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Spiritual orientation and mental health: an SEM analysis of meaning and death attitudes as mediators in Turkish religious officials

Ömer Faruk Söylev¹ , Çınar Kaya² and Nesrullah Okan^{3*}

Abstract

This study examines the relationships between spiritual orientation, meaning in life, attitudes towards death, and indicators of psychological health (depression, anxiety, and stress) among 348 Muslim religious officials in Turkey (28% female). Using structural equation modelling (SEM), the results showed that spiritual orientation directly and indirectly reduces psychological distress by enhancing personal meaning and fostering more accepting attitudes towards death. Results showed a moderate positive association between spiritual orientation and meaning in life, and weak but significant negative associations between meaning/attitudes towards death and psychological symptoms. As one of the first empirical studies to examine the mediating role of death attitudes in this population, the research highlights the theoretical relevance of existential frameworks such as logotherapy. The study offers practical implications for the development of culturally sensitive psychoeducational and spiritual counselling programmes aimed at supporting the mental health of religious professionals exposed to grief and death-related stressors.

Keywords Türkiye, Muslim religious officials, Death attitudes, Depression, Structural equation modelling

Introduction

Death is an inevitable and universal fact of life. This reality can lead to stress, anxiety, and depression while affecting life meaning-making profiles [1, 2]. One of the ways to cope with the fear of death and uncertainty is through religious beliefs and rituals [3]. Religions provide emotional stability by adding meaning to existential concerns [4, 5]. Attitudes toward death and their relationship to

well-being vary significantly across religious traditions. In Islam and Christianity, death is often conceptualized as a transition to an afterlife, which may foster acceptance through belief in divine purpose [6]. By contrast, Buddhist traditions emphasize impermanence (*anicca*) and detachment, cultivating a distinct form of equanimity toward death [7]. Empirical studies support these distinctions: intrinsic religiosity in monotheistic contexts correlates negatively with death anxiety [8], whereas Eastern practices like mindfulness link death awareness to enhanced present-moment well-being [9]. Cross-cultural research further highlights how collectivist versus individualist orientations shape meaning-making [10]. These differences underscore the need for culturally sensitive mental health interventions, particularly for religious leaders who navigate existential questions in their communities.

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In Islamic belief, death is accepted as the beginning of a new life in the afterlife [11]. In Türkiye, burial procedures for Muslims are carried out according to religious procedures. They are regulated by the Presidency of Religious Affairs [Directorate of Religious Affairs' Regulation on Duties and Working Principles [12]. Funeral procedures are listed as preparation (preparation), tekfin (shrouding), teşyî (escorting), and defin (burial). Preparation includes general preparations, such as tekfin, the washing and shrouding of the body; teşyî, the transportation of the body; and burial, the placement of the body in the grave. In addition, other religious practices such as giving the telkin (reciting guidance prayers), announcing the news of death, giving comforting speeches, and organizing condolence programs are also carried out (DİBGÇY, 7/o, 149/2b-ğ, & 3c).

During funeral services, religious workers often encounter deceased persons and encounter their relatives. These experiences may help them become more familiar with their own feelings about life, death, and the meaning of life, thus providing better services. However, direct contact with the deceased, washing and shrouding them, and providing moral support to their relatives requires facing death, touching the deceased, and comforting grieving relatives and friends. Such tasks pose particular challenges for religious workers and may cause them to experience more occupational stress and burn-out than in their other jobs.

Therefore, this study aims to empirically examine the relationships between the levels of spiritual orientation, profiles related to the meaning of life, attitudes toward death, and levels of depression, anxiety, and stress among Sunni Muslim religious officials in Türkiye. This examination aims to better understand the challenges that religious workers face during funeral services and how these challenges affect their spiritual and emotional states.

Spiritual orientation

Spirituality, a crucial construct for understanding meaning and purpose, is conceptualized in various fields. ASERVIC [13] characterizes spirituality as encompassing elements like vitality, courage, and transcendence, facilitating both active and passive experiences that foster creativity and personal growth. Psychologically, Kelly [14] describes spirituality as a transcendent connection to the cosmos, while Shafranske and Gorsuch [15] emphasize its link to courage. Elkins et al. [16] define it as an experiential mode involving awareness of a transcendent dimension. Hage [17] notes the overlap between spirituality and religion, with the former reflecting an individual's search for meaning and purpose. Zinnbauer and Pargament [18] distinguish between religiosity and spirituality, highlighting their intertwined yet distinct nature and their influence on various dimensions of human experience. While

spirituality is analyzed at the individual level, religion is examined from a social perspective [14, 19].

The study employs the concept of *spiritual orientation* to evaluate spirituality and associated behaviors, using the Spiritual Orientation Scale developed by Kasapoğlu [20]. An analysis of the scale's items reveals that spiritual orientation encompasses cognitive, affective, and behavioral components. This suggests that the construct of spiritual orientation closely aligns with an individual's overall attitude toward spirituality, integrating their beliefs, emotions, and actions related to spiritual matters. For religious officials, spirituality is a critical element that enables them to find meaning and purpose in their professional lives. Spirituality strengthens their inner values and their relationship with a transcendent being. It also enhances their capacity to provide social support and connect with shared values within the community [21]. Spirituality can be especially impactful during times of stress and adverse life events [22]. Religious officials often express their spirituality through religious practices such as worship, prayer, and reading sacred texts. This creates a deep sense of belonging and meaning in their professional and personal lives. Spirituality helps religious officials to find inner peace in the face of challenges and to serve their communities more effectively.

Attitudes towards death

Death is an unavoidable aspect of human existence, prompting individuals to develop various attitudes to navigate and cope with this reality. Wong et al. [23] classified attitudes towards death under three main categories: Neutral Acceptance, Approach Acceptance, and Avoidance Acceptance. Neutral Acceptance is defined as an attitude that sees death as a natural life process and has no difficulty in accepting mortality. Armstrong [24] explains Neutral Acceptance as an insensitive or mixed attitude towards death. Studies by Cicirelli [25] showed that Neutral Acceptance is positively associated with psychological well-being and life satisfaction in older adults. Tomer and Eliason [26] reported that high Neutral Acceptance was negatively associated with death anxiety and depression. Gesser, Wong, and Reker [27] found that Neutral Acceptance was positively associated with perceived physical and psychological well-being and negatively associated with depression.

Approach Acceptance is defined as an attitude that includes believing in the existence of a happy life after death [23]. Park [4] reported that Approach Acceptance was positively associated with religious well-being and negatively associated with death anxiety. Wink and Scott [28] found that Approach Acceptance was associated with greater self-integrity and less hopelessness. Accepting death as a transition was associated with a sense of life well lived.

