Religiosity and Death Anxiety of College Students

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ABSTRACT

This study examines the relationship among gender, religiosity, and death anxiety. A total of 236 college student participants completed the Intrinsic Religious Motivation Scale, Revised Death Anxiety Scale, and a personal questionnaire. Factor analyses, Pearson correlation, and both linear and quadratic regression analyses were conducted. The results showed a relationship between religiosity and death anxiety, and a positive relationship between intrinsic religious motivation and frequency of religious service attendance and strength of belief. Female participants seemed to show more fear of pain than their male counterparts. A curvilinear relationship was present because people of intermediate religious motivation had higher death anxiety than those who were both high and low on the religious motivation scale.

Keywords: religiosity, death anxiety, college student

INTRODUCTION

Humans face the reality of death. Regardless of status or wanting to live longer or not, the reality of death is present in everyone’s life. Certain people are more anxious of their death than others. Richardson, Berman, and Piwowarski (1983) stated, “Death anxiety refers to a negative reaction, and an apprehension and uneasiness which one experiences when contemplating death and dying” (p. 149). A factor that may influence an individual’s level of death anxiety is the strength of his or her religious beliefs (Leming, 1979, 1980; Richardson et al.).

Ellis and Wahab (2012) describe four theories that provide implications for how religiosity and fear of death may be related. These theories are buffering theory, terror-management theory, curvilinearity theory, and death apprehension theory. Several studies that examined the relationship between religiosity and death anxiety were described in a meta-analysis of intrinsic and extrinsic religiousness by Donahue in 1985. Several studies showed positive correlations, others showed negative correlations, and several showed no significant correlations. However, most studies indicated that death anxiety appeared to be lower in people with strong and integral religious views, and greater in people with more expedient religious beliefs. Numerous studies showed no relation when employing superficial measures of religion (e.g., denominational affiliation). Other studies showed that people who possess intrinsic religious motivations have significantly lower levels of various types of death anxiety than people with extrinsic religious motivations (Clements, 1998; Kraft, Litwin, & Barber, 2001; Martin & Wrightsman, 1965; Minear & Brush, 1980-1981; Richardson et al., 1983; Suhail & Akram, 2002; Templer, 1972). One study indicated that people with regular attendances at religious services have less death anxiety (Duff & Hong, 1995), whereas another indicated that a strong religious commitment was an important determinant of the fear of death (Spilka, Minton, & Sizemore, 1977).

Conversely, a few studies have indicated that weak or no religious beliefs are related to a low death anxiety (Cole, 1978, 1979; Ray & Najman, 1974). This contradictory finding may originate from the presence of a curvilinear relationship between religiosity and death anxiety. At least four studies have
suggested that the relationship between religiosity and death anxiety may have a curvilinear component (Aday, 1984-1985; Leming, 1979, 1980; McMordie, 1981; Nelson & Cantrell, 1980). These four studies employed psychometrically sound measures of death anxiety, but their measures of religiosity were weak. Aday employed frequency of church attendance and a single-item measure of religiosity with unknown reliability and validity. McMordie employed a checklist with unknown reliability and validity, in which participants rated themselves as extremely religious, very religious, somewhat religious, slightly religious, not at all religious, or anti-religious. Both measures of religious attendance and orthodox Christian beliefs were included in the study by Nelson and Cantrell. Unfortunately, no evidence of the reliability or validity of the scale was presented. Leming employed a measure of orthodox Christian beliefs with unknown reliability and validity. Studies that identified a curvilinear component in the relationship between religiosity and fear of death were marked by poor and limited measures of religiosity.

One purpose of this study is to examine the presence of a curvilinear relationship with better measures and a broader measure of religiosity. This study focuses on intrinsic religious motivation. People with intrinsic religious motivations seek to internalize their religious beliefs, make those beliefs a central aspect of their lives, and live out those beliefs in their lives, irrespective of whether they have orthodox beliefs and attend church regularly (Clements, 1998).

Gender differences in death anxiety have frequently been observed. Females were shown to have more death anxiety in several studies (Abdel-Khalek, 1991; Abdel-Khalek & Omar, 1988; Aday, 1984-85; Davis, Bremer, Anderson, & Tramill, 1983; Ray & Najman, 1974; Schumaker, Barraclough, & Vagg, 2001; Suhail & Akram, 2002; Tang, Wu, & Yan, 2002; Templer, Lester, & Ruff, 1974; Young & Daniel, 1980). At least three studies have shown no significant gender difference (Abdel-Khalek, 2002; Cole, 1978, 1979; Fortner & Neimeyer, 1999), but Cole identified an interaction in single people of a specific gender; single males (n = 10) had more death anxiety than single females (n = 14).

