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The Reliability, Validity, and Factorial Structure of the Collett-Lester Fear of Death Scale in a Sample of Iranian Nurses

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ABSTRACT

The fear of death is an emotional reaction involving subjective feelings of unpleasantness and concern based on contemplation or anticipation of any of the several facts related to death. A cross-sectional study was conducted to investigate reliability, validity, and factorial structure of the Farsi version of Collett-Lester Fear of Death Scale (CLFDS) in 106 Iranian nurses from two hospitals at Tehran city, Iran. They were selected using a convenience sampling method, and completed the Collett-Lester Fear of Death Scale (CLFDS), the Death Concern Scale (DCS), the Death Anxiety Scale (DAS), the Reasons for Death Fear Scale (RDFS), the Death Depression Scale (DDS), and the Death Obsession Scale (DOS). The Cronbach alpha coefficient for the CLFDS was 0.94, the Spearman-Brown coefficient 0.83, the Guttman Split-Half coefficient 0.83, and two-week test-retest reliability 0.58. Cronbach alpha coefficients for the four subscales of the CLFDS were 0.79 for Your own death, 0.90 for Your own dying, 0.75 for The death of others, and 0.90 for The dying of others. The CLFDS correlated 0.51 with the DCS, 0.38 with the DAS, 0.39 with the RDFS, 0.39 with the DDS, and 0.46 with the DOS, significant at the .01 level and indicating good construct and criterion-related validity. The results of the factor analysis of the CLFDS items identified 7 factors, four of which had 4 or more items loaded on them and matching the labels of the four subscales The CLFDS, therefore, appears to have good validity and reliability, and it can be used in clinical, educational, and research settings.

Keywords: Death fear, validity, reliability, factorial structure, CLFDS, nurses, Iran

INTRODUCTION

Death fear is defined as a morbid, abnormal or persistent anxiety of one's own death or the process of his/her dying [1]. Death fear is a state in which people experience negative emotional reactions in recognition of their own mortality [2]. Death fear includes prediction of own death and fear of the death and dying process involving significant persons in one's life [3]. When people are faced with death, they show different reactions to it. Death fear appears to be a basic fear at the core of a range of mental disorders, including hypochondriasis, panic disorder, anxiety and depressive disorders. It is a trans-diagnostic construct involved in numerous disorders [4]. Death anxiety is used interchangeably with fear of death [5]. Death anxiety is a type of bound anxiety in which the source of anxiety is the fear of death [6].

Nursing often involves care of the dying. Nurses are exposed to dying patients in the course of their clinical work, and the personal attitudes of nurses about death and dying may affect the quality of care that they provide during the terminal stages of a patient's life. [7-12]. Research on how death anxiety and the attitudes of nurses affect the nursing care of dying patients has identified three key variables: (1) The level of death anxiety of nurses, (2) Attitudes toward the care of dying patients, and (3) The role of death education for nurses [13].

Chen, Del Ben, Fortson et al (2006) found that nursing students who had experienced the death of other people reported significantly more fear of the dying process than nursing students who had not. Both experienced and inexperienced nursing students had more fear of the unknown than controls [14]. Halliday and Boughton (2008) reported high scores on the Revised Death Anxiety Scale (RDAS) in hospice nurses [15]. Aghajani, Valiee, and Tol (2010) found that death anxiety was higher in critical care nurses, and these nurses cared for more dying patients than nurses in the general wards [16]. Naderi, Bakhtiar pour, and Shokohi (2010) found significant differences in death anxiety among female nurses working in emergency departments, intensive care units, renal, surgical and psychiatric wards, operating rooms, and children's units. Female nurses working in emergency departments reported less death anxiety than female nurses who working in operating rooms [17]. Ayyad (2013) found that nurses dealing with critical cases and working in higher stress wards, such as intensive care units, obtained higher mean scores on the Reasons for Death Fear Scale (RDFS) than nurses who working in lower stress wards such as internal medicine [18]. Peters et al (2013) reported that younger nurses reported more fear of death and more negative attitudes to end-of-life patient care [13].