Escape Acceptance refers to the attitude that views death as a solution to life's pain and distress [29]. Fortner and Neimeyer [30] reported that Avoidance Acceptance was positively associated with suicidal ideation in older adults. Cicirelli [31] found that Avoidance Acceptance was negatively associated with life dissatisfaction and positively associated with fear of the dying process.

Fear of Death is defined as negative feelings and anxieties about one's own death. Wong et al. [23] state that fear of death is a universal human experience. Fear of death can vary depending on factors such as unknown aspects of death, personal self-concerns, and uncertainties about the afterlife.

Death Avoidance involves actively avoiding thoughts, discussions, or reminders about death. This is seen as a defense mechanism that prevents death from entering consciousness in order to reduce death anxiety. Death avoidance differs from fear of death in that it represents a behavioral coping strategy rather than merely an emotional experience. Klug and Sinha [32] stated that death avoidance is generally observed in people with low levels of psychological well-being. In this study, the death attitudes of religious officials were considered as a central variable.

Meaning in life

Intellectual explorations of the meaning of life can be traced back to antiquity. Reker and Wong [33] define *personal meaning* as a complex construct that integrates cognitive, motivational, and affective dimensions, addressing deep existential questions like "What is worth living for?" and "What is the meaning of life?" While a comprehensive definition of *meaning in life* or *personal meaning* is beyond the scope of this paper, this study adopts the framework proposed by Reker and Wong.

The search for personal meaning holds additional significance for religious employees and leaders. Meaning in life overlaps intensely with the role of religious officials who guide others in spiritual and existential matters, including order, coherence, and purpose in life. Frankl's [34] concept of "will to meaning" emphasizes how religious officials can channel this drive to serve their communities and fulfill their spiritual mission. Emmons [35] emphasizes that the pursuit of personally significant goals is deeply intertwined with religious teachings and principles and is integral to living a meaningful life for religious officials. These goals may include promoting spiritual growth, propagating ethical values, and enhancing the congregation's well-being. Furthermore, religious doctrines and practices serve as important sources of meaning, which include meeting basic human needs, strengthening personal relationships, promoting cultural values, and leaving a legacy that transcends individual lives.

From a broader psychological perspective, Wong [36] examines how cognitive, motivational, and emotional components of meaning influence individuals' beliefs, purposes, and values, contributing to a sense of coherence. Frankl [34], through the logotherapy framework, highlights freedom of will, the will to meaning, and the search for meaning in life as crucial for understanding human existence. Pargament [37] notes that individuals interpret personal and environmental changes through religious and spiritual lenses, seeking meaning amid life's challenges. Ok [32] underscores that the quest for meaning is a central concern of the human mind, significantly shaping identities and lifelong development.

Research emphasizes the vital link between meaning and psychological well-being [38, 39] and states that life purpose positively affects personal satisfaction and emotional health. However, a study conducted with Chinese and Italian adolescents [40] found that the presence of meaning was negatively associated with psychological distress, while the search for meaning was positively associated with psychological distress. The same study showed that the effects of meaning and meaning on functioning may differ between cultures.

Depression anxiety and stress

It is essential to understand the prevalence and effects, and more importantly, the mechanisms, of mental health problems in an important segment of society such as religious employees. According to DSM-5, Major Depressive Disorder is defined by the presence of at least five symptoms, such as depressed mood, loss of interest, and sleep problems for at least two weeks. Anxiety disorders are mood disorders with harmful cognitive, physiological, and behavioral components and have various subtypes, according to DSM-5 [41].

Pressures related to societal expectations, spiritual responsibilities, and personal beliefs can lead to anxiety [42]. Stress, on the other hand, refers to physiological and behavioral reactions to negative experiences and may result from religious officials' efforts to help congregation members' problems, manage religious ceremonies, and maintain their personal spiritual development [43, 44]. The DASS scale, which is used as an indicator of general functioning, includes symptoms of depression, anxiety, and stress [45, 46]. The mental health problems of religious officials are closely related to occupational stress and cultural-religious factors. Therefore, it is essential to ensure their access to mental health support and counseling services.

Present study

The interplay between spirituality and human functioning has been a focus since the inception of scientific research on religion, with extensive literature emerging

on various spiritual orientations [47]. Current literature largely examines the relationship between death attitudes and mental health within the context of individual religious beliefs and the search for meaning. Frankl's [34] logotherapy approach proposes that an individual's search for meaning reduces existential anxiety and enhances psychological resilience, while Terror Management Theory [48] suggests individuals rely on cultural worldviews and self-esteem to manage death awareness. Particularly for religious leaders, death attitudes should be analyzed in terms of how they influence personal meaning structures and mental health, with attention to cultural factors.

In Türkiye, religious officials handle most funeral procedures adhering to Islamic practices, such as announcing death, performing rituals, and guiding congregations on death-related issues, reflecting societal values. Research on Christian clergy reveals that theological religiosity impacts death acceptance and anxiety, with beliefs in God and the afterlife correlating negatively with death anxiety [49]. Similarly, Finnish clergy with positive death attitudes show lower burnout and higher work engagement [50]. Studies on Turkish imams indicate that their views on suicide are tied to spiritual orientations [51], while high stress and moderate burnout are noted among Turkish religious officials [52]. Findings from Kımter and Üner [53] show a strong link between life meaning and death anxiety, contrasting with existing research. Acar Çınar [54] observed significant relationships between religious orientation and psychological well-being among male Turkish religious officials. Notably, this represents one of the first investigations of death attitudes' impact on psychological health among active Turkish religious officials, extending prior work focused on other populations. This study aims to explore the connections between spiritual orientation, death attitudes, life meaning, and psychological indicators such as depression, anxiety, and stress, hypothesizing that spiritual orientation positively influences life meaning and death attitudes, thereby affecting emotional well-being.

Method

Research design

This study utilized structural equation modeling (SEM) to explore the relationships between spiritual orientation, attitude toward death, meaning of life, and psychological factors like depression, anxiety, and stress. SEM and confirmatory factor analyses (CFA) are robust methods for modeling these relationships [55]. Data analysis was conducted using AMOS software [56], with model fit assessed through indices such as the Chi-square Fit Test (χ^2/df), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), and Adjusted Goodness of Fit Index

(AGFI) [57]. An RMSEA below 0.08 and CFI and GFI values above 0.90 indicate a good model fit. The study also examined direct and indirect effects, revealing how spiritual orientation and attitudes toward death influence psychological outcomes through the meaning of life [58]. The study used several scales to measure key constructs. The Spiritual Orientation Scale [20] assessed cognitive, affective, and behavioral aspects of spirituality. Attitudes toward death were evaluated with the Death Attitude Profile-Revised (DAP-R) [23] which was adapted into Turkish by Işık et al. [59], which measures distinct death attitudes. Meaning in life was measured using the Brief Version of the Personal Meaning Profile by MacDonald et al. [60], which was adapted into Turkish by Ekşi et al. [61], capturing cognitive, motivational, behavioral, and affective aspects across separate domains. Psychological functioning was assessed with the Depression, Anxiety, Stress Scale-21 (DASS-21) [45] which was adapted into Turkish by Yıldırım et al. [62], offering a nuanced measure of depression, anxiety, and stress.