This study alleviates several shortcomings of previous studies in this area by using the Intrinsic Religious Motivation Scale (IRMS; Hoge, 1972) and the Revised Death Anxiety Scale (RDAS; Thorson & Powell, 1994). Both scales are more sophisticated than those used in numerous previous studies of death anxiety. The most important reason for conducting this study was to compare results with previous studies, which had led to contradictory conclusions regarding the relationship between religiosity and death anxiety. Furthermore, the lapses in understanding from the varied conclusions regarding gender may be alleviated. This study was designed to answer the following research questions: Is there a curvilinear relationship between religiosity and death anxiety when religiosity is measured by intrinsic religious motivation? Is there a curvilinear relationship between religiosity and death anxiety when religiosity is measured by the frequency of attendance at religious services? Do males and females differ in their levels of death anxiety and religiosity?

METHOD

Sample

Participants were 236 students at a midsized university in Colorado. All students who participated in the study were 18 years of age and older. Participants were men (n = 81, 34%) and women (n = 155, 66%) with a mean age of 23.07 (SD = 6.35). Both undergraduate students (n = 179, 76%) and graduate students (n = 57, 24%) were included, and most participants were single (n = 204, 86%). Their religious affiliations were as follows: Catholic, 25% (n = 59); Protestant, 36% (n = 86); Buddhist, 6% (n = 14); Agnostic, 4% (n = 10); Atheist, 5% (n = 12), and other, 24% (n = 55). These figures included participants who chose “other”
and 6 participants who were members of various unspecified religions. Strengths of religious beliefs are as follows: very strong, 43% (n = 102); somewhat strong, 42% (n = 100); not very strong, 7% (n = 16); not at all, 3% (n = 8); and I don’t believe, 4% (n = 10). Attendance frequency of religious services or meetings were several times a week, 20% (n = 47); once a week, 20% (n = 48); several times a month, 11% (n = 26); several times a year, 23% (n = 53); less than once a year, 13% (n = 30); never, 9% (n = 20); and other, 5% (n = 12). A total of 224 participants were included in the attendance frequency of religious services or meetings during statistical analysis when “other” was omitted.

Instrumentation

Participants completed two scales, the IRMS and the RDAS, and a demographic questionnaire. All instruments were administered simultaneously in a group setting.

Intrinsic Religious Motivation Scale (IRMS) (Hoge, 1972). Allport and Ross (1967) showed a distinction between intrinsic and extrinsic religious motivations with the IRMS. Intrinsics are described as people who seek to internalize their religious beliefs, make those beliefs a central aspect of their lives, and live out those beliefs in their lives. Extrinsic people are religious for benefits, such as sociability, security, and solace, or status in the community (Clements, 1998). The IRMS is a 10-item scale, which comprises 10 statements that measure the various ways of being religious. Although it was developed and tested within the Christian tradition, only 2 of the 10 items make specific references to God, and no item refers specifically to Christianity (Hill & Hodd, 1999). Seven intrinsic items are at the top of this scale, and three extrinsic items are at the bottom of the list. A higher score indicated a higher extrinsic religious orientation (Clements; Hill & Hodd). The reliability of the scale was identified as .90 (KR-20), and is highly related to ratings of intrinsic religious motivation (Hoge).

Revised Death Anxiety Scale (RDAS) (Thorson & Powell, 1994). The RDAS consists of 25 statements concerning different elements of the fear of death. According to Thorson, Powell, and Samuel (1998), the “elements of death anxiety assessed by the scale include fears of pain, uncertainty, bodily decomposition, isolation, loss of control, and not being” (p. 1173). The RDAS is a scale with 25 items, and high scores indicate a high death anxiety. The scale has an acceptable reliability and validity (Tang et al., 2002; Thorson & Powell, 1998).

