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Psychometric Evaluation of the Good Death Index from Patients with Terminal Cancer's Perspectives: A Mixed-Methods Study

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Background: Patients with terminal illness often experience significant physical and mental suffering. This distress affects the patients themselves, as they endure the pain of their condition and their family members, who are affected by the patient's situation and medical decisions. Furthermore, exploring the patients' and their families' concepts of a "good death" is crucial for reflecting on the value of life and for planning treatment or care models (such as advance care planning). Therefore, understanding the issues is essential in improving palliative care and the overall quality of life.

Aim: This study aimed to develop a clinical assessment tool for the self-assessment of patients with terminal cancer to determine whether they are approaching a good death.

Methods: Our good death concept was developed through in-depth interviews with terminal cancer patients and qualitative analysis by experts in a research program. Three themes were analyzed: "living in dying (L)", "experiencing the existential self (E)", and "dying in living (D)." Therefore, the principal and co-principal investigators designed the primary LED Good Death Index (LED-GDI) based on three major themes and 15 subtopics of the LED Good Death concept.

Results: A total of 144 participants completed the LED-GDI assessment. Cronbach's alpha for the LED-GDI was 0.854. We found that the LED-GDI allowed patients to assess whether they were approaching a good death.

Conclusion: The philosophical concept of LED-GDI is particularly in line with Confucian culture in East Asia and emphasizes the importance of living well before death. Therefore, the most critical goal of clinical end-of-life care is to determine whether patients with terminal illness can achieve a good death and live until the last moment.

Keywords: attitude to death, existentialism, good death index, end-of-life care

Introduction

Achieving a good death for all is prioritized at societal and political levels. This needs to train and educate healthcare professionals to ensure rigorous assessment of end-of-life care services and explore best resource use.[1] The good death is subjective and based on personal, cultural, social, political, and religious perspectives.[2] Based on Confucianism and Buddhism, the concepts of good death among East Asian countries have unique viewpoints from Western culture.[3–6] All clinical psychometric tools for good death were developed based on modern Western theories. Even if there are studies that perform cultural corrections, psychometric tools developed from Eastern cultures for the concept of a good death should still be considered.

Meier et al conducted a systematic review of previous qualitative and quantitative research, identifying core themes such as preferences for the dying process, pain-free status, emotional well-being, family, dignity, life completion,

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religiosity or spirituality, treatment preferences, quality of life, and relationships with healthcare providers.[7] Another integrative literature review on the concept of a good death, which collected information from dying participants, healthy participants, and professionals, identified four predominant themes: (1) good death as control, (2) the wrong, good death, (3) the threatened good death, and (4) denial of dying. Cotterell and Duggleby (2016) mention that the concept of "good death" is often negatively portrayed as a means of controlling the dying process for both the individuals facing death and those providing their end-of-life care.[8] In East Asian countries, death or illness was considered inauspicious, and individuals would avoid discussing "death" as much as possible.[9] Consequently, clinical observations have shown that patients' expectations for a good death may differ from those of their families and healthcare providers. This discrepancy led the research team to investigate patients' perspectives on good death. Specifically, perspectives on a good death can vary significantly depending on one's perspective. However, based on medical ethics concerning autonomy, the feelings and perspectives of dying patients should be the most crucial consideration and priority. Anyone has the right and responsibility to decide a good death for their own life. Therefore, patients should be able to "autonomously choose" to accept or refuse medical treatment under conditions of complete information, thereby enhancing the quality of life and death preparation for patients with terminal illness to achieve their personal goal of a good death.

Evaluating a good death is an essential aspect of palliative care for determining whether a patient is approaching a good death. Several inventories and scales for assessing good-quality deaths have been developed in East Asia. For example, The Good Death Inventory (GDI), developed in Japan, comprises 18 domains and 54 items.[10,11] The domains are divided into 10 core and 8 optional categories. The 10 core domains included (1) environmental comfort, (2) life completion, (3) dying in a favorite place, (4) maintaining hope and pleasure, (5) independence, (6) physical and psychological comfort, (7) good relationships with medical staff, (8) not being a burden to others, (9) good relationships with family, and (10) being respected as an individual. The eight optional domains included (11) religious and spiritual comfort, (12) receiving sufficient treatment, (13) control over the future, (14) feeling that one's life is worth living, (15) unawareness of death, (16) pride and beauty, (17) natural death, and (18) preparedness for death. The GDI has 54 items, making it possible to obtain detailed information on whether the family believes the deceased has experienced a good death.