Kang and Han (2013) investigated four variables: the meaning of death, death anxiety, death concern, and respect for life among nurses. They found that a positive meaning of death was negatively correlated with death anxiety and death concern and positively with respect for life; death anxiety was positively correlated with death concern and negatively with respect for life; death concern was negatively correlated with respect for life. Compared with nurses who served in an ICU for a long time, nurses with less ICU experience scored lower on the meaning of death and respect for life, but higher on anxiety and concern about death [19]. Kim and Yong (2013) reported that death anxiety was positively correlated with burnout levels in Korean nurses [20]. Sharif Nia, Lehto, Ebadi, and Peyrovi (2016) reported that there was death anxiety among nurses and health care professionals who are exposed to sickness, trauma, and violence. Death anxiety was also related to more negative attitudes toward managing dying patients and their families [21].

Nurses often have to work with dying patients, and their concerns, fears, and anxieties regard to the death and dying can have an impact on their mental and physical health. The death of patients has an impact on nurses. This can affect them both in their work environment and outside of work [22]. Their fear of death can influence their communication with and quality of care delivery for dying patients. Information from research on attitudes of nurses toward caring for dying patients can play a useful role in the education of nurses [23]. It is a major challenge both in interactions of nurses with patients, families of patients, and perceptions of nurses of themselves and their efforts in end-of-life care for patients [24]. Valiee, Negarandeh, and Dehghan Nayeri (2012) stressed the need for providing the nurses with psychological support when attending to the management of the patients and their families and engaging nurses in decision making about end-of-life patients. They suggested that managers should provide specialized units for providing care to end-of-life patients and supporting the nurses involved [25]. Nurses need to be supported also by their own families consistently. Ignoring the needs of nurses can have adverse effects on the patients and their community [26].

Lehto and Stien (2009) identified defining attributes, antecedents, and consequences of the concept of fear of death among nurses [27]. Hinderer (2012) explored critical care experiences of nurses associated with deaths of patients and found four themes: coping, personal distress, emotional disconnect, and inevitable death [28]. Valiee et al (2012), using a qualitative design with conventional content analysis of in-depth interviews with ten nurses from an ICU ward, reported that three main themes emerged: psychological harm, lack of feeling attributed by the nurses to patients, and sticking to the inner voice for the nurses [25]. Karimi Moneghy et al (2013) using a phenomenological approach and interviews with twelve nurses from high mortality wards, identified five themes in nurses' experience of dealing with dying patients: mental erosion, maladaptive interpersonal interactions, stress from caring for the patients, feelings of sadness, and normalization that portrayed the experiences of nurses concerning the patient deaths. Nurses were experiencing serious problems [26].

In order to design appropriate care and support systems for dying patients and their families, it is important, therefore, to examine nurses' attitudes and beliefs, since the attitude of nurses to death can affect how they care for dying patients and their families. If healthcare workers believe that death is an ominous and frightening event, they will not be able to assist patients in dying peacefully. Identifying the daily experiences of nurses with dying patients would be useful for setting and monitoring adequate standards of care [29-30]. Naderi and Shokohi (2010) stated that enough understanding and maturity, along with positive attitude toward death, could result in decreasing the death anxiety in nurses [31].

Culture is closely related and intertwined with health and nursing [32-33]. Some research has been conducted with Iranian nurses and their emotional needs involving death issues [16-17, 31, & 34-37]. On the Death Concern Scale (DCS) and a Death Obsession Scale (DOS), Dadfar, and Lester (2015) showed that Iranian women nurses did not differ from women non-nurses [38]. On the RDAS, Dadfar, Asgharnejad Farid, Atef Vahid, Lester, et al (2014) found that Iranian women nurses had significantly higher scores than a control group on only two items: grieving over what they would leave behind (wealth, valuables, etc.) and over the loss of self or identity [39]. On the Collett-Lester Fear of Death Scale (CLFDS), Dadfar, and Lester (2014) reported that Iranian women nurses had higher scores for the total and subscales scores for your own death, your own dying, the death of others and the dying of others than the control group, but these differences were not significant [40].

The CLFDS is perhaps the most commonly used tool that clearly and systematically distinguishes between two key dimensions involving death, (1) The state of death vs. the process of dying, and (2) One's own death vs. the death of others. Therefore, it includes four subscales: Death of Self (e.g., the total isolation of death, the shortness of life, never thinking or experiencing again); Dying of Self (e.g., the pain involved in dying, intellectual degeneration, lack of control over process, the grief of others); Death of Others (e.g., losing someone close, never being able to communicate with them again, feeling lonely without the person); and Dying of Others (e.g., watching the person suffer, having to be with someone who is dying). Data on the psychometric properties of the CLFDS would contribute to the literature of measuring the fear of death.