Participants

The data in this study was collected from 348 (28% female) Muslim religious officials working in Türkiye. One of the duties of Muslim religious officials is to fulfill the religious obligations required for deceased Muslims. Bentler and Chou [63] recommend 5 to 10 participants per parameter in SEM, and Boomsma [64] advocates a minimum sample size of 100 or 200 in SEM; thus the participant number can be deemed sufficient for the present study.

The demographic characteristics of the 348 participants are presented in Table 1. Gender distribution shows 28.4% female ($N=99$) and 71.6% male ($N=249$). Marital status reveals 87.6% married ($N=305$) and 12.4% single ($N=43$). Regarding children, 15.8% have none ($N=55$), 10.1% have one ($N=35$), 38.8% have two ($N=135$), 27.6% have three ($N=96$), and 7.7% have four or more ($N=27$). Education levels include 8.0% high school ($N=28$), 37.1% associate degree ($N=129$), 44.0% bachelor's degree ($N=153$), and 10.9% postgraduate ($N=38$). Age distribution shows 14.7% are 20–29 ($N=51$), 21.0% are 30–39 ($N=73$), 39.7% are 40–49 ($N=138$), 22.4% are 50–59 ($N=78$), and 2.3% are 60+ ($N=8$). This diverse participant profile enhances the study's validity and generalizability. The sample comprised imams (60%), muezzins (25%), and preachers (15%). Participants were selected using purposive sampling, with a focus on individuals currently employed by the Turkish Presidency of Religious Affairs. Participation in the study was voluntary, and all participants provided informed consent.

Table 1 Demographics of participants

Variable	Frequency (N)	Percentage (%)	Variable	Frequency (N)	Percentage (%)
Gender			Graduated School		
Woman	99	28,4	High School	28	8,0
Male	249	71,6	Associate degree	129	37,1
Marital Status			License	153	44,0
Married	305	87,6	Postgraduate	38	10,9
Single	43	12,4			
Number of Children			Age		
0 Child	55	15,8	20–29	51	14,7
1 Child	35	10,1	30–39	73	21,0
2 Children	135	38,8	40–49	138	39,7
3 Children	96	27,6	50–59	78	22,4
4 + Children	27	7,7	60+	8	2,3
Total	348	100,0			

Measures

The data were collected between July and December 2024 through an online survey platform. The survey instrument was disseminated through official communication channels and professional networks of the Presidency of Religious Affairs.

Spiritual orientation scale This study utilized the Spiritual Orientation Scale that Kasapoğlu [20] developed. As a result of exploratory and confirmatory factor analysis, it was concluded that the 16-item single-factor model showed adequate fit. As a result of confirmatory factor analysis, fit indices were examined, and it was found that the chi-square value ($\chi^2=239.718$, $df=100$, $p=.000$) was significant. In addition, $\chi^2/sd=2.39$ (less than 3), $RMSEA=0.06$, $RMR=0.05$, $GFI=0.93$, $AGFI=0.90$, $CFI=0.95$, $IFI=0.95$, $NFI=0.92$), indicating that the fit indices were acceptable and/or good fit. In addition, Cronbach Alpha internal consistency coefficient was found to be 0.87. The internal consistency coefficients within the scope of reliability studies showed that the scale can be used reliably.

Death attitude profile-revised (DAP-R)) This study used the Death Attitude Scale-Revised Form developed by Wong et al. [23] and adapted into Turkish by Işık et al. [59]. The Cronbach’s alpha internal consistency coefficient of the Turkish form of the scale was found to be 0.81, test-retest reliability $r=.85$, and equivalence coefficient for two-half test $r=.72$. As a result of the exploratory factor analysis, it was determined that the scale consisted of 3 factors with an eigenvalue above 1 and a joint contribution to the total variance of 43.67%. All items of the scale were found to belong to a factor with positive loadings between 0.42 and 0.77. There is a strong correlation between the SCTT and the SCL, which was found to be $r=.66$. In addition, the item-total test correlation coefficients of the scale ranged between.42 and 0.67. It was

calculated that the items were sufficiently discriminative. These findings indicate that the Turkish version of the scale is a valid and reliable measurement tool.

Brief version of the personal meaning profile scale This study used the Brief Version of the Personal Meaning Profile adapted into Turkish by Ekşi et al. [61]. This scale was developed by MacDonald, Wong, and Gingras [60] from a more extended version [36] and aims to reveal what constitutes the meaning of individuals’ lives. The Turkish adaptation study conducted a comprehensive reliability and validity analysis. For confirmatory factor analysis (CFA), 336 participants were reached, and the original 7-factor structure of the scale (self-transcendence, intimacy, religion, success, relationship, fair treatment, self-acceptance) was confirmed. As a result of the reliability analysis, Cronbach’s alpha coefficient for the whole scale was found to be 0.83. The findings indicate that the Turkish version of the scale is adequate in terms of validity and reliability and can be used in Turkish.

Depression, Anxiety, Stress Scale-21 (DASS-21) Another measurement tool used in this study was the Depression Anxiety Stress Scale-21 (DASS-21) developed by Lovibond and Lovibond [45] and adapted into Turkish by Yıldırım et al. [62]. The psychometric properties of this scale were examined on a sample of 30 patients diagnosed with major depression, 30 patients with anxiety disorders, and 250 healthy controls. Six alternative models were tested using confirmatory factor analysis (CFA). As a result of the analyses, it was found that the triadic model consisting of anhedonia and physiological hyperarousal with general negative affect was superior to the other models. DASS-21 was able to distinguish clinical groups from healthy controls. The scale has excellent internal consistency values, with Cronbach’s alpha coefficients ranging from 0.87 to 0.90. The stability of the scale over time was also found to be high, with intra-correlations

ranging from 0.82 to 0.93. These findings suggest that the Turkish version of the DASS-21 has adequate psychometric properties in clinical and non-clinical samples.

