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Predicting Death Anxiety Based on Health Locus of Control in The Middle-Aged and Elderly

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ABSTRACT: One of the pathological variables in dealing with death is death anxiety. The aim of this study was to predict death anxiety by examining its relationship with the health locus of control in middle age and elderly. The design of present research was a correlational study. This study was conducted from the winter of 2019 to the spring of 2020 on 226 middle-aged and elderly Iranian men and women who participated in this study voluntarily. Cult-Leicester Death Anxiety Scale and standard questionnaire of Health locus of control were used for collecting data. The results indicated that there was a significant negative relationship between the internal health locus of control and death anxiety, which means that as the internal health locus of control increases, death anxiety decreases. Also, the results of regression analysis revealed that the health locus of control and its dimensions can predict death anxiety at a significant level.

Keywords: Death anxiety, health locus of control, middle age, elderly

Introduction

One problem that has affected human mind and aroused fear since the beginning of creation, is death. There is death anxiety in our lives, and it affects each of us in different ways. This fear is described as a feeling of fear, anxiety, or fear of death or any connection to death. This anxiety about the fear of death is read by Sigmund Freud in his major essay: "Thoughts for the Times on War and Death". Freud believes that this is related to one's unconscious belief in his/her immortality. "Life," like a parable, begins at birth and ends at death, Jung says. In other words, death is part of the life cycle. Therefore, understanding the inevitability of death is essential for our lives (Sinoff, 2017).

Studies have shown that anxiety leads to decreased general functioning and psychological health in people. Although individual differences in people may cause differences in their attitudes toward death, but now the quality of life and mental health of adult society is one of the main concerns of politicians, scientists and experts in the field of mental health. One of the issues that can predict the decrease or increase of death anxiety is a person's belief of his ability to control physical health. There is a difference between locus of control and mortality anxiety (Jastrzebski & Slaski, 2011). Considering health's important role in the developmental stages of adulthood and providing adult's mental health by reducing anxiety, especially death anxiety in the last stages of life, this study predicts death anxiety based on the source of health control in middle age and old age.

Because death has never been experienced by humans, and no one has touched it clearly, people become anxious about it. Death, as the biggest problem and accident in life, has a complex meaning that is

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associated with many physical and mental pain symptoms. The process of death is different for each of us, and it is really unpredictable what will really happen and how we will feel. In adulthood, people usually talk and think about death, and friends' loss provides more evidence of death (Naderi & Esmaieli, 2008). Klein explained in 1948 that, in fact, death anxiety is one of the basic emotions of humanity and is the root of all anxiety. Humans are the only species aware of life's limitations and imminent death (Kübler-Ross, 1969).

Death anxiety is a psychological phenomenon defined by anxiety of destruction (Jones, 2014), and it refers to the fear of complete extinction, something like nothingness. Fear of death is not a single variable but a combination of several components such as loss of identity, loneliness (Depaola, Griffin, Young, & Neimeyer, 2003).

Observing the symptoms of the disease that will afflict people from middle age onwards will cause sensitivity to the symptoms of death. Middle age is seen as a period in which life is valued, past experiences are meaningful, and plans are more realistic for the future. Although the thought of life's end is not at the forefront, in this period death anxiety arises among certain people. For some, death means that life ends and various hopes and aspirations are not fulfilled (Yüksel, Güneş, & Akdağ, 2017).

Aging is a critical stage of life and it is necessary to consider the needs and issues related to this stage. Also, studies by Missler et al. (2012) showed that death anxiety is one of the most important issues in the elderly population because they experience the inevitable feeling of approaching death and a sense of wholeness versus despair is also important to them. Is.

Feifel and Branscomb (1973) directly examined the relationship between age and death anxiety. Old people are more afraid of death at different levels of conscious and unconscious. Twelker (2006) reports that death anxiety peaks in middle age and disappears in the elderly. A meta-analysis study of Johnson and Barer (1992) about the fear of death in the elderly shows that this phenomena is essentially stable at the age of 61 to 87.

One aspect of personality is the perception of internal control versus external control. Rotter (1966) based on the principles of social learning theory, introduces the theory of place control in the discussion of public expectations to the perception of internal control and external control. Rotter (1966) conceptualizes the locus of control as a predictor of understanding what is amplifying. (Reinforcement means reward, desired result, and achievement of goal. Prediction of control internal place stems from understanding that reinforcement is conditionally related to person's behavior or relatively permanent characteristics or traits of the person himself. The notion that reinforcement is due to chance, destiny, or factors beyond one's control indicates the place of external (i.e., external) control. Perceived control is

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an overall internal expectation. Reaction is formed by a person's perception of unpleasant stimuli and his ability to deal with them.