It is based on qualitative research involving hospice nurses, a small study of patients with advanced cancer, and an observational study of patients. The GDI is widely used in palliative medical research and clinical services as an assessment tool from the bereaved family's perspective.[12,13] In 2008, Miyashita published an article stating that the GDI demonstrated sufficient concurrent validity with the Care Evaluation Scale and overall care satisfaction, along with adequate internal consistency (alpha = 0.74–0.95) and acceptable test-retest reliability (ICC = 0.38–0.72).[10] Similarly, the Good Death Score (GDS) was developed in Taiwan based on the opinions of experts and professors and is assessed by palliative care providers.[14] The GDS is also employed in palliative medical research and clinical services.[15,16] However, despite the widespread use of these tools developed in Asia, they have not been evaluated from the patients' perspective.

After systematic research, current good-death assessment tools are assessed by family members or provided by healthcare providers. There are almost no tools for patients to evaluate themselves.[17] Although all medical professionals emphasize patient autonomy as the most critical medical ethical issue, East Asia's terminal patient autonomy is consequently subordinate to family values and physician authority because of Confucianism and the concept of filial piety.[18] For the many patients with terminal illnesses in East Asia, a psychometric tool that allows them to assess whether they have a good death from Confucianism and the construction of patient autonomy are necessary for both clinical and research.

The LED Good Death concept was developed through in-depth interviews with terminal cancer patients and qualitative research and analysis by experts under a research program supported by the Taiwan National Ministry of Science and Technology.[19] LED is the abbreviation of the first letter of the three major themes of good death, namely living in dying, experiencing the existential self, and Dying in living.[19] That is to say, even if it is very close to death, for patients with terminal illness, it is still necessary to affirm their own life and live in the present to achieve a good death. This concept reflects the concept of Confucian culture that emphasizes the importance of survival over death, which is what Confucius said: Without knowing life, how can we know death."[20]

This study aimed to enable medical staff to use this scale, completed by patients with terminal illness themselves, to understand their attitudes toward death. This approach will help caregivers address patients' needs and support individuals with terminal illness patients in attaining a good death.

Methods

Study Design

This study was part of a 4-year research program supported by the Taiwan National Ministry of Science and Technology and Medical Research Department of MacKay Memorial Hospital. The title of the master plan is "Enhancing Medical Professionals' Knowledge and Skill to Good Death of Dying Patients and Normal Grief of Their Family." The implementation period was from August 1, 2016, to July 31, 2020. This study was approved by the MacKay Memorial Hospital Human Research Ethics Review Board (15MMHIS113). During the master plan research period, the Ministry of Science and Technology requires annual research reports and tracking of research processes and results.

The study site was MacKay Memorial Hospital's main campus, including the Taipei campus in Taipei City and the Tamsui campus in New Taipei City. MacKay Memorial Hospital is a large medical center with over 2000 beds, providing complete cancer treatment and hospice palliative care. The participants of this study were inpatients in cancer or palliative care units using an intentional sampling method. All participants were at least 20 years old. If the patient was under the age of 20 years or illiterate, they were excluded from admission. After signing the participants' informed consent, the research assistant assisted them in completing the questionnaire independently. This study complied with the principles of the Declaration of Helsinki.

Qualitative Research Method

According to qualitative research by Fang (2017), in the first year of the qualitative study, we invited 12 patients with terminal illness (life expectancy < 12 months) (Table 1) to participate in semi-structured in-depth interviews, of which seven were Women and four were Men. Their ages ranged from 29 to 73 years, with an average age of 57.8 years. Each patient was asked five questions: How would you describe your current life? What thoughts and feelings do you have regarding your illness? What thoughts and feelings do you have about your death? How would you like to spend your remaining time? Imagine the moment of death, how would you like the situation to be? The remaining portion of the interview allowed patients to express their thoughts freely. Before the interviews, we obtained patients' consent to record the entire session. After the interviews, the recordings from the in-depth interviews were transcribed into text, and the text was analyzed using ATLAS.ti 7.5 software (Muhr T, ATLAS.ti Scientific Software Development, Berlin, Germany),

