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The Mediating Role of Death Anxiety on The Relationship Between Successful Aging and Life Satisfaction

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ABSTRACT

Research Article

This study aimed to test the mediating role of death anxiety on the relationship between Turkish older adults' levels of successful aging and life satisfaction. The study group consisted of 243 individuals (130 females, 113 males) aged 60 years and older. The Successful Aging Scale, Adult Satisfaction with Life Scale, and Death Anxiety Scale were used for data collection. The Pearson product-moment correlation technique and the standard multiple regression technique were used to analyze the data. Preliminary analysis showed the existence of significant relationships among the variables discussed in the study. The regression analysis results indicated that a significant relationship exists among elderly individuals' levels of life satisfaction and death anxiety, with these variables significantly predicting their level of successful aging. Another important finding from this study was that the variables of death anxiety and life satisfaction together explain 36% of the total variance in successful aging. It was concluded that death anxiety was a mediating variable in the relationship between successful aging and life satisfaction. In this context, in order to obtain more detailed information, it is recommended to increase the studies in quantitative, qualitative and mixed methods within the framework of the concepts of death anxiety, successful aging and life satisfaction.

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Başarılı Yaşlanma ve Yaşam Doyumu Arasındaki İlişkide Ölüm Kaygısının Aracı Rolü

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ÖZ	Araştırma Makalesi
<p>Bu araştırmada, yaşlıların başarılı yaşlanma ve yaşam doyumu düzeyleri arasındaki ilişkide ölüm kaygısının aracı rolünün test edilmesi amaçlanmıştır. Araştırmanın çalışma grubunu, 60 yaş ve üzeri 243 (130 kadın, 113 erkek) yaşlı birey oluşturmuştur. Araştırmanın veri toplama aşamasında Başarılı Yaşlanma Ölçeği, Yetişkin Yaşam Doyumu Ölçeği ve Ölüm Kaygısı Ölçeği kullanılmıştır. Verilerin analizinde Pearson Momentler Çarpım Korelasyon Tekniği ve Standart Çoklu Regresyon Tekniği'nden yararlanılmıştır. Yapılan ön analizler, araştırmada ele alınan değişkenler arasında manidar ilişkiler olduğunu göstermektedir. Regresyon analizi sonuçları ise yaşlıların başarılı yaşlanma düzeylerinin yaşam doyumu ve ölüm kaygısı değişkenleri tarafından manidar bir şekilde yordanması ile birlikte yaşam doyumu ile ölüm kaygısı arasında manidar bir ilişkinin olduğuna işaret etmektedir. Bu noktada araştırmamızın önemli bir diğer bulgusu ölüm kaygısı ve yaşam doyumu değişkenlerinin birlikte başarılı yaşlanma toplam varyansının %36'sını açıkladığı yönündedir. Ölüm kaygısının başarılı yaşlanma ile yaşam doyumu arasındaki ilişkide aracı değişken olduğu sonucuna varılmıştır. Bu kapsamda daha detaylı bilgiler edinebilmek adına ölüm kaygısı, başarılı yaşlanma ve yaşam doyumu kavramları çerçevesinde nicel, nitel ve karma yöntemdeki araştırmaların artırılması önerilmektedir.</p>	<p>Alınma Tarihi: 17.04.2021 Düzeltilmiş Hali Alınma Tarihi: 24.05.2021 Kabul Edilme Tarihi: 26.05.2021 Çevrimiçi Yayınlanma Tarihi: 30.05.2021</p>
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Introduction

The concept of successful aging, which first appeared in modern gerontological thought in 1961, is defined in terms of life satisfaction, which emphasizes “the greatest good for the most advanced age” (Diamond, 2014; Havighurst, 1961). Successful aging, a gerontology concept introduced by Rowe and Kahn, is defined within the framework of three main components (Holmes, 2006; Strawbridge et al, 2002). The first component is defined as the absence of any disease in the elderly, which also includes having low risk factors for the possibility of acquiring a disease. The second component involves high cognitive and physical capacities. This component, which is seen as the potential to engage in any activity, reflects that what the elderly do is more important than what they can do. The final component in the framework is active participation in life. Here, the effects on successful aging of interpersonal relations, contact with others, and productive activities are emphasized (Rowe & Kahn, 1997, pp. 433).

