efforts towards intergenerational union is an imperative strategy (Zaino & College, 2005; Zhou, 2007). Younger and older generations must learn to coexist, especially as older adults are remaining in the workforce well beyond traditional retirement age (Desilver, 2016).

Perhaps most fundamental to the effort towards intergenerational cohesion will be Generation Y, also referred to as *Millennials* – a population of “emerging” adults (Arnett, 2013) who will officially comprise the majority of the U.S population in 2019 (Fry, March 2018) and are currently the majority of the U.S. workforce (Fry, April 2018); Millennials are more likely to come into contact with older adults who are growing in numbers and working longer. Perceptions of aging/older adults among Millennials may serve as clues for how Millennials will view and treat older adults, which may, in turn, determine the quality of their intergenerational relationships (Pasupathi & Lockenhoff, 2002; Zhou, 2007). Therefore, Millennial views on aging *and* factors that may affect them, are important to assess.

Religion is one such factor that is known to promote specific ideas about aging (McFadden, 1995; Whittington, 2010). In fact, many religious teachings encourage special consideration of the aged and promote compassionate and respectful treatment of older adults (Coleman, 2009; McFadden, 1995; Moberg, 1972; Whittington, 2010). Interestingly, a notable

general trend among Millennials is a declining association with religion (Alper, 2015; Lipka, 2015; Pew Research Center, 2014). Thus, religion is a variable that may potentially affect Millennials' perspectives and behaviors toward aging and older adults.

This study investigated whether perceptions of aging differ by religious affiliation and level of religiosity among Christian, Muslim, Jewish, Atheist, and Agnostic Millennials. Because no prior studies have assessed Millennial religion and perceptions of aging, I will begin by reviewing previous findings on perceptions of aging. I will then provide a brief background on general characteristics of the Millennial cohort and the rationale for investigating the relationship between religion and perceptions of aging among Millennials. I draw upon Sergio Moscovici's Social Representation theory as a guiding construct for how religion may lead to communal thinking among Millennials, which may influence their perceptions of aging.

Background and Rationale

The literature on perceptions of aging/older adults focuses on societal factors, such as culture and population aging, and on individual factors, such as contact with older adults, level of education, age, and gender (Lyons, 2009; North & Fiske, 2015)

Societal Factors

Culture and modernization. Culture appears to be the most widely studied variable in the perceptions of aging literature. The belief that eastern cultures are more positive in their views of aging than western cultures is widely held (North & Fiske, 2015; Zhang et al., 2016). These beliefs are based on the notion that eastern cultures display "interdependent" values, which are associated with positivity towards aging and older adults. On the other hand, convention holds that several components of western culture – modernization and individualism – result in more negative perceptions of aging (North & Fiske, 2015; Zhang et al., 2016; Zhou, 2007). This

is because theorists believe that the value system that upholds modernization and individualism dismantles the traditional status given to older adults and results in a devaluation of their “outdated” experience (North & Fiske, 2015).

More recent research highlights the fact that this east/west comparison is limited and flawed (Lockenhoff et al., 2009; North & Fiske, 2015; Zhang et al., 2016). In fact, much of the prior research in this area is largely inconclusive regarding whether individuals in eastern versus western cultures differ in their perceptions of aging (Lockenhoff et al., 2009; North & Fiske, 2015; Zhang et al., 2016). Lockenhoff et al. (2009) analyzed the biological, mental, emotional, and social views of aging among individuals in 26 different cultures and found that there were many shared ideas of aging across cultures. Individuals across cultures uniformly perceived *declines* with age in “physical attractiveness, the ability to perform everyday tasks, and new learning” and *increases* with age in “wisdom, knowledge, and received respect” (Lockenhoff et al., 2009, p. 1). In fact, the value placed on individualism in western cultures may generate positive views of aging (North & Fiske 2015; Zhou, 2007). Inglehart and Baker's (2000) "revised modernization theory" is often referenced in research where western values are contemplated in promoting positive views of aging, as the authors assert that modernization and individualism can generate progressive values of tolerance and appreciation for individual uniqueness (Lockenhoff et al., 2009; North & Fiske, 2015; Zhou, 2007).

Population aging. Research has considered whether societies with a higher proportion of older adults have more negative perceptions of older adults (Butler, 2009; North & Fiske, 2012; Lockenhoff et al., 2009; Walker, 1990). Researchers who find that greater population aging is correlated with negativity towards aging reason that societies with proportionately greater numbers of older adults generate more competition for public resources and obligate younger

cohorts to assume the responsibility to care for those older adults (Butler, 2009; North & Fiske, 2015; North & Fiske, 2012; Walker, 1990). Analysts believe that interdependent values mixed with a greater proportion of older adults frustrates the duty bound younger cohorts who feel obligated to care for the aged in their societies (North & Fiske, 2015). The most concrete support for this current speculation was provided by North and Fiske (2015) in their cross-cultural meta-analysis. These researchers examined proportions of working populations compared with proportions of older adults in need of support across several countries; they found a correlation between increased population aging and negative perceptions, and they concluded that this relationship may be even stronger in eastern countries, where the proportions of older adults are highest.

Individual Factors

Studies generally find that more individual contact with older adults is positively related to perceptions of aging (Cadieux, Chasteen & Packer, 2018; Flamion et al., 2017; Lockenhoff et al., 2009; Tan et al., 2004), and education levels also appear to be positively related to perceptions of aging (Lockenhoff et al., 2009). Researchers report that greater contact with older adults can eliminate negative stereotypes and fostering positive attitudes (Cadieux et al., 2018). Lockenhoff et al. (2009) found that even in societies with large older adult populations (which tends to generate negative perceptions of aging), high education levels generated more positivity towards the idea of aging. On the other hand, factors such as age and gender do not appear to be related to perceptions of aging (North & Fiske, 2015).

Perceptions of aging/older adults and factors that may affect these perceptions are rarely investigated beyond the broad factors highlighted in this review. Additionally, because much of the literature on perceptions of aging focuses on a cultural level of analysis, which serves as a

limited scope of analysis that is difficult to generalize, many of the findings serve only as vague conclusions (Lockenhoff et al., 2009).

Millennial Profile

The birth years that constitute the Millennial generation are varied among sources. For this study, I will use the years specified by the Pew Research Center, as it is a reputable information source. Therefore, I will consider Millennials to be individuals who were born from 1981 to 1996 (Pew Research Center, 2014). As such, the oldest Millennials are 36 and the youngest are 19 at the time of this study.

