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Original Article

The Farsi translation, reliability and validity of the Death Concern Scale

Tradução, confiabilidade e validade da Death Concern Death para a língua persa

Mahboubeh Dadfar,[1] David Lester[2]

Abstract

Introduction: Death concern is a conscious contemplation of the reality of death combined with a negative evaluation of that reality. The Death Concern Scale (DCS) is related to thinking, and death fear or anxiety about death. The aim of the present study was to develop a Farsi version of the DCS and to explore its psychometric properties in a sample of Iranian nurses.
Methods: A cross-sectional study was conducted to investigate the reliability, validity, and factorial structure of the Farsi version of the DCS in a convenience sample of 106 Iranian nurses in two hospitals in Tehran, Iran. The nurses completed the DCS, the Collett-Lester Fear of Death Scale (CLFDS), the Death Anxiety Scale (DAS), the Reasons for Death Fear Scale (RDFS), the Death Depression Scale (DDS), and the Death Obsession Scale (DOS).
Results: For the DCS, Cronbach's α was 0.77, the Spearman-Brown coefficient 0.63, the Guttman split-half coefficient 0.62, and two-week test-retest reliability 0.77. The DCS correlated at 0.51 with the CLFDS, 0.52 with the DAS, 0.34 with the RDFS, 0.40 with the DDS, and 0.48 with the DOS, indicating good construct and criterion-related validity. The results of an exploratory factor analysis for the DCS identified seven factors, accounting for 64.30% of the variance and indicating considerable heterogeneity in the content of the items.
Conclusions: The Farsi version of the DCS has good validity and reliability, and it can be used in clinical, educational, and research settings to assess death concerns in the Iranian society.
Keywords: Death concern, death anxiety, DCS, reliability, validity, factorial structure, nurses, Iran.

Resumo

Introdução: A preocupação com a morte é uma contemplação consciente da realidade da morte combinada com uma avaliação negativa dessa realidade. A Death Concern Scale (DCS) aborda o pensamento, o medo da morte ou a ansiedade em relação à morte. O objetivo deste estudo foi desenvolver uma versão da DCS na língua persa e explorar suas propriedades psicométricas em uma amostra de enfermeiros iranianos.
Métodos: Um estudo transversal foi conduzido para investigar a confiabilidade, validade e estrutura fatorial da versão persa da DCS em uma amostra de conveniência de 106 enfermeiros iranianos em dois hospitais de Teerã, no Irã. Os enfermeiros completaram os seguintes instrumentos: DCS, Collett-Lester Fear of Death Scale (CLFDS), Death Anxiety Scale (DAS), Reasons for Death Fear Scale (RDFS), Death Depression Scale (DDS) e Death Obsession Scale (DOS).
Resultados: Para a DCS, o α de Cronbach foi 0,77, o coeficiente de Spearman-Brown 0,63, o coeficiente *split-half* de Guttman 0,62 e a confiabilidade teste-reteste de duas semanas 0,77. A DCS apresentou correlação de 0,51 com CLFDS, 0,52 com DAS, 0,34 com RDFS, 0,40 com DDS e 0,48 com a DOS, indicando a qualidade do construto e a validade dos critérios relacionados. Os resultados de uma análise fatorial exploratória para a DCS identificaram sete fatores, respondendo por 64,30% da variância e indicando uma heterogeneidade considerável no conteúdo dos itens.
Conclusões: A versão persa da DCS tem boa validade e confiabilidade e pode ser usada em contextos clínicos, educacionais e de pesquisa para avaliar preocupação com a morte na sociedade iraniana.
Descritores: Preocupação com a morte, ansiedade com a morte, DCS, confiabilidade, validade, estrutura fatorial, enfermeiros, Irã.

[1] School of Behavioral Sciences and Mental Health, Tehran Institute of Psychiatry, International Campus, School of Public Health, Iran University of Medical Sciences, Iran. [2] Psychology Program, Stockton University, Galloway, NJ, USA.

