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Associations Between Death Fascination, Death Anxiety and Religion among Polish College Students

Abstract: Previous research examining the relationship between religion and attitudes about death have yielded mixed results due to over-simplified conceptualizations of constructs, lack of theory, and an over-reliance on Western samples. To overcome these issues, the present study examined the relationship between three types of religious orientation and two types of death attitudes among a sample of 532 college students in Poland. The results demonstrated unique relations between religion and death attitudes, as well emphasized the importance of considering religious engagement as a moderating variable. Although the results were generally consistent with Terror Management Theory, other theoretical perspectives were considered as well.

Key words: death fascination, death anxiety, religious orientations

There is arguably no force as profound and overwhelming as death. Death not only goes against our most basic instinct to live (Becker, 1973), but it also poses the greatest threat to our sense of control and beliefs about life (Spilka, Hood, Hunsberger, & Gorsuch, 2003). Because religion appears to ameliorate the problems that death poses by providing existential answers about the mysteries concerning death and a means for conquering death itself, it is understandable why it is widely assumed that the relation between religion and attitudes about death would be straight forward and simple. However, inconsistent findings to date point to the complexity behind the link between religion and death attitudes (Neimeyer, Wittkowski, & Moser, 2004; Spilka et al., 2003). In an effort to clarify this relation, researchers have made a number of important recommendations for future studies in this area to follow.

First, because more recent conceptualizations of religion and attitudes about death have moved beyond simple, unidimensional perspectives, researchers are encouraged to use more sophisticated, nuanced approaches to studying these phenomena (Spilka et al., 2003). Much

of the conflicting results in this area, including some of the seminal work conducted by Hermann Feifel, can be traced to oversimplified conceptualizations and measurements of religion and death attitude constructs (Neimeyer et al., 2004). However, Feifel's work does suggest that death attitudes need to be assessed at multiple levels of awareness (see Feifel, 1990; Feifel & Branscomb, 1973; Feifel & Nagy, 1981). In fact, prediction of death attitudes increase when conscious and pre-conscious (i.e., fantasy) levels of death anxiety are assessed simultaneously (see Feifel & Nagy, 1981).

Second, because culture influences both religion and attitudes about death (Thorson, 1998), it is important to examine this link on populations outside of the United States and Western Europe. Poland, a post-communist country where 93.1% of the population is affiliated with the Roman Catholic Church (Boguszewski, 2012), offers a unique perspective on the religion-death link because of the depth for which Catholicism permeates all aspects of Polish life (see Porter, 2001). Moreover, previous work has not only found culturally specific attitudes toward death (Roff,

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Butkeviciene, & Klemmack, 2002), but also Catholics compared with other denominations, such as Protestants, may rely on distinct coping processes (Park, Cohen, & Herb, 1990). Last, research in this domain has been lacking adequate theoretical models (Neimeyer et al., 2004; Spilka et al., 2003). Terror Management Theory (TMT; Solomon, Greenberg, & Pyszczynski, 1991, 2004), not only provides a theoretical framework for understanding the connection between religion and death attitudes, it is also supported by a large number of empirical studies. Thus, guided by these recommendations, this study will examine the religious orientations of intrinsic religiosity, extrinsic religiosity, and quest, and their relation to death anxiety and death fascination among a sample of Polish college students.

Attitudes toward Death: Death Anxiety and Death Fascination

The science of death attitudes has developed over the years. Researchers' attention was initially focused on death anxiety, or fear of death. The distinction between fear and anxiety was first articulated by Freud (1961), with fear defined as a reaction to a specific stimulus and anxiety as a more general attitude, present in neurosis. Earlier studies did not discriminate between sources of death anxiety, treating general death anxiety, fear of personal death, fear of dying and other related types of fear the same. Recent studies adopt a more multidimensional conceptualization of death anxiety (see Florian and Mikulincer, 1997 for details). In the present paper, we concentrated on personal death anxiety, without any discriminating between its sources. Personal death anxiety is defined as an awareness of life finitude (Tillich, 1952).

Research concerning frequency of death-associated thoughts initially focused on death concern (i.e., frequently thinking about personal death; Dickstein & Blatt, 1966; Kuperman & Golden, 1978; Waskel, 1992). Death concern correlates positively with death anxiety (Kuperman & Golden, 1978). In later studies, the construct of death depression was developed, a phenomenon which also positively correlates with death anxiety (Templer, Lavoie, Chalgujian, & Thomas-Dobson, 1990). Finally, in the late 90s, studies of death obsession began (e.g. Abdel-Khalek, 1998; Abdel-Khalek & Maltby, 2008; Maltby & Day, 2000). Death obsession, similar to previously mentioned constructs, also correlates positively with death anxiety (e. g. Abdel-Khalek, 2004). What these findings suggest, is that all of the phenomena described above (i. e. death concern, depression and obsession) revolve around rumination on personal death. This point is underscored by a study by Abdel-Khalek (2004), who reported a single underlying factor called "death distress" which underlies death obsession, death depression, and death anxiety.