CFA and internal consistency analyses were also conducted in the present study. According to the presented in Table 2, the scales' reliability and model fit indices were evaluated. The Spiritual Orientation Scale has a high internal consistency coefficient ($\alpha=0.92$) and shows a good fit with (CMIN/DF=2.969; RMSEA=0.075; CFI=0.937; TLI=0.925). The Personal Meaning Profile also had a high internal consistency ($\alpha=0.904$) and goodness of fit values (CMIN/DF=3.296; RMSEA=0.087; CFI=0.915; TLI=0.888). The Attitudes Towards Death Scale has an acceptable internal consistency coefficient ($\alpha=0.72$). The goodness of fit values (CMIN/DF=2.225, RMSEA=0.059, CFI=0.921, and TLI=0.902) indicated a good fit. The Depression-Anxiety-Stress Scale also had a high internal consistency coefficient ($\alpha=0.92$). Likewise, the goodness of fit values (CMIN/DF=2.842; RMSEA=0.073; CFI=0.921=TLI=0.904) are good. Overall, all scales show acceptable levels of internal consistency and model fit.

Procedure

Data collection This study focused exclusively on religious officials from Kütahya Province, Turkey. To ensure that participants met the study criteria, the introductory section of the data collection form included a verification step confirming their status as religious officials. This step was critical for validating participant eligibility and ensuring the accuracy of the data collected.

Participants were primarily recruited through vocational announcements and by sharing information in groups on platforms like WhatsApp. These communications targeted Muslim religious officials, including imams, Quran course teachers, muezzins, and both male and female preachers (vaiz and vaize) within Kütahya Province. Informed consent was obtained by providing a detailed explanation of the study procedures and how personal data would be managed. Participants provided their online approval of the informed consent before proceeding.

Data were collected exclusively using Google Forms, which included sections for informed consent,

demographic information, and scale items. No personal identification information was collected to maintain anonymity. The study adhered to ethical guidelines, with necessary permissions obtained from relevant institutions, ensuring both the reliability and validity of the results.

Ethical approval This study was conducted with ethical approval from Kütahya Dumlupınar University (Approval Date and Number: 2nd April 2024/03). Ethical approval is of great importance in protecting the participants' rights and conducting the study in accordance with ethical standards. Informed consent was obtained from the participants, and their participation in the study was voluntary. During the ethical approval process, detailed information about the participants' purpose, methods, and rights was provided, and the participants' privacy was respected at every stage of the study. In this way, the scientific validity and reliability of the study were increased.

Data analysis

Structural equation modeling (SEM) Structural Equation Modeling (SEM) was used to analyze the relationships between variables in this study. SEM is a powerful statistical technique for testing complex model structures by combining confirmatory factor analysis (CFA) and path analysis [55]. In this study, SEM analyses were conducted using AMOS software. The analysis of the data was conducted utilising the SPSS 26 and AMOS 24 software. Structural equation modeling (SEM) was employed to test the hypothesized relationships among variables. The model fit was evaluated using standard indices, including CFI, TLI, RMSEA, and χ^2/df . Bootstrapping with 5,000 resamples was used to estimate the significance of direct and indirect effects, with 95% confidence intervals. AMOS is a frequently preferred software for SEM analysis with its user-friendly interface and wide range of analysis capabilities. During the analysis process, the normality of the data, missing data, and inconsistencies were carefully examined, and necessary corrections were made to ensure the accuracy of the data and the validity of the model. After the general structure of the model was established, the factor structures of the model were tested with confirmatory factor analysis, and the results obtained were supported by path analysis [56].

Model fit indices Several fit indices were used to assess the fit of the model. These indices include the chi-square fit test (χ^2/df), Root Mean Square Error (RMSEA), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), and Adjusted Goodness of Fit Index (AGFI). The chi-square fit test (χ^2/df) value indicates how well the model fits the data, and a value less than 3 indicates that the model is a good fit [57]. The RMSEA value should be below 0.08; this value indicates the average error of the model, and a low

Table 2 Internal consistency coefficients and CFA goodness of fit values according to present study data

Scale	Alpha	CMIN/DF	RMSEA	CFI	TLI
Spiritual Orientation Scale	0.921	2.969	0.075	0.937	0.925
Personal Meaning Profile	0.904	3.296	0.087	0.915	0.888
DAP-R	0.722	2.225	0.059	0.921	0.902
DASS-21	0.915	2.842	0.073	0.921	0.904

Table 3 Descriptive statistics

Variable	Mean	N	Std. Deviation	Kurtosis	Skewness
Spiritual Orientation	106.6954	348	6.50376	1.062	-1.288
Personal Meaning	119.3109	348	17.39994	0.948	-0.883
Death Attitude	163.8851	348	14.03735	0.482	-0.228
Depression	5.1983	348	3.91528	1.138	0.977
Anxiety	4.3103	348	3.54326	1.022	1.000
Stress	6.0833	348	3.97056	0.034	0.477

value indicates that the model provides a good fit. When CFI and GFI values are above 0.90, the model is considered to provide an acceptable fit. These indices reveal the model's overall fit by evaluating different aspects of the model and supporting its accuracy [65].

Direct and indirect effects Direct and indirect effects in the model are analyzed to examine the relationships between variables in more detail. Direct effects refer to the unmediated effects of an independent variable on the dependent variable, while indirect effects refer to the effects realized through one or more mediating variables. In this study, the indirect effects of spiritual orientation and attitude toward death on depression, anxiety, and stress through the meaning of life were examined. Direct and indirect effects were evaluated using bootstrap methods [66]. The results revealed the effects of spiritual orientation and attitude toward death on the meaning of life and the reflections of these effects on depression, anxiety, and stress. These analyses provided a more comprehensive and in-depth understanding of the model.

Findings

Descriptive statistics

Table 3. presents the descriptive statistics of the measurement tools and subscale scores used in the study. For the Spiritual Orientation Scale, the mean (Mean) was 106.70, the standard deviation (Std. Deviation) was 6.50, the kurtosis was 1.062, and the skewness was -1.288. The mean of the Personal Meaning Profile was 119.3109, the standard deviation was 17.39994, the kurtosis was 0.948, and the skewness was -0.883. The mean of the DAP-R was 163.8851, the standard deviation was 14.03735, the

kurtosis value was 0.482, and the skewness value was -0.228. For the depression sub-dimension, the mean was 5.1983, the standard deviation was 3.91528, the kurtosis was 1.138, and the skewness was 0.977. The mean of the anxiety sub-dimension was 4.3103, the standard deviation was 3.54326, the kurtosis was 1.022, and the skewness was 1.000. The stress sub-dimension has a mean of 6.0833, a standard deviation of 3.97056, a kurtosis of 0.034, and a skewness of 0.477. These values show the distributional properties and measures of the central tendency of each measurement tool.

Correlation analysis

Pearson Correlation analysis was conducted to determine the zero-order relationships between the variables. The results are presented in Table 4.