As the older adult population has been increasing, Millennials have also increased in number and, in 2019, they are projected to become the largest cohort living within the U.S. (Fry, 2018); therefore, Millennials also comprise the largest proportion of younger generations. There are 71 million Millennials in the U.S., and they are estimated to reach 74.3 million in 2050 through immigration (Fry, 2018). Because Millennials have become such a significant portion of the U.S. population, it is important to understand their perceptions on aging, as they face a reality in which older adults will also be a large demographic with whom they must share resources and cooperate.

Millennials possess many distinguishing characteristics and trends. One of the most differentiating features of the Millennial generation is their strong connection with and ability to use the internet and technology (Pew Research Center, 2014), as the generation was born into an advanced digital era. Consequently, they have been dubbed "digital natives" (Pew Research Center, 2014).

Millennials are generally liberal and supportive of tolerant policies. For example, Millennials are the largest supporters of gay marriage, the most lenient towards immigration

policy, and they are much less apprehensive towards changes in American values, such as single parent homes or interracial marriage (Pew Research Center, 2014). Their general broadmindedness may be due, in part, to the fact that Millennials are the most racially diverse generation (Pew Research Center, 2014). Politically, Millennials display a rejection of current government: 50 percent are unaffiliated with either major U.S. party, and they are less likely to identify as patriotic than older generations (Pew Research Center, 2014).

Despite being the most educated American cohort, Millennials are poorer and, in more debt, than Generation X'ers or Baby Boomers were at equivalent ages (Pew Research Center, 2014). Many Millennials still reside with their parents, further preventing them from entering the "traditional" adult roles expected of earlier generations (Pew Research Center, 2014). In 2014, 68 percent of Millennials were unmarried, and one fourth of the millennial population may never marry (Wang & Parker, 2014). Because the Millennial life course shows considerable differences from earlier generations, this cohort may be ushering in future changes to familial societal norms.

Millennial decline in religion. Religion has a very strong presence in the United States. Not only do most U.S. citizens belong to a faith tradition, the U.S. is currently the only advanced nation where many of its citizens value religious faith (Pew Research Center, 2002). Researchers have noted that such a strong religious presence may affect general American perceptions and culture (Shepperd et al., 2014). Millennials, however, display a different relationship with religion and religious affiliation. Amidst such high levels of conviction in the U.S., the Millennial cohort is rejecting organized faith and embracing secularism at record levels.

A 2012 Pew study reported that "...a third of adults under 30 – are religiously unaffiliated today, the highest percentage in Pew research polling" (Pew Research Center, 2012, p. 1). The

adults that Pew is referencing are the Millennial cohort, who are characteristically displaying trends that dismiss customary values. More recently, Lipka (2015) found that 35 percent of Millennials do not associate with any religion. Consequently, Millennials have the highest rates of religious alienation when compared to older cohorts, both currently and at equivalent ages (Pew Research Center, 2014; Twenge, 2015). The significant Millennial withdrawal from religion mirrors the growing change among all American age groups: 22.8 percent of the overall U.S. public was considered religiously-unaffiliated in 2015, and that number is projected to continue increasing (Pew Research Center, 2015). Despite the significant level of religious alienation among Millennials, a majority of the cohort still identify with religion. As a very diverse generation, levels of religiosity differ among Millennials by race, with African-American and Hispanic-American Millennials characterized as more institutionally religious than non-Hispanic White Millennials (Pew Research Center, 2012).

Twenge et al. (2015) found higher levels of individualism among Millennials to be related to lower levels of religiosity and religious affiliation. Individualism, which is characterized by independence, self-determination, and striving for uniqueness, appears to be incompatible with religious values, which promote a group focus (Twenge et al., 2015). As cited by Twenge and colleagues, research has shown that individualistic and religious values have a particularly negative relationship in societies where the presence of religion is common, such as the United States (Gebauer, Paulhus & Neberich, 2012).

Despite these findings, researchers have differing ideas as to whether this decline is a temporary trend representing the carelessness of youth, or a permanent and growing societal change (Pew Research Center, 2014; Twenge, 2015). Twenge et al. (2015) analyzed national surveys spanning over 48 years (1966-2014) and three different adult cohorts (Baby Boomers,

Gen X'ers, and Millennials) and found that the recent decrease in religion among Millennials is significantly higher than preceding generations and is, therefore, more than just an age-related phase. Twenge and colleagues' generational analysis is a significant indicator that differences in era is what has brought about this decline in the need or want for religious conviction. In fact, the number of younger adults and adolescents who reject religion and do not partake in religious activity has doubled (Twenge et al., 2015). Thus, Twenge et al. (2015) attribute lower levels of Millennial religiosity to a cultural shift, i.e., a more permanent movement (Twenge et al., 2015). This decline in religious affiliation and religiosity among Millennials may affect perceptions of aging and, in turn, the relationship between younger and older cohorts.

Millennial perceptions of aging. The literature on Millennial perceptions of aging is limited, as most research incorporates all younger generations collectively, rather than giving primary focus to Millennials. However, one Millennial-focused study conducted by Branscum and Sciaraffa (2013) found that Millennials have high levels of negative perceptions of older adults, as well as negative views towards respecting older adults and working/interacting with older adults. Likewise, the Pew Research Center reported that 53 percent of Millennials feel that federal programs should be geared towards benefiting younger generations, rather than older generations (Pew Research Center, 2014). Despite these findings, the Pew Research Center reported that Millennials generally revere the elderly and are in favor of supporting older generations: "A majority say that the older generation is superior to the younger generation when it comes to moral values and work ethic. Also, more than six-in-ten say that families have a responsibility to have an elderly parent come live with them if that parent wants to" (Pew Research Center, 2010, p. 3).

Importance of Millennial Aging Perceptions

Intergenerational unity. A steadily increasing aging population within the United States is expected to bring about change to societal and fiscal structures (Ortman et al., 2014; Zaino & College, 2005). Moody and Sasser (2006) point out that our older population "on average, is now living longer, is better educated, and is in better health than ever before" (p. 415). The most current calculations from the Administration on Aging (AOA) are that, in 2016, 15.2 percent of the population consisted of older adults, (Administration on Aging, 2018) and by 2030 (a reality only 12 years away) the older adult population will expand to 20 percent (Ortman et al., 2014). This rise in the number of older adults is projected to steadily continue; the U.S. Census Bureau estimates that there will be 83.7 million older adults in the United States by 2050 — double the numbers recorded in 2012 (Ortman et al., 2014). Accordingly, As the older population increases, aging and older adults will become more common in society.