According to TMT, the prospect of dying is so terrifying that a great deal of human behavior is actually aimed at reducing this existentially based fear (Solomon et al., 1991). Not surprisingly, empirical research on death attitudes have focused primarily on death anxiety and its wide reaching effects on psychological functioning. For

instance, death anxiety is linked to emotions such as guilt, motivation such as powerlessness (Minton & Spilka, 1976), and personality traits such as neuroticism (Lee & Surething, in press). The core of one's self is also adversely affected by death anxiety such that it is associated with lower levels of self-efficacy (Tang, Wu, & Yan, 2002), self-esteem (Cotter, 2003), and self-control (Galliot, Schmeichel, & Baumeister, 2006). Individuals high in death anxiety tend to find less humor (Mager & Cabe, 1990) and slightly less satisfaction (Abdel-Khalek & Al-Sabwah, 2005) and purpose in life (Drolet, 1990) than their less anxious counterparts. Couple these findings with death anxiety's links to death depression (Templer, Lavoie, Chalgujian, & Thomas-Dobson, 1990), obsessions with death (Lester, 2003), nightmares about death (Kroth, McDavit, Brendlen, Patel, & Zweiner, 2001), and exacerbated levels of grief during bereavement (Ens & Bond, 2005), and one can see how it clearly earned such a negative reputation.

Although attitudes about death tend to focus on death as a force to be feared and loathed, some attitudes toward death can be positive. For instance, the construct of death acceptance focuses on death in an encouraging and constructive manner (Wong, Reker, & Gesser, 1994). Of particular concern for us is the construct of death fascination which is defined as an interest about and curiosity in the concept of death (see Żemojtel-Piotrowska & Piotrowski, 2009). Generally speaking, curiosity reflects a positive engagement with the world. Research has demonstrated that curiosity is strongly accompanied by positive emotional states such as joy and excitement (Kashdan & Roberts, 2004) and slightly lower levels of anxiety (Ben-Zur, 2002; Reio & Callahan, 2004). Curious individuals tend to rely on proactive methods to cope with life adversity (Seaton & Beaumont, 2008), draw satisfaction from learning (Reio & Callahan, 2004), and exhibit relatively high levels of emotional intelligence (Seaton & Beaumont, 2008). It is possible for death-related interests to result from cognitive curiosity. Although, fascination with death-related themes is particularly strong among people with anxiety disorders (Abdel-Khalek, 2002), engagement with death related topics may help people, particularly those with anxiety, to restore a sense of control. Moreover, preoccupation with the subject of death is quite frequent among adolescents because at this stage of life young people begin to ponder over metaphysical questions (Yalom, 1980). Because Polish culture and society embrace Christian concepts of heaven and death transcendence, curiosity and interest about death is not perceived as morbid or maladaptive. On the contrary, fascination with death within this population may reflect a means of coping with death because it reinforces a shared cultural worldview (Solomon et al., 1991).

Religious Orientations and Attitudes toward Death

An important function of religion is to deal with the potentially terrifying awareness that we will someday die (Vail, Rothschild, Weise, Solomon, Pyszczynski, & Greenberg, 2010). Religion deals with the problem of

death by providing a belief system that not only denies the very notion of death, via the promise of an afterlife, but it also provides a strategy for living one's life in the here and now. Although this functional perspective on religion's influence on death attitudes appears simple, this dynamic is actually quite complex (Spilka et al., 2003). One of the main factors that contribute to this complexity is that there are many different approaches to using religion. For this study we focused on three approaches or orientations to religion: intrinsic, extrinsic, and quest because of their consistent link to death attitudes (Donahue, 1985).

