Religious Meaning System and Fear of Death in Older Adults: The Longitudinal Mediation Analysis of Wisdom and Meaning-Making

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ABSTRACT

A close examination of recent studies in these fields demonstrated that relationships between religion and fear of death are likely to be mediated by the structures of wisdom and meaning-making. In this study, we investigated a parallel longitudinal mediation of wisdom and meaning-making in the association between the religious meaning system and fear of death in older adults. A longitudinal study with triplicate measurements was conducted on a sample of 270 Polish older adults (141 women and 129 men; $M_{\rm age} = 68.32$ years, SD = 6.32). Four questionnaires were used: the Religious Meaning System Questionnaire, the Three-Dimensional Wisdom Scale, the Fear of Death Scale, and the Meaning-Making Questionnaire. The serial mediation analysis with a bias-corrected bootstrapping method showed that the relationship between the religious meaning system and fear of death was mediated by meaning-making and wisdom. These results suggest that one's religious meaning system, through increasing both meaning-making processes and wisdom, has a positive effect on decreasing fear of death. The intrapersonal structures of meaning and wisdom thus play a significant role within the gerotranscendental model of positive aging.

KEYWORDS

religious meaning system fear of death wisdom meaning-making older adults

One of the major psychological tasks in life, particularly in old age, is to make sense of death and dying. According to Wong (2000), life teaches us how to survive, whereas death teaches us how to live. The results of studies in gerontology led to the conclusion that people may become more religious and develop a closer personal relationship with God as they age (Abreu et al., 2022; Tornstam, 1997). Therefore, religiosity may help older adults review their past experiences in a positive way, which in turn may reduce the fear of death (Fishman, 1992). Even though the majority of researchers emphasize the positive relationship between religiosity and attitude toward death (e.g., Fischer & Secinti, 2022), little is still known about the mechanisms that explain these relationships. It is thus important to examine the extent to which wisdom and meaning-making influence relationships between religiosity and fear of death in late adulthood.

The Explanatory Context of the Gerotranscendence Model

The theoretical framework for our research was the gerotranscendence theory of the Swedish scientist Lars Tornstam (2005). According to his theory, gerotranscendence is the final stage in a natural process towards maturity and wisdom that can be described as a shift in metaperspective which accompanies the process of aging: from a materialistic and rational perspective to a more transcendent one (Tornstam 1989). This shift in the perspective occurs in three dimensions: the cosmic (transcendent) dimension, the self-dimension, and the social dimension. The themes such as redefinition of time, decreased fear of death, and transcendental sources of life satisfaction are subsumed under the cosmic dimension. The dimension of self includes the aspects of self-confrontation, self-transcendence, and ego-integrity. The importance of social contacts during different phases of life, social masks, emancipated innocence, and reduced interest in material assets are the issues under the dimension of social and personal relationships (Tornstam, 1997). As a result of these changes, the aging individual becomes more aware of the higher self and seeks spiritual enlightenment. Fear of death is lower and the affinity with the earlier, existing, and imminent generations is greater (Tornstam, 2011).

There are three main reasons why we decided to base our research on this theory. First, the theory of gerotranscendence relates to the real experiences of older adults and shows the relevance of the theory in old age experience (Rajani & Jawaid, 2015). Secondly, this theory of adaptation to old age, in its assumptions, directly refers to issues related to religiosity (and spirituality), the category of meaning, maturing in wis-

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dom, and the individual's confrontation with one's own mortality (see Abreu et al., 2022; Girard, 2014; Kellehear & Garrido, 2023; Takahashi, 2019). Third, Tornstam's (2005) theory provides strong indications as to the direction of the postulated relationships. A manifestation of gerotranscendent changes (mainly in the cosmic area) is the increased importance of spiritual and existential issues (including religiosity). Changes taking place in particular dimensions of gerotranscendence lead to an increase in wisdom and encourage a person to reinterpret reality. This, in turn, allows a person to look at the end of one's life with more peace and less fear (Tornstam, 2011).