Demographic questions. The demographic section of the questionnaire was designed specifically for this study. This section of the questionnaire consisted of demographic questions regarding characteristics such as gender, age, student status, marital status, and religious affiliation. Two questions targeted religiosity: 1) How strong is your religious belief? Very, Somewhat, Not very, Not at all, or I don’t believe, scored 1-5, respectively. A low score indicated a high religious belief. 2) How often do you attend religious services or meetings? Several times a week, Once a week, Several times a month, Several times a year, Less than once a year, or Never, scored 1-6, respectively. A low score showed high attendance services.

RESULTS

Measurement Issues

Before examining the relationship between religiosity and death anxiety, we examined the reliabilities and factor validity of the instruments. Examining the reliability and validity within each study is desirable because reliability and validity are not inherent properties of instruments, but are properties of instruments in particular groups of people (Vacha-Haase, 1998).
Principal axis factor analysis was conducted for both the IRMS and the RDAS. The Kaiser-Meyer-Olkin (KMO) statistics value of the IRMS was .92, and the KMO of the RDAS was .87. The significant chi-square in Bartlett’s test of sphericity indicated that both scales were suitable for factor analysis because the correlation matrix was unlikely to be the identity matrix (Cerney & Kaiser, 1977). The number of factors to be extracted was determined using parallel analysis (Kaufman & Dunlap, 2000). Proxmax rotation was implemented, and its degree of obliqueness was determined by a hyperplane count (Gorsuch, 1983).

Only one factor was extracted for the IRMS. The first two eigenvalues were 5.69 and 1.26, and the first two eigenvalues from the parallel analysis were 1.44 and 1.30, respectively, which indicates that only one factor accounts for more variance than a corresponding analysis of random numbers. Therefore, the IRMS was assumed to be unidimensional. The reliability and internal consistency of the scale was .92, which is slightly above the reliability reported by Hoge (1972).

However, the RDAS was not unidimensional. Three factors were found for the RDAS. Only the three initial eigenvalues (7.36, 2.16, and 1.67) were greater than the 1.76, 1.61, and 1.53 values, respectively, of the parallel analysis. When determining the obliqueness of the rotation, the hyperplane count showed that a kappa of 4 yielded the best approximation to a simple structure. Moreover, there was a moderate correlation among the three factors (Factor 1 with Factor 2 = .40 and Factor 3 = .50; Factor 2 with Factor 3 = .34). The first factor Fear of Dying has 11 items (3, 2, 9, 22, 20, 18, 7, 12, 14, 6, and 19), the second factor Fear of Pain has 5 items (15, 1, 23, 10, and 8), and the third factor Fear of Body Decay has 4 items (11, 4, 25, and 17). The first factor corresponds to a general fear of death. Cronbach’s alpha (internal consistency reliability) of the three factors is .91, .73, and .61, respectively. Cronbach’s alpha is .87 for the 25 items of the RDAS.

Correlates of Measures of Religiosity

All three measures of religiosity were significantly related (Table 1). A positive relationship exists between the IRMS and attendance frequency, and a positive relationship exists between the IRMS and strength of belief. Moreover, a positive relationship exists between the attendance frequency and strength of belief. This pattern supports the validity of the IRMS.

Gender, Age, and Death Anxiety

Few significant correlations exist with gender. A significant positive relationship between gender and Factor 2 suggests that female participants seem to show more Fear of Pain than their male counterparts. The IRMS was non-significantly related to gender, and there were few significant correlations with age. A positive relationship between age and Factor 2 indicated that older people seem to experience more Fear of Pain than younger participants. A positive relationship between age and the IRMS indicated that older participants seem to possess greater extrinsic religious motivations than young participants.

Religiosity and Death Anxiety

A relationship exists between religiosity and death anxiety. The IRMS and Frequency of Attendance were significantly related to the RDAS and Factor 1; Factor 3 was related solely to Factor 1. Participants with high scores on the IRMS (persons with “extrinsic” religious motivation) reported significantly higher levels of death anxiety than participants with low scores on the IRMS (persons with “intrinsic” religious motivation). Only the RDAS total and Factor 1 were used when examining the existence of a curvilinear relationship between the IRMS and Death Anxiety because they best represent the construct of general
death anxiety. Two approaches were used to examine the curvilinear relationship: statistical analysis and visual inspection. Both the linear and quadric terms were examined with a multiple regression using the Curve Estimation procedure in SPSS to examine whether a curvilinear quadric relationship exists. The quadratic term accounted for nearly twice as much variance than the linear for both the RDAS total and RDAS Factor 1. A nonparametric smoothing function was applied to the scatter plots between the IRMS with RDAS and RDAS Factor 1 (Systat 11). For nonparametric smoothing, a weighted function of a data subset provides a local estimate for a region without the priori parameters found in parametric smoothing. The results for the RDAS total are shown in Figure 1 and for RDAS Factor 1 in Figure 2. A curvilinear relationship exists between people of intermediate religious motivations with higher death anxiety and both people with high and low on religious motivations (see Curve Fit).