There is no consensus in the literature regarding an objective definition of successful aging (Depp & Jeste, 2006; Fisher, 1992; Havighurst, 1961). According to Hilgaard-Bülow and Söderqvist (2014), successful aging needs to be emphasized over the processes that impact life satisfaction and how individuals protect their sense of autonomy. At the same time, life satisfaction can be evaluated as an important criterion of successful aging within psychosocial models (Bowling & Dieppe, 2005; Chan et al., 2019; Estebarsari et al., 2020; Havighurst, 1961; Hye-Kyung & Ji-Hye, 2020). When looked at conceptually, life satisfaction reflects the judgment process where individuals evaluate their expectations for life according to criteria unique to the self (Hinz et al., 2018).

There are studies in the literature that show significantly relationship between life satisfaction and successful aging. (Dorji et al., 2019; Kars-Fertelli & Deliktaş, 2019; Özsungur, 2019). Also examined the life satisfaction of retired individuals in Paris, and which identified a positive meaningful relationship between life satisfaction and physical health, activity levels, and social interaction levels (Iwatsubo et al., 1996). In another study, it was concluded that adverse health conditions are directly affected by the satisfaction of the person with life and there is a pessimistic attitude at the point of self-assessment (Angelini et al., 2012). A qualitative study conducted with 19 elderly people set out to discover the meanings attributed to the concepts of successful aging and life satisfaction. In the resulting model, which evaluated successful aging as it relates to strategies for coping and maintaining a positive outlook to meet changing life conditions, life satisfaction was evaluated in terms of comparing past expectations with the current situation (Fisher, 1992). At the same time, as no other development period allows for the postponement of death, death anxiety is defined in the literature as an issue of particular concern for the elderly and is associated with their levels of life satisfaction (Hickson et al., 1988; Zahedi-Bidgol, 2020). Findings have been reached in this context, in which elderly individuals with high life satisfaction exhibit more positive attitudes toward death and possess lower levels of death anxiety (Fortner & Neimeyer, 1999; Given & Range, 1990; Hickson et al., 1988; Hye-Kyung & Ji-Hye, 2020; Jose et al., 2018; Tel et al., 2020).

Although the impact of the thought of death on human life is inevitable, the ways in which people perceive death and experience death anxiety depend on how they look at the reality of death (Jose et al., 2018; Özen, 2008; Tanhan, 2013). The concept of the death in western philosophy is handled in different ways. Within the thought of Sufism, for example, death appears as a desired blessing (Çelik, 2009). This is illustrated in Gazzâlî's death: “Death is the time of meeting with the beloved for the rifs, and this is why they are sorry for the late death.” This thought is also conveyed when the bride reunites the deceased with her lover and Mevlânâ, who, in describing death as the wedding night, says, “*(My God) Death is like a*

candy after you take our life; while being with you, dying is even sweeter than sweet life for us...”

Although there are studies on life satisfaction and death anxiety of the elderly in the Turkish literature, it has been observed that studies including successful aging are limited. Therefore, in this study, we aimed to examine the mediating role of death anxiety in the relationship between successful aging and the life satisfaction levels of the elderly. Increasing efforts to age successfully is important not only for the quality of life of the elderly, but also for their families and their communities. We think that the findings of this study will fill an important gap in the Turkish geriatric literature and will contribute to the development of content for psychological support programs for the elderly.

Methodology

Model

This research was designed as a descriptive study based on the relational screening model. It was examined the mediating role of death anxiety on the relationship between successful aging and life satisfaction in order to understand the relationships between variables in the study.

Research Group

The participants of this research consisted of 243 elderly individuals aged 60 and older, all of whom participated in the study voluntarily. Of the participants, 130 were female (53.5%) and 113 were male (46.5%); the average age was 67 years ($SD = 6.5$). This research with the elderly—who are more difficult to access compared to other age groups—benefitted from the convenience sampling method while forming the study group.