Psychologists identify three dimensions of death fear: intrapersonal, interpersonal, and transpersonal death-related concerns. Intrapersonal death fear seems to be primarily concerned with whether one is able to accomplish major life goals and fulfill one's meaning of life. Interpersonal death fear is based on worries about leaving the loved ones, being unable to care for them, or being forgotten by them. Transpersonal death fear is concerned with what happens after death, such as fear of punishment (Tripathi, 2019)

The above clearly shows that various meanings of death are intricately and irrevocably related to meanings of life (Wong, 2000). If we have lived a meaningful life and achieved wisdom, we are able to face death without fear (Tornstam, 2005; Wadensten, 2007).

Relationships Between Religiosity and Fear of Death

In this study, religiosity was understood in terms of the religious meaning system, which is based on the view that religion can help individuals to explain reality in terms of significance and purpose (Park, 2005). The religious meaning system is defined as an idiosyncratic system of concepts related to the sacred and having references to self, other people, and the world (Krok, 2014, 2016). The complicated relationship between religiosity and fear of death is a relatively frequent subject of interest in the field of thanatos psychology and gerontology (Jong, 2021; Lamba et al., 2021). However, different authors have obtained contradictory results, and there are still no clear conclusions about the connection between the two psychological constructs. For example, Donovan's (1994) review of 137 studies found that 78 provided evidence for a negative correlation between religiosity and death anxiety, whereas 13 provided evidence for a positive correlation. The remaining 46 presented discrepant, null, or otherwise inconclusive results. In addition, among these 46 were six studies that supported the curvilinearity hypothesis, arguing that the relationship between religiosity and death anxiety follows an inverted-U pattern. In addition, Ellis and Wahab (2013) made a similar analysis of previous studies on the relationship between religiosity and fear of death. They concluded that "when nonreligious individuals are sampled alongside those who are both moderately and extremely religious, the overall relationship shifts to being curvilinear, and possibly even positive" (p. 149). In turn, Jong et al. (2018) found a weak negative association between religiosity and death anxiety. A more profound examination revealed that 10 of the 11 studies that directly tested for curvilinearity provided some support for an inverted-U pattern.

It seems that the issue of the relationship between religiosity and fear of death may be especially important among the older population (Solaimanizadeh et al., 2020). The main reason for this is that, on the one hand, the absence of fear of death may be one of the indicators of successful aging (Erikson & Erikson, 1998; Wong, 2000; Waheed Elzohairy et al., 2022) and, on the other hand, it is generally accepted that mature religiosity correlates positively with well-being in late adulthood (Bodogai et al., 2020). Previous research has shown that less intrinsically religious persons are more anxious about death or dying than those who were highly intrinsically religious (Ardelt & Koenig, 2006; Ellis & Wahab, 2013). Using a sample of students, Ghazaei et al. (2022) showed that intrinsic religiosity had a negative direct relation with fear of death and high-risk behavior, and extrinsic religious orientation had a positive direct relation with fear of death and high-risk behavior. In turn, Ardelt and Wingard (2018), using a sample of older community residents, nursing home residents, and hospice patients, found that religiosity was positively associated with the frequency of spiritual behavior and had a curvilinear relationship with death anxiety and neutral and escape acceptance of death. Although intrinsic religiosity is a negative predictor of fear of death, there are no unambiguous conclusions about the relationship between the frequency of religious practices and the fear of death in the older population (Krause & Hayward, 2014). Moreover, only relatively few longitudinal studies have investigated the relationship between religiosity and fear of death among older people (Upenieks, 2021). Yet, in old age, many developmental changes can be observed that may affect both the character of religiosity and attitude toward death (Caruso & Candore, 2021). Among these developmental changes, the most important are: the increase in the need for life balance, the emergence of wisdom and, finally, the development of gerotranscendence. The increasingly clear prospect of death in old age makes us ask ourselves the question: What have I achieved in life and what must I consider a failure? Wisdom allows an older person to give a true answer to this question without exaggerated delight or inappropriate sadness. In turn, maturing towards gerotranscendence allows older adults to easily reach for spiritual resources when confronting the inevitable necessity of death.

Despite the fact that the empirical evidence discussed above generally points to relationships between religiosity and fear of death, some important issues regarding potential mediating factors specific to late adulthood remain unexplored and require more thorough investigation. In addition, the complexity of associations between religiosity and fear of death indicates the presence of interrelated mediation mechanisms (Fortner & Neimeyer, 1999; Pandya & Kathuria, 2021). Previous research has shown that belief in literal immortality was related to lower death anxiety only among intrinsically religious participants. Moreover, meaning in life mediated the relationship between belief in literal immortality and death anxiety. However, this mediational relationship was present only for intrinsically religious individuals (Van Tongeren et al., 2017).