Intrinsic orientation (IO) describes the use of religion as a meaning-endowing framework for which all life is understood (Allport & Ross, 1967). According to TMT, this approach to religion should not only be associated with less death anxiety because of the internalization of religious belief (see Krause, 2011), but it should also be connected with positive esteem and meaning because it reflects a genuine adoption of a cultural world view (Solomon et al., 1991). Indeed, empirical studies support this perspective by demonstrating that IO is associated with religiousness (Donahue, 1985), morality (Wiebe & Fleck, 1980), life satisfaction (O'Connor, & Vallerand, 1990), control (Kahoe, 1974), life meaning (Acklin, Brown, & Mauger, 1983), and lower levels of depression (O'Connor, & Vallerand, 1990). The majority of data show the positive influence of intrinsic religiosity on coping with death anxiety (e. g. Donahue, 1985; Harrawood, 2009-2010; Jonas & Fisher, 2006; Wink, 2006). On the other hand, some research has shown a positive relation between intrinsic religiosity and high death anxiety (e. g. Pierce, Cohen, Chambers, & Meade, 2007; Swanson & Byrd, 1998). The reason for the discrepancy in the data might stem from the method in which death anxiety is measured. Questionnaire studies generally measure a conscious level – a high result in the questionnaire might indicate a substantially high level of anxiety but also a lesser influence of defense mechanisms relying on denial and anxiety suppression, and consequently - a lesser awareness of one's anxiety. Therefore, it is especially important to account for anxiety at the fantasy level. The defensive function of intrinsic religiosity should manifest itself in a lower level of anxiety at this stage. Most studies that have examined the relation between IO and death anxiety, along with TMT, suggest that IO should be associated with less death anxiety, especially on the fantasy level. They also suggest that individuals high in IO would be more likely than those with lower levels of IO to approach the topic of death because their religious beliefs buffers them from death related concerns. Maltby and Day (2000) showed that among Protestant students death obsession correlates negatively with intrinsic religiosity. In the Catholic sample, one may expect a different patterns of associations as pondering the subject of death is an integral part of the Catholic faith. This should be the case particularly for those strongly involved in religious practices because Catholicism holds positive views of death (e.g., belief in resurrection; justice in the afterlife; the glorification of death) and these views are strengthened through participation in religious ceremonies.

Extrinsic orientation (EO), on the other hand, describes one's use of religion for self-serving, utilitarian purposes (Allport & Ross, 1967). Unlike IO, EO treats religion in a superficial manner. According to TMT, this approach to religion should not confer any anxiety buffering advantages nor should it provide a sense of esteem or value because the individual high in EO would not have internalized the cultural worldview espoused by their chosen religion. In fact, endorsing religious worldviews without truly internalizing these beliefs may even be harmful because resources are being applied to an ineffective system for coping. Accordingly, the research on EO consistently demonstrates that this approach is positively associated with various manifestations of psychological distress such as depression (Smith, McCullough, & Poll, 2003), anxiety (Baker & Gorsuch, 1982), stress reactivity (Masters, Hill, Kircher, Benson, & Fallon, 2004), and even death anxiety (Donahue, 1985; Harrawood, 2009-2010; Swanson & Byrd, 1998). Moreover, EO is a much stronger and reliable predictor of death anxiety than IO (see Donahue, 1985). These findings coupled with TMT suggest that EO would exacerbate one's death anxiety but not necessarily influence one's approach to death related topics. Because extrinsic religiousness lacks an association with searching for answers to fundamental questions (Donahue, 1985; Altemeyer & Hunsberger, 1992), the lack of ties between these constructs and death fascination should be expected.

Quest orientation (QO) describes an honest, questioning approach to religion (Batson, 1976). QO is similar to IO in that it is based on a genuine approach to religion. Because QO is concerned with exploration and seeking existential meaning, it differs from IO in that it does not derive satisfaction from a particular religious belief. According to TMT, QO would not necessarily mitigate death anxiety nor provide esteem because it does not reflect a cultural worldview. However, it does reflect a flexible and investigative approach to existential issues. Accordingly, QO is related to moral reasoning (Sapp & Gladding, 1989), religious cognitive complexity (Batson & Raynor-Price, 1983), and openness of the Five-Factor model (Simpson, Newman, & Fuqua, 2010). These findings along with TMT suggest that QO would be associated with approaching death related topics but not necessarily influence one's level of death anxiety.

Religion in Poland

Most studies of religiosity and attitudes towards death derive from Protestant, or possibly Catholic, samples but Western European in origin. Samples of other denominations are rare. Substantial differences exist between the Catholic and Protestant religions, which lead to the anticipation of different relationships between religiosity and attitudes towards death. The first difference relates to the kind of attachment to God and church institutions. Protestantism is an individualistic and less institutionalised religion, and Catholicism – collectivistic and highly hierarchical. Moreover, Catholicism tends to be strongly preoccupied with the subject of death, the testimony of which

can be observed during ceremonial religious celebrations of All Saints' Day or Resurrection. Similarly, in Mexico, festivals around the cult of Santa Muerte, which is a blend of Pre-Columbian and Catholic beliefs, also integrate Catholic views of death in their rituals. Protestantism has only Halloween to its name, whose character is that of fun and festivity rather than deep religious contemplation of the fragility of human existence that characterizes Catholicism.