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Introduction

Concern or worry is a general feeling of unpleasant irritation, an expectation of danger, and a fear of a danger that seems imminent from an unknown source. Concern or worry can be an emotional strategy or a coping mechanism, but one that is not solution-oriented. Worry can be a series of negative and relatively uncontrollable thoughts and ideas that include the possibility of one or more negative results. Borkovec suggested that concern was linked to the definition of the problem or to cognitive avoidance of expected events.[2] Both concern and worry are intimately related to fear processing.[3]

Death concern focuses on death. Death concern has been defined as the conscious contemplation of the reality of death combined with a negative evaluation of that reality.[4] According to Dickstein's definition of death concern, conscious contemplation is the extent to which one admits to thinking about death, while negative evaluation is a reaction to this contemplation and is similar to death anxiety or death fear.[5] Yalom indicated that one of the major concerns for people is death,[6] and three sources of death fear can be identified: 1) things occurring after death; 2) the process of dying; and 3) the end of existence.[7,8] Indeed, following Melanie Klein, Yalom saw death anxiety as the root of all anxiety. Death anxiety can be considered to be a psychological construct and a personality trait, affected by culture and religion.[9] Western cultures are generally more anxious about death than Eastern cultures.[10]

Fear of death is an emotional reaction involving subjective feelings of unpleasantness and concern based on the contemplation or anticipation of any of the several facts related to death.[11] Fear of death is a multidimensional concept.[12-14] Four components of death anxiety were identified by Lonetto & Templer: 1) concern about the intellectual and emotional impact of dying; 2) concern about the physical changes involved in dying and death; 3) concern about the passage of time; and 4) concern about the pain and stress that can accompany illness and dying.[15] Lester distinguished between fear of death and fear of the dying process, and he also distinguished whether these fears are for one's own death and dying or for the death and dying of significant others.[16]

Dickstein developed a scale containing 32 items with heterogeneous content to measure what he called death concern.[4] The Death Concern Scale (DCS) has been used in many studies. For example, Yilmaz found that gender, self-esteem, death anxiety, and death of a friend/relative within the last month predicted scores on the DCS among Turkish college students. DCS scores were higher in students with lower self-esteem, in female students, and in those who had experienced a recent death of a friend or relative and who had greater death anxiety.[17] Bluck & Dirk reported that higher levels of experience with death were related to lower levels of death anxiety and avoidance. Experience with death can have positive effects on death attitudes, particularly decreasing death anxiety, and can also increase people's death competency or the skills and capabilities in dealing with death.[18] Some studies have found that age, religious beliefs, and having a serious disease are associated with death concern and death anxiety.[19-21] Tobacyk found that those who believed in paranormal phenomena had higher DCS scores than those who did not believe.[22]

Researchers have been interested in the question of whether nurses – who, in the course of their work, deal with sick and dying patients – have a heightened or reduced fear of death. There have been many studies on death anxiety, using various scales, in nurses and nursing students.[23-35] For example, using the Death Attitude Profile Revised (DAP-R), Asadpour et al. found that death anxiety among Iranian nurses was significantly higher in female nurses, in younger nurses with little work experience, in nurses who had no experience in the intensive care unit, and in nurses who had not had death education classes.[36]

There has been a resurgence of interest in death anxiety in medical illness (especially advanced disease), given recent developments in measurement tools and psychotherapeutic treatments to reduce this symptom in patients and families. This field of study is extremely relevant, and the present manuscript offers a useful translation of the DCS into the Farsi language, to promote the study of death anxiety in health care professionals, who are no less subject to the emotional difficulties involved in confronting mortality, and indeed may be burned out by them over time.

There are compelling reasons for translating Dickstein's DCS into the Farsi language, since cultural, religious, and ethnic factors can influence the severity of death concern. Despite the good characteristics of the DCS and its applicability in English-speaking college students, there are no published studies on the validation of the DCS for Iranians. The DCS would be useful in personality research and in clinical practice, but there is a need to estimate the psychometric properties of the DCS after translation. Thus, the aim of the present study was to develop a Farsi version of the DCS and to explore its psychometric properties in a sample of Iranian nurses.

