

# Investigation into the Factors affecting Death Anxiety in Iranian Students

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## ABSTRACT

**Introduction:** Death anxiety can have many effects on behaviour. Student's dropout can be the result of student death anxiety. Death anxiety can be related to several factors in students of different countries.

**Aim:** The present study was carried out in order to examine the factors affecting death anxiety in Iranian students.

**Materials and Methods:** The present study was a cross-sectional investigation that was carried out using simple random sampling on 500 students attending universities of Tehran in 2016. The students' demographic data were collected through a data registration form, and the extended version of Templer Death Anxiety Scale (51-item) was employed to collect data on the students' death anxiety. Kolmogorov-Smirnov test, Leven's test, ANOVA, and Independent t-test were employed in this study.

**Results:** The mean score of death anxiety among the students was  $21.7 \pm 7$ . The mean score of death anxiety was higher among the female students (22.86) than the male (20.98) students ( $p=0.006$ ). The undergraduate and graduate students had the highest 21.90 (7.93) and the lowest 10.23 (4.64) levels of death and anxiety respectively. In comparison with the single students, the married ones experienced higher death anxiety ( $p=0.038$ ). The results of the multiple linear regression analysis indicated that 'women' and the 'married' were the only remaining variables in the regression model that could be predictor variables.

**Conclusion:** According to the findings of the present study, many students, in different levels and majors, experienced death anxiety. There was a relationship between gender, education level, marital status, and death anxiety.

**Keywords:** Related factors, Students dropout, Psychological disorder, Behavioral problem

## INTRODUCTION

An important aspect of health is related to mental health. Therefore, the World Health Organisation places a high emphasis on mental health [1]. Different factors can influence the individuals' mental health. Students are a vulnerable group in the face of psychological disorders. It has been indicated that there has been an increase in psychological disorders among Iranian students [2]. During their studies, students with psychological disorders experience problems like academic failure, lack of concentration, behavioural problems, distraction, lack of social skills, and a decrease in incentives [3]. Death anxiety is one of the psychological disorder itself and it's caused by psychological disorder among students [4].

Death anxiety is a kind of morbid attitude towards death [5], the feeling of not leading a favourable life and have a feeling of absurdity so that life is not pleasurable [6]. When an individual thinks about death, an attitude toward death anxiety phenomenon, with different degrees takes shape in his mind, under the influence of social teachings and individual beliefs [7]. Death anxiety is not an inherent concept, but its meaning is influenced by social structures and differs from one organisation to another [8]. Fear, denial and despair are the most common interpretations and perceptions made by individuals about the meaning and concept of death anxiety [7]. This psychological disorder (i.e., death anxiety) is seen more among students than other adults [9]. Moreover, it is indicated that students with a more extensive psychological problem experience a large number of problems during their university education. As a result, it is highly significant to examine the factors effective in creating psychological disorders (death anxiety) among students [10]. Numerous studies indicated that not only the level of death anxiety but also its concept and attitude are affected by different variables such as age, gender, occupation, religious beliefs,

moral and spiritual characteristics, life-threatening conditions and situations, inappropriate health conditions, death teachings, and death experience [11,12]. Uncontrolled fear of death may lead to neurosis; on the other hand, it causes a decrease in psychological adjustment among individuals. Despite the fact that fear of death is under the influence of different factors, it can seriously affect an individual's life [13]. Death anxiety is correlated with religious beliefs [14]. This issue, however, is opposed by some studies [15,16]. It has also been shown that religion plays a supporting role in death anxiety [17].

Nevertheless, factors affecting death anxiety in different populations are not quite known, and since death anxiety is acquirable and influenced by environmental teachings [18], it is likely to be correlated with different factors in different environments with different cultural values. Therefore, the present study was aimed at investigating factors affecting the level of death anxiety among students.