Poland is one of the countries with the highest percentage of self-declared Catholics, with a high level of involvement in religious practices (Porter, 2001). Society in Poland is monocultural but despite the high percentage of Catholics, the level of religious engagement in younger age groups is falling (cf. Norris & Inglehart, 2005). The domination of Catholicism in Poland leads to a highly religion-saturated culture which can be seen in such events as weddings, First Communion or funerals, as well as the most important state holidays which are also given a religious context. A typical phenomenon, relatively rare in other societies, presents an individual who is a practicing non-believer and who, as a result of social pressure, though declaring themselves atheist, takes part in religious ceremonies to satisfy the expectations of their family or friends. This leads to a disparity, observed in the World Values Survey, between religiosity as an attachment to religious values, and participation in religious practices (Norris & Inglehart, 2005). In Polish culture, greatly saturated with religious content as it is, participation in religious practices at the same time allows one to be part of the culture. This occurs even in the case of low religiosity. Thus, Catholic beliefs permeate the culture and people of Poland.

The Present Study

The purpose of this study was to examine the religious orientations of intrinsic religiosity, extrinsic religiosity, and quest, and their relation to death anxiety and death fascination among an understudied population (i.e., Polish college students). Because death operates on many levels of awareness (de Raedt & van der Speeten, 2008; Feifel & Branscomb, 1973; McLennan, Akande, & Bates, 1993), we assessed death anxiety on both the conscious and the pre-conscious levels using Feifel and Branscomb's (1973) methodology.

Hypotheses

Based on previous empirical work and TMT we made the following hypotheses: First, we expected IO to be negatively associated with death anxiety on the fantasy level but be positively correlated with death fascination (Hypothesis 1). This relation is expected to not be influenced by religious engagement in the case of death anxiety, but the relation between death fascination and IO is expected to be present among religiously engaged individuals (Hypothesis 1a). Second, we expected EO to be negatively associated with death anxiety on the fantasy and conscious levels, but uncorrelated with death fascination (Hypothesis 2). Last, we expected QO to be uncorrelated with death anxiety but

positively correlated with death fascination (Hypothesis 3). Death anxiety is expected to be negatively related with quest orientation, but among high religious engaged individuals (Hypothesis 3a). To further clarify the predictive relation between the religious orientations and death attitudes, we ran a series of multiple regression analyzes where we included gender, age, and religious practices as covariates. In addition, we examined the moderating influence of "religious" practices because many of the social events in Poland ranging from community festivities to national holidays are heavily influenced by Catholic beliefs and rituals. Specifically, we inquired about participation in religious ceremonies, including weddings, funerals and family celebrations, as this would indicate participation in the culture. Moreover, we asked questions not only about frequency of prayer but also about participation in the sacraments which reflects the cultural character of the Catholic faith.

Method

Participants

The sample consisted of 532 Polish undergraduate college students of social sciences: 121 men and 403 women, while 8 people did not answer the question about sex, $M_{\text{age}} = 24.17$ years ($SD = 6.22$). Most of the participants were Catholic (84.2%) while 11.7% described themselves as either agnostic or atheist, and 4.1% described themselves as Protestant, Russian Orthodox or Muslim. Participants completed questionnaires in groups ranging in size from 20 to 50 people. Although participants did not receive any financial incentives, they did receive academic credit for their participation.

Measures

Death Anxiety and Fascination Scale (DAFS). The scale consists of 23 items scored on a scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Death fascination, which is defined as an interest about and curiosity in the concept of death is measured by 14 items, while death anxiety, which is defined as a general fear of personal death without discriminating from its sources, by 9 items. Estimates of internal consistency (Cronbach's alpha) were .80 for death fascination and .90 for death anxiety, scale has proved validity (see Żemojtel-Piotrowska & Piotrowski, 2009 for details). Sample items are "I like to imagine how I will die" (death fascination) and "The possibility of my death fills me with terror" (death anxiety).

Death anxiety at fantasy level. To measure death anxiety at fantasy level, 14 two-dimensional items were administered. Participants marked their answers on a 10 centimeter line (scale from 0 to 100), with only the end-points of the line described, e.g. "Dark – Bright" and "Cruel – Merciful". The items were coded so that higher scores indicated higher levels of death anxiety. Cronbach's alpha of this scale was .76. This method was patterned on a measure of death anxiety at fantasy level applied by Feifel and Branscomb (1973).