Methods

Participants

A convenience sample of 106 Iranian nurses from different wards of two hospitals located in Tehran, Iran (the Rasool-e-Akram General Hospital affiliated with the Iran University of Medical Sciences, and the Khatam-Al-Anbia General Hospital) were assessed. The nurses provided written consent. The study protocol was approved by an institutional review board. Table 1 shows the characteristics of the sample.

Measures

The nurses completed Dickstein's DCS. The concurrent validity of the DCS was measured using the Collett-Lester Fear of Death Scale (CLFDS),[37] the Templer's Death Anxiety Scale (DAS),[38] the Reasons for Death Fear Scale (RDFS),[7] the Death Depression Scale (DDS),[39] and the Death Obsession Scale (DOS).[40]

The CLDFS, DAS, and RDFS assess the construct of death anxiety/fear; the DDS and DOS assess the construct of death depression and death obsession, and were chosen for concurrent validity. These scales are correlating with DCS. The DCS, developed by Dickstein,[4] contains 30 items divided into two parts. Items 1 to 11 are related to thinking about death and are answered as never (1), rarely (2), sometimes (3), and often (4). Items 12 to 30 are associated with fear or anxiety about death and are answered as strongly agree, somewhat agree, somewhat disagree, and strongly disagree. The DCS also has eight items to control for an acquiescence response set. The acquiescence items are used in scoring or evaluating the measure so that agreement represents high death concern on some items and disagreement high death concern on others, to control for acquiescence response set. Total scores for the 30 items can range from 30 to 120 and are categorized as low (30-67), average (68-80), or high scores (81-120).

For the English version of the DCS, the internal consistency using the Kuder-Richardson formula 20 (KR-20), test-retest and split-half reliabilities were 0.85, 0.87, and 0.85, respectively, in samples of female

Table 1 - Characteristics of the sample

Variable	%
Age (years)	
20-29	26.2
30-39	48.8
40-49	19.0
50+	6.0
Sex	
Women	95.0
Men	5.0
Appointment	
Contract	61.0
Formal	39.0
Work experience (years)	
1-5	32.6
10+	67.4
Position	
Staff nurse	88.0
Head nurse	12.0
Work shift	
Rotational	79.0
Fixed	20.4
Number of patients per shift	
0-9	51.0
Care of end stage patients in the past 3 months	
0-6	58.0
Participation in reclamation operations in the past 3 months	
5+	29.9

college students.[41,42] Other studies have also reported reliabilities around 0.80.[17,43,44] The correlation between two parts of the DCS was strong and positive (r=0.72), indicating that the two set of scores are consistent with each other.[5] Scores on the DCS are moderately correlated with scores on the DAS, ranging from 0.40 to 0.60.[5,45] Factor analyses of the DCS have identified from one single factor to nine factors.[4-5,17,43,44]

For the present study, the 30-item version of the DCS was obtained from the website of Cengage Learning with permission from the senior grant coordinator of Cengage Learning Global Production and Manufacturing. The DCS was translated into Farsi from English by two different translators. Then, the back-translation technique was used to check the adequacy of the translation.

The RDFS, developed by Abdel-Khalek, consists of 18 brief items answered using a Likert-type format.[7] The CLFDS was developed by Collett & Lester and has 32 items answered using a Likert-type format.[37] The DAS was devised by Templer and has 15 false-true items.[38] The DDS was devised by Templer et al. and has 17 items, also answered using a false-true format.[39] The DOS was developed by Abdel-Khalek; it has 15 items answered using a Likert-type format.[40] Previous studies have reported acceptable reliability and validity for these scales.[4,7,37-40] Data on the reliability and validity for these scales can be found in the references cited above. All have been translated into Farsi and used in previous research using Iranian subjects.

Statistical analysis

Data were analyzed by descriptive statistics. Cronbach's α test, Pearson correlation coefficient, principal component analysis, and exploratory factor analysis by varimax rotation were conducted. All analyses were performed using the Statistical Package for the Social Sciences (SPSS) version 16.