## MATERIALS AND METHODS

The present cross-sectional study was carried out from October 2016 to December 2016. All participants gave written informed consent for participation in the study. The study was approved by the Ethical Committee of Baqiyatallah University of Medical Sciences (IR.BMSU.REC:1396.40). The study population consisted of all students majoring in Humanities (27), Art (72), Engineering (99), and Medical Sciences (302) at the State University. The study subjects were chosen using simple random sampling. The adequacy of the sample size was determined using G\*Power-3.0.10 software and based on bilateral significant level of 0.05 and test power of 80%. Six individuals were predicted for each item of the questionnaire, and by taking into account the subjects' withdrawal from the study, a total number of 500 students were selected.

After the aims of the study were explained and the participants' cooperation was obtained, the questionnaires were distributed to be filled out. The study inclusion criterion was subjects studying in the academic year of 2016-17, and the study exclusion criterion was the subject's disagreement to participate in the study. In order to collect the required data, a demographic data form and Templer Death Anxiety Scale (51-item) [19] that was scored in yes/no form were employed. Questions 2, 5, 6, 7, and 15 were inversely scored [19]. High scores indicate high death anxiety among students and low ones a low level of death anxiety. Templer Death Anxiety Scale is freely usable by Dr. Templer website (<http://donaldtempler.com/>). Examinations carried out on the validity and reliability of Templer's 51-item scale (all the 51-items) designed in 2006 indicated an acceptable reliability for this scale [19]. Studies carried out in Iran in 2014 and 2016 showed an acceptable validity and reliability coefficient (Cronbach's Alpha=0.89) for this version of the scale [20,21]. The content validity of the Death Anxiety Scale was also evaluated both qualitatively and quantitatively. In order to confirm the content validity of the Persian version in the present study, the scale was delivered to 10 experts (nursing PhD, psychology PhD, and psychologist) and they were asked to express their opinion about the relevancy of its items. After the scale was modified according to the experts' opinions, its content validity was confirmed. Moreover, the internal consistency of the scale on the students was evaluated by Cronbach's Alpha (0.86).

## STATISTICAL ANALYSIS

Statistical procedures SPSS 22.0 software were employed for data analysis. Given the assumption of data distribution equality and variance equality in the groups, Kolmogorov-Smirnov test, Leven's test, ANOVA, and Independent t-test were employed,

respectively. Pearson correlation coefficient was utilised to examine the correlation between the continuous quantitative variables. Linear regression was used to predict the effect of predictor variables on the level of death anxiety among the students. First, the variables were individually entered the regression mode, and then, they were entered in the multiple linear regression model by "Enter" method. Durbin-Watson test was employed to examine the assumption of the lack of correlation between the residuals and independent errors in the linear regression. Tolerance statistics and Variance Inflation Factor (VIF) were used to examine the assumption of lack of multicollinearity. The significance level was set at 0.05 for all tests. The students were informed about the study's aims and assured that their presence is voluntary. All data of the patients were made confidential by allocating codes.

## RESULTS

The results of the present study showed that the students' mean age was  $22.03 \pm 4.97$  years and their mean death anxiety score were  $21.70 \pm 7.89$ . Among the students' (309 men and 191 women) individual characteristics, the mean death anxiety score of the women (22.86) was higher than that of the men (20.98), ( $p=0.006$ ), undergraduate outperformed higher levels ( $p=0.011$ ), and married students (84) had a higher death anxiety score than single ones (416), ( $p=0.038$ ). Scheffe post hoc test indicated that there was a significant difference between bachelor and PhD levels and master level in terms of their academic level [Table/Fig-1]. The results of the multiple linear regression showed that women compared to men ( $B=1.92$ ) and married ones compared to single ones ( $B=2.01$ ) could significantly predict the variance of death anxiety scores among the students [Table/Fig-2]. Multiple linear regression model explained 19.4% of the variance of the death anxiety scores.