Wisdom and Meaning-Making as Mediators

Some studies have demonstrated the mediating role of wisdom and meaning-making between specific measures of religiosity and fear of death. Wisdom can be conceptualized as the integration of cognitive, reflective, and compassionate (affective) personality characteristics (Ardelt, 2003). In this context, wisdom is understood as a developmental construct rather than a personality trait. This means that wisdom can increase with age as long as there is the motivation to engage in psychosocial growth (Ardelt et al., 2018; Glück, 2022). In fact, in Tornstam's (2005, 2011) model of personal development, wisdom is the greatest inner strength that is gained in old age if the process of maturing into gerotranscendence runs normatively. Brudek (2022) tested the mediating role of wisdom between religiosity and sense of self-dignity and revealed a positive correlation among religious meaning system and wisdom as well as between wisdom and the sense of self-dignity. Furthermore, research has shown that, among older adults, wisdom is negatively related to fear of death, escape acceptance (Ardelt, 2008), and death avoidance as well as positively related to neutral acceptance and approach acceptance of death (Brudek & Sekowski, 2021).

As for the construct of meaning-making, it can be identified as a person's cognitive process aimed at perceiving and understanding life events in a different way and assimilating them within the consistent structures of personal beliefs and goals. In that sense, meaning-making represents the human ability to deliberately make meaning of ongoing events and situations. Meaning-making is thus a dynamic process that involves one's conscious reflection and interpretation (Park & Blake, 2020). The meaning-making model was developed on the basis of research on coping with stress. Therefore, it mainly applies to difficult and stressful situations. Aging is characterized by decreasing resource gains and increasing resource losses in many life domains (Aldwin et al., 2021; Lazarus & Lazarus, 2006). However, the results of previous research show that most older people successfully adapt to the shifting balance of resource gains and losses (Carpentieri et al., 2017).

Adaptation to old age may be defined as a complex interactive process between the aging person and that person's environment. Adaptive coping with aging assumes that the older people are aware of changes brought on by old age and modify their expectations, goals, and intentions in order to achieve a satisfying result for themselves (Nikitin & Freund, 2019). Life satisfaction, sense of self-dignity, wisdom, and gerotranscendence are recognized as the main signs of adaptation to old age (Erikson & Erikson, 1997; Tornstam, 2011), which may inspire a person to modify and restructure current goals and intentions (Kropf & Tandy, 1998; Singer, 2004).

The Present Study

To our knowledge, no one has investigated whether wisdom and meaning-making mediate in parallel the relationship between a religious meaning system and fear of death in older adults in a longitudinal, prospective study. Thus, in this study, we aimed to test a parallel mediation model in which the relationship between one's religious meaning system and fear of death is mediated by wisdom and meaning-making in older adults (see Figure 1). We measured the religious meaning system (Time 1 at baseline [T1]), wisdom, meaning-making (Time 2 after 3 months [T2]), and fear of death (Time 3 after 6 months [T3]) at separate time points in order to examine the temporal precedence for a prospective mediation model (Cole & Maxwell, 2003). On the basis of both gerotranscendence theory and previous research, we hypothesized that older adults with a strong religious meaning system at baseline would be more likely to show higher wisdom and meaning-making than at 3 months, and a lower fear of death at 6 months (Hypothesis 1). We also hypothesized that 3-month wisdom and meaning-making would mediate the relationship between a religious meaning system and 6-month fear of death (Hypothesis 2).

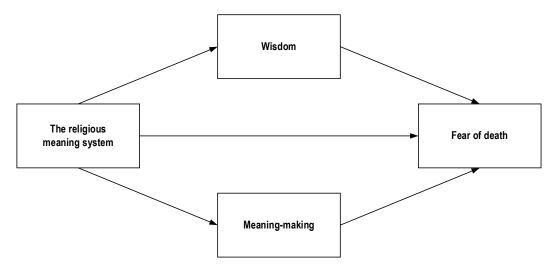


FIGURE 1.