Religious Orientation Scale (Batson, Schoenrade,

& Ventis, 1993), the Polish version adapted by Socha (1999). The Religious Orientation Scale is based on a three-factor model of personal religion and consists of 32 items scored on a scale ranged from 1 (disagree) to 5 (agree). Estimates of internal consistency (Cronbach's alpha) were .65 for extrinsic orientation, .85 for intrinsic orientation and .68 for Quest orientation. Sample items are "The primary purpose of faith is to gain relief and protection" (Extrinsic orientation), "I try hard to carry my religion into all other dealings in life" (Intrinsic orientation), and "It might be said that I value my religious doubts and uncertainties" (Quest orientation). Average level of intrinsic orientation was $M = 2.74$ ($SD = 0.90$), extrinsic orientation $M = 2.64$ ($SD = 0.56$), and quest orientation $M = 2.93$ ($SD = 0.57$).

Religious practices. They were measured by set of 3 questions: about everyday prayer, engagement in religious ceremonies and sacraments (like Holy Communion). These questions are chosen from the set of typically used questions about religious practices (see for example Hall, Meador & Koenig, 2008; Tarakeshwar, Pargament & Mahoney, 2003). The scale ranging from 0 (never) to 5 (many times a day in the case of pray and more than one per week in the case of twoother forms). Internal consistency (Cronbach's alpha) of

this measure was .85. Average level of religious engagement was $M = 2.05$ ($SD = 1.17$).

Results

Correlation Analysis

Descriptive statistics and zero-order correlations are reported in Table 1. Intrinsic orientation was negatively correlated with fantasy level death anxiety, but positively correlated with death fascination which supports our first hypothesis. Extrinsic orientation was positively associated with conscious level death anxiety which supports our second hypothesis. It is important to note, however, that only one level of death anxiety was associated with intrinsic and extrinsic orientations. Quest orientation was positively associated death fascination which supports our final hypothesis. Collectively, these correlations support our hypotheses.

Hierarchical Regression Analysis

To clarify the predictive relation of the religious orientation variables on death attitudes, three separate hierarchical regression analyses were performed (see Table 2).

Table 1. Descriptive Statistics and Zero-Order Correlations

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Age	515	24.17	6.22	--							
2. Gender	524	.78	.42	.01	--						
3. Practices	532	.00	.87	.06	.16***	--					
4. Intrinsic	520	2.74	.90	.07	.10*	.77***	--				
5. Extrinsic	519	2.64	.56	-.02	.05	.25***	.27***	--			
6. Quest	520	2.93	.57	.02	.02	.13**	.30***	.31***	--		
7. DA-Con	520	2.50	.60	.05	.31***	.12**	.07	.27***	.07	--	
8. DA-Fan	519	55.53	12.67	-.10*	.10*	-.20***	-.19***	.08	.01	.44***	--
9. Fascinate	520	1.79	.53	-.08	-.01	.02	.11*	.07	.19***	-.02	-.07

Note. Gender (0 = Male; 1 = Female); Practices = Religious Practices; Intrinsic = Intrinsic Religious Orientation; Extrinsic = Extrinsic Religious Orientation; Quest = Quest Religious Orientation; DA-Con = Death Anxiety at the Conscious Level; DA-Fan = Death Anxiety at the Fantasy (Pre-Conscious) Level; Fascinate = Death Fascination.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2. Final Steps of Hierarchical Regressions Predicting Death Attitudes

Variable	Death Anxiety CL	Death Anxiety FL	Death Fascination
Age	.05	-.01	-.09*
Gender	.28***	.12**	-.02
Practices	.09	-.12	-.09
Intrinsic	-.12	-.15*	.17*
Extrinsic	.23***	.08	.01
Quest	-.01	-.02	.19***
Intrinsic x Practices	-.11*	-.17**	.02
Extrinsic x Practices	-.01	.01	.11
Quest x Practices	-.01	-.08	-.04*
R^2	.16	.11	.06

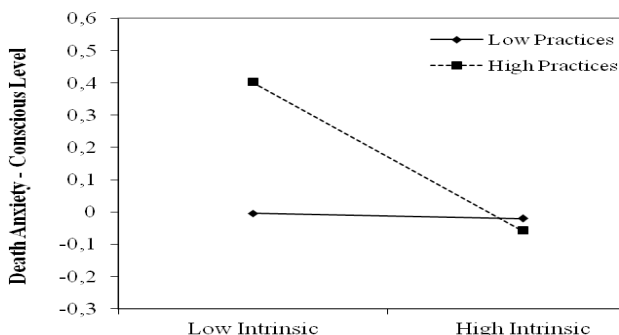
Note. $N = 495$. Above values reflect standardized regression coefficients. Gender (0 = Male; 1 = Female); Practices = Religious Practices; Intrinsic = Intrinsic Religious Orientation; Extrinsic = Extrinsic Religious Orientation; Quest = Quest Religious Orientation; Death Anxiety CL = Death Anxiety at the Conscious Level; Death Anxiety FL = Death Anxiety at the Fantasy (Pre-Conscious) Level.