A primary point of concern for both researchers and White House Conference on Aging (WHCoA) leaders, is the accommodation of such a larger older adult population, as the proper management and support of the increasing older adult population is fundamental for society to continue functioning effectively (Zaino & College, 2005). Researchers have established that the shifting demographics will bring about significant changes to public programs and resources portioned for older adults (Zaino & College, 2005; Ortman et al., 2014). As a result, WHCoA leaders and researchers have cited “intergenerational unity” – the cooperation of and support of all age groups – to be a chief strategy in successfully adapting to the increasing older adult population (Zaino & College, 2005; Zhou, 2007). Intergenerational cohesion has been an important topic of conversation since the 1995 WHCoA and became a dominant theme in 2005, which marked the beginning of progressive policies and the effort to address the drastically

increasing aging population (Zaino & College, 2005). Experts believe that the policies and programs that require interdependence and partnership among younger and older generations will thwart the potential for instability due to changing demographics (Zaino & College, 2005).

To achieve positive intergenerational cohesion, we must consider and study the perceptions of younger generations (Zhou, 2007). This is because *perceptions* and *attitudes* towards aging influence *behavior* towards older adults (Pasupathi & Lockenhoff, 2002). Indeed, the perceptions of younger generations about older adults may significantly impact the personal and societal well being of older adults (Levy & Meyers 2004; Pasupathi & Lockenhoff, 2002; Zhou, 2007). In a cross-cultural study examining the knowledge of American and Chinese college students about aging and/or "being old" (Zhou, 2007, p. 812), Dr. Ling-Yi Zhou illuminated the importance of intergenerational relationships and the role of understanding perceptions:

...younger cohorts' perception of the older cohorts has significant implications for the older adults. As life proceeds, older adults will eventually need care and support, and it is usually the younger generations who are performing such tasks. Quality care service and healthy, loving relationships with senior adults will be out of the question if younger people's views of older adults are negative or if they misunderstand the needs and preferences of the elderly. To help foster intergenerational understanding, the very first step is to find out what mutual knowledge exists across generations." (Zhou, 2007, p. 4)

Millennials in the workforce. In 2016, Millennials became the largest percentage of the labor force (Fry, 2018) – at a time when older adults are also becoming a more common element of the American workforce, increasingly working beyond retirement (Desilver, 2016; Drake, 2014; Pew Research Center, 2009). Moreover, Millennials are joining a labor force with three preceding generations: Traditionalists, Baby Boomers, and Generation X (Eisner, 2005); two of these cohorts (Traditionalists and Baby Boomers) encompass the older adult population (Eisner, 2005). Considering this, Eisner (2005) suggests that Millennial perceptions of aging and older

adults are important within the professional setting, as their perceptions may influence their interactions with older colleagues and their progress into the labor force.

In response to this circumstance, there has been a growing body of literature on managing employees with considerable age differences and promoting "intergenerational harmony" (Brack & Kelly, 2012; Bransum & Sciaraffa, 2013; Eisner, 2005; Myers & Sadaghiani, 2010). Because perceptions of aging are known to affect attitudes and behaviors towards older adults, any negative or misguided views may contribute to workplace maltreatment of older adults by the dominant U.S. generation (Millennials).

Importance of Analyzing Millennial Perceptions through Religion and Religiosity

As stated previously, religion is a widespread phenomenon that may influence perceptions (Koenig, 2012; Shepperd et al, 2014), and there is a significant decline in religion among the Millennial cohort (Alper, 2015; Lipka, 2015; Pew Research Center, 2014; Twenge, 2015). This may prove to be significant for perceptions of aging among Millennials, as religion contains teachings that promote positive meanings towards aging and older adults.

Religion and effect on perceptions. Researchers and theorists have solidly established that religion has no uniform definition (Koenig, 2012; Pals, 2006), and the construct of religion and its application have been given various meanings across many fields of study (Pals, 2006). However, what is known is that religion is a widely practiced phenomenon (Pew Research Center, 2012); 84 percent of the global population are reported to be religiously-affiliated, 54.9 percent of which are followers of the three major monotheistic religions: Christianity, Judaism, and Islam (Pew Research Center, 2012). Additionally, religious disassociation has become a major global trend. The religiously-unaffiliated represent 16.1 percent of the global population and are only surpassed by Christianity and Islam in membership (Pew Research Center, 2012).

As both religion and religious dissociation are considerable parts of our world, they become important variables to consider when studying perceptions of aging.

Koenig (2012) defines religion using a psychosocial framework, characterizing it as "an organized system of beliefs" and traditions that is used to create a relationship with a higher power and to guide both our understanding of the world and our behavior towards others (Koenig, 2012, p. 212). Using this definition, it can be assumed that religion is a system that can affect our perceptions and attitudes and is, therefore, a factor that may influence perceptions on aging.

Research has found religion to be a significant element in an individual's worldview, which is defined as a conceptual framework used by an individual to interpret the world and guide behavior (Shepperd et al., 2014). Furthermore "greater religiousness corresponds with a stronger worldview" (Shepperd et al., 2014. p. 298), and worldviews based in religion are connected to greater levels of cognitive and physical well-being (Shepperd et al., 2014). The effect that religion has on worldviews (and, as a result, on behaviors) demonstrates that religion (or lack thereof) has a considerable effect on perceptions and can affect our ideas of aging.

Likewise, religion is a powerful predictor of other trends, such as attitudes in politics and social policy. For example, Pew reported that 60 percent of the religiously-unaffiliated (a great majority) favor the Democratic party (Pew Research Center, 2012). Moreover, individuals who have disassociated with organized religion are much more likely to identify with liberal policy: 72-73 percent of religiously-unaffiliated individuals are supporters of abortion and same sex marriage (Pew Research Center, 2012).

Religion and aging perceptions. Most work in the fields of religion and gerontology focuses on the effects of religious affiliation for aging persons themselves. For example,

religious conviction is believed to be positively related to the self- concept and to the overall well-being of older adults (Koenig, Kvale & Ferrel, 1988; Krause, 2003; McFadden, 1995). However, there is very little information on how religion affects perceptions of aging among younger demographics. A 2015 cross-cultural study assessing the effects of "personal" and "communal" values on attitudes towards older adults found that adhering to a group value system or "communal values" led to more favorable views towards aging and older adults (Zhang et al., 2016). Zhang and colleagues found that those who had "stronger religious beliefs" (a type of communal value) had more agreeable attitudes towards older adults, and, therefore, towards aging (Zhang et al., 2016). In addition, Ellison and Xu (2015) found that religious conservatism and resolute religious conviction fosters a belief in aiding older adults and promotes positive intergenerational relationships. Despite these few examples, modern publications that address religion and perceptions of aging are scarce, as most literature that addresses the conceptions of aging within Christianity, Judaism, and Islam are much older sources.