Table 4 shows the correlations between the various scales and sub-dimensions used in the study. A positive and significant correlation was found between Spiritual Orientation Scale scores and Personal Meaning Profile scores ($r=.398, p<.01$). Likewise, a positive and significant correlation exists between Spiritual Orientation Scale scores and Death Attitude Profile-Revised scores ($r=.258, p<.01$). These results show that spiritual orientation is related to personal meaning and attitude towards death. On the other hand, negative and significant correlations were found between Spiritual Orientation Scale scores and Depression ($r=-.156, p<.01$), Anxiety ($r=-.155, p<.01$), and Stress ($r=-.147, p<.01$) scores. This suggests that spiritual orientation is associated with lower levels of depression, anxiety, and stress. Negative and significant relationships were also found between Personal Meaning Profile scores and Depression ($r=-.313, p<.01$), Anxiety ($r=-.221, p<.01$), and Stress scores ($r=-.235, p<.01$). This suggests that personal meaning is also associated with lower levels of depression, anxiety, and stress. Similarly, Attitudes towards Death Scale scores had negative and significant relationships with Depression ($r=-.206, p<.01$), Anxiety ($r=-.246, p<.01$), and Stress ($r=-.240, p<.01$) scores. The high correlations between Depression, Anxiety, and Stress ($r=.746$ to $r=.777$) indicate that these three variables are highly interrelated. These high correlations suggest that these variables can be grouped under a common structural factor and considered together. These

Table 4 Pearson correlation results

	1	2	3	4	5	6
1. Spiritual Orientation						
2. Personal Meaning	0.398**					
3. Death Attitude	0.258**	0.089				
4. Depression	-0.156**	-0.313**	-0.206**			
5. Anxiety	-0.155**	-0.221**	-0.246**	0.746**		
6. Stress	-0.147**	-0.235**	-0.240**	0.777**	0.717**	

**Correlation is significant at the 0.01 level (2-tailed)

correlation results in the table show that the relationships between the variables meet the premises for Structural Equation Modeling (SEM) analyses. In SEM analyses, significant correlations between variables increase the accuracy and validity of the model [67]. These results support the study's main hypotheses and strengthen the model's testability. The findings imply that while spiritual and existential variables do relate to psychological well-being, they may function within a broader network of influences. This underscores the value of exploring additional mediating or moderating variables, such as social support or individual coping styles, in future research to better understand these dynamics.

SEM results

The model presented in Fig. 1 is a structural model built using Structural Equation Modeling (SEM). This model examines the relationships between spiritual orientation, personal meaning, attitudes toward death, depression, anxiety, and stress (DASS). Concurrently, Fig. 1 presents a structural equation model, illustrating the interrelationships among spiritual orientation, personal meaning, attitudes towards death, and psychological distress (DASS-21). All values represent standardized regression weights. The latent variable "DASS" represents the combined psychological distress scores derived from the depression, anxiety, and stress subscales of the DASS-21. Spiritual orientation indirectly reduced psychological distress through its positive effect on personal meaning ($\beta = 0.43$) and subsequent reduction in negative attitudes towards death ($\beta = 0.25$).

Reviews of model data

Spiritual orientation Spiritual Orientation has a direct effect on Personal Meaning. The path coefficient of Spiritual Orientation on Personal Meaning is 0.43. This shows that spiritual orientation has an increasing effect on personal meaning.

Personal meaning Personal Meaning comprises various sub-dimensions such as Achievement, Relationship, Self-Transcendence, Religion, Self-Acceptance, Intimacy, and Fair Treatment. The impact of each sub-dimension on Personal meaning is shown in the model. For example, the path coefficient of the Relationship on Personal Meaning is 0.82. Personal Meaning also has a direct effect on Attitude toward death. The path coefficient of Personal Meaning on Attitude Towards Death is 0.50.

Attitude towards death Attitudes Towards Death consist of sub-dimensions such as Approach Acceptance/Neutral, Escape, and Fear/Avoidance. The effects of these sub-dimensions on Attitudes toward death are also shown in the model. For example, the path coefficient of Neutral on Attitudes Towards Death is 0.35. Attitudes Towards Dying has a direct effect on Depression, Anxiety, and Stress (DASS). The path coefficient of Attitudes Towards Dying on DASS is -0.62 . This indicates that more positive death attitudes have a decreasing effect on DASS scores.

Depression, Anxiety, and Stress (DASS) DASS consists of the sub-dimensions of Depression, Anxiety, and Stress. The effects of these sub-dimensions on DASS are also

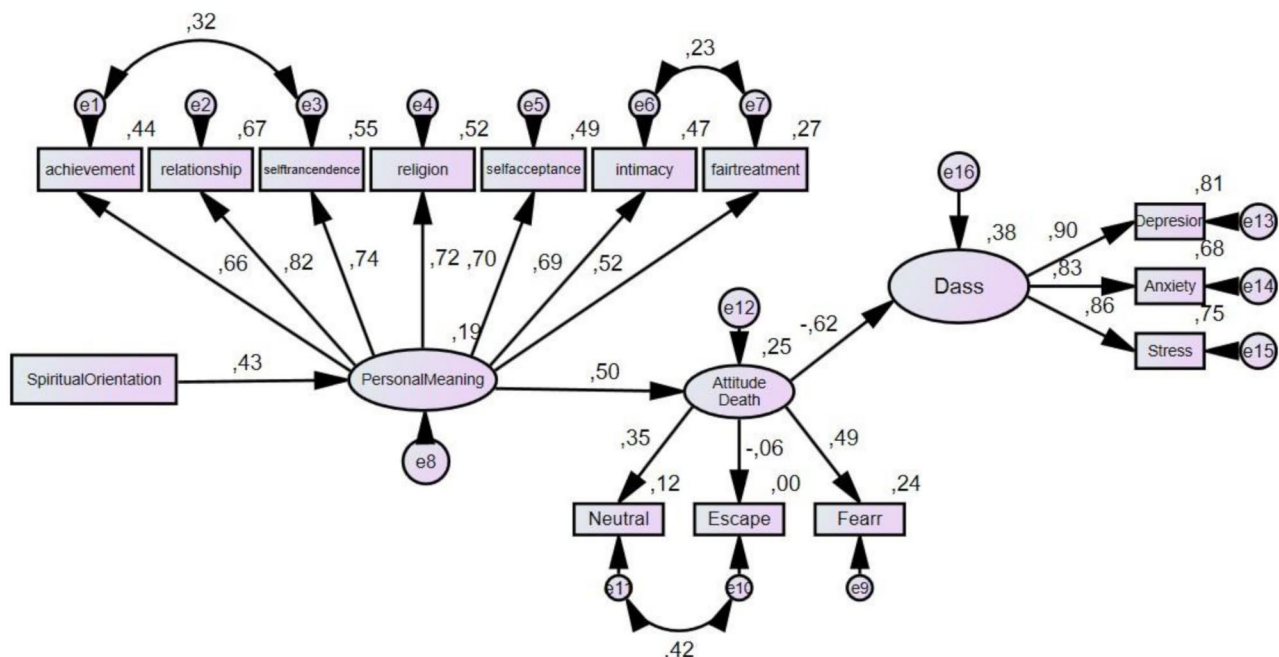


Fig. 1 Structural model tested

shown in the model. For example, the path coefficient of Depression on DASS is 0.90.