Model of the mediating role of wisdom and meaning-making in associations between religious meaning system and fear of death.

METHOD

Power Analysis

We conducted an a priori power analysis using G*Power to define an adequate sample size (the following parameters were applied: power level $[1-\beta]$, prespecified significance level $[\alpha=.05]$, and test power $[1-\beta]=.90$). The following type of analysis was applied: F test; linear multiple regression: fixed model, R^2 deviation from zero; type of power analysis: A priori. The results showed that the sample of 265 participants was sufficient for our examination.

Participants and Procedure

Initially, 357 older adults (> 60 years old) were recruited to participate in this study and attended the T1. Of the initial sample, 301 participants (84.3%) participated in the T2, and 270 (75.6% of the T1 sample) participated in the T3. The final sample thus included 270 older adults (141 women and 129 men, $M_{\rm age}=68.32$ years, SD=6.32, Age range = from 60 to 88 years). All of the participants were Caucasian who constituted a representative sample of Polish older adults in terms of gender, age, and sociocultural background (see Table 1).

The participants came predominantly from various regions of Poland and were recruited using the snowball sampling method (i.e., we asked our participants to nominate another person from the same age group as our next participant until we had a sufficient number of participants) to participate in a longitudinal three-wave field study. Participants were recruited for the study either through direct contact initiated by the researchers or via referrals from friends who encouraged their participation. Outreach efforts were conducted in various personal settings, including social gatherings, cultural events, and educational sessions aimed at older adults. Indirect procedures (telephone or email) were not used in data collection. Participation was anonymous, and participants were able to quit the study at any time. There were 10-week intervals between the three measurement times (T1, T2, and T3). At T1, participants provided their contact details and filled in the Religious Meaning System Questionnaire (Krok, 2014). At T2, they completed the Three-Dimensional Wisdom Scale (Ardelt, 2003) and the Meaning-Making Questionnaire (Krok & Zarzycka, 2020), and in T3, we measured fear of death using the Death Attitude Profile-Revised (Wong et al., 1994). Informed consent was obtained from all participants, and the Institutional Ethics Committee approved the study.

Measures

RELIGIOUS MEANING SYSTEM

The Religious Meaning System Questionnaire was used to assess religiosity conceptualized as a religious cognitive and motivational system that allows people to understand and interpret their personal experiences and the world in terms of significance and purpose. The method characterizes the religious meaning system both on a global level and within two dimensions: (a) orientation, which assesses the extent to which religion enables people to comprehend their life and the world, and (b) meaningfulness, which evaluates the extent to which religion allows people to find purpose and meaning in their life. The questionnaire includes 20 items (10 items for each of the two dimensions) that are rated on a 7-point scale, ranging from 1 (very strongly disagree) to 7 (very strongly agree). The total score is calculated by averaging the scores of the two dimensions. Cronbach's α coefficients for the current study were .90 (orientation), .91 (meaningfulness), and .91 (the total result), respectively.

WISDOM

We used the Polish adaptation of the Three-Dimensional Wisdom Scale (Steuden et al., 2016). In this scale, wisdom is defined as the combination of cognitive, reflective, and affective dimensions. The cognitive dimension represents one's ability to comprehend life as a whole by perceiving intrapersonal and interpersonal events from a wider perspective. The affective dimension reflects one's ability to feel compassion and empathy and overcome egocentric tendencies. The reflective dimension indicates the ability to distance oneself and assess events from different perspectives (Ardelt, 2003). The total score is calculated by averaging the three scores of the three dimensions. The scale comprises 39 items (14 items for the cognitive dimension, 13 items for the affective dimension, and 12 items for the reflective dimension) rated on a 5-point scale, ranging from 1 (strongly agree or definitely true of myself) to 5 (strongly disagree or not true of myself). Cronbach's α coefficients for the current study were .83 for the cognitive dimension, .87 for the affective dimension, .81 for the reflective dimension, and .85 for the entire scale, respectively.