The external locus of control seems to determine severe anxiety mortality. Research among Chinese students and the elderly has shown that in both groups, the internal control sources and high levels of self-efficacy are associated with low death anxiety (Tang, Wu, & W. Yan, 2002).

Doroudian, Vakili, and Amin-Esmaeili (2018) in their research on AIDS patients find that health control source cannot predict death anxiety in these patients. Samreen and Zubair (2013) research on police forces show that the source of external health control can significantly predict death anxiety. Extensive and well-documented evidence is available to suggest that internal health control source is more positive than external health control source. Evidence has shown that self-control has a negative correlation with high levels of stress, mood swings, and death anxiety (O'Connor & Shimizu, 2002).

Salehi, Hojati, and Abedini (2017) have been active in a research entitled "predicting the degree of death anxiety based on internal and external control, spiritual intelligence and existential anxiety in the elderly", which based on their findings, there is no significant relationship between death anxiety components and internal control source, but external control source positively predicts death anxiety.

Habibollahi, Sodagar, Bani Jamali, and Sobhigjaramaleki (2017) conducted a study entitled "Structural Model of Relationships between Spirituality and Mental Health and Death Anxiety", in which they focus on the mediating role of control source and social support. The results of this study shows that spirituality is a predictor of social control and support, mental health and death anxiety. All path coefficients except the regression coefficient between internal control sources on death anxiety are statistically significant, and in addition to a direct effect, spirituality has an effect on mental health and death anxiety in the elderly through mediating variables. Social support has a direct effect on mental health and death anxiety, but the effect of an internal control source on death anxiety is not confirmed. Predictive variables have an indirect effect on 41% of the variance of general health and 19% of the variance of death anxiety. The internal locus of control and social support mediates the relationship between spirituality and mental health and death anxiety. The model is aligned with the observed data. Growing and strengthening the internal control source, social support and spirituality are among the appropriate ways to prevent and reduce vulnerability to mental health problems in the elderly. These variables should be considered to reduce death anxiety in the elderly and improve their psychological well-being.

Hashemi Razini, Baheshmat Juybari, and Ramshini (2017) in a study entitled "to investigate the relationship between coping strategies and source of control with death anxiety in the elderly" conclude that there is a significant relationship between opposition strategies and control source with death anxiety in the elderly. The results of regression analysis also show that external control, avoidance and

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emotion opposition significantly predict death anxiety in the elderly. The researchers also say that death anxiety is one of the most important factors in the mental health of the elderly. According to the findings, opposition strategies and control source have an important role in anxiety in the death of the elderly. Therefore, by designing psychological interventions based on opposition strategies and changing the control source from external to internal, the improvement of death anxiety can be certain. The result of Hashemi Razini et al. (2017) greatly confirms the direction of the present research; it has been instrumental in formulating the hypothesis of this research. Thus, in this study, the researchers investigated the prediction of death anxiety based on the health locus of control in the middle-aged and elderly with a descriptive and analytical view. Accordingly, the research hypothesis was: health locus of control predicts death anxiety.

Material and Methods

The research design of this research was descriptive-correlational. This study is performed on middle-aged and elderly Iranian men and women from winter 2019 to spring 2020. The statistical population of this study consists of all middle-aged and elderly people in Shiraz and due to the current acute situation, it is not possible to accurately estimate the population size. The members of the statistical sample of this study are identified and selected by available means like telephone with nursing homes located in Shiraz. Then, the questionnaires are designed and made available to people due to the prevalence of COVID-19 in the form of Google World Wide Web. Also, before collecting data through cyberspace, each participant is given the necessary information about this research, and individuals cooperates with the researcher with informed consent. In this study, the following tools are used to collect data:

The Collett-Lester Fear of Death Scale (CL-FODS): This questionnaire has 32 questions and 4 subscales, the initial form of which is designed by Collett and Lester (1969). For the first time in Iran, Naderi and Esmaieli (2008) use a revised form of this scale. Lester (1994) reported the reliability of this questionnaire for its own death scale as 0.85, its own death as .79, the family members' death as.86 and the relatives' death as.83. Naderi and Esmaieli (2008) in Iran report this questionnaire's reliability through Cronbach's alpha and halving as .89 and.68, respectively. The concurrent validity of this scale with Templer and Ruff (1971) death anxiety is equal to.57 at the significance level of .001, which indicates the acceptable validity of this questionnaire. In the present study, the reliability of the death anxiety questionnaire is calculated by Cronbach's alpha method and based on the results, the reliability coefficient was .76.