Christianity, Judaism, and Islam are known to promote notable veneration towards older adults. This is demonstrated through teachings that assure respect and a favorable status for older adults and values that go beyond the mainstream ideals associated with youth (McFadden, 1995; Moberg, 1972; Moody, 1990; Sanecka, 2015; Stambler, 1982; Whittington, 2010). McFadden illustrates this concept:

Judaism and Christianity also deny that human value depends upon productivity and youthful appearance. Aged individuals who no longer experience biomedical, psychological, and social ideals of health, active mastery of environment and extensive interpersonal networks can find affirmation of their fundamental worth in religion. In addition to Judaism and Christianity, other world religions, like Islam, convey

meaningful portrayals of late life possibility for spiritual growth and fulfillment."

(McFadden, 1995, p. 164).

Respect for older adults is a theme present in all three major religions. The fifth commandment is cited as a major source for Christians and Jews in their views of older adults: "Honor thy father and thy mother that thy days may be long upon the land which the Lord thy God giveth thee" (Exodus 20:12). In Judaism, ageing is associated with wisdom, a characteristic that establishes dignity and portrays older adults as serving a practical and helpful purpose in communities (Stambler, 1982).

Like Judaism and Christianity, Islam stresses respect towards ageing parents, which is translated as respect for older adults (Moody, 1990). As Moody points out, filial piety is a significant value in Islamic teachings. Islam emphasizes that despite the biological weakening that occurs with old age, ageing is a time that can offer plentiful productivity and satisfaction, so long as one maintains strong convictions and dutifully follows Islamic morals (Moody, 1990). Thus, the three major monotheistic religions define aging in a way that grants a positive societal status and self-concept to older adults.

Social representation theory. Moscovici's Social Representation theory is a psychosocial lens of analysis that asserts that an individual's social perceptions are influenced by their group membership and the "social representations" their group creates (Wagner et al., 1999). Moscovici (1963, p. 251; as cited in Wagner et al., 1999) defines a social representation as a "social object by the community for the purpose of behaving and communicating." Along these lines, Moscovici seems to use this term to reference shared beliefs among group members, which serve to influence their perceptions (Moscovici, 1984). Simply put, Moscovici's theory argues that on the individual level, perceptions about our social world are influenced by the

groups we belong to and the beliefs that those groups promote. Thus, our *individual* perceptions are a product of our *group* beliefs.

Sergio Moscovici developed Social Representation theory through an investigation of how French society received the introduction of psychoanalysis in the 1950's (Wagner et al., 1999). The social psychologist noticed that different communication outlets were introducing the concept of psychoanalysis in different styles, to be compatible with the pre-existing beliefs of the targeted audience and/or groups (Wagner et al., 1999). Moscovici maintained that social representations generated through groups create distinct realities for members and guide their perceptions and behavior (Moscovici, 1984).

Considering Moscovici's (1984) theory, religion may be a vehicle of social representation. Christianity, Judaism, and Islam contain religious teachings and texts that serve as social representations, as they are a basis of shared knowledge among members of those religions. In accordance with the purpose of social representations, religious teachings and values (social representations) influence the perceptions of individual members (Koenig, 2012). This is consistent with Koenig's definition of religion as a system of knowledge that guides individual thinking and behavior (Koenig, 2012).

Furthering the assertion that religion generates social representations, we may assume that perceptions of aging among Christian, Jewish, and Muslim Millennials will be influenced by the interpretations and/or social representations of aging and older adults that are provided through the religious groups with which they identify. For example, Christianity, Judaism, and Islam's promotion of respect towards older adults and depiction of old age as a time of increasing wisdom (McFadden, 1995; Moody, 1990; Stambler, 1982) serve as social representations of aging that may influence Millennial perceptions of aging.

Moscovici's Social Representation theory provides a framework for the following hypotheses:

Hypotheses

(1) Perceptions of aging will be more positive among members of the Millennial generation who self-identify as religiously-affiliated (Jewish, Muslim, or Christian) than among those who do not self-identify as religiously-affiliated (Atheist and Agnostic).

(2) Perceptions of aging will be positively related to level of religiosity among religiously-affiliated (Jewish, Muslim, or Christian) Millennials.

For all analyses, perceptions of aging will be measured by the eight individual items from Lockenhoff's Perceptions of Aging scale (Lockenhoff, 2009). For all analyses, level of religiosity will be measured by two items from the Duke University Religion Index (DUREL) measuring organizational religious activity (ORA) and non-organizational religious activity (NORA; Koenig & Bussing, 2010), and by the total score from Hoge's Intrinsic Religious Motivation scale (Hoge, 1972).

Method

Participants

To study the relationship between religion and perceptions of aging among the Millennial cohort, I recruited participants between the ages of 19 and 36 (Millennials) who reported being followers of the world's three major monotheistic religions (Christianity, Judaism, or Islam) or who identified as Atheists /Agnostics. The final sample consisted of 197 individuals; I excluded 20 individuals who submitted incomplete questionnaires or did not meet inclusion criteria, such as: no affiliation with the belief systems being analyzed, not living in the U.S., being of an age outside the Millennial age range.

To describe the sample, I conducted simple frequency tests (see Table 1). The sample included individuals of every age between 19 and 36, with 21-year-olds comprising the greatest portion of the sample (14.2 percent). Christians constituted the greatest portion of the sample of religiously-affiliated individuals, at 25.9 percent. A majority of the sample (81.7 percent) were born in the United States, and 95.9 percent were U.S. Citizens – indicating that a truly “American” sample was collected. Interestingly, 38 percent of the sample reported having some form of education in gerontology.

Procedure

Participants completed three different measurement tools and a demographic questionnaire, administered either electronically or in-person. To allow participants to take the study electronically, I uploaded the questionnaires to *Question Pro* – an online tool used to upload surveys so that participants can access a specific link that allows researchers to collect data anonymously.

I recruited participants through community and social media outreach. Target areas included: Hood College, University of Maryland, city of Frederick, Maryland, and Facebook. I contacted religious organizations at Hood College through email: Hillel or Jewish student Union (JSU), Muslim Student Association (MSA), Catholic Campus Ministry (CCM), and Hood Interfaith Team (HIT). I explained to the leaders of these groups that I was conducting a study on young adult views of older adults and was looking for individuals of diverse backgrounds. The leaders of each of these organizations agreed to pass on the information and link to the study to their members’ email lists.