TABLE 1.Participant Sociodemographic Characteristics

	M	SD
Age	68.32	6.32
	N	%
Sex		
Male	141	52.2
Female	129	47.8
Employment status		
Retired	202	74.8
Full time work	45	16.7
Part time work	23	8.5
Marital status		
Married/Living with partner	195	72.2
Single	75	27.8
Educational attainment		
Basic vocational education	49	18.1
High school education	175	64.8
University education	46	17.1
Religious denomination		
Roman Catholics	237	87.8
Protestants	19	7.0
Agnostics or atheists	14	5.2

MEANING-MAKING

The Meaning-Making Questionnaire assesses one's cognitive capacity to assimilate challenging or ambiguous life events into coherent structures of personal meaning, beliefs, and goals. Its conceptualization are based on theoretical assumptions of the meaning-making model, within which meaning-making involves cognitive attempts to perceive, reinterpret, and evaluate personal experiences and events in order to understand their meaning and purpose (Park, 2010). The questionnaire has been used in previous studies to assess the mediational relationships between self-efficacy and psychological well-being in cardiac patients (Krok & Zarzycka, 2020), between risk perception of COVID-19, religiosity, and subjective well-being in emerging adults (Krok et al., 2023), and between social support and illness acceptance among cancer patients (Krok et al., 2024). It turned out to be a reliable and valid measure of the meaning-making processes. The questionnaire comprises eight items rated on a 5-point scale, ranging from 1 (never) to 5 (very often). Sample items are: "I am looking for what is really important in life situations" or "I focus on meaning and purpose in current events." Higher scores reflect a stronger process of meaningmaking. Cronbach's α for the present study was .87.

FEAR OF DEATH

Fear of death was measured with the Fear of Death Scale, which is part of the widely used Death Attitudes Profile Revisited (Wong et al., 1994). We used Brudek et al.'s (2020) Polish adaptation. Because of the aim of our study, we used only this particular scale. Fear of death reflects the extent to which a person experiences feelings of fear associated with death, which is perceived as something unknown or associated with pain or suffering. It also describes how people react to the prospect of losing their life. A higher score represents a higher level of feelings of fear associated with death. The scale contains seven items that are rated on a 7-point scale, ranging from 1 (*I strongly disagree*) to 7 (*I strongly agree*). Cronbach's α for the present study was .82.

Data Analysis

First, as all variables were measured by questionnaires, Harman's one-factor test was used to exclude the possibility of common method variance, which may cause our results to be biased (Podsakoff et al., 2003). The results of Harman's one-factor test showed that all items formed 19 distinct factors, with the first unrotated factor explaining only 20.34% of the variance. Therefore, common method error was

not present in our study. Next, the basic assumptions of the regression analysis were checked: (a) all distributions for the study variables approximated normality–skewness < |.89| and kurtosis < |.83|; (b) the amount of multicollinearity in regression analysis was acceptable – the VIF was 1.17; (c) the assumption of homoscedasticity – Levene's tests turned out to be insignificant for the religious meaning (.23; p = .745), wisdom (.951; p = .501), and meaning–making (.17; p = .675).

Finally, after calculating descriptive statistics and conducting correlational analyses to establish relationships among religious meaning system, wisdom, meaning-making, and fear of death, we performed mediation analysis with two parallel mediators was using Model 4 with bootstrap procedures recommended by Hayes (2017; 95% biascorrected confidence intervals, 10 000 bootstrap resamples, see Figure 1). IBM SPSS Statistics 21.0 PROCESS macro 3.4 were used.

RESULTS

Descriptive Statistics and Correlational Analysis

First, we calculated descriptive statistics for all the variables. These values are shown in Table 2. The initial correlation analysis showed that all the Pearson coefficients turned out to be statistically significant. Religious meaning system at T1 was positively associated with wisdom and meaning-making at T2 and negatively associated with fear of death at T3. Wisdom at T2 was positively correlated with meaning-making at T2. Finally, both wisdom and meaning-making at T2 were negatively associated with fear of death at T3.

Mediation Analysis

To investigate whether wisdom and meaning-making would mediate in parallel the relationship between religious meaning system and fear of death, we applied a mediation analysis (Model 4) with the bootstrapping procedure (sample = $10\,000$; 95% bias-corrected CIs) in accordance with the recommendations given by Hayes (2017). The results are presented in Table 3.