Multidimensional Health Locus of Control (MHLC): This questionnaire has 18 items and 3 subscales. In Wallston, Strudler Wallston, and DeVellis (1978) research, Cronbach's alpha internal consistency

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coefficients for internal health are .81, people's health is .83 and health related to chance is .79. In this study, the reliability of this scale was calculated by Cronbach's alpha method and based on the results, the reliability coefficient was .76.

In the present study, SPSS21 software has been used for data analysis. Statistical indicators such as frequency, percentage, mean, standard deviation, correlation coefficient and regression were used.

Results

In this section, first the tables and values related to descriptive statistics and then the tables and values related to inferential research statistics are given. From 226 respondents, 153 (67.7%) are male and 73 (32.3%) are female. Also, with total number of 226 respondents, 122 (54%) of them are in the age group of 40 to 50 and 92 of them (40.7%) are in the age group of 50 to 82. Also, by using the determined age by each subjects, their average total age is 50.26 years. Twelve subjects refused to indicate their age. Out of a total of 226 respondents, 52 (23%) are single and 174 (77%) are married. Other descriptive statistics such as mean, standard deviation, minimum, maximum, skewness and kurtosis of scores for each research variables dimension are shown in Table 1.

Table 1. Descriptive statistics indicators for studied variables dimension

Variables	Descriptive indexes			
	mean	SD	Min.	Max.
Fear of own's death	22.05	7.32	8	38
Fear of seeing own's death	27.12	7.11	9	40
Fear of other's death	28.65	7.62	10	40
Fear of seeing other's deaths	14.87	2.51	13	40
Locus of control related to effective people	26.13	13.96	11	36
Internal health locus of control	23.09	5.24	11	36
Chance control	23.57	4.43	11	36

According to Table 1, the "fear of others' death" dimension with a value of 28.65 has the highest average value among the death anxiety dimensions. Also, the standard deviation of the mentioned dimension to the value of 7.62 has been reported as the highest value of the standard deviation among other dimensions. The higher the mean, the greater the significance, and the higher the standard deviation, the greater the dispersion and the less consensus in this dimension.

As can be seen in Table 1, the locus of control related to the effective people among the dimensions of the health locus of control has the highest average (26.13) and the highest standard deviation (13.96). These two values together show more importance and less consensus regarding this variable among the subjects.

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In the second part of the research findings, inferential statistics related to predictor and criterion variables are given. The Kolmogorov-Smirnov test is used to show the normality of the research data distribution, and the results of this test are reported in Table 2.

Table 2. Kolmogorov-Smirnov test results

Variable	Statistic's indexes		
	Z Kolmogorov-Smirnov	*p*	Assumption accepted
Death anxiety	.84	.46	H_0
Health control source	.91	.37	H_0
locus of control related to effective people	.81	.27	H_0
Internal health locus of control	.82	.27	H_0
Chance control	.77	.26	H_0
Fear of own's death	.89	.46	H_0
Fear of seeing own's death	.83	.45	H_0
Fear of other's death	.84	.41	H_0
Fear of seeing other's death	.89	.45	H_0

The null hypothesis is chosen so that the data are normal, and the opposite hypothesis is chosen if the data is abnormal. According to the results of Table 2, the Z-value of Kolmogorov-Smirnov is not significant for all variables and sub-variables of the research. Therefore, the assumption of data normality is confirmed, and the assumption of zero will not be rejected. Proving the normality of the data, Pearson correlation parametric test is used to examine the relationship between the variables.
Pearson correlation test is used to show the correlation between research variables dimensions, and the results are reported in Table 3.