General review of the model

This model shows the effects of spiritual orientation, personal meaning, and attitudes toward death on individuals' levels of depression, anxiety, and stress. The paths and coefficients in the model indicate the direction and magnitude of the relationships between these variables.

In this model, spiritual orientation increases personal meaning, and personal meaning adds depth and meaning to people's lives. It is understood that personal meaning positively affects attitudes towards death and enables individuals to have a more neutral or positive view of death. Positive attitudes toward death seem to reduce depression, anxiety, and stress. Therefore, spiritual orientation increases personal meaning, which leads to a positive attitude toward death. A positive attitude towards death significantly reduces depression, anxiety, and stress. These findings suggest that individuals can improve their psychological well-being by increasing their spiritual orientation and meaning of life.

Table 5 shows the bootstrap results of total, direct, and indirect effects in the structural equation model. The coefficient of *the total effect* is 0.3600, which is highly significant with a *t* value of 4.64 ($p < .001$). This refers to the total effect of the independent variables in the model on the dependent variable. It is within the confidence interval (BootLLCI = 0.2075, BootULCI = 0.5125), which indicates that the effect is positive and significant. The coefficient of *the direct effect* is 0.2099, which is significant with a *t* value of 2.40 ($p < .05$). This refers to the direct effect of the independent variable on the dependent variable. It is within the confidence interval (BootLLCI = 0.0382, BootULCI = 0.3816), indicating a positive and significant effect. The coefficient of *the total indirect effect* is 0.1500 and is significant with a *t* value of 2.50. This refers to the total indirect effect of the independent variable on the dependent variable. It is within the confidence interval (BootLLCI = 0.0209, BootULCI = 0.2670), which indicates that the effect is positive and significant. The findings of this study suggest that spiritual orientation exerts a direct beneficial effect on psychological well-being. Furthermore, it has been

demonstrated that spiritual orientation also exerts an indirect effect by enhancing personal meaning and shaping more adaptive attitudes towards death. In summary, individuals who possess a stronger spiritual orientation have a tendency to report a greater sense of meaning in life. This, in turn, has a positive effect on their well-being, as evidenced by reduced levels of depression, anxiety, and stress.

Indirect impacts

Indirect effect 1 (spiritual orientation → personal meaning → DASS) The coefficient of this indirect effect is 0.1658 and it is significant with a *t* value of 2.76. This pathway shows the effect of Spiritual Orientation on DASS through Personal Meaning. The effect is significant.

Indirect Effect 2 (Spiritual Orientation → Attitude Towards Death → DASS) The coefficient of this indirect effect is −0.0489 and the *t* value is significant with −2.44. This pathway shows the negative (decreasing) effect of Spiritual Orientation on DASS through attitude towards death.

Indirect effect 3 (Spiritual orientation → personal meaning → attitude towards death → DASS) The coefficient of this indirect effect is 0.0332, and it is significant with a *t* value of 2.20. This pathway shows the effect of Spiritual Orientation on DASS through Personal Meaning and attitude towards death. The effect is significant. These results clearly show the total, direct, and indirect effects of the independent variables in the model on the dependent variable. Both direct and indirect effects were significant, indicating that the model has a good fit overall and that the independent variables have significant effects on the dependent variable. In particular, the effects of indirect paths are also significant and positive, indicating that the effects through intermediaries are also significant.

When the goodness-of-fit values of the model in Table 6 are compared with the acceptable limits, the following comments can be made: The χ^2/df (*Chi-square/Unit Degrees of Freedom*) value of the model was found to be 2.734. Since this value is below 3, we can say that the model shows an excellent fit. The *RMSEA value* (*Root Mean Square Error Approximation*) was found

Table 5 Bootstrap results of Total, direct and indirect effects in the structural equation model

Impact	Bootstrap Coefficient	S.H.	t	Lower Limit	Upper Limit
Total Impact	0.3600	0.08	4.64	0.2075	0.5125
Direct Impact (c' pathway)	0.2099	0.09	2.40	0.0382	0.3816
Total Indirect Impact	0.1500	0.06	2.50	0.0209	0.2670
Indirect Effect (SO → PM → DAS)	0.1658	0.06	2.76	0.0560	0.2736
Indirect Effect (M → DA → DAS)	−0.0489	0.02	−2.44	−0.1073	−0.0095
Indirect Effect (M → PM → DA → DASS)	0.0332	0.01	2.20	0.0089	0.0655

Note: SO: Spiritual Orientation, PM: Personal Meaning, DA: Death Attitude, DAS: Depression, Anxiety and Stress

Table 6 Goodness of fit values for the model

Indexes	Model Values	Acceptable Limits
χ^2/df	2.734	≤ 5 Acceptable agreement, ≤ 3 excellent agreement < 0
RMSEA	0.071	≤ 0.10 poor agreement, ≤ 0.08 good agreement, ≤ 0.05 excellent agreement
GFI	0.926	0.85–0.89 acceptable fit, ≥ 0.90 good fit
CFI	0.937	≥ 0.90 acceptable fit, ≥ 0.95 good fit, ≥ 0.97 perfect fit
TLI	0.920	≥ 0.90 acceptable fit, ≥ 0.95 good fit, ≥ 0.97 perfect fit

to be 0.071. Since this value is below 0.08, it means that the model shows a good fit. *GFI* (*Goodness of Fit Index*) value was obtained as 0.926. Since this value is above 0.90, it can be said that the model shows a good fit. *The CFI* (*Comparative Fit Index*) value was found to be 0.937. Since this value is ≥ 0.90 , it can be said that the model shows an acceptable fit. *TLI* (*Tucker-Lewis Index*) value was obtained as 0.920. Since this value is ≥ 0.90 , it can be said that the model shows an acceptable fit. According to these results, the model is within the acceptable and good fit limits.

Discussion

This study explored the effects of spiritual orientation and personal meaning on depression, anxiety, and stress in religious workers using structural equation modeling (SEM). The analyses revealed several key findings: a moderate positive correlation between spiritual orientation and personal meaning, a weak but significant positive correlation between spiritual orientation and a positive attitude towards death, and weak but significant negative correlations between personal meaning and depression, anxiety, and stress. Additionally, high positive correlations were found among depression, anxiety, and stress. These patterns align with Wong et al.'s [23] theoretical framework about death attitudes and psychological health, though our effects were somewhat weaker, possibly due to religious professionals' unique occupational context. Direct relationships showed that spiritual orientation negatively impacted depression, anxiety, and stress, while indirect relationships indicated that spiritual orientation reduced these psychological issues by enhancing personal meaning.