There are compelling reasons for translating the CLFDS into the Farsi language and studying its psychometric properties since cultural, ethnic, and socio demographic factors related to death fear can influence the severity of the fear of death. Despite the good characteristics of the CLFDS and its applicability in British, American, Spanish, Japanese, Nigerian, Chilean, Kuwaiti, Egyptian, and Turkish, there are no published studies on the factorial structure of the CLFDS among Iranian nurses. Western countries and Iran do not share the religion of Islam. Therefore, the present research was carried out in order to adapt and implement the CLFDS in Iran. The CLFDS would be useful in research in personality, clinical practice and cross-cultural comparisons. To carry out research on death fear in a different culture, there is a need to estimate the psychometric properties of the CLFDS. Thus, the aim of the present study was to develop a Farsi version of the CLFDS and to explore its psychometric properties in a sample of Iranian nurses.

MATHERIALS AND MATHODS

Participants

The sample was 106 Iranian nurses. They were selected using a convenience sampling method from different wards of two hospitals in Tehran, Iran: Rasoul-e-Akram General Hospital affiliated with Iran University of Medical Sciences, and the Khatom-Al-Anbia General Hospital. The age of nurses was 20-29 (26.2%), 30-39 (48.8%), 40-49 (19%), and 50 and higher (6%); 95% were female. The modal nurse had a bachelor's degree and higher (60%), and was married (59.5%). The type of appointment of the majority of nurses was contract (61%) vs. formal (39%). Work experience was 1-5 years (32.6%), and 10 and higher (67.4%). The organizational position was staff nurse (88%) vs. head nurse (12%). The majority of work shift was rotational (79%) vs. fixed (20.4%). The number of patients per shift was 0-9 (51%); care of end stage patients in past 3 months was 0-6 (58%); direct participation number in reclamation operations in past 3 months was 6 and higher (21.2%); and the observed number the death of patients in past 3 months was 5 and higher (29.9%). They completed the Collett-Lester Fear of Death Scale (CLFDS), Death Concern Scale (DCS), Reasons for Death Fear Scale (RDFS), Death Anxiety Scale (DAS), Death Depression Scale (DDS), and Death Obsession Scale (DOS).

Measures

The Collett-Lester Fear of Death Scale (CLFDS)

The CLFDS was developed by Collett, & Lester (1969) in the USA [41]. Since its original development, the CLFDS has been revised, reducing the number of items from 36 to 28 in order to have equal weighting across the subscales for scoring purposes, and to remove problematic or deviant items [42-43]. A respondent can respond to each question using a Likert scale of 1-5 with one and two being low death anxiety, three and four being somewhat anxious and five being very anxious [44]. In another scoring the CLFDS is rated to not (1), somewhat (2, 3, 4), and very (5). The CLFDS's cut off score for low death anxiety is two or less for each question. Despite a potentially problematic factor structure, it has been used extensively in a wide range of research areas, and more has been adapted for use with languages other than English [45-47]. The CLFDS has also been used in evaluating the impact of training programs on participants' fear of death, such as palliative care volunteer training [48-52], and death education for nursing students [53-54].

Lester (1990) noted that psychometric studies of other death anxiety instruments [44] and related variables such as death competency have often utilized the CLFDS in order to establish their validity [55]. For example, Robbins (1990-1991) found that the Coping with Death Scale was negatively associated with the CLFDS which provided some degree of convergent validity for the measure [56]. Lester (1990) reviewed research using the CLFDS and found that the scale has acceptable reliability and validity, Cronbach's alphas for the four subscales of the CLFDS were 0.91 for Your own death, 0.89 for Your own dying, 0.72 for The death of others, and 0.87 for The dying of others [44]. Zeyrek and Lester (2008) reported that, in a sample of 100 Turkish undergraduates, the CLFDS had adequate interterm reliability and adequate concurrent validity with the DAS [57]. The Pearson correlation between the CLFDS and the Arabic Scale of Death Anxiety was significant and positive [58]. Abdel-Khalek, and Lester (2004) obtained good Cronbach reliabilities for the four subscales and total score, ranging from 0.75 to 0.92 and acceptable test-retest reliability for the four subscales of the Arabic version of the revised CLFDS [45]. Tomas-Sabado, Limonero, and Abdel-Khalek (2007) achieved good internal consistency and satisfactory test-retest reliability of the four subscales of the Spanish version of the CLFDS [47]. Kolawole, and Olusegun (2008) found good reliability and convergent validity for the revised CLFDS (version 3) in a sample of Nigerian medical students [59]. Venegas, Alvarado, and Barriga (2011) found that the 28 items of the CLFDS possessed good internal consistency as a whole (0.91), and also for the four subscales 0.77, 0.82, 0.80, and 0.78, and construct validity as confirmed by the significant correlation with the Attitude Toward Death Scale (ATDS: r=0.43), Factor analysis partially supported content validity of the subscale items, but identified a modified multidimensional structure that pointed towards the reconceptualization of the subscales in a sample of Chilean nursing students [60]. Sifontes, Moreira, and Urrea (2012) reported that Cronbach alphas for the Spanish version of the CLFDS were 0.75, 0.69, 0.80 and 0,81 for subscales of Fear of self-death, Self-dying, Death of some others, and Dying of others, respectively, in a sample of medical students [61].