* $p < .05$. ** $p < .01$. *** $p < .001$.

The first step included the control variables of age, gender, and religious practices. The second step included the religious orientations of intrinsic, extrinsic, and quest. The final step examined the moderating influence of religious practices on each of the religious orientations. Following the strategy suggested by Friedrich (1982), scores were converted to standardized values before running the regression analyzes with interaction terms in order to avoid problems associated with multicollinearity and to improve the interpretability of the coefficients (see Tabachnick, & Fidell, 2001). Moreover, the significant interactions were further subjected to simply slope analyses to determine where along the slopes the effects were most pronounced (O'Conner, 1998).

The first hierarchical regression analysis examined the conscious level of death anxiety as the criterion variable. In the first step, which accounted for 9% of explained variance, gender ($\beta = .29, p < .001$) was a significant predictor, $F(3, 491) = 17.13, p < .001$. In the second step which accounted for an additional 6% of explained variance, extrinsic orientation ($\beta = .27, p < .001$) was a significant predictor while gender ($\beta = .29, p < .001$) also remained a predictor, $F(6, 488) = 15.78, p < .001$. In the final step, which accounted for an additional 1% of explained variance, extrinsic orientation ($\beta = .27, p < .001$) and gender ($\beta = .28, p < .001$) continued to be predictors while the interaction between intrinsic orientation and religious practices ($\beta = -.11, p < .05$) emerged as a unique predictor as well, $F(9, 485) = 11.28, p < .001$. Simple slopes analysis demonstrated that death anxiety was greatest among those who were low in intrinsic orientation but high in religious engagement (see Figure 1). Results confirmed Hypotheses 1 and 2, but contrary to Hypothesis 1a, relation between death anxiety and intrinsic orientation occurred only among religiously engaged individuals.

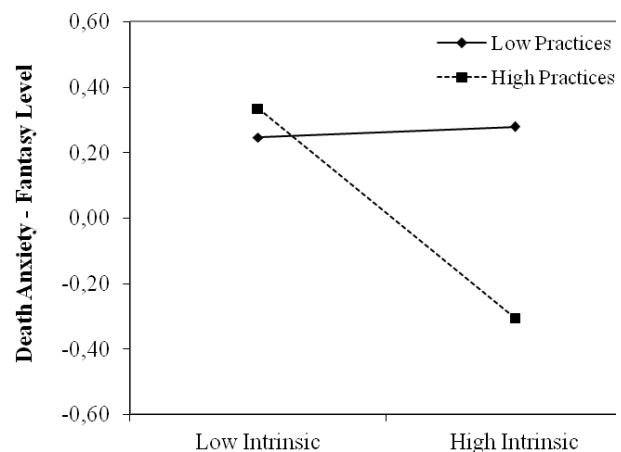
Figure 1. Moderating effect of religious practices on intrinsic orientation in predicting death anxiety at the conscious level. Values are based on one standard deviation below and above sample means.



The second hierarchical regression analysis examined the pre-conscious, fantasy level of death anxiety as the criterion variable. In the first step, which accounted for 6% of explained variance, age ($\beta = -.09, p < .05$), gender ($\beta = .14, p < .01$), and religious practices ($\beta = -.21, p < .001$)

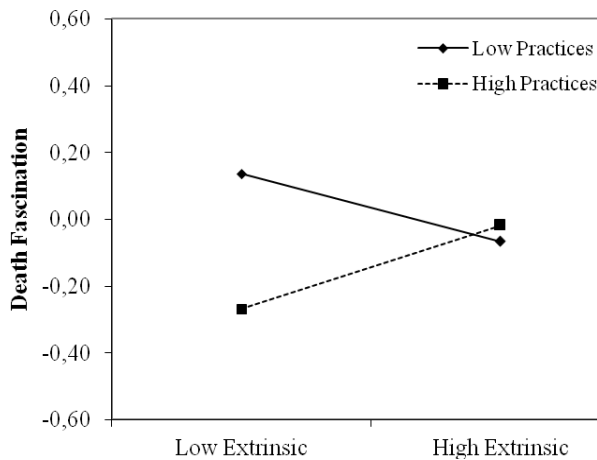
were all significant predictors, $F(3, 491) = 10.95, p < .001$. In the second step which accounted for an additional 2% of explained variance, gender ($\beta = .13, p < .01$) and religious practices ($\beta = -.14, p < .05$) continued to be significant while extrinsic orientation ($\beta = .14, p < .01$) emerged as a predictor while intrinsic orientation ($\beta = -.14, p = .05$) demonstrated marginal significance as a predictor, $F(6, 488) = 7.79, p < .001$. In the final step, which accounted for an additional 3% of explained variance, intrinsic orientation ($\beta = -.15, p < .05$) and gender ($\beta = .12, p < .01$) continued to be predictors while the interaction between intrinsic orientation and religious practices ($\beta = -.17, p < .01$) emerged as a unique predictor as well, $F(9, 485) = 7.45, p < .001$. Simple slopes analysis demonstrated that death anxiety was lowest among those who were high in both intrinsic orientation and religious engagement (see Figure 2). This result support Hypothesis 1 and 2, but is not congruent with Hypothesis 1a.