In summary, it has been shown that the meaning of life and death attitudes have a mediating role in the relationship between spiritual orientation and depression, anxiety, and stress. Model fit indices show that the model fits the data well [57, 65] and supports that spiritual orientation and personal meaning have the potential to improve psychological health. This mediated pathway empirically validates Frankl's [34] meaning-centered theory while extending it to religious occupational settings. This suggests that the model used to explain the effects of spiritual orientation and personal meaning on depression, anxiety, and stress is reliable. However, weak correlations for some variables in the model imply that the effects of

spiritual orientation and personal meaning on depression, anxiety, and stress are not equally strong for each individual.

The findings obtained in the current study are consistent with previous research emphasizing the positive effects of spiritual orientation and personal meaning on psychological well-being. Wong et al. [23] reported that positive attitudes towards death increase individuals' psychological health. The current study also supports these findings and emphasizes the reducing effects of spiritual orientation and personal meaning on depression, anxiety, and stress. Notably, our results mirror Pargament's [37] observations about religion's stress-buffering capacity, though with stronger effects likely due to our sample's professional spiritual integration. Yüksel et al. [68] found a weak but significant relationship between the meaning of life and death anxiety in Turkish adults, which is consistent with the results of the current study. The findings also suggest that the high correlations of depression, anxiety, and stress suggest that these variables can be grouped under a common structural factor and can be considered together. This was similar to the results of studies conducted by Lovibond and Lovibond [45]. Therefore, the results of this study suggest that spiritual orientation and personal meaning can improve psychological health.

Dezutter et al. [69] examined the importance of life meaning in adulthood and how it can be assessed with an individual-oriented approach. They also emphasized the positive relationship between personal meaning and psychological well-being. Huo et al. [70] found that the implicit meaning of life moderated the effect of the explicit meaning of life on depression. Our mediation findings complement these studies by demonstrating how both explicit spiritual orientation and implicit meaning systems operate sequentially to reduce distress. The current study supports these findings and emphasizes the reducing effects of spiritual orientation and personal meaning on depression, anxiety, and stress.

Studies have found a relationship between a lack of meaning in life and high death anxiety. For example, Durlak [71] reported that individuals who found purpose and meaning in their lives reported less fear of death and more positive and accepting attitudes. Similarly, Quinn and Reznikoff [72] found that individuals who lacked purpose and direction reported elevated levels of death

anxiety. Our results extend this work by showing how spiritual orientation specifically mitigates this anxiety-meaning relationship in a professional religious context. Fear of death is associated with high levels of depression and low life satisfaction. For example, Gesser, Wong, and Reker [27] reported that fear of death and death anxiety are negatively correlated with psychological well-being and positively correlated with depression. Individuals who try to suppress or deny thoughts and feelings about death may experience a sense of emptiness and lack of purpose.

The findings of the study are also consistent with the literature on religious officials in Türkiye. Eskin [51] examined Turkish imams' views on suicide and suicide prevention and found that religious officials' attitudes on this issue are related to their spiritual orientation. Baltacı [52] found that religious officials in Türkiye experience high levels of stress and moderate levels of burnout. These contextual findings highlight the importance of our SEM model in capturing both universal psychological processes and culture-specific manifestations. Kimter and Üner [53] found a strong relationship between the meaning of life and death anxiety among religious officials, which contradicts the findings of the current study. Acar Çınar [54] found significant relationships between religious orientation styles and psychological well-being levels of male religious officials working in Türkiye. There were moderate positive relationships between intrinsically oriented religiosity and all dimensions of psychological well-being, weak positive relationships between extrinsically oriented religiosity and some dimensions of psychological well-being, and a weak negative relationship between extrinsically oriented religiosity and positive relationships. These findings are in line with the indirect effects between spiritual orientation and depression, anxiety, and stress in the current study.

This study offers a unique contribution by examining the complex interplay between spiritual orientation, personal meaning, and psychological well-being among religious workers through structural equation modeling (SEM). In line with existential psychology [34] and religious coping theory [37] the study demonstrates how these frameworks help explain the psychological mechanisms influencing religious professionals. By elucidating how spiritual orientation directly and indirectly impacts depression, anxiety, and stress through personal meaning and attitudes toward death, the study provides a nuanced understanding of the mechanisms underlying psychological health in this population. The integration of these variables into a comprehensive model not only highlights the mediating role of personal meaning and death attitudes but also reveals that these factors interact in intricate ways to affect mental health. This approach allows for a more detailed exploration of how spiritual and

existential factors can influence psychological outcomes, thus offering valuable insights for both theory and practice. The findings underscore the potential for enhancing psychological well-being through targeted interventions that address spiritual and existential dimensions, making it easier to develop more effective support strategies for religious employees.

Limitations

Several limitations affect the study's results. First, the limited sample size may restrict the generalizability of the findings. A more diverse sample, encompassing different regions and denominations, could provide a broader understanding of the issues faced by religious leaders. Additionally, the reliance on self-reports to assess mental health issues such as anxiety, depression, and stress may introduce bias, as participants might underreport symptoms due to fear of stigmatization or exaggerate them to gain sympathy. The cross-sectional design of the study also complicates causal inferences; longitudinal studies could better reveal how spiritual orientation and attitudes towards death impact mental health over time.

Moreover, the specificity of the findings to the cultural and religious context of Türkiye might limit their applicability to religious leaders in other cultural settings. Notably, the sample primarily represents Sunni Muslim religious officials, which may not fully capture the experiences of religious leaders from different Islamic sects or other faith traditions. Future studies should include participants from more diverse religious and cultural backgrounds to enhance the generalizability of the findings.

The study also did not compare the experiences of religious leaders with those in other death-related professions, such as health professionals, missing out on valuable comparative insights. Future research should address these limitations by utilizing larger, more diverse samples, employing different methodological approaches, and conducting comparative analyses.

Another limitation is related to the measurement tools used. The Brief Version of the Personal Meaning Profile (PMP) [60] includes a subscale related to religion, which may overlap with the spiritual orientation construct. Similarly, the DAP-R, which assesses fear and avoidance of death, might overlap with the DASS-21 [45], as fear and avoidance can be related to these mental health constructs. The potential overlap between the Spiritual Orientation Scale [20] and the religion subscale, as well as between fear/avoidance and the DASS subscales, may complicate the interpretation of the results. Future research should consider using measures that clearly distinguish between these constructs to avoid such limitations.

Additionally, while the study provides valuable insights into religious officials' mental health and attitudes toward

death, it does not address how these factors evolve over time. Longitudinal research could offer a clearer picture of the long-term effects of spiritual orientation and meaning in life on psychological well-being. Comparative studies with professionals in other high-stress, death-related fields, such as healthcare and emergency response, could provide a richer understanding of how different occupational groups navigate existential challenges.