To diversify the sample with individuals who were agnostic or atheist, I made the study available on Facebook, advertised the study in the University of Maryland Baltimore County’s

University Magazine, and visited undergraduate classes at Hood College. I also advertised the study to Millennials on Facebook and encouraged people to “share” the post so that the study would gain participants from varying backgrounds and institutions. Two undergraduate classes in psychology (Hood College) and one graduate class in counseling (Hood College) completed the study in-person. All three sessions took place in a quiet room with a desk and chair for each participant, and participants had as much time as they needed to complete the questionnaires. I also provided the study link to an undergraduate psychology class of 67 students at the University of Maryland, who were given extra credit for their participation. In each data collection scenario, I attempted to achieve a snowballing effect by encouraging participants to share the study with other individuals.

Measurement

Perceptions of aging. Lockenhoff's (2009) Perceptions of Aging measure investigates a participant's ideas about the physical, mental, emotional, and societal status of older adults. To do this, the scale presents eight items that ask participants to rate: (1) physical attractiveness, (2) ability to do everyday tasks, (3) ability to learn new information, (4) general knowledge, (5) wisdom, (6) respect received from others, (8) authority in the family and (9) life satisfaction. The original scale has participants rate these traits on a 5-point Likert scale ranging from -2 (Decreases a lot) to 2 (Increases a lot). However, for the purposes of this study, we arranged scoring to range from 1 (Decreases a lot) to 5 (Increases a lot). Because Lockenhoff's measure is composed of eight unique items to assess perceptions of aging and attitudes towards older adults, item scores are not summed and, therefore, traditional measures of reliability and validity do not apply.

Religious commitment/motivation. The Hoge Intrinsic Religious Motivation Scale (HIRMS; Hoge, 1972) assesses level of religious motivation, specifically, intrinsic level of motivation. The development of the scale stems from Gordon Allport's concept of assessing level of religious intention through analyzing an individual's "motivation" for following religion. Allport depicts an *intrinsically* motivated individual to be one who follows his/her faith because of a deep-seated and true belief with no ulterior motives (Allport & Ross, 1967). Hoge emphasizes that the scale is not meant to test religious "behavior," but rather an individual's "motivation" in following his/her respective faith system. The HIRMS can be used to analyze any religious faith. Hoge reduced the original list of 30 items to the 10 items with the highest evidence for reliability and validity. The scale was assessed for validity through a preliminary and final validity assessment, and factor analysis has confirmed the unidimensional factor structure of the scale. Internal consistency reliability was reported to be .90.

The final HIRMS is a 10-item scale of statements on the importance of faith and relationship to a higher being: (1) My faith involves all my life, (2) It doesn't matter so much what I believe as long as I lead a moral life, (3) One should seek God's guidance when making important decisions, (4) In my life, I experience the presence of the Divine (God), (5) I refuse to let religion influence my everyday affairs, (6) My faith sometimes restricts my actions, (7) Nothing is as important as serving God as best as I know how, (8) There are many more important things in life than religion, (9) My religious beliefs lie behind my whole approach to life, (10) I try hard to carry religion over into life's dealings. Participants rate the statements on a 4-point Likert scale ranging from (1) Strongly Agree to (4) Strongly Disagree. According to this scoring system, individuals with greater levels of intrinsic religiosity score lower on the HIRMS,

and those with lower levels of intrinsic religiosity score higher. The *median* HIRMS score for religiously affiliated Millennials in the current study was 23.00.

Level of religiosity. To assess level of religiosity or “religious involvement,” participants completed two items from The Duke University Religion Index (DUREL; Koenig & Bussing, 2010). The original scale consists of five items intended to measure: organizational religious activity (ORA), non-organizational religious activity (NORA), and intrinsic religiosity (based on Hoge’s ten-item scale). However, because participants completed Hoge’s (1972) original 10-item scale to assess religious motivation, I only used the first two items on the DUREL (ORA and NORA) to measure level of religiosity. The ORA (How often do you attend church or other religious meetings?) and NORA (How often do you spend time in private religious activities, such as prayer, meditation or Bible study?) items were recommended as two of three elements to determine overall religious involvement (third element being intrinsic religiosity, which is the third subscale) at the 1995 National Institute on Aging and Fetzer Institute Conference (Koenig & Bussing, 2010). Participants rated these two items on two different six-point Likert scales that assess the frequency of organizational and non-organizational religiosity: The ORA scale ranges from 1 (never) to 6 (once a week; more than once/week); the NORA scale ranges from 1 (rarely or never) to 6 (more than once a day). As recommended by the developers of the scale, I scored each item separately, therefore, scores can range from one to six on each respective item. Because only two items of the DUREL scale were used, traditional measures of reliability and validity do not apply. However, in its entirety, the DUREL is a widely used scale whose scores have been determined to have a high level of reliability and validity through test and retest measures as well as assessments conducted by independent analysts (Koenig & Bussing, 2010). Koenig and Bussing (2010) reported internal consistency reliability to be 0.91 and significant

convergent validity with other validated tools used to evaluate religiosity. The *median* ORA and NORA scores for religiously affiliated Millennials in the current study were 4.00 and 3.00, respectively.

Results

To assess whether religiously-affiliated and unaffiliated Millennials differ in their perceptions of aging (my first hypothesis), I conducted Mann Whitney U tests. The Mann Whitney U is the non-parametric equivalent of the t-test and was required due to the ordinal nature of the data. Religiously-affiliated and unaffiliated participants did not differ on Lockenhoff's first three items (biological aspects of aging). Therefore, I retained the null hypothesis for these items: (1) *physical attractiveness*, (2) *ability to do everyday tasks*, (3) *ability to learn new information*. On the other hand, religiously-affiliated participants scored significantly higher than non-religiously-affiliated participants on Lockenhoff's last five items, which addressed several socio-emotional aspects of aging: (4) *general knowledge*, (5) *wisdom*, (6) *respect received from others*, (7) *authority in the family*, (8) *life satisfaction*. These statistical analyses are presented in Table 2.