Variable		N	Mean (standard deviation)	Statistics	p-value
Gender	Male	309	20.98 (8.39)	T=2.74	0.006
	Female	191	22.86 (6.86)		
Major	Humanities	27	19.29 (8.70)	F=1.79	0.148
	Engineering	99	22.22 (7.87)		
	Art	72	20.44 (9.02)		
	Medical Sciences	302	22.04 (7.52)		
Level	Bachelor	391	21.90 (7.93)	F=4.50	0.011
	Master	22	10.23 (4.64)		
	PhD	87	21.25 (7.62)		
University*	State	489	21.72 (7.90)	T=0.375	0.703
	Non-state	11	20.81 (7.51)		
Marital status	Single	416	21.37 (7.63)	T= 2.08	0.038
	Married	84	23.33 (8.92)		
Grade Point Average**	Over 18	108	22.39 (8.16)	F= 0.592	0.621
	Between 16 and 18	220	21.19 (7.37)		
	Between 14 and 16	142	21.82 (8.27)		
	Below 14	30	21.76 (9.04)		
Disease	Yes	24	21.05 (9.19)	T=0.353	0.763
	No	476	21.70 (7.86)		
Death Experience	Yes	113	21.77 (8.29)	T=0.207	0.836
	No	387	21.59 (7.72)		
Place of Residence	With family	236	21.66 (7.28)	F=0.449	0.639
	Dormitory	248	21.85 (8.16)		
	Independent	16	19.93 (11.75)		
Smoking	Yes	54	20.03 (8.92)	T=1.64	0.101
	No	446	21.90 (7.74)		
Medicine consumption (Psychoactive drugs such as: Anti- depressant-affecting the thyroid-opium and psychedelic agent)	Yes	15	20.66 (8.76)	T=0.512	0.609
	No	485	(7.87) 21.72		

[Table/Fig-1]: The relationship between individual characteristics and death anxiety scores among the students.

\*=type of university State= national and Non-state= Private University; \*\*= GPA

Predictor variable*	Non-modified (simple)			Modified (multiple)**		
	B	p	CI 95%	B	p	CI 95%
Gender	1.88	<0.009	3.370 to 0.470	1.92	<0.008	3.338 to 0.510
Education level	-0.425	0.365	0.495 to 1.342	-	-	-
Marital status	1.96	0.038	3.082 to 0.112	2.01	0.031	3.856 to 0.181
Age	0.016	0.819	0.156 to -0.123	-	-	-

**[Table/Fig-2]:** The relationship between the predictor variables and the level of death anxiety among the students based on linear regression model.

\*Basis: men, bachelor, single

\*\*Durbin-Watson test statistics was estimated 0.841. Moreover, the tolerance of four variables in multiple regression was between 0.96 and 0.99. VIF was also estimated between 1.01 and 1.02.

## DISCUSSION

The present study was aimed at examining the effective factors in death anxiety among students by employing the extended version of Templer scale. The results of the present study showed that there was a significant relationship between education level and the level of death anxiety. Bachelor students had the highest level of death anxiety, and the master students had the lowest level. Although, numerous studies have focused on different dimensions of death anxiety and effective factors in experiencing it by individuals, only some studies dealt with the relationship between education level and death anxiety. For instance, the results of the study conducted by Mutran EJ et al., showed that individuals with higher education are willing to live longer than those with lower education [22]. Faisal A et al., also indicated that there is a correlation between education level, death anxiety and death, such that illiterate and poorly-literate people experience death anxiety more than educated individuals [23]. Based on the conducted examinations, it seems that what is important in death anxiety is the individuals' knowledge and education type rather than the level of their education. This claim; however, necessitates conduct of further qualitative and quantitative studies on death anxiety and its relationship with the individuals' knowledge and level of education [24].

There was a significant relationship between gender and death anxiety, such that it was concluded that women had a higher level of death anxiety than men. There are different reports with regard to death anxiety among women and men. The results of numerous studies have indicated that women show more death anxiety compared to men [25,26]. The results of a study carried out in Arab communities also supported this issue [27]. In the United States, women reported higher levels of death anxiety compared to men [28]. However, some studies reported that there was no relationship between death anxiety and gender. For instance, there was no significant difference between women and men who were in charge of funerals with regard to their mean score of death anxiety [29]. It is possible that there is no real difference between men and women regarding death anxiety, and that is cultural patterns that let women express their anxiety more freely [29], while men tend to show themselves stronger in the face of damages and concerns and express their anxiety less [30].