Our examination of direct effects demonstrated that having a religious meaning system was positively related to wisdom and meaning-making but was not related to fear of death. In contrast, wisdom and meaning-making were negatively associated with fear of death. The total indirect effect showed that wisdom and meaning-making were parallel

TABLE 2.Means, Standard Deviations, and Correlations: Religious Meaning system, Fear of Death, Wisdom, and Meaning-Making

Variable	M	SD	Skewness	Kurtosis	Score range	1	2	3
Religious meaning system (T1)	5.08	.94	55	.83	1-5	_		
Wisdom (T2)	3.01	.76	16	15	1-5	.39***	_	
Meaning-making (T2)	3.47	.87	.11	58	1-5	.29***	.33***	_
Fear of death (T3)	3.23	.98	.89	.69	1-7	17**	32***	30***

Note. T1 = Time 1; T2 =- Time 2; T3 = Time 3; T4 = Time 4.

^{**}p < .01. ***p < .001.

TABLE 3.Mediation Estimates for Wisdom and Meaning-Making in the Relationship of Religious Meaning System with Fear of Death (Standardized Effects).

Variables	B	SE	t	Model R ²
Direct effects				
Religious meaning system – Wisdom	.39	.05	5.97***	.15***
Religious meaning system - Meaning-making	.29	.06	4.90***	.08***
Religious meaning system - Fear of death	01	.06	17	.15***
Wisdom - Fear of death	25	.07	-3.94***	
Meaning-making - Fear of death	21	.05	-3.49***	
Total effect				
Religious meaning system - Fear of death	17	.05	-2.83	.03**
Indirect effects	Effect	SE	LLCI	ULCI
Religious meaning system - Wisdom - Fear of death	10	.03	16	04
Religious meaning system - Meaning-making - Fear of death	06	.03	11	02
Religious meaning system - Wisdom/Meaning-making - Fear of death	16	.04	23	09
Effect contrast (Wisdom minus Meaning-making)	04	.03	11	.04

mediators between a religious meaning system and fear of death. Taking into account the specific effects, the religious meaning system at T1 was related to higher levels of wisdom and meaning-making at T2, which in turn were related to lower fear of death at T3. The separate mediation effects for both wisdom and meaning-making were also statistically significant. The total effect of the religious meaning system on fear of death was also significant. Finally, we decided to estimate the separate mediation effects of wisdom and meaning-making by using an effect contrast method which estimates the difference between these two indirect effects in a parallel mediator model. A contrast is understood as the difference between two indirect effects (i.e., between wisdom and meaning-making in the context of the present study). This method has been applied by many researchers (Romero-Moreno et al., 2016; Schotanus-Dijkstra et al., 2019). The result turned out to be nonsignificant (effect = -.04, 95% CI [-.11, .04]), which demonstrates that there were no significant differences in the mediating power of these two mediators. All analyses were controlled for age and gender with regard to the statistical significance of the effects; they yielded highly similar results.

DISCUSSION

The main aim of the present study was to verify whether wisdom and meaning-making mediated the relationship between religious meaning system and fear of death in late adulthood. The findings of our longitudinal study support the mediating effects, which clearly demonstrated a pattern of associations among these variables. To our knowledge, this is the first longitudinal study to examine the mediating effects of wisdom and meaning-making, taken together, on religious meaning system and fear of death among Polish older adults.

Relationships Among Religious Meaning System, Meaning-Making, Wisdom, and Fear of Death

Hypothesis 1 was fully confirmed. The results showed that higher levels of religious meaning system were related to higher wisdom and

stronger meaning-making, which in turn were related to a lower level of fear of death. These results are compatible with those of previous studies that have pointed out a significant role of religious meaning system, wisdom, and meaning in relation to fear of death (Ardelt, 2008; Brudek & Sekowski, 2020, 2021).

These studies confirmed, among other things, that the religious meaning system has a positive effect on wisdom, which in turn reduces the fear of death. A negative effect was noted in the case of the direct impact of religiosity on the fear of death. This means that the more religiosity becomes a reference point in the perception of reality, the less is the fear of death. Maturation toward gerotranscendence, according to Tornstam's (2005) model, which provided the theoretical framework for our research, was associated with an increase in the importance of spiritual issues in the lives of older people. A particular manifestation of this may be, among others, the increase in the importance of religiosity in the lives of older individuals. Tornstam (1997) argued that, "depending on the definition of 'religion' the theory of gerotranscendence may or may be not regarded as a theory of religious development" (p. 203).