Data Collection Tools

Adults Life Satisfaction Scale (ALSS). The ALSS is a 5-point Likert-type scale consisting of 21 items. According to the exploratory factor analysis results obtained from the structure validity studies, the ALSS contains a five-factor structure that is able to explain 65.98% of the total variance. The results from the confirmatory factor analysis also showed the scale's fit indices to have acceptable ranges ($\chi^2 / df = 1.48$, $TLI = .93$, $CFI = .94$, $RMSEA = .063$, $SRMR = .065$). Within the scope of the validity analyses, the General Life Satisfaction Scale appears to have a positive meaningful relationship ($r = .67$, $p < .01$) with the ALSS. In the reliability study of the ALSS, cronbach's alpha coefficient of internal consistence was found to be .89. (Kaba et al., 2017).

Death Anxiety Scale (DAS). The DAS was developed by Templer (1970). In terms of the consistency of the original form of the scale, the test-retest reliability was found to be .83, while the reliability coefficient calculated using the Kuder-Richardson formula was found to be .76. Criterion validity was assessed between the DAS and the Collett-Lester Fear of Death Scale, and showed a correlation of .74 (Templer, 1970). As a result of the validity and reliability analysis conducted by Akça and Köse (2008) with over 356 individuals in normal and patient groups, test-retest reliability was found to be .79, while the reliability coefficient calculated using the Kuder-Richardson formula was found to be .75.

Successful Aging Scale (SAS). In the process of developing the scale, qualitative interviews were first conducted with individuals aged 60 and older to identify their perceptions and beliefs as they related to successful aging. Afterward, an item pool for the scale was created by considering the qualitative data obtained from this group and the literature. Data were collected from 600 elderly individuals using 84 items; validity and reliability analyses were conducted using data from 521 of these individuals. The factor

loadings ranged between .74 and .84 and accounted for 61.42% of the total variance of the 19-item SAS. After the exploratory factor analysis studies of the SAS, confirmatory factor analysis studies were begun; after conducting two modifications, the fit indices for the model were determined to be appropriate ($\chi^2 / df = 2.24$, RMSEA = .069, CFI = .922, TLI = .911, SRMR = .067). Cronbach's alpha of internal consistency for the total score on the SAS was determined to be .95 in the first research group and .90 in the second research group (Demir-Çelebi, 2020).

Collection of Data and Analysis

After obtaining the necessary ethical permissions, data were collected from the elderly who volunteered to participate in the study. It took about 10 minutes for them to complete the scales after the verbal instructions were given.

After collecting the data, all forms were reviewed and 6 forms were eliminated due to the obviously inconsistent responses. Statistical analysis was initiated with 243 forms, which were deemed to have given sincere reactions from the participants.

The Pearson product-moment correlation technique and the standard multiple regression technique were used to analyze the data.

Findings

When examining the relationship among the variables of successful aging, death anxiety, and life satisfaction, which have been addressed in the literature, a significant relationship was noted among all variables. Table 1 presents the descriptive values and correlational values regarding the main variables of the research.

Table 1. Descriptive Statistical Values and the Relationships Among the Variables

Variable	<i>n</i>	<i>M</i>	<i>SS</i>	1	2	3
1. Successful Aging	243	78.21	11.52	.		
2. Life Satisfaction	243	79.27	10.53	.590**	.	
3. Death Anxiety	243	6.46	3.25	-.232*	-.164*	.

* $p < .05$, ** $p < .01$

Table 1 presents the analysis results for the relationships among the variables of successful aging, life satisfaction, and death anxiety. A positive medium-level significant relationship was found between life satisfaction and successful aging ($r = .590$; $p < .01$). Additionally, it was discovered that a negative low-level significant relationship exists between successful aging and death anxiety ($r = -0.232$; $p < .05$). A negative low-level significant relationship between life satisfaction and death anxiety ($r = -0.164$; $p < .05$) was also identified.

Table 2. Results from the Multiple Regression Analysis Regarding Successful Aging and Death Anxiety's Level of Predicting Life Satisfaction Scores

Variable	<i>B</i>	<i>SD</i>	β	<i>t</i>	<i>p</i>	Paired <i>r</i>	Partial <i>r</i>
Fixed	32.216	4.894		6.583	.000		
Death Anxiety	-0.493	.185	-0.139	-2.669	.008	-0.170	-0.137

Life Satisfaction	.620	.057	.567	10.885	.000	.575	.559
$r = .605$; $R^2 = .367$; adj. $R^2 = .361$; $F = 69.443$; $p < .000$							