In the present study, the 32-item version of the CLFDS was translated into Farsi from English. Then, the back translation technique was carried out to check on the adequacy of the translation.

Other Scales

The Death Concern Scale (DCS), developed by Dickstein (1972), contains 30 items in two parts. Items 1 to 11 are related to thinking about death, and Items 12 to 30 are associated with fear or anxiety about death [62]. The Death Anxiety Scale (DAS) was developed by Templer (1970), and has 15 true-false items [63]. The Reasons for Death Fear Scale (RDFS), developed by Abdel-Khalek (2002), consists of 18 brief items [64]. The Death Depression Scale (DDS), developed by Templer, Lavoie, Chalgujian and Thomas-Dobson (1990), is a 17-item scale [65]. The Death Obsession Scale (DOS) was developed by Abdel-Khalek (1998), and has 15 Likert format items [66]. Previous studies have reported desirable reliability and validity for all the scales [62-66]. In the present study, Farsi validated forms of the DCS, DAS, RDFS, DDS, and DOS were used.

RESULTS

The mean total score on the CLDFS was 99.15 (*SD*=25.14) and for the CLDFS subscales 22.50 (*SD*=6.50) for Your own death, 24.67 (*SD*=8.28) for Your own dying, 26.17 (*SD*=7.25) for The death of others, and 25.79 (*SD*=7.82) for the dying of others.

The lowest mean score for Your own death subscale was 2.59 (SD=1.11) for item 6 "Never thinking or experiencing anything again", and the highest mean score 3.22 (SD=1.31) for item 7 "The possibility of pain and punishment during life-after-death". The lowest mean score for Your own dying subscale was 2.72 (SD=1.29) for item 9 "The physical degeneration involved in a slow death", and the highest mean score 3.34 (SD=1.35) for item 12 "That your abilities will be limited as you lay dying". The lowest mean score for The death of others subscale was 2.60 (SD=1.41) for item 22 "Feeling guilty that you are relieved that they are dead", and the highest mean score 4.09 (SD=1.22) for item 17 "The loss of someone close to you". The lowest mean score for The dying of others subscale was 2.86 (SD=1.28) for item 26 "Having them want to talk about death with you", and the highest mean score 3.67 (SD=1.28) for item 27 "Watching them suffer from pain" (Table 1).

Table 1. Mean and SD of the CLFDS items

CLDFS Items of subscales	Minimum	Maximum	Mean	SD
Your own death				
1	1.00	5.00	2.87	1.16
2	1.00	5.00	2.67	1.16
3	1.00	5.00	2.62	1.40
4	1.00	5.00	2.69	1.33
5	1.00	5.00	3.00	1.20
6	1.00	5.00	2.59	1.11
7	1.00	5.00	3.22	1.31
8	1.00	5.00	2.97	1.53
Your own dying				
9	1.00	5.00	2.72	1.29
10	1.00	5.00	3.02	1.33
11	1.00	5.00	3.28	1.30
12	1.00	5.00	3.34	1.35
13	1.00	5.00	3.11	1.22
14	1.00	5.00	3.22	1.37
15	1.00	5.00	2.94	1.47
16	1.00	5.00	3.24	1.40
The death of others				
17	1.00	5.00	4.09	1.22
18	1.00	5.00	3.06	1.44
19	1.00	5.00	3.23	1.34
20	1.00	5.00	3.55	1.17
21	1.00	5.00	3.51	1.24
22	1.00	5.00	2.60	1.41
23	1.00	5.00	3.42	1.36
24	1.00	5.00	2.81	2.33
The dying of others				
25	1.00	5.00	3.28	1.27
26	1.00	5.00	2.86	1.28
27	1.00	5.00	3.67	1.28
28	1.00	5.00	3.13	1.25
29	1.00	5.00	3.27	1.31
30	1.00	5.00	3.11	1.15
31	1.00	5.00	3.33	1.28
32	1.00	5.00	3.10	1.28