Results

The mean total score on the DCS was 72.72 (standard deviation [SD]=10.82). Looking at individual items, the lowest mean score was 1.92 (SD=0.91), for item 10: "When I am outside during a lightning storm I think about the possibility of being struck by lightning." The highest mean score was 2.99 (SD=0.93), for item 28: "The death of the individual is ultimately beneficial because it facilitates change in society" (Table 2).

DCS reliability

Cronbach's α was 0.77, the Spearman-Brown coefficient 0.63, and the Guttman split-half coefficient 0.62, indicating good internal consistency (Table 3). The two-week test-retest reliability was 0.77. Pearson correlations between each item and the DCS total score ranged from -0.15 to 0.64, with a median correlation of 0.37, indicating that the items are heterogenous in content (Table 4).

Correlations with other scales

The correlation of DCS scores with CLFDS scores was 0.51, with DAS scores 0.52, with RDFS scores 0.34, with DDS scores 0.40, and with DOS scores 0.48 (all statistically significant), indicating moderate concurrent validity (Table 5).

Factor analysis of the DCS

The criteria used for the factor analysis were the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and the Bartlett test of sphericity. The KMO was 0.676, indicating sample adequacy, and Bartlett's test of sphericity resulted 1.031E3 (df=436, p<0.001), indicating that the factor analysis was justified. The results of the exploratory factor analysis by varimax rotation on the DCS identified seven factors (64.30% of the variance explained by the factor analysis), confirming the heterogeneous content of the items.

Factor 1 (four items) explained 18.16% of the observed variance and was labeled "Thinking about death." It included the following items: "I think about dying young," "I think about death just before I go to sleep," "I think of how my relatives would act and feel upon my death," and "When I am sick I think about death." Factor 2 (three items) explained 9.94% of the observed variance and was labeled "Death depression, and concern with existential meaningless." It included the items "I think about my own death," "The prospect of my own death depresses me," and "The inevitable death of a person poses a serious challenge to the meaningfulness of human existence." Factor 3 (three items) explained 7.23% of the observed variance and was labeled "Concern about death of loved ones, waste of time, and desire to live on after death." It included the items "I think about the death of loved ones," "Thinking about death is a waste of time," and "I have a desire to live on after death." Factor 4 (three items) explained 6.34% of the observed variance and was labeled "Concern about being to die within a given period of time, morbid thoughts, and fear of dying." It included the following items: "I think of how I would act if I knew I were to die within a given period of time," "My general outlook just doesn't allow for morbid thoughts," and "I am afraid of dying." Factor 5 (three items) explained 5.53% of the observed variance and was labeled "Death anxiety, fear of being dead, and concern about future life." It included the items "The

prospect of my own death arouses anxiety in me," "I am afraid of being dead," and "The question of whether or not there is a future life worries me considerably." Factor 6 (two items) explained 5.15% of the observed variance and was labeled "Concern about the possibility of being to die on a specific place and concern about death in

Table 2 - Mean and SD of the items in the Death Concern Scale (DCS)*

DCS items	Mean	SD
1. I think about my own death.	2.65	0.86
2. I think about the death of loved ones.	2.66	0.93
3. I think about dying young.	2.23	0.94
4. I think about the possibility of my being killed on a city street.	2.27	1.04
5. I have fantasies of my own death.	2.02	1.00
6. I think about death just before I go to sleep.	1.95	0.99
7. I think of how I would act if I knew I were to die within a given period of time.	2.37	1.09
8. I think of how my relatives would act and feel upon my death.	2.40	0.95
9. When I am sick I think about death.	2.34	0.93
10. When I am outside during a lightning storm I think about the possibility of being struck by lightning.	1.92	0.91
11. When I am in an automobile I think about the high incidence of traffic fatalities.	2.02	0.98
12. I think people should first become concerned about death when they are old.	2.35	0.98
13. I am much more concerned about death than those around me.	2.37	0.98
14. Death hardly concerns me.	2.68	0.79
15. My general outlook just doesn't allow for morbid thoughts.	2.66	0.91
16. The prospect of my own death arouses anxiety in me.	2.45	0.87
17. The prospect of my own death depresses me.	2.61	0.88
18. The prospect of the death of my loved ones arouses anxiety in me.	2.80	0.91
19. The knowledge that I will surely die does not in any way affect the conduct of my life.	2.45	0.97
20. I envision my own death as a painful, nightmarish experience.	1.94	0.83
21. I am afraid of dying.	2.60	0.87
22. I am afraid of being dead.	2.55	0.84
23. Many people become disturbed at the sight of a new grave but it does not bother me.	2.44	0.92
24. I am disturbed when I think about the shortness of life.	2.44	0.98
25. Thinking about death is a waste of time.	2.66	0.90
26. Death should not be regarded as a tragedy if it occurs after a productive life.	2.16	1.02
27. The inevitable death of a person poses a serious challenge to the meaningfulness of human existence.	2.35	0.85
28. The death of the individual is ultimately beneficial because it facilitates change in society.	2.99	0.93
29. I have a desire to live on after death.	2.58	0.97
30. The question of whether or not there is a future life worries me considerably.	2.43	0.86