Finally, while quantitative analysis allows for broad generalizations, qualitative and mixed-method research approaches are needed to capture the depth and complexity of religious officials' experiences. Future studies should incorporate interviews, focus groups, and thematic analyses to explore how spiritual orientation and death attitudes manifest in real-life contexts, providing richer, more nuanced insights into the personal and professional challenges faced by religious leaders.

Recommendations

Several significant suggestions for future research and practical applications can be made. Longitudinal studies should be conducted to understand how spiritual orientation and death attitudes change over time and their effects on mental health. Such studies may reveal religious leaders' spiritual and psychological development processes more clearly. In addition, studies comparing the coping mechanisms of religious leaders and other professionals who frequently encounter death may help us better understand the stressors and strategies of these groups. Comparative studies across professions like health professions and religious leaders can be useful in understanding the differences in these mechanisms. To build upon the current findings, future research should systematically incorporate theoretically relevant constructs such as resilience, social support, and coping styles during the initial study design phase. Including these variables would allow for more nuanced analyses of protective factors while maintaining methodological rigor. This expansion would enable researchers to: (1) examine potential moderating effects on the observed relationships, (2) identify additional pathways through which spiritual orientation influences mental health outcomes, and (3) develop more comprehensive theoretical models of psychological well-being in religious professionals.

Intervention-focused research should evaluate the effectiveness of spirituality-based interventions combined with evidence-based occupational stress management techniques. Given the frequent exposure of religious leaders to death-related situations, structured psychological support programs are crucial for enhancing their coping mechanisms and mitigating occupational stress. Integrating meaning-centered interventions inspired by Frankl's logotherapy [34] can help religious

leaders reframe their experiences, finding deeper existential fulfillment in their roles. Additionally, incorporating principles from religious coping theories [37] can offer practical stress management strategies.

Such programs should include mindfulness-based relaxation techniques, peer support groups, and supervision sessions where religious leaders can reflect on their emotional challenges in a safe environment. Training in emotional self-regulation, setting healthy boundaries between professional and personal life, and developing structured debriefing practices after emotionally intense experiences could further enhance resilience.

Policymakers should develop mental health support programs, counseling services, and stress management workshops for religious leaders. They should also provide training on mental health awareness, coping strategies, and self-care and organize activities and events to reduce the stigma around mental health in religious communities. Future studies should explore the effectiveness of these interventions in supporting religious leaders' well-being.

Although this study focuses on Muslim religious leaders in Türkiye, its findings may offer insight for developing context-sensitive interventions across religious traditions. Intervention-focused research should evaluate logotherapy-informed programs tailored to religious contexts. For Muslim leaders, interventions could integrate Qur'anic reflection on *tawakkul* (trust) with paradoxical intention exercises, using sacred texts to reframe death anxiety. Christian clergy might benefit from meaning-centered therapies incorporating resurrection theology, while Buddhist monastics could adapt *maranasati* (death contemplation) [7] with clinical oversight. However, it is crucial to recognize that religious perspectives on death and the afterlife vary widely within traditions, shaped by cultural, regional, and personal differences, necessitating approaches that respect these nuances. To enhance spiritual resilience across traditions, these interventions might be more effective if co-developed with religious scholars and mental health professionals, allowing for theological congruence and psychological appropriateness. Seminaries could consider integrating existential themes into curricula—for example, spiritual autobiography workshops to explore vocational purpose or Socratic dialogues to reflect on suffering. Including experiential components—such as silent retreats, guided reflections, and intergenerational mentorship—may help religious officials internalize such practices. In contexts like Türkiye, institutions such as the Presidency of Religious Affairs (Diyanet İşleri Başkanlığı) could explore pilot programs for religious official training that blend Islamic psychological frameworks with voluntary peer-support models. Rather than prescribing a standardized approach, these initiatives could serve as exploratory

efforts to support well-being while remaining grounded in local religious values. Future research comparing religious groups would benefit from grounding in indigenous conceptualizations of meaning and death, ensuring that interventions are contextually appropriate and respectful of differing metaphysical frameworks.

Conclusion

This study revealed that spiritual orientation and personal meaning significantly reduce depression, anxiety, and stress among Turkish religious officials, both directly and through enhanced meaning-making. The robust model showed these psychological benefits are interconnected, suggesting they should be addressed collectively. While effects vary across individuals, the findings clearly demonstrate how spiritual resources protect mental health in religious occupations.

Practically, the results advocate for support programs that integrate spiritual and psychological approaches, emphasizing meaning-centered interventions tailored to religious contexts. Future research should expand to diverse samples and longitudinal designs to strengthen these conclusions. These findings provide a valuable foundation for developing comprehensive wellbeing strategies for religious professionals.

Abbreviations

SEM Structural Equation Modeling
DASS-21 Depression, Anxiety, and Stress Scale-21

Acknowledgements

The authors extend their gratitude to Kütahya Dumlupınar University for ethical approval and the participants for their contributions. Special thanks to colleagues who provided feedback during the preparation of this manuscript.

Author contributions

Ömer Faruk Söylev: Conceptualized the study, developed the theoretical framework, and designed the research methodology. Conducted the data analysis using structural equation modeling (SEM), interpreted the results, and drafted the manuscript. Acted as the lead author in coordinating revisions and integrating feedback from co-authors. Çınar KAYA: Contributed to the development of the study design and assisted with data collection and management. Provided critical input on the analysis process and interpretation of findings, ensuring alignment with the study's objectives. Reviewed and edited the manuscript to enhance its clarity and coherence. Nesrullah OKAN: Provided expertise in the theoretical underpinnings of spirituality and psychological health, offering significant contributions to the literature review and theoretical framework. Assisted in refining the discussion section to contextualize findings within the broader field. Participated in the review and final approval of the manuscript for submission. All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work, ensuring that any questions related to the accuracy or integrity of any part of the study are appropriately investigated and resolved.

Funding

The authors declare that no funds, grants, or other support were received during the preparation of this manuscript.

Data availability

The data of this research will be shared when requested from the responsible author.

Declarations

Ethics approval and consent to participate

All procedures were conducted in accordance with the ethical standards of Kütahya Dumlupınar University Social and Human Ethics Board (Meeting Number: 2024/03, Approval Date: 2nd April 2024) and with the 1964 Declaration of Helsinki and its subsequent amendments. Informed consent was also received from each participant whose data was collected.

Consent for publication

Not applicable; the manuscript does not include identifiable personal data from participants.

Competing interests

There is no conflict of interest in this manuscript

Received: 25 December 2024 / Accepted: 11 April 2025

Published online: 18 April 2025

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