Reliability coefficients of the CLDFS

Cronbach alpha coefficient for the total CLDFS score was 0.94, Spearman-Brown coefficient 0.83, and Guttman Split-Half coefficient 0.83. Cronbach alpha coefficients for the CLFDS subscales were 0.79 for Your own death 0.90 for Your own dying 0.75 for The death of others, and 0.90 for The dying of others, indicating high internal consistency (Table 2). The two-week test-retest reliability of the CLFDS was 0.58.

Table 2. Descriptive statistics for all scales

Scales	Mean	SD	Number of items	Format	Cronbach's Alpha
Collett-Lester Fear of Death Scale (CLDFS)	99.15	25.14	32	Likert (1-5)	.94
Subscales of the CLDFS					
Your own death	22.50	6.50	8	Likert (1-5)	.79
Your own dying	24.67	8.28	8	Likert (1-5)	.90
The death of others	26.17	7.25	8	Likert (1-5)	.75
The dying of others	25.79	7.82	8	Likert (1-5)	.90
Death Concern Scale (DCS)	72.72	10.82	30	Likert (1-4)	.77
Death Anxiety Scale (DAS)	8.27	2.71	15	False-True (0-1)	.60
Reasons for Death Fear Scale (RFDS)	57.70	14.23	18	Likert (1-5)	.90
Death Depression Scale (DDS)	8.07	4.34	17	False-True (0-1)	.84
Death Obsession Scale (DOS)	30.74	12.35	16	Likert (1-5)	.95

Correlations of inter- subscales, inter-items, and total scores of the CLFDS

The Pearson correlations between the CLFDS subscales scores ranged between .48 for Your own death and The dying of others to 0.67 for Your own death and Your own dying, indicating moderate associations between the subscales. The Pearson correlations between the CLFDS total score and subscales scores were between 0.81 for The dying of others to .88 for Your own dying, indicating high association between the CLFDS total score and the subscales. All correlations were significant at the 0.01 level (Table 3).

Table 3. The Pearson correlations (r) between the CLFDS subscales and total scores

Subscales	Your own death	Your own dying	The death of others	The dying of others	Total score
Your own death	1				
Your own dying	.671**	1			
The death of others	.639**	.661**	1		
The dying of others	.478**	.583**	.624**	1	
Total score	.813**	.876**	.866**	.807**	1

*** Correlation is significant at the 0.01 level*

The Pearson correlations between the individual items and the CLFDS total scores ranged between 0.23 for item 024 (significant at the 0.05 level) to 0.73 for item 30 (significant at the 0.01 level), indicating low to high association between the individual items and the CLFDS total scores.

The inter-items correlations of the CLFDS ranged between -0.01 for items 7 and 24 (not significant), and 0.73 for items 28 and 29 (significant at the 0.01 level), indicating the importance of distinguishing the four types of death anxiety using the CLFDS.

Correlations of the CLFDS with other scales

The Pearson correlations between the CLFDS and other scales were between 0.38 for the DAS to 0 .51 for the DCS, indicating only a moderate construct and criterion-related validity and association between the measures (Table 4).

Table 4. The Pearson correlations (r) between the scales

Scales	r with CLFDS
Death Concern Scale (DCS)	.51**
Death Anxiety Scale (DAS)	.38**
Reasons for Death Fear Scale (RDFS)	.39**
Death Depression Scale (DDS)	.39**
Death Obsession Scale (DOS).	.46**

*** Correlation is significant at the 0.01 level.*

Factor Analysis of the CLFDS

The criteria for the factor analysis were evaluated using the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and the Bartlett Test of Sphericity. The KMO was 0.867, indicating the adequacy of the sample of nursing, and the Bartlett's Test of Sphericity was 1.956E3 (df = 496, p< .001) indicating that the factor analysis was justified in the nursing sample. The results of exploratory factor analysis on CLFDS identified 7 factors (68.48%).