Figure 2. Moderating effect of religious practices on intrinsic orientation in predicting death anxiety at the fantasy level. Values are based on one standard deviation below and above sample means.



The final hierarchical regression analysis examined death fascination as the criterion variable. In the first step, none of the control variables were significant except for age ($\beta = -.09, p = .05$) which displayed marginal significance, $F(3, 491) = 1.47, p = .22, ns$. In the second step which accounted for 5% of explained variance, age ($\beta = -.10, p < .05$) became significant while intrinsic orientation ($\beta = .15, p < .05$) and quest orientation ($\beta = .19, p < .001$) emerged as predictors, $F(6, 488) = 5.43, p < .001$. In the final step, which accounted for an additional 1% of explained variance, age ($\beta = -.09, p < .05$), intrinsic orientation ($\beta = .17, p < .05$) and quest orientation ($\beta = .19, p < .001$) continued to be significant while the interaction between extrinsic orientation and religious practices ($\beta = .11, p < .05$) emerged as a unique predictor as well, $F(9, 485) = 4.43, p < .001$. Simple slopes analysis demonstrated that death fascination was greatest among the individuals who exhibited low intrinsic and low religious practices, but lowest among the low intrinsic but high religious practices individuals (see Figure 3 - page 445). These results confirmed Hypothesis 3.

Figure 3. Moderating effect of religious practices on intrinsic orientation in predicting death fascination. Values are based on one standard deviation below and above sample means.



Discussion

The results of this study supported most of our hypotheses. Death anxiety was predicted by intrinsic (positively) and extrinsic (negatively) orientation, congruent with Hypotheses 1 and 2. Congruent with Hypothesis 3 death fascination was predicted by quest orientation and by intrinsic orientation. However, our prediction that death anxiety would be negatively related to quest among those who were highly engaged in religious practices was not supported (Hypothesis 3a).

There were also patterns that were consistent other studies. For instance, women tended to exhibit greater engagement in religious practices (Nicholson, Rose, & Bobak, 2010), were more intrinsically oriented (Pierce, Cohen, & Chambers, 2007), and reported more death anxiety than men (Harding, Flannelly, Weaver, & Costa, 2005; Pierce et al., 2007). The positive correlation between both levels of death anxiety was also consistent with previous research (Feifel & Nagy, 1981). Age had no bearing on death anxiety, but with the age spread in the sample being limited, these findings were not informative. We did not establish substantial interactions between gender and religiosity in predicting attitude towards death. Also of notable concern was the lack of correlation between death fascination and the death anxiety measures, demonstrating that it is not another facet of death anxiety. This result is consistent with previous studies (Piotrowski & Żemojtel-Piotrowska, 2004; Żemojtel-Piotrowska & Piotrowski, 2009). In fact, death obsession, which sounds conceptually similar to death fascination, is associated with death anxiety (Abdel-Khalek, 1998) while death fascination is not. Future studies should further refine the construct of death fascination as distinct attitude toward death.

The results obtained shed a little light on the problems indicated earlier. For example, the relationship

between religious orientations and attitudes towards death seems to depend on the type of religion dominant in a given culture. The results acquired demonstrate that religious engagement interacts with intrinsic religiosity in predicting death anxiety (on both levels). This finding points to the significance of religious engagement in reducing death anxiety, not as a single factor, but rather as an important moderator of the relation between religious orientation and death attitudes. Such engagement brings experience of community through participation in religious ceremonies (Wink, 2006), and permits participation in the culture. Thus, these findings are consistent with those postulated by TMT theoreticians (e. g. Jonas & Fisher, 2006).