To determine whether level of religiosity (among religiously-affiliated Millennials) was related to perceptions of aging (my second hypothesis), I conducted non-parametric Spearman Rho correlational tests. I correlated the scores on each measure of level of religiosity (ORA, NORA, and HIRMS) with each perception of aging item on Lockenhoff's scale (see Table 3). I found no significant relationships between ORA and aging perceptions. However, NORA scores were significantly positively correlated with *general knowledge* (small effect size), *wisdom* (small effect size), and *respect received from others* (small effect size). I also found significant negative correlations between HIRMS scores and *respect received from others* (small effect size)

and *life satisfaction* (small effect size), which indicate that greater levels of intrinsic religiosity are related to more favorable perceptions of aging in these two domains. Interestingly, *ability to do everyday tasks* was significantly positively correlated with HIRMS scores (small effect size), suggesting that lower levels of intrinsic religiosity are correlated with more favorable perceptions of aging in this domain.

Finally, I explored the relationship between level of religiosity and perceptions of aging in Christian participants, Jewish participants, and Islamic participants, separately. I found no significant correlations between ORA and perceptions of aging. However, NORA scores for both Christian participants ($r_s = .33$ [Bootstrap 95% CI: .01, .59]; medium effect size) and Jewish participants ($r_s = .40$ [Bootstrap 95% CI: .10, .65]; medium effect size) were significantly positively correlated with *life satisfaction*. Likewise, HIRMS scores for both Christian participants ($r_s = -.31$ [Bootstrap 95% CI: -.54, -.04]; medium effect size) and Jewish participants ($r_s = -.52$ [Bootstrap 95% CI: -.72, -.20]; large effect size) were significantly negatively correlated with *life satisfaction*. NORA scores were significantly positively related to *respect received from others* in Christian participants ($r_s = .29$ [Bootstrap 95% CI: -.02, .54]; medium effect size). Finally, *ability to do everyday tasks* was significantly positively related to HIRMS scores in Muslim participants ($r_s = .31$ [Bootstrap 95% CI: .00, .57]; medium effect size), again suggesting that lower levels of intrinsic religiosity are correlated with more favorable perceptions of aging in this domain.

Discussion

This study adds to the body of knowledge on perceptions of aging by linking and analyzing two understudied variables: (1) *Millennials*: a significant young adult population who are more likely to interact with older adults and whose views on aging could have far-reaching

effects on how older adults are treated and (2) *Religion*: a major phenomenon that can affect individual perceptions/actions and is showing an unprecedented decline among Millennials which could, therefore, affect their views of aging and treatment of older adults (Pasupathi & Lockenhoff, 2002). In addition, by examining these variables, this study attempts to offer preliminary conclusions about the prospect for intergenerational harmony between a younger adult generation and older adults. Because both Millennials and religion have been scarcely investigated in their effect on perceptions of aging, *direct* empirical evidence to provide a context for this research is limited.

My first hypothesis was supported, as religiously-affiliated Millennials had more positive views of aging than non-religiously-affiliated Millennials on most of the items from the Lockenhoff scale. For the first three items on the Lockenhoff scale (*physical attractiveness, ability to do everyday tasks, ability to learn new information*), which represent biological aspects of aging, there were no significant differences between religiously-affiliated and non-religiously-affiliated Millennials; both perceived declines in the biological aspects of aging. For the last five Lockenhoff items, which represent social aspects of aging (*general knowledge, wisdom, respect received from others, authority in the family, life satisfaction*), neither group of Millennials reported perceived declines; however, religiously-affiliated Millennials had significantly more positive perceptions than non-religiously-affiliated Millennials. These results demonstrate that, in general, religiously-affiliated Millennials have *more* positive perceptions of older adults and aging than religiously-unaffiliated Millennials.

My second hypothesis was partially correct, as only certain items from the Lockenhoff scale were positively related to level of religiosity among religiously-affiliated Millennials. Interestingly, organizational religious activity showed no significant relation to aging

perceptions; perceptions of aging, for Christian, Jewish, and Muslim participants combined – as well as separately – were not significantly related to organizational religious activity. These results are loosely similar to the findings of Ellison and Xu (2015), who found that religious attendance (a type of organizational religious activity) was not a determinant of intergenerational support. On the other hand, for religiously-affiliated Millennials (i.e., Christian, Jewish, and Muslim participants combined), *general knowledge*, *wisdom*, and *respect received from others* were positively related to non-organizational religious activity, while *respect received from others* and *life satisfaction* were negatively related to intrinsic religious motivation. This suggests that religiosity marked by internal/private religious practices is potentially more useful to predict several domains of aging perceptions.

Finally, for Jews and Christians, separately, higher levels of non-organizational religious activity and higher levels of intrinsic religious motivation were related to the perception that *life satisfaction* increases with age. In addition, for Christians, the perception that adults receive greater *respect from others* as they age was related to higher levels of non-organizational religious activity.

As previously stated, both religiously-affiliated and religiously-unaffiliated Millennials perceived declines in Lockenhoff's first three items, which represent biological aspects of aging: (1) *physical attractiveness*, (2) *ability to do everyday tasks* and (3) *the ability to learn new information*. Such a strong agreement on biological decline between both groups may be related to the fact that physical and mental weakening is recognized as a common trajectory among geriatric specialists and is an occurrence in old age that is confirmed by scientific research (Crimmins, 2015; DiGiovanna, 2000; Fajemiroye et al., 2018). This is especially true as increased longevity among older adults has led to extended periods of physical decline and

greater instances of chronic disease that are highly evident (Crimmins, 2015), which can cause even greater association between old age and disability. Beliefs in biological decline with age have also been observed as an international phenomenon that is consistent across cultures and nations. In one of the most comprehensive cultural investigations on perceptions of aging, Lockenhoff and colleagues (2009) found that among 26 cultures, there was a vast consensus on the perception of biological decline during old age. As a widely held perception with strong scientific backing, it appears that the perception of biological decline with age is also held despite religious affiliation, at least among individuals who identify as Christian, Jewish, Muslim, Agnostic, or Atheist. In fact, Islam, Christianity and Judaism all reference old age as a time of frailty and mental decline (Greenberger, 2012; Moody, 1990; Miller, n.d.). Indeed, this likely explains why higher levels of intrinsic religiosity in religiously-affiliated Millennials were related to lower perceptions of the *ability to do everyday tasks* with age (a biological aspect of aging).

Despite consistent perceptions of biological decline with age, religiously-affiliated Millennials showed significantly more positive perceptions than religiously-unaffiliated Millennials in their ratings of several socio-emotional items of aging: (1) *general knowledge*, (2) *wisdom*, (3) *respect received from others*, (4) *authority in the family*, and (5) *life satisfaction*. Thus, even though religiously-affiliated Millennials perceive that aging brings biological declines, they are more optimistic about increasing social value and meaning with aging. My findings indirectly support the analysis of McFadden (1995), who asserts that religion gives positive meaning to aging and is effective against societies that idolize characteristics associated with youth.