Factor 1 (7 items) explained 38.02% of the observed variance and was labeled: "Fear of the dying of others". It included the items: "Having to be with someone who is dying", "Having them want to talk about death with you", "Watching them suffer from pain", "Having to be the one to tell them that they are dying", "Seeing the physical degeneration of their body", "Not knowing what to do about your grief at losing them when you are with them", and "Watching the deterioration of their mental abilities".

Factor 2 (10 items) explained 8.71% of the observed variance and was labeled: "Fear of your own dying". It included the items: "The possibility of pain and punishment during life–after-death", "The disintegration of your body after you die", "The physical degeneration involved in a slow death", "The pain involved in dying", "The intellectual degeneration of old age", "That your abilities will be limited as you lay dying", "The uncertainty as to how bravely you will face the process of dying", "Your lack of control over the process of dying", "The possibility of dying in a hospital away from friends and family", and "The grief of others as you lay dying".

Factor 3 (4 items) explained 5.93% of the observed variance and was labeled: "Fear of the death of others". It included the items: "Never being able to communicate with them again", "Regret over not being nicer to them when they were alive", "Growing old alone without them", and "Feeling lonely without them".

Factor 5 (4 items) explained 4.08% of the observed variance and labeled: "Fear of your own death". It included the items: "Missing out on so much after you die", "Dying young", "How it will feel to be dead", and "Never thinking or experiencing anything again".

The remaining factors had two or fewer items. Factor 4 (2 items) explained 4.53% of the observed variance and labeled: "Fear of total isolation of death, and shortness of life". It included the items: "The total isolation of death", and "The shortness of life". Factor 6 (1 item) explained 3.73% of the observed variance and labeled: "Fear of having to see dead body of others". It included the items: "Having to see their dead body". Factor 7 (2 items) explained 3.45% of the observed variance and labeled: "Guilt feeling, and envious of death of others". It included the items: "Feeling guilty that you are relieved that they are dead", and "Envious that they are dead" (Table 5-6 and Figure 1).

Table 5. Factor loadings of the Farsi version of the Collett-Lester Fear of Death Scale (CLDFS) in Iranian nurses (*N*=106)

(CLFDS) Items	Component						
Your own death	**F1**	**F2**	**F3**	**F4**	**F5**	**F6**	**F7**
1. The total isolation of death				**.519**			
2. The shortness of life				**.784**			
3. Missing out on so much after you die					**.691**		
4. Dying young					**.496**		
5. How it will feel to be dead					**.670**		
6. Never thinking or experiencing anything again					**.767**		
7. The possibility of pain and punishment during life –after -death		**.533**					
8. The disintegration of your body after you die		**.523**					
Your own dying							
9. The physical degeneration involved in a slow death		**.646**					
10. The pain involved in dying		**.612**					
11. The intellectual degeneration of old age		**.566**					
12. That your abilities will be limited as you lay dying		**.814**					
13. The uncertainty as to how bravely you will face the process of dying		**.654**					
14. Your lack of control over the process of dying		**.754**					
15. The possibility of dying in a hospital away from friends and family		**.563**					
16. The grief of others as you lay dying		**.654**					
The death of others							
17. The loss of someone close to you							
18. Having to see their dead body						**.735**	
19. Never being able to communicate with them again			**.550**				
20. Regret over not being nicer to them when they were alive			**.664**				
21. Growing old alone without them			**.720**				
22. Feeling guilty that you are relieved that they are dead							**.566**
23. Feeling lonely without them			**.583**				
24. Envious that they are dead							**.820**
The dying of others							
25. Having to be with someone who is dying	**.548**						
26. Having them want to talk about death with you	**.677**						

27. Watching them suffer from pain	**.811**						
28. Having to be the one to tell them that they are dying	**.800**						
29. Seeing the physical degeneration of their body	**.861**						
30. Not knowing what to do about your grief at losing them when you are with them	**.656**						
31. Watching the deterioration of their mental abilities	**.794**						
32. Being reminded that you are going to go through the experience also one day							
Eigen value	12.16	2.78	1.89	1.45	1.30	1.19	1.10
% of variance	38.02	8.71	5.93	4.53	4.08	3.73	3.45
% of total variance	68.48						

Factor 1 (items: 25, 26, 27, 28, 29, 30, and 31): Fear of the dying of others.
Factor 2 (items: 7, 8, 9, 10, 11, 12, 13, 14, 15, and 16): Fear of your own dying.
Factor 3 (items: 19, 20, 21, and 23): Fear of the death of others.
Factor 4 (items: 1, and 2): Fear of total isolation of death, and shortness of life.
Factor 5 (items: 3, 4, 5, and 6): Fear of your own death.
Factor 6 (items: 18): Fear of having to see dead body of others.
Factor 7 (items: 22, and 24): Guilt feeling, and envious of death of others.