Table 3. Pearson correlation matrix for research variables

Variables' dimensions		1	2	3	4	5	6
1.	Fear of own's death	1					
2.	Fear of seeing own's death	.68**	1				
3.	Fear of other's death	.43**	.47**	1			
4.	Fear of seeing other's death	.44**	.55**	.77**	1		
5.	Locus of control related to effective people	.06	.07	.01	.03	1	
6.	Internal health locus of control	-.35**	-.29**	-.14**	-.22**	-.27**	1
7.	Chance control	.11**	-.09	.18**	.19**	.26**	.36**

** P < .001

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in Table 3, the dimension of " locus of control related to effective people" as a part of the variable dimensions of health locus of control does not have a significant relationship with any of the dimensions of variable death anxiety, but the dimension of " internal health locus of control " with all dimensions of variable death anxiety has a negative and significant relationship. The "chance control" dimension of the health locus of control has been positively and significantly related to the three dimensions of death anxiety, namely, "fear of one's own death", "fear of others' death" and "fear of seeing others die", but the amount of this correlation is reported to be somewhat weak. Simultaneous regression test is used to predict death anxiety variable through health locus of control variable and its dimensions; the results are reported in Table 4.

Table 4. The Results of simultaneous regression analysis to predict death anxiety variable

Prediction variable	B	SE	Beta	T	*p*
Heath locus of control	-.90	-.33	-.25	-2.7	.007
Locus of control related to effective people	1	.34	.30	1.1	.25
Internal locus of control	-4.4	-.97	-.98	-4.4	.001
Chance control	.50	.13	.46	3.2	.001

As shown in Table 4, the variables of "health locus of control " and "dimension of internal health locus of control " with a significant level ($P < .01$) have been good predictors for the variable of death anxiety.

Discussion

Findings showed that there is a significant negative relationship between the two variables of internal health locus of control and death anxiety; this means that as the internal health locus of control increases, the death anxiety decreases. To explain this finding, it can be said that due to the very great role of health in middle age and old age and the reduction of physical abilities from this age onwards and turning one's attention to physical health and its relationship with death, observing health loss and consequently, peers' deaths, the internalization of the sense of control over life in health will lead a person to the fact that the level of health is under the control of the person's own actions; so, he can take control of his health, and the fear of death will be decreased due to the sense of internal control over health.

The present finding is in line with earlier researches. Viswanathan (1996), based on physicians' research specializing in a variety of medical fields, has found that the internal locus of control is associated with high levels of death anxiety. The results of Jastrzebski and Slaski (2011) research indicated a significant relationship between locus of control and mortality anxiety. Based on their findings, the internal locus of control of severe mortality anxiety determines death anxiety. Evidence from O'Connor and Shimizu (2002) shows that the internal health locus of control is more positive than external health locus of

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control, and the personal control emotion is negatively correlated with high levels of stress, negative mood, and death anxiety. Dodd and Mills (1985) shows that locus of control may play an important role in the development of accidental death anxiety. Javaheri and Yazdani (2016) showed in their study that the higher the attitude of trust in physicians' work on people's health, the lower the fear of death. All these findings are consistent with the findings of the present study.

However, the findings of the present study are inconsistent with some studies; Doroudian et al. (2018), in their research on AIDS patients have found that the health locus of control cannot predict death anxiety in these patients. Samreen and Zubair (2013) research on police forces also showed that the external health locus of control can significantly predict death anxiety, which is in contrast to the findings of the present study. Two recent studies by Samreen and Zubair (2013) and Doroudian et al. (2018) have been conducted on vulnerable and dangerous people, and it seems obvious that these people, even if they have internal health locus of control, cast a shadow over death and anxiety. It seems that by controlling the variables of risky occupations and incurable diseases, the discrepancy between the two studies with other researches in this field can be eliminated.

Research Limitations

1. In this research, only one measurement method, which is questionnaire, has been used to measure the research variables. Using other variables to measure variables not only increase the accuracy of the work, but also reduce the error rate.

2. Collecting information through cyberspace in the age group of the subjects of this research greatly increases the possibility of annoying variables such as unfamiliarity with cyberspace and unfamiliarity with electronic devices. These disturbing variables have led to a drop in the subject to some extent.

3. The statistical sample of the research seems to be somewhat limited to infer such variables, and due to psychological conditions, generalizing the results to the statistical population and the target population become somewhat difficult.

Suggestions

1. More research should be done at the provincial and national levels to further investigate variables with different research methods.

2. The findings of the present study, along with the explanation of the results, should be provided in the form of a booklet for health workers and assistants working in nursing homes.

3. We suggest that counseling centers use the findings of this study for elderly and solve their problems related to death anxiety.

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