A series of analysis of variance (ANOVA)-based trend analyses (Tabachnick & Fidell, 2001) were conducted for the three RDAS factors and the RDAS total to further examine this curvilinear relationship by using religious attendance as the predictor variable. Twelve participants were omitted from the analysis because of unusable responses to the demographic survey. A significant linear and quadric trend was identified for Factor 1【F(1, 218) = 11.50, p < .001; F(1, 218) = 18.21, p < .001; respectively】 and RDAS total【F(1, 218) = 7.06, p < .01; F(1, 218) = 21.40, p < .001; respectively】. A significant quadric trend was identified for Factor 2【F(1, 218) = 0.69; F(1, 218) = 13.25, p < .001; respectively】 but not a linear trend. For Factor 3, a significant linear trend was found for Factor 2【F(1, 218) = 10.78, p < .001; F(1, 218) = 2.84, ns, respectively】 but not for the quadric trend. A curvilinear relationship exists between people of intermediate religious attendance with higher death anxiety/fear of dying and people high and low on the religious attendance scale.

<table>
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<th>Item</th>
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<th>RDAS Factor</th>
<th>Total</th>
<th>Sex</th>
<th>Age</th>
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<td>Belief</td>
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<td>.67**</td>
<td>.19**</td>
<td>-.01</td>
<td>.09</td>
<td>.10</td>
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<td>IRMS</td>
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<td>.33**</td>
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<td>.43**</td>
<td>.31**</td>
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<td>.89**</td>
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<td>.15*</td>
<td>-.13</td>
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</table>

** Correlation is significant at the .01 level (2-tailed).  
* Correlation is significant at the .05 level (2-tailed).

For nonparametric smoothing, a weighted function of a data subset provides a local estimate for a region without the priori parameters found in parametric smoothing. The results for the RDAS total are shown in Figure 1 and for RDAS Factor 1 in Figure 2. A curvilinear relationship exists between people of intermediate religious motivations with higher death anxiety and both people with high and low on religious motivations (see Curve Fit).
DISCUSSION

The analysis suggests the presence of both a curvilinear and linear trend; that is, intermediate levels of religiosity showed a higher death anxiety than either extremes. Moreover, highly religious people showed a lower death anxiety than non-religious people; thus, the relationship appears to be an inverted “J.”

This result differs from that of the Templer and Dotson (1970) study, whereby identified religious variables do not appear to be related to death anxiety, but is similar to that obtained by Clements (1998) who reported that people with intrinsic religious motivations showed significantly lower levels of various types of death anxiety compared to people with extrinsic religious motivations. Moreover, this result was similar to those of studies in which religiosity was argued to be correlated with a low fear of death (Clements; Kraft et al., 2001; Martin & Wrightsman, 1965; Minear & Brush, 1980-1981; Richardson et al., 1983; Suhail & Akram, 2002; Templer, 1972). For example, Young and Daniel (1980) stated that born-again Christians show a lower death anxiety compared to non-born-again Christians. However,
whether people with religiosity owe living with benevolence to philosophy as a type of consoling factor is unknown. Therefore, a further qualitative study is recommended.

A positive relationship exists between intrinsic religious motivation and attendance frequency of religious services or meetings and strength of belief. Moreover, we discovered a positive relationship between attendance frequency and strength of belief. A positive relationship was identified between attendance frequency and death anxiety. This study indicates that a higher attendance frequency of religious services or meetings indicates lower death anxiety. This result is similar to that obtained by Adays (1984-1985) and Duff and Hong (1995), where people who attended church more often had a lower death anxiety. These findings support Durkheim’s (1915) notion regarding the importance of participation in shared religious rituals. According to Duff and Hong, central to this ritual theory is solidarity, shared meanings, and a sense of transcendent continuity that becomes more striking in public religious rites; these religious rites strengthen people and protect people from negative thinking. It is different from everyday social interaction.