Most research on religion and aging focuses on how religion affects the self-perception of older adults. Many publications assert that the positive ideas of aging fostered by religion help fuel positive-self conceptions among older adults and, therefore, foster better mental and physical health – and an overall better sense of self-worth. The results of this study suggest that these positive meanings given to aging through religion transfer across age groups and become meanings that younger generations embrace as well, causing them to see societal and emotional value to aging. “As these theological and philosophical orientations are dealt with more directly, disseminated more effectively, and promoted more enthusiastically by religious bodies, these values may come to pervade the entire culture to the point where youth accentuated values of society are modified in a direction that gives greater dignity and worth to aging” (Moberg, 1972, p. 53).

Teachings in Christianity, Judaism, and Islam promote the idea that older adults are valuable members of society that deserve respect, simply for being old. This is because such religious teachings give a unique meaning and worth to later life that can only be achieved through aging – contrasting with the typical ideas of uselessness and depression associated with old age due to negative stereotypes. In fact, specific teachings from Christianity, Judaism, and Islam speak to aging and promote the idea of honoring older adults, as they support the idea that with age comes greater general knowledge, wisdom, respect received from others, and authority in the family. Indeed, several socio-emotional domains of aging were rated more positively by religiously-affiliated Millennials than by non-religiously-affiliated Millennials in this study, and higher levels of intrinsic religiosity among religiously-affiliated Millennials were also correlated with perceptions of greater wisdom, respect, and life satisfaction.

The Quran stresses respecting and being kind towards parents in old age and strictly forbids their maltreatment: “Your Lord has commanded that you should worship none but Him, and that you be kind to your parents. If either or both of them reach old age with you, say no word that shows impatience with them, and do not be harsh with them, but speak to them respectfully and lower your wing in humility towards them in kindness and say, ‘Lord, have mercy on them, just as they cared for me when I was little’” (Quran 17:23-24, Oxford World’s Classics Edition). Likewise, the Holy Bible characterizes older adults as wise and deserving of respect in Job 12:12 (English Standard Version) “Wisdom is with the aged, and understanding in length of days,” and in Job 32:7 (King James Version), “I said, days should speak, and multitude of years should teach wisdom.” As Stambler (1982) illustrates through teachings in Leviticus, Judaism gives older adults prestige and mandates support for them: “Thou shalt rise before the hoary head and honor the face of the old man” (Leviticus 19:32, King James Version).

Unlike mainstream society, which is focused on youth and health, religion stresses valuing old age. Whittington (2010) asserts that recognizing and remembering that we will all eventually grow old is firmly stressed in all three Abrahamic religions and is established as an imperative component to maintaining a positive relationship with God. Aging reminds us of God’s greatness and our vulnerability, as youth and life are only temporary (Whittington, 2010). Old age is even celebrated among Abrahamic religions. Christianity depicts old age as a reward for dutiful faith and, therefore, a positive state – contrasted with the common negative notions of old age (Sanecka, 2015). Furthermore, the Islamic hadith demonstrates cherishing gray hair (sign of aging): “The Apostle of Allah said: Do not pluck out grey hair. If any believer grows a grey hair in Islam, he will have light on the Day of Resurrection” (Hadith, Sufyan version).

Implications

This study provides evidence that monotheistic religious affiliation is associated with more positive Millennial perceptions of aging than agnosticism/atheism. Because most Millennials do follow a religious faith, most Millennials have favorable views of older adults and will likely, in turn, respect the older adult generation. These findings are consistent with the observations of the Pew Research Center (2010), which reported that most Millennials have respect for and voluntary obligation towards older adults. This suggests that as Millennials further progress into adulthood and the workplace, their relationships with a longer-employed and a larger older adult population will be healthy, which will help to accommodate larger greying populations in the workplace.

Despite this, the significant and growing religiously-unaffiliated portion of the Millennial population may be a matter of concern, especially as significant religious decline is reported to be continuing among later generations as well (Twenge, 2015). This potential loss of religion may eventually bring about the loss of values that give positive meaning and prestige to old age, which may, in turn, influence intergenerational relationships and the way younger generations treat older adults. Religion and its institutions serve as one of the only resources committed to positive thinking about older adults and serving older adults (Koenig, 2004; Moberg, 1972). As Whittington (2010) cites, even the field of Gerontology (which is devoted to education about aging and promoting fair views of aging) has been criticized for promoting stereotypes within the field, such as the “Healthy Aging” measure, which favors mental and physical stamina – characteristics of youth (MacKinlay, 2008). In addition, religious communities serve as major resources and providers of services for older adults that otherwise would require strained public funds to continue (Koenig & Lawson, 2004; Butler, 2011). Not only are religious institutions supportive of providing services for older adults (as it follows religious traditions of caring for

the sick and old), older adults rely on and prefer to use faith-based aide in place of government programs (Butler, 2011; Sanecka, 2015). Finally, religious congregations and services provide a sense of community for older adults, as well as the opportunity for older adults to interact with individuals of all ages. Such social interaction is fundamental to healthy aging and developing intergenerational bonding. If fewer Millennials and ensuing younger generations affiliate with a religion, such practices and ways of thinking may lead to a decline in both opinions of aging and in the treatment of older adults – a concerning matter, as the aging population is greatly increasing and greater interdependence is needed.

The question then becomes: What measures can we take to ensure a positive status for older adults and beneficial intergenerational relationships, with the risk of significantly less religious affiliation? Intervention programs that facilitate effective interaction with older adults among grade school children may be a way to reduce ageism. Many studies have identified greater intergenerational contact as a factor and strategy that promotes more positive views of aging (Attar-Schwartz, Tan & Buchanan, 2009; Cadieux et al., 2018; Flamion et al., 2017; Kwong-See & Nicoladis, 2010; Lockenhoff et al., 2009). Furthermore, perceptions of aging among youth are significantly less negative than at older ages and typically only range from neutral to positive perceptions, suggesting that negative perceptions are developed from influences after childhood (Flamion et al., 2017).

Mandatory school programs (elementary to high school age) that promote interaction with and service to older adults may help to promote positive perceptions at a young age (while views are already much less negative) and can carry on into the beginning of adulthood. They could also provide the opportunity for children from religiously unaffiliated families to have more contact with older adults. Such programs should be dynamic and aim to create activities

that foster positive experiences, as the quality of such interactions are as important as frequency (Flamion et al., 2017). Such opportunities are largely available through voluntary services, however, implementing such programs as a mandatory part of school curricula will make it so that they are issued with more authority and, therefore, salience.