Congruent with earlier studies (e. g. Feifel & Nagy, 1981; Jonas & Fisher, 2006; Wink, 2006), intrinsic religiousness predicted death anxiety, but only at the fantasy level. In the present sample we did not establish an anxiety correlation at the conscious level. In line with Swanson and Byrd's (1998) study, death anxiety (only on conscious level) was positively predicted by extrinsic religiousness. Similar to our study, participants were also largely young adults. However, Swanson and Byrd's participants were of both Catholic and Protestant faith, whereas our participants were predominantly Catholic. Perhaps our differences are tied to the characteristics of the Catholic religion and the type of piety associated with it (highly institutionalized and not based on personal religious inquiries). Although the data collected does not allow for a straightforward conclusion as to the true relationship between extrinsic religiosity and death anxiety, at least two different scenarios may explain our findings: (1) high extrinsic religiosity leads to high death anxiety, which indirectly testifies to its ineffective protection against existential angst or (2) high death anxiety prompts one to seek solace in religion. Having considered the correlation between religious practices and lower death anxiety, as well as a lack of interaction between extrinsic religiosity and religious engagement, we consider the first scenario more plausible. Had death anxiety been the cause for seeking solace in religion, we would have obtained an analogous result for participation in religious practices, as individuals with high levels of anxiety would have tended to look for refuge in prayer or religious participation in order to experience reassurance or consolation. In addition, the correlation between extrinsic religiosity and high death anxiety should appear especially high in individuals with high religious engagement. However, this pattern was not confirmed by the data. The second relationship, in turn, seems more logical and plausible.

At present, religion appears to be changing across many societies – moving away from institutionalized forms towards the more individual. Similar trends can also be observed among the young generation of Poles (Norris & Inglehart, 2005). For this reason, individuals with extrinsic religiosity may experience a feeling of social alienation. For them, religion is not a means in itself, but rather a way of satisfying various needs (e.g. social). However, in a situation where institutionalized religious life becomes eroded (e.g. with the number of participants in religious ceremonies dropping), especially among the same-age

group, these needs may lead to frustration and the level of existential angst may rise. Those observing a drop in the significance of institutionalized religion in their immediate surroundings may not be experiencing social support and may be simultaneously receiving signals that their religious outlook on life is not the only one which is valid or dominant, with a great number of people beginning to stray from it. According to the assumptions made by TMT, this weakens the protective function of such an outlook on life and puts the individual at risk of experiencing death anxiety.

Death fascination was negatively predicted by age, which confirms Yalom's theory that adolescents should demonstrate a greater preoccupation with the subject of death than other age groups, but without having necessarily higher death anxiety and believing in their invulnerability (see Yalom, 1980). Death fascination was also predicted by intrinsic and quest religiosity and had no association with other forms of religiosity. Perhaps people with high death fascination are more open-minded. Interest in death and dying could be associated with pronounced openness to experience and cognitive curiosity. Since quest religiosity is associated with the quest for an answer to the great question (Socha, 1999), the data collected could also indicate a relation between death fascination and existential fears. Intrinsic and quest religiosity are associated with the search for an answer to fundamental questions (Donahue, 1985; Socha, 1999). Pondering religious questions could make you "familiar" with death. Frequent consideration of death-related thoughts could result from cognitive curiosity, not from anxiety (as is in the case of death obsession). Religious engagement was also not connected with the level of death fascination. Therefore, the assumption that frequent participation in religious practices related to the Catholic faith leads to more frequent and more positive thoughts about death was not confirmed. However, both intrinsic and quest religiosity point to the individual pondering religious questions. With Catholicism devoting a great deal of attention to the issues of death and afterlife, this type of religiosity may be conducive to death fascination and suggests one possible explanation for the divergent results for the negative correlation between death obsession and intrinsic religiosity, as obtained by Abdel-Khalek with individuals of a faith other than Catholicism.

As was mentioned above, death fascination did not correlate with death anxiety, neither at conscious nor fantasy level. This indicates the notion that interest in death and dying is something different than death concern, death depression and death obsession, which are clearly associated with death anxiety. Also, relations between death fascination and religiosity are different from relations between religiosity and death depression (Abdel-Khalek, 2004; Maltby & Day, 2000). There is at least one possible explanation for this finding. Death fascination reflects a positive attitude toward death that stems from interest in death and dying that contain positive images, whereas death obsession, which is a part of death distress, is associated with negative thoughts and fears of personal death (Abdel-Khalek, 2004).

The results presented in this study do suggest

caution in formulating definite conclusions regarding the relationships between religious orientation, religious engagement, and attitudes towards death. Although the results obtained do have obvious cultural limitations, the commonly observed relationships in this study have provided a certain amount of backing for the universality of Terror Management Theory. However, when the correlation between participation in religious practices and death anxiety vanished with the inclusion of religious orientations, these findings suggest the influence of cultural context. The fact that extrinsic orientation allows for prediction of death anxiety may be connected with our specific sample which demonstrated relatively low religious engagement and an average level of extrinsic religious orientation (results around the middle scores of the scale). The authors hope that the research presented will demonstrate the usefulness of studying samples from societies other than Western populations, by showing cultural specific influences on attitudes towards death and religion.

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