In the linear regression model of this study, the sum of the IRMS explains only 5.1% of the variability on the RDAS at a significant level \[ F(1, 234) = 12.58, p < .01 \]. However, a curvilinear relationship exists between people of intermediate religious motivation with higher death anxiety and people who are high and low on the religious motivation scale. This result is similar to that obtained by McMordie (1981), Aday (1984, 1985), Leming (1979, 1980), and Nelson and Cantrell (1980); they noted that a curvilinear relationship existed between people of intermediate religious participation with higher death anxiety and people who were high and low on the religious dimension. A strong belief system may foster a perception of increased control and predictability, which lessens the fear of death. This means that religion may reduce death anxiety when accompanied by a high degree of commitment.

Generally, from a Christian viewpoint, death is like heading home. It is a joyful event because the world is similar to a hotel that is inhabited temporarily. The Bible states that “You don’t even know what your life tomorrow will be! You are like a puff of smoke, which appears for a moment and then disappears” (James 4:14). We often prepare for death in life. In this circumstance, we prepare for graduation from each school of life in various stages. Graduation brings responsibility, and responsibility brings courage and loyalty (Bolding, 1974). Therefore, people require determination, perseverance, and sincerity to face life, including death and dying.

In the Bible, Jesus said, “I am the resurrection and the life. Whoever believes in me will live, even though he dies; and whoever lives and believes in me will never die. Do you believe this?” (John 11:25-26). In this study, the participants showing moderate religiosity (religiously ambivalent) have a high death anxiety. If participants have uncertain beliefs, they may be afraid of being refused by God and not know what will occur after death; thus, they have high death anxiety. The reverse is also true; if people know deeply what is occurring in this life, they know they will be accepted by God or gods after death. People may ascertain that death is not death and that after death they will obtain eternal life. Nonbelievers may believe that there is no heaven or hell and that when a person dies, he/she closes his/her eyes and stops breathing; he or she does not know anything and owes nothing. Therefore, a person’s death is similar to a light being turned off; the life is ended. Furthermore, no one dies and returns to inform us of the afterlife situation. Nonbelievers may use this reasoning as a manner of believing that death is the end; thus, they may experience lower death anxiety. A future qualitative study is required to understand the differences in religious thoughts among a high religious motivation, low religious motivation, and moderate religiosity group.

There is no gender effect on religiosity and the death anxiety. However, a positive relationship exists between gender and Factor 2 [Fear of Pain (r = .19, p < .01)], and no relationship exists among gender, Factor 1 (Fear of Dying), and Factor 3 (Fear of Body Decay). This study indicates that female participants...
seemed to show more Fear of Pain than male participants. These results differ from those obtained by previous studies: the Abdel-Khalek and Omar (1988) study, in which Kuwaiti college students participated; the Abdel-Khalek (1991) study, in which a Lebanese secondary school and college students participated; and the Tang et al. (2002) study, with Chinese college participants that indicated that females attained higher mean death anxiety scores than their male counterparts. In this study, female participants showed more Fear of Pain than male participants; we must examine the reason.

According to Abdel-Khalek (1991), if specific environmental events have been brought into a person’s life, it can change their outlook on death anxiety. The potential for war in the Middle East has always been present. Abdel-Khalek stressed that his Lebanese participants may be different because of different social, political, and historical factors. The participants of this study may have not faced death or other violent acts as an everyday occurrence, which may have given them a different outlook on death and dying compared to the Israelis.

The results of this study are similar to those obtained by Abdel-Khalek (2002), which indicated that no gender differences were detected among college students. However, these findings were researched solely in Arabic and mainly among Muslim college students. In this study, the participants were from numerous different religions. Each participant had their own philosophy of life. The participants of this study had a mean age of 23 years; they were young. There was a positive relationship between age and the IRMS ($r = .19, p < .01$); older participants seemed to possess greater extrinsic religious motivations than young participants. Several undergraduate participants were potentially members of churches, and convenient sampling may have influenced the results of this study.

People with extrinsic religious motivations may at times experience more death anxiety and be in greater need of counseling than people with intrinsic religious motivations. If people need death education, religious issues can be provided by television, magazines, and websites. Moreover, the results of this study suggest that the IRMS of the internal consistency reliability with Cronbach’s alpha is .92, and the RDAS of the internal consistency reliability with Cronbach’s alpha is .87.

REFERENCES