* The minimum and maximum values were all 1-4.

Table 3 - Descriptive statistics for all scales employed

Scales	Mean (SD)	No. of items	Format	Cronbach's α
Death Concern Scale (DCS)	72.72 (10.82)	30	Likert (1-4)	0.73
Collett-Lester Fear of Death Scale (CLDFS)	99.15 (25.14)	32	Likert (1-5)	0.94
Death Anxiety Scale (DAS)	8.27 (2.71)	15	False-true (0-1)	0.60
Reasons for Death Fear Scale (RFDS)	57.70 (14.23)	18	Likert (1-5)	0.90
Death Depression Scale (DDS)	8.07 (4.34)	17	False-true (0-1)	0.84
Death Obsession Scale (DOS)	30.74 (12.35)	15	Likert (1-5)	0.95

SD = standard deviation.

aging." It included the items "I think about the possibility of my being killed on a city street" and "I think people should first become concerned about death when they are old." Factor 7 (two items) explained 4.52% of the observed variance and was labeled "Concern about dying due to a sudden event and concern about death," and it included the items "When I am in an automobile I think about the high incidence of traffic fatalities" and "I am much more concerned about death than those around me" (Table 6).

Discussion

The results of the present study showed that the mean death concern score among the nurses was average. In our study, mean score of the DCS was 72.72 (SD=10.82). In the study of Klug & Boss, the mean score of the DCS was 72.32 (SD=13.53),[5] similar to the mean reported by Dickstein.[4]

The results indicate that the reliability coefficients of the DCS were high, indicating acceptable reliability. Previous studies of versions of the DCS in English and Turkish among college students and church-going adults have reported good reliability (from 0.80 to 0.85) and concurrent validity.[5,17,41-45]

DCS scores correlated moderately but significantly with the criterion scale scores. Both Rajabi & Bahreini[45] and Yilmaz[17] found significant correlations between DCS and DAS scores. However, these associations are only moderate, suggesting that the DCS measures a variable somewhat different from death anxiety, death obsession and death depression. It means that the DCS scale has moderate concurrent validity based on the scale applied.

Item-total correlations, and inter-item correlations of the DCS are very heterogenous. The findings of Yilmaz[17] and Klug & Boss[43] demonstrated low to moderate relations among the items and also between the items and total scores of the DCS. Waskel found relationships for seven items on the scale.[46]

We identified seven factors in the study (64.30% of the variance). The internal consistency of the factors (Cronbach's α) were between 0.55 and 0.76. We identified seven factors in the study (64.30% of the variance). The factors explained 18.16 to 4.52% of the variance for the first and seventh factors, respectively. The factor analyses of the DCS have identified a single factor,[4] two factors,[43,44] three factors,[5] and nine factors.[17] Therefore, the number of factors appears to depend on the sample chosen and the statistical techniques employed.

Our components were not consistent with the theoretical formulation of one, two or three components described in the studies by Dickstein,[4] Klug & Boss,[5,43] Yilmaz,[17] and Hammer & Brookings.[44] The factors found by Klug & Boss explained 25% of the variance in one study[43] and 31.3% in another.[5] Yilmaz[17] explained 60% of the variance, near to our finding (64.30%).