According to the results of the multiple regression analysis performed to determine the level at which the life satisfaction and death anxiety scores predicted successful aging (as shown in Table 2), the two variables together show a significant mid-level relationship with the variable of successful aging ($r = .605$). While the relationship between successful aging and death anxiety was realized at the level of $r = -0.170$ when keeping the variable of life satisfaction constant, a significant relationship of $r = .575$ was seen between successful aging and life satisfaction when the death anxiety variable was constant. The variables of death anxiety and life satisfaction together explained 36% of the total variance of successful aging (adj. $R^2 = .361$; $p < .000$). Therefore, we have reached the conclusion that death anxiety is a mediating variable in the relationship between life satisfaction and successful aging ($R^2 = .415$; adj. $R^2 = .361$; $F = 69.443$; $p < .000$).

Result and Discussion

In this study, data were collected from individuals over the age of 60, aiming to reveal the mediating role of Death Anxiety on The Relationship Between Successful Aging and Life Satisfaction, and then these data were analyzed. As a result of the analysis, a significant mid-level positive relationship was found among the variables of successful aging for the elderly. This finding can be explained by the fact that the elderly obtain more life satisfaction by increasing their desire to set new goals as a way to make life more meaningful, and to increase their sense of accomplishment by becoming more social and active. At the same time, when looking at the components of successful aging, a social life that regulates one's life is important in terms of the component of actively participating in life (Hsu, 2010; Şanlı, 2012). In addition to the family and relatives system companionship with friends and peers can increase the life satisfaction of the elderly; consequently this can contribute to successful aging (Iwatsubo et al., 1996, Öz, 2002). In terms of the successful-aging components—being free of disease and retaining a high cognitive capacity—the challenges, functional losses, and difficulties of adapting to physical changes, which begin with the loss of physical strength, can negatively impact life satisfaction and cause mental depression among the elderly (Çelik et al., 2017; Mroczek & Spiro, 2005). To summarize these statements: life satisfaction and successful aging here can be considered as a type of self-feeding loop. When looking at the related literature, life satisfaction is also seen to be an important gerontological variable associated with the mental and physical health of the elderly (Siahpush et al., 2008). Although no consensus on the issue of the components that together bring about successful aging has been identified, life satisfaction is seen here as one of its most important components (Depp & Jeste, 2006; Fisher, 1992; Havighurst, 1961; Kanning & Schlicht, 2008). At the same time, the findings obtained from this study are supported by the literature (Fisher, 1995; Warshney, 2007).

Our analysis of the relationship between elderly individuals' levels of life satisfaction and death anxiety shows a negative low-level significant relationship between these two variables. Life satisfaction covers the process of evaluating expectations from life and in the elderly is linked to evaluating the past events of their lives (Hinz et al., 2018). The elderly are in the last of Erikson's psychosocial developmental stages, which involves a crisis of despair against inner wholeness—a crisis that occurs as a result of a general accounting of one's life (Erikson, 2014). This approach—which emphasizes that death is no longer distant for the

elderly— states that not enough time remains for the sake of attaining inner wholeness, assessing one's life can precipitate death anxiety by opening the door to despair. In Fortner and Neimeyer (1999)'s meta-analytical study of death anxiety among the elderly, life satisfaction and the measurements intended to operationalize inner wholeness were specifically identified, and they concluded that a significant negative relationship exists between inner wholeness and death anxiety, which is consistent with the finding of this study. This research finding is also consistent with the findings of other studies conducted on the elderly (Given, & Range, 1990; Hickson et al, 1988; Roushani, 2012; Saeed, & Bokharey, 2016; Taghiabadi et al., 2017).