Limitations and future studies

A limitation of this study was that I was only able to gather data for three major world religions: Christianity, Judaism and Islam, which limits the scope of these findings to Abrahamic religions, which overlap in values. There are many world religions beyond the three analyzed in this study that are practiced in the U.S. Future studies would benefit from looking at religions in addition to Judaism, Christianity, and Islam; analyzing a greater number of religions will offer a more complete view of how religion affects Millennial perceptions of aging. Through studying more religions, researchers can better assess whether *religion* contributes positively to aging, or only *certain religions*. In addition to this, future analysis could benefit from investigating whether religion affects the general population rather than a single generation; this would provide a more thorough understanding of the relationship between religion and perceptions of aging. In addition, most of my sample was drawn from institutions of higher education, making most of the people who were studied college-educated/associated individuals. Related to this is the fact that I did not draw participants directly from religious institutions (church, mosque, synagogue) but, rather, from religious groups at Hood College. Finally, any conclusions from my analyses of the individual religious groups outlined in this study (Christianity, Judaism and Islam) is limited due to small sample sizes; however, my preliminary investigation offers interesting results that warrant further exploration. Future studies with larger sample sizes would

benefit the analysis of potential differences between each of these groups on questions about religiosity and perceptions of aging.

Research on Millennials' perceptions of aging is very rare, and research in perceptions of aging could benefit from further analysis of the Millennial generation. As the youngest adult population who are directly facing an increased aging population for whom they will have to care, Millennial perceptions of aging are critical to assess. Future studies should continue to explore Millennials' perceptions of aging and the factors that may affect them.

Finally, since my research is correlational, it cannot be assumed that religious affiliation is the cause for more positive perceptions of aging among Millennials. Although my study finds that religious affiliation leads to more positive perceptions of aging, it may also be that individuals who have more positive perceptions of aging tend to be drawn to religion.

Conclusion

I found more positive perceptions of aging among religiously-affiliated Millennials compared to religiously-unaffiliated Millennials in a sample of 197 young adults aged 19-36. Both groups perceived that there are biological declines in older adulthood, however, religiously-affiliated Millennials were significantly more positive about socio-emotional aspects of older adult life (i.e., general knowledge, wisdom, respect received from others, authority in the family, and life satisfaction). Although organizational religious activity was not related to perceptions of aging, non-organizational religious activity and level of intrinsic religiosity were positively related to perceptions of several socio-emotional domains of aging (i.e., wisdom, respect received from others, and life satisfaction). These findings will be important to consider when evaluating intergenerational relationships and in developing intergenerational programs, as practices and ideas in religion that contribute to positive perceptions serve as examples that may

be emulated. Studies that examine religion and perceptions of aging (as separate factors) in Millennials should be considered for future research. This study demonstrated that Millennials are an important generation to consider in efforts towards intergenerational unity, and that religion is a factor that may significantly affect intergenerational unity and perceptions of aging.

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Table 1
Frequencies for relevant variables (N=197)

Demographic Variable	n	Percent
Sex		
Female	125	63.45
Male	71	36.04
Other	1	0.51
Ethnicity		
Caucasian/White (non-Hispanic)	107	54.31
Black/African American (non-Hispanic)	27	13.70
Asian or Pacific Islander	21	10.66
Asian Indian	11	5.58
Multi-Racial	7	3.55
Hispanic/Latino	6	3.05
Puerto Rican	3	1.52
Native American	2	1.02
Other	13	6.60
Citizenship		
Citizen	189	95.94
Non-Citizen	8	4.06
Birthplace		
U.S.	161	81.73
Outside of U.S.	36	18.27
Religious Affiliation		
Christianity	51	25.89
Islam	42	21.32
Judaism	33	16.75
Agnostic	34	17.26
Atheist	37	18.78

Table 2

Mann Whitney U for religiously-affiliated (n = 126) and religiously unaffiliated (n = 71) Millennials on eight perception-of-aging items

Lockenhoff scale item	Non- Religious	Religious	<i>u</i>	<i>z</i>	<i>p</i>	<i>r</i>
	<i>Mdn.</i>	<i>Mdn.</i>				
Physical Attractiveness	2.0	2.0	4,473.00	.000	1.00	0.03
Ability to do Everyday Tasks	2.0	2.0	4,606.50	.401	0.69	-0.03
Ability to Learn New Information	2.0	2.0	4,306.00	-.482	0.63	-0.03
General Knowledge	3.0	4.0	3,288.00	-3.215	0.001	-0.23
Wisdom	4.0	5.0	3,251.50	-3.508	0.000	-0.24
Respect Received from Others	4.0	4.0	3,167.50	-3.568	0.000	-0.25
Authority in the Family	4.0	4.0	3,039.00	-3.940	0.000	-0.28
Life Satisfaction	3.0	4.0	3,665.50	-2.208	0.03	-0.16

Table 3
Spearman Rho Correlations for eight perception-of-aging items with three religiosity measures in religiously-affiliated Millennials (n = 126)

	ORA	NORA	HIRMS
Physical Attractiveness	.02 [-.15, .18]	-.06 [-.23, .12]	.14 [-.06, .33]
Ability to do Everyday Tasks	-.147 [-.31, .01]	-.13 [-.29, .04]	.26** [.08, .43]
Ability to Learn New Information	-.07 [-.27, .11]	-.16 [-.32, .00]	.13 [-.04, .30]
General Knowledge	.08 [-.09, .25]	.18* [-.01, .35]	-.10 [-.28, .09]
Wisdom	-.05 [-.21, .13]	.18* [.00, .34]	-.07 [-.24, .09]
Respect Received from Others	.11 [-.07, .28]	.24** [.06, .42]	-.23** [-.40, -.04]
Authority in the Family	-.05 [-.24, .15]	-.12 [-.30, .05]	.07 [-.11, .25]
Life Satisfaction	-.01 [-.17, .15]	.14 [-.04, .30]	-.22* [-.37, -.05]

* = $p < .05$; ** = $p < .01$; Bootstrap 95% Confidence Intervals are reported in square brackets
 ORA = Organizational religious activity; NORA = Non-organizational religious activity;
 HIRMS = Hoge Intrinsic Religious Motivation Scale
 Note: lower scores on the HIRMS indicate higher levels of intrinsic religious motivation