Klug & Boss[43] and also Hammer & Brookings[44] found two factors for the DCS: "Conscious contemplation" and "Negative evaluation," with moderately correlated, congruent coefficients of 0.96 and 0.92, respectively. Components had moderately correlated with each other. Klug & Boss[43] suggested the elimination of some items from the DCS and that two items of "Conscious contemplation" and "Negative evaluation" should instead be sustained, and only the second factor was considered as specifically characterizing death anxiety. Overall, Yilmaz[17] indicated that nine factors were too high and each of these factors could not be labeled

Table 4 - Pearson correlations (*r*) between items in the Death Concern Scale (DCS) and the total score

Item	*r*	Item	*r*
1	0.23*	16	0.46*
2	-0.15	17	0.35*
3	0.47*	18	0.22†
4	0.09	19	0.15†
5	0.51*	20	0.27*
6	0.59*	21	0.26*
7	0.59*	22	0.41*
8	0.57*	23	0.08
9	0.52*	24	0.40*
10	0.55*	25	0.38*
11	0.64*	26	0.27*
12	0.21†	27	0.14
13	0.42*	28	0.31*
14	0.16	29	0.27*
15	0.47*	30	0.55*

* Correlation significant at 0.01.
† Correlation significant at 0.05.

Table 5 - Pearson correlations (*r*) between scores of the Death Concern Scale (DCS) and of the scales used to assess concurrent validity

Scales	*r*
Collett-Lester Fear of Death Scale (CLDFS)	0.51*
Death Anxiety Scale (DAS)	0.52*
Reasons for Death Fear Scale (RDFS)	0.34*
Death Depression Scale (DDS)	0.40*
Death Obsession Scale (DOS)	0.48*

* Correlation significant at 0.01.

Table 6 - Factor loadings (≥0.50) for the Farsi version of the Death Concern Scale (DCS) among Iranian nurses*

DCS items	Component						
	F1	F2	F3	F4	F5	F6	F7
1. I think about my own death.		**0.691**					
2. I think about the death of loved ones.			**-0.728**				
3. I think about dying young.	**0.608**						
4. I think about the possibility of my being killed on a city street.						**0.806**	
5. I have fantasies of my own death.							
6. I think about death just before I go to sleep.	**0.792**						
7. I think of how I would act if I knew I were to die within a given period of time.				**0.548**			
8. I think of how my relatives would act and feel upon my death.	**0.593**						
9. When I am sick I think about death.	**0.587**						
10. When I am outside during a lightning storm I think about the possibility of being struck by lightning.							
11. When I am in an automobile I think about the high incidence of traffic fatalities.							**0.589**
12. I think people should first become concerned about death when they are old.						**-0.652**	
13. I am much more concerned about death than those around me.							**0.751**
14. Death hardly concerns me.							
15. My general outlook just doesn't allow for morbid thoughts.				**0.714**			
16. The prospect of my own death arouses anxiety in me.					**0.603**		
17. The prospect of my own death depresses me.		**-0.538**					
18. The prospect of the death of my loved ones arouses anxiety in me.							
19. The knowledge that I will surely die does not in any way affect the conduct of my life.							
20. I envision my own death as a painful, nightmarish experience.							
21. I am afraid of dying.				**0.710**			
22. I am afraid of being dead.					**0.771**		
23. Many people become disturbed at the sight of a new grave but it does not bother me.							
24. I am disturbed when I think about the shortness of life.							
25. Thinking about death is a waste of time.			**0.785**				
26. Death should not be regarded as a tragedy if it occurs after a productive life.							
27. The inevitable death of a person poses a serious challenge to the meaningfulness of human existence.		**0.696**					
28. The death of the individual is ultimately beneficial because it facilitates change in society.							
29. I have a desire to live on after death.			**0.561**				
30. The question of whether or not there is a future life worries me considerably.					**0.537**		
Eigen value	5.44	2.98	2.16	1.90	1.66	1.34	1.35
% of variance	18.16	9.94	7.23	6.34	5.53	5.15	4.52
% of total variance	64.30						