The results showed that religiosity can be linked to gerotranscendence, especially when people related them to their existential and metaphysical ideas. Hence, we can assume that religiosity, which increases along with gerotranscendence, will affect the functioning of people in late adulthood (Chia, 2019). One of the psychological areas where the importance of religiosity becomes apparent is the wisdom of older individuals. It is easy to find, in the psychological literature, various approaches to wisdom and religiosity, outlining their meanings, history, and empirical research. Although there are a fair number of empirical studies on each construct, research on their relationship is still in the early stages. Brudek et al. (2021) examined whether wisdom is a mediator in the relationships between religious meaning system and social support among older adults and showed that higher levels of a religious meaning system were related to higher levels of wisdom. In this study, the theoretical framework was determined by the gerotranscendence theory.

The Role of Meaning-Making Processes

Meaning-making processes seem to be particularly important for older people as they mature into gerotranscendence, mainly because of their adaptive character. The physical and mental changes that occur with aging significantly change the lives of older people and affect their mental health and quality of life (Baltes & Mayer, 2001; Yi & Park, 2022). Developmental changes that occur as older people age place particular demands on comprehending one's reality and life from a new perspective and reorganizing important beliefs and goals. Because religion is the basis for many older people's global beliefs and goals, their religious meaning system often plays a crucial role as they cope with aging (see Lazarus & Lazarus, 2006; Pargament, 1997; Xu, 2021). Gerotranscendence as a unique process of positive aging that opens older individuals to a rich spiritual world that may give new meaning to their past, present, and future experiences (Tornstam, 2005). In turn, religiosity emerging from gerotranscendence supports the meaning-making process. The main point here is that religiosity, as a manifestation of maturing towards gerotranscendence, stimulates an older person to redefine the aging process and, consequently, also their own death, which closes the history of human life. One explanation for this relationship might be that religious beliefs provide people with a meaningful framework for stressful events and help them discover their positive aspects (Ardelt et al., 2008).

Tornstam (1997, 2011) has argued that maturing into gerotranscendence is accompanied by an increase not only in religiosity but also in wisdom. The aging individual growing into wisdom experiences a redefinition of time, life, and death. An older wise person becomes more aware of the uncertainty of one's life and seeks spiritual consolidation. Moreover, wisdom leads to a lower fear of death and a greater affinity with earlier and existing generations (see Ardelt, 2003, 2008; Massmann, 2012; Tornstam 2011). Our research suggests that the wisdom that emerges in the process of gerotranscendence can reduce the fear of death in a Polish sample of older adults. Similar results have been obtained by other researchers. Dittmann-Kohli and Baltes (1990), on the basis of a literature review and their own research, made a distinction between practical wisdom, relating to one's personal life, and philosophical wisdom. In their opinion, an increased ability to accept death is a result of an increase in practical wisdom.

The Mediational Effects of Wisdom and Meaning-Making

The main contribution of our study is the examination of mediational effects between religious meaning system and fear of death. Two variables—wisdom and meaning-making—mediated the relations between religious meaning system and fear of death. These central results lend support to the few studies that have shown that relationships between religious meaning system and fear of death are mainly of a mediational nature (Brudek & Sękowski, 2021). They also highlight the crucial role played by wisdom and meaning-making in older individuals' psychosocial adaptation to old age, which has been suggested by previous research (Brudek, 2022; Krok et al., 2019; Nikitin & Freund,

2019). Our second hypothesis, which assumed such relationships, was thus confirmed

The current study expands on existing findings by demonstrating that wisdom and meaning-making can operate together in influencing older Polish adults' attitude toward death. Wisdom and meaning-making mediated the relationship between religious meaning system and fear of death. These results can be interpreted within the gerotranscendental model of positive aging (Tornstam, 2005), which posits that wisdom is the effect of maturing into gerotranscendence, and the gerotranscendence process itself is a shift in a meta-perspective, which essentially means the meaning-making process. For older Polish adults, wisdom and meaning-making are key resources to make the links between religiosity and fear of death clearer (Lazarus & Lazarus, 2006). One can assume that, drawing on meaning, older Polish adults apply wisdom to cope with aging to reduce a sense of their own finitude and psychological problems related to their death anxiety.