There was a significant relationship between death anxiety and marital status. The results of the statistical analysis showed that the married students experienced higher levels of death anxiety than single ones. Along with some individual characteristics, marriage plays an important role in experiencing the level of death anxiety. Although, literature has shown that there are few studies on the relationship between different dimensions of death anxiety and the individuals' marital status, Ghufuran M and Ansari S indicated that divorced individuals (women and men) obtained higher scores of death anxiety compared to those whose spouses were living [26]. It seems that marital status along with individual characteristics such as age, gender, and sociocultural variables could have an influence on the level of death anxiety [31].

The results of statistical analysis showed that there was no relationship between disease and death anxiety among the students. This issue should be examined more specifically, because first, the disease nature and second, the disease period can have different effects on the development of death anxiety. Also, it has been shown that among young men with treated testicular cancer or Hodgkin's disease, whose disease was recently diagnosed had a higher level of death anxiety [32]. Similarly, Ootom S et al., indicated that disease was a strong predictor for death anxiety and there was a negative relationship between them. They also reported that patients who were recently diagnosed with epilepsy had a higher level of death anxiety because they did not have enough time to get adjusted with their disease [33]. Patients who were spending their final stages of life had a relatively low level of death anxiety, which shows the realistic acceptance of the inevitable concept of death [32]. In another study it has been shown that patients with AIDS in comparison to cancer patients experience more death anxiety. Moreover, both groups of the patients had higher death anxiety than their family caregivers [34]. Diagnosis of risky diseases such as cancer and AIDS that have no certain treatment and doubles the level of death anxiety among individuals. Death expectation and lack of treatment for this group of patients lead to an increase in death anxiety. Moreover, in most cases, death anxiety among individuals drops with passage of time, which can be caused by death inevitability for either ill or healthy individuals [34]. One of the probable reasons that the present study did not show a difference between the level of death anxiety and the student's illness is that the students participating in the present study were mostly healthy individuals and those with serious and severe diseases were on leave or temporarily dropped out.

Having death experience had no effect on the level of the students' death anxiety. Bassett JM et al., showed that students who studied funeral ceremony had a lower level of death anxiety compared to other students [35]. On the contrary, Chen YC et al., concluded that skilled nursing students had higher death anxiety compared to less skilled ones, and their understanding of death anxiety was deeper than and different from others who had no such experiences [36]. A probable reason for emergence of such contradiction is failure to take into account the recent stressful conditions among students. Given the environmental factors, certain unpredictable and stressful situations may affect the experience of death anxiety; though, it might not be same all the time. In a large number of studies, a slight difference was observed between students who experienced and those who did not experience numerous traumatic experiences (severe accidents with motor vehicles) in terms of death anxiety levels [37-39]. These findings suggest that death anxiety pretensions might be different in the face of stressors among individuals given the type, context, and duration of environmental harms and relevant stressors [40]. Since, not all interfering factors could be controlled in the present study, contradiction in results is expected.

The strength of the present study is using the extended version of death anxiety scale. In most studies, evaluation of death anxiety had been carried out using the 15-item version of the scale. In the present study, the 51-item version was used. It is suggested that exclusion studies are determined based on different psychological diseases in the future. Furthermore, it is recommended that the level of death anxiety is examined among different psychological patients.

One of the limitations of the present study was limitation in the study exclusion criterion.

## CONCLUSION

The results of the present study showed that female students had a higher level of death anxiety compared to the male ones. Moreover, the undergraduate students experienced the highest level of death anxiety compared to other education levels. There was no

relationship between the students' death anxiety and disease, field of study, university type, GPA, death experience, place of living, smoking, and medicine consumption.

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