Factor 1 (items 3, 6, 8, and 9): Thinking about death.
Factor 2 (items 1, 17, and 27): Death depression and concern of existential meaningless.
Factor 3 (items 2, 25, and 29): Concern about death of loved ones, waste of time, and desire to live on after death.
Factor 4 (items 7, 15, and 21): Concern about being to die within a given period of time, morbid thoughts, and fear of dying.
Factor 5 (items 16, 22, and 30): Death anxiety, fear of being dead, and concern about future life.
Factor 6 (items 4 and 12): Concern about the possibility of being to die on a specific place and concern about death in aging.
Factor 7 (items 11 and 13): Concern about dying due to a sudden event and concern about death.
* Items with high loadings (≥0.50) are presented in bold to more clearly differentiate the factors.

appropriately. Due to these reasons, the number of factors was decreased to five.

Therefore, Klug & Boss,[43] Hammer & Brookings,[44] and Yilmaz[17] suggested that the usefulness of the DCS may be enhanced by the utilization of separate scores for each of these factors. Results of the factor analyses of the DCS corroborated the subjective judgments of five independent judges.[10,43]

Our factor analysis indicated that the items of the DCS are very heterogenous, and thus further research is warranted to see if the items could be reduced or modified in order for the DCS to measure one or two more homogenous variables. Interpretation of each factor is needed based on the correlation between the items and the unobserved latent variable.

Because the DCS has been used in as varied populations as college students and church-going adult samples with different religions and cultures, and with various rotation methods and factor loading coefficients, our findings were very different. However, there were similar and different views regarding the factorial validity of the scale and thus about the use of the scale in its proposed four-factor structure.

Conclusions

The present study had some limitations. The sample comprised mostly female nurses and was too small to take into account their different occupational positions (e.g., operating room, pediatric nurses, etc.). Despite these limitations, we conclude that the Farsi version of the DCS presented good validity and reliability and can be used with Iranian samples in research and clinical settings. The Farsi version of the DCS may provide an opportunity for researches to conduct cross-cultural comparisons, and future studies should be conducted with diverse populations and different sociodemographic backgrounds.

Disclosure

No conflicts of interest declared concerning the publication of this article.

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Correspondence:
mahboubehdadfar@yahoo.com

Appendix 1 - The Farsi version of the Death Concern Scale (DCS)

نسخه فارسی مقیاس نگرانی مرگ

تفکر و تعمق در باره مرگ تنوعی از افکار و احساسات را در ما بوجود می آورد. تا حدودی، فلسفه ما در باره جایگاه مرگ در زندگی انسان و تاثیری که مرگ روی پاسخ های ما بجا می گذارد را دنبال می کند. مقیاس نگرانی مرگ شامل 30 عبارت است که اضطراب، دلهره و هراس را وقتی که ما در باره مرگ فکر می کنیم، اندازه گیری می کند. این مقیاس شامل دو بخش است.

دستورالعمل: به سوال های 1 تا 11 از طریق وارد کردن رمز زیر پاسخ دهید و سپس عدد پاسخ داده شده را در مربع سفید وارد کنید.

1= هرگز 2= بندرت 3= گاهی اوقات 4= اغلب

☐ 1. در باره مرگ خودم فکر می کنم.

☐ 2. در باره مرگ عزیزانم فکر می کنم.

☐ 3. در باره مردن در جوانی فکر می کنم.

☐ 4. در باره احتمال کشته شدن خودم در یک خیابان شهر فکر می کنم.

☐ 5. خیال پردازی هایی در باره مرگ خودم دارم.

☐ 6. در باره مرگ خودم درست قبل از خوابیدن فکر می کنم.

☐ 7. فکر می کنم چگونه عمل خواهم کرد اگر می دانستم که در یک دوره زمانی معین می میرم.

☐ 8. در باره اینکه بستگانم در مورد مرگ من چگونه عمل و احساس خواهند کرد، فکر می کنم.