In an extension of the existing literature, our findings let us draw interesting conclusions, namely, that two mechanisms explaining the relationship between religious meaning system and fear of death have been identified that so far have not been studied This confirms earlier findings (Aglozo et al., 2021; Krok et al., 2019) indicating that a religious meaning system does not operate in isolation while influencing older Polish persons' attitudes toward death. Instead, together with the mediating functions of wisdom and meaning-making, it affects older adults' fear of death by allowing them to positively adapt to the challenges of old age. This is due to the fact that religious meaning systems, which contain meaning structures, can play an important role in coping with aging (Malone & Dadswell, 2018) because they can more deeply inform general beliefs and provide primary goals in terms of development tasks of old age. One of the most important of these is accepting the prospect of one's own death (Erikson & Erikson, 1997; Tornstam, 2011). However, it must be remembered that the relationship of the religious meaning system with fear of death can be bilateral, that is, a religious meaning system can affect an older adult's fear of death, but a lower level of death anxiety also allows them to make a more positive life cycle assessment and to use religious resources in the meaning-making process that accompanies positive aging: maturing into gerotranscendence.

Limitations and Future Directions

There are some limitations to this study. First, the participants were predominantly White, Polish, Christian, and older. In turn, the interconnection between psychological functioning and culture very likely influenced the results. Our rather homogeneous sample limits the degree to which one can generalize the results to populations that differ by race, religious affiliation, and age. That is why caution should be used when comparing our findings with caution results obtained in other, more religiously diverse countries. Second, the study focused on the analysis of relationships between only four variables. Future longitudinal research should also include different dimensions of the attitude toward death, not just the fear of death, as well as consider other possible pathways to influence, such as sense of meaning, for-

giveness, meaning-making, and attitudes toward death. Taking into account the sense of meaning, a different aspect of the meaning system (important for older people) and its relationship with the attitudes toward death would be examined. Additionally, an interesting idea seems to be the implementation of another research project which would take into account opposite directions of influence or bilateral relationships between variables that could be theoretically expected. Third, the psychological methods used in the study were self-report. Thus, there is a possibility that the obtained results were influenced by a social desirability response set. It is therefore possible that a different way of measuring religious meaning system, meaning-making, wisdom, and fear of death would have yielded different results. Fourth, although the variables were collected at three points in time, we do not know how stable the variables are across time, which means that we still cannot be sure about the direction of the effects without controlling for baseline scores.

CONCLUSION

Despite these limitations, our study demonstrates the value of examining the mediating role of wisdom and meaning-making taken together in the relationship of the religious meaning system with fear of death among older Polish adults, allowing a more precise look at death anxiety within the gerotranscendental model of positive aging. Religiosity, conceptualized as a religious meaning system, as well as wisdom and meaning-making, was a good predictor of lowering the fear of death in older adults. This may indicate that, when coping with aging problems, religious meaning system and gerotranscendental resources (wisdom and meaning-making) may contribute to a more positive aging experience. As a practical implication, clinicians, gerontologists, psychologists, and psychotherapists working with older persons should pay attention to general religious meaning system, wisdom, and meaning-making in their clients/patients because these factors are associated with a fear of death and, more broadly, the aging process oriented toward gerotranscendence.

A promising form of development of these resources seems to be gerotranscendent reminiscence therapy, which focuses on the following tasks: to enable participants to arrive at novel ideas regarding time, space, life, and death; to help participants know themselves through reflection and dialogue; to encourage participants to examine positively their own past, present, and future; to help participants face death calmly; to spur participants to accept and appreciate life; to encourage participants to confront future life challenges in an active, positive manner; and to aid participants in appreciating and reflecting on their own lives (Tornstam, 1997). The previous studies on the influence of reminiscence therapy on the increase of gerotranscendence prove the effectiveness of this method (Hsiao et al., 2018, 2020).

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All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. The Ethics Committee at The University of Opole approved the study; the reference number: (number KEBN/2/2021).

Informed consent was obtained from all individual participants included in the study.

DATA AVAILABILITY

The data are openly available in OSF HOME at: https://osf.io/exdmz/

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