Table 6. Component Transformation Matrix of the CLDFS

Component	1	2	3	4	5	6	7
1	**.517**	**.570**					
2	**-.792**						
3		**-542**			**.581**		
4			**.648**				
5						**-579**	
6							**.711**
7				**-529**	**.514**	**-506**	

Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization

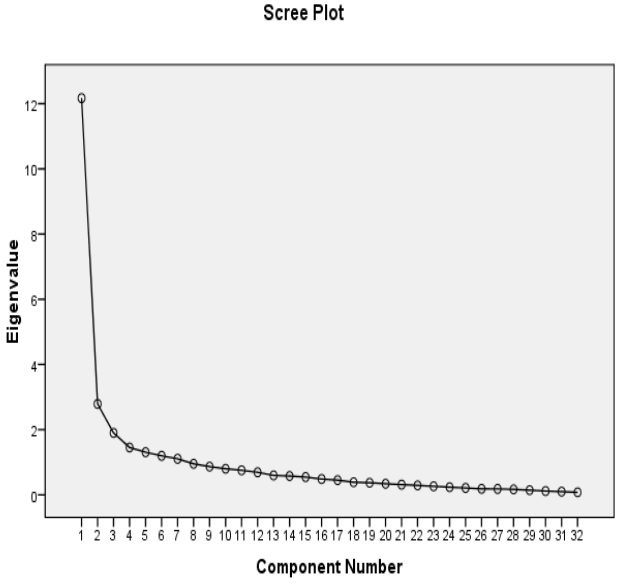

Fig. 1. Scree Plot of the CLDFS

The first four factors mentioned about (Factors 1, 2, 3, and 5 correspond to the four aspects of death and dying for which the CLFDS was devised to measure.

DISCUSSION

The results of the present study showed that the mean fear of death score among the nurses was moderately-high. The lowest feared score was for fear of Your own death, and the highest feared score was for the fear of The death of others. The means for all items of CLDFS were rated in the range of “somewhat” to “very”. The lowest and the

highest mean scores of Your own death subscale were for items 6, and 7;Your own dying subscale for items 9, and 12; The death of others subscale for items 22, and 17; and The dying of others subscale for item 26, and 27, respectively.

The present study found that the reliability coefficients of the CLDFS and its subscales were high, indicating acceptable reliability. Previous studies of versions of the CLDS in English, Arabic, Spanish, Nigerian, Turkish, and Chilean have reported good reliability and concurrent validity [45, 47, 57, 59, 60-61, & 67].

In the present study, the four subscales of the CLFDS had only moderate correlations with one another, ranging from 0.48 to 0.67, indicating that, although the fears association with the death and dying of oneself and others are associated, it makes psychological sense to measure them separately. These moderate associations were reported in previous research in other countries [42, 45, 54, 61, & 68].

In the present study, scores on CLFDS were significantly with scores on the DCS, DAS, RDFS, DDS and DOS, but only moderately. These results provide evidence for the construct validity of the CLFDS but also indicate that the CLFDS measures psychological constructs different from those measured by these other scales. Again, these results replicate those found in research in other countries [47, & 69-70].

We identified seven factors in the study, four of which matched the designations (labels) given to the four subscales, thereby supporting the assignment of items to the subscales. Five items did not load on these four factors, suggesting that the CLFDS might require further psychometric refinement in future research. These results were more supportive of the factor analytic structure of the CLFDS than previous research in other countries [45, 47, 54, & 71]. The present study has the limitation that there was an over-representation of female nurses. Future research should study the CLFDS in male nurses separately from female nurses. However, we conclude that the CLFDS has good validity and reliability, and it can be of use in clinical and research settings, including Persian-speaking healthcare settings in order to evaluate attitudes toward death and dying in oneself and others in Iranian society.

Conflicting Interests
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