☐ 9. وقتی بیمار هستم در باره مرگ فکر می کنم.

☐ 10. وقتی بیرون از فاصله طوفان رعد و برق هستم، در باره احتمال اینکه رعد و برق به من اصابت کند، فکر می کنم.

☐ 11. وقتی در یک اتومبیل هستم، در باره بروز بالای مرگ در ترافیک فکر می کنم.

به سوال های 12 تا 30 با استفاده از رمز ارائه شده در زیر پاسخ دهید و سپس عدد پاسخ داده شده را در مربع سفید وارد کنید.

ش موا = شدیداً موافقم موا = تا حدی موافقم مخا = تا حدی مخالفم ش مخا = شدیداً مخالفم

☐ 12. فکر می کنم وقتی مردم پیر می شوند ابتدا بایستی در باره مرگ نگران باشند.

ش موا	موا	مخا	ش مخا
1	2	3	4

☐ 13. بیشتر از افراد دور و برم نگران مرگ هستم.

ش موا	موا	مخا	ش مخا
4	3	2	1

☐ 14. مرگ مرا به شدت نگران می کند.

ش موا	موا	مخا	ش مخا
1	2	3	4

☐ 15. دیدگاه کلی ام اجازه پرداختن صرف به افکار بیمارگون را به من نمی دهد.

ش موا	موا	مخا	ش مخا
1	2	3	4

☐ 16. پیش بینی مرگم در من اضطراب ایجاد می کند.

ش موا	موا	مخا	ش مخا
4	3	2	1

☐ 17. پیش بینی مرگم مرا افسرده می کند.

ش موا	موا	مخا	ش مخا
4	3	2	1

☐ 18. پیش بینی مرگ عزیزانم در من اضطراب ایجاد می کند.

ش موا	موا	مخا	ش مخا
4	3	2	1

☐ 19. آگاهی از اینکه مطمئنا خواهم مرد بهیچ وجه روی اداره کردن زندگی ام تاثیر نمی گذارد.

ش موا	موا	مخا	ش مخا
1	2	3	4

☐ 20. رویای مرگم را به عنوان یک تجربه دردناک، ترسناک (کابوس مانند) می بینم.

ش موا	موا	مخا	ش مخا
4	3	2	1

☐ 21. از مردن می ترسم.

ش موا	موا	مخا	ش مخا
4	3	2	1

☐ 22. از مرده بودن می ترسم.

ش موا	موا	مخا	ش مخا
4	3	2	1

☐ 23. بسیاری از مردم با نزدیک شدن به یک قبر جدید خیلی ناراحت و پریشان می شوند ولی این موضوع مرا رنج نمی دهد.

ش موا	موا	مخا	ش مخا
1	2	3	4

☐ 24. وقتی در باره کوتاهی عمرم فکر می کنم، خیلی ناراحت و پریشان می شوم.

ش موا	موا	مخا	ش مخا
4	3	2	1

☐ 25. فکر کردن در باره مرگ اتلاف وقت و هدر دادن زمان است.

ش موا	موا	مخا	ش مخا
1	2	3	4

☐ 26. اگر مرگ بعد از یک زندگی پربار اتفاق بیفتد نبایستی به عنوان یک حادثه غم انگیز در نظر گرفته شود.

ش موا	موا	مخا	ش مخا
1	2	3	4

☐ 27. مرگ اجتناب ناپذیر یک فرد، یک چالش جدی برای معنادهی تجربه انسانی به شمار می آید.

ش موا	موا	مخا	ش مخا
4	3	2	1

☐ 28. مرگ فرد نفع نهایی و غایی است زیرا مرگ تغییر در جامعه را تسهیل می کند.

ش موا	موا	مخا	ش مخا
1	2	3	4

☐ 29. میل به زندگی پس از مرگ دارم.

ش موا	موا	مخا	ش مخا
4	3	2	1

☐ 30. این سوال که آیا زندگی در آینده وجود دارد یا نه مرا به طور قابل ملاحظه ای نگران می کند.

ش موا	موا	مخا	ش مخا
4	3	2	1