Analysis results regarding the relationship between death anxiety and successful aging levels among the elderly show that there is a low and negative relationship between these two variables. A quotation of Cicero's is valuable in terms of this finding: "What is as appropriate for nature as the death of an elderly? Approaching death in person, I feel like I have seen the land after a long sea voyage and will finally arrive at the port. We are sure to die one day. One day we are sure to die. So can someone who feels the destructiveness of death with fear every hour be mentally peaceful?" (Cicero, 2017, pp. 35-6). From this point of view, we can say that the wise person is aware that he is mortal and that death approaches during old age. As a result of this awareness, people can live life more meaningfully and fully (Kımtır & Köftegöl, 2017). Of course, it is necessary to have information about different beliefs in order to better understand the various attitudes towards death. Sufism makes it quite clear that each of us experiences the idea of death differently. Hz. Mevlana (Rumi), for instance, claims that everyone understands death in their own color. The relativity of these attitudes towards death is clearly expressed in the couplet, "Death is enemy against enemy, friend against friend"; a person who can accept death can be regarded optimistically, whether he has a belief or not (Çelik, 2009, pp. 123). A believer can attribute meaning to death by adhering to the interpretation of his belief; on the other hand, people who have no faith can see death as the last journey they must make to complete their mission. Establishing a bridge between death and life can give one the opportunity to fulfill everything that has meaning for that person. Ensuring this integrity between death and life can lead the elderly to live lives in which they can realize their values (Kımtır, & Köftegöl, 2017).

Interpreting this finding by considering the components of successful aging— especially the absence of disease and the presence of active participation in life—may indicate that death anxiety may be higher among those elderly people who have illnesses and/or live isolated lives. In fact, serious health problems in old age may cause death anxiety due to elderly adult's judgments about disease-related patterns. At the same time, social relationship ties among the elderly can weaken for a variety of reasons, whether one is aware of them or not. In such cases, remaining alone can remind the elderly of nothingness, and at this point where nothingness symbolizes death, they can become anxious about death (Özen, 2008). On the other hand, death anxiety can cause the elderly to spend their time dwelling on death, drifting further away from being in the moment; here they may find life to be meaningless, or they may exhibit a passive attitude toward life due to this concern (Öztürk et al., 2011). In addition to influencing the satisfaction obtained from life, these factors can prevent elderly individuals from being evaluated as aging successfully. Although no study in the related literature directly correlates these two variables, death anxiety in the book edited by Tomer (1992) was determined to indicate unhealthiness, albeit to a low degree. Regardless of one's beliefs, the individual who accepts that death is drawing near is expected to see death as a natural part of life.

Lastly, the mediation analysis shows that death anxiety plays a mediating role between life satisfaction and successful aging. According to this result, life satisfaction among the elderly affects successful aging by the way of death anxiety. When looking at the literature,

we see that Jose, George, and Dante (2018) directly examined the impact of life satisfaction on death anxiety, reaching the conclusion that life satisfaction predicts death anxiety with considerable accuracy. On this point, death anxiety and its possible impacts—such as being unable to give oneself to other aspects of life due to thinking about death, being unable to remain in the moment, finding life meaningless, maintaining an introverted life, or any number of somatic symptoms—may prevent successful aging. At the same time, another important finding from this current study is that the variables of death anxiety and life satisfaction together explain 36% of the total variance in successful aging. Hence a significant part of successful aging can be explained by the variables of death anxiety and life satisfaction, which have already been shown to be interrelated.

These comprehensive results have been arrived at by bringing the words of Yalom (2008) to mind: “Despite the staunchest, most venerable defenses, we can never completely subdue death anxiety: it is always there, lurking in some hidden ravine of the mind” (pp. 5-6). In response to this worthy thought, the following interpreted thoughts of Camus may provide some suggestions for its application (Camus, 2003, pp. 8):

“Are we going to close our eyes, the doors of our hearts, to the beauties of the world of these experiences, as well as to the suffering of humans, to their despair, because it ends with death? Because we live, we must look at creating happiness on our right and on our left to be happy.”

In this context, it is recommended that projective techniques based on the dynamics of the person or group may be added to those psychological counseling programs for the elderly that address death. In addition, the elderly can take part in initiatives that facilitate their engagement, including pursuits related to the arts (such as theaters and musicals), based on the idea that their thoughts will be directed outwards as long as they are engaged in a pursuit. Tazelenme Üniversitesi (a refresher university that provides courses for the elderly) and Sosyal Yaşam Evi (a kind of social housing for the elderly in Turkey) are important initiatives, for which the elderly should be provided with appropriate information and orientation.

This study has several limitations. As it was not possible to stick to a specific region of Istanbul during the data collection phase, it is difficult to generalize the study findings to the larger society. At the same time, the study group was composed of older adults who did not suffer from a fatal disease or any disability. Future studies should examine the relationships between death anxiety, life satisfaction, and successful aging with control groups formed in working groups within this framework.

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