Table 1 Relevant Information of the 12 Interviewees

Code	Sex	Age	Marital Status	Number of Children	Education	Occupation	Type of Cancer	Interview Duration
M1	Men	62	Separated	2	College	Resigned	Nasophar-yngeal Cancer	90 min
F1	Women	73	Married	5	Elementary School	Retired	Breast Cancer	30 min
F2	Women	56	Married	1	Elementary School	Unemployed	Breast Cancer	40 min
F3	Women	63	Divorced	2	Elementary School	Retired	Colorectal Cancer	120 min
F4	Women	45	Unmarried	0	College	Resigned	Colorectal Cancer	35 min
F5	Women	58	Married	2	College	Retired	Breast Cancer	75 min
F6	Women	65	Divorced	2	College	Retired	Lung Cancer	50 min
M2	Men	61	Married	1	High School	Retired	Lung Adenocarcinoma	60 min
M3	Men	29	Unmarried	0	College	Resigned	Liver Cancer	50 min
M4	Men	59	Married	2	College	Employed	Pancreatic Cancer	45 min
M5	Men	63	Widowed	1	College	Retired	Lung Cancer	60 min
F7	Women	60	Married	0	College	Retired	Breast Cancer	90 min

employing the hermeneutic phenomenological analysis method. To ensure the accuracy of the collected data, the researchers invited a senior specialist in palliative medicine and a social worker to conduct triangulation for comparison, thereby confirming the conclusions drawn by the researchers. After data analysis and verification, it was found that patients with terminal illnesses describe their "good death" experiences from three dimensions.[19] The first theme was "living in dying (L)" with five items: (1) establishing a life pattern, (2) recalling past times, (3) confirming self-identity, (4) connecting with essential others, and (5) maintaining a doctor-patient relationship. The second theme was "experiencing the existential self (E)", with five items: (1) positive responses to sick experiences, (2) conflicting feelings at the border between life and death, (3) maintaining personal autonomy, (4) authentic companionship with others, and (5) settling in with religious or spiritual experiences. The third theme was "dying in living (D)" with five items: (1) having a complete understanding of the disease, (2) facing death with a rational attitude, (3) being aware of death through physical conditions, (4) planning after death, and (5) anticipating the situation of death.[19]

Quantitative Research Method

The principal and co-principal investigators designed 15 assessment indicators based on 15 items identified through qualitative research analysis and referenced the relevant literature. The assessment indicators comprising these 15 items, are each designed using a four-point Likert scale: 4 points for "strongly agree", 3 points for "agree", 2 points for "disagree", and 1 point for "strongly disagree" (score range: 15–60). We referred to this assessment tool as the LED-Good Death Index (LED-GDI) (Table 2). The higher the LED-GDI score, the stronger the patient's perception of a good death. We invited seven experts from related fields to attend an expert meeting to test the validity of the LED-GDI. Among the seven experts, there were two palliative care physicians, one physician specializing in psychiatry and palliative care, one nursing supervisor, one social worker, and one senior research assistant. They provided feedback on the necessity and clarity of the indicator content. Subsequently, 30 patients were invited to complete the LED-GDI to ensure that all sentences were easily understood.

Table 2 Contents and Rating of the LED-GDI

	Answer Instructions: Please Complete in the Form Based on Your Current Status And Your Feelings.	**Strongly Agree**	**Agree**	**Disagree**	**Strongly Disagree**
1	I can recall my good old days.	4	3	2	1
2	I can build new lifestyles.	4	3	2	1
3	I feel that my life has value.	4	3	2	1
4	I can find peace through religion or other means.	4	3	2	1
5	I can face my sick experience with a positive attitude.	4	3	2	1
6	I can maintain good connections with individuals who are important to me.	4	3	2	1
7	I can face the dilemma of therapy.	4	3	2	1
8	I have a good relationship with the medical team.	4	3	2	1
9	I can maintain my autonomy.	4	3	2	1
10	I can feel good interaction and caring with others.	4	3	2	1
11	I know very well that my days are limited.	4	3	2	1
12	I know how to face the end of life.	4	3	2	1
13	I realize that my days are limited through my deteriorating body.	4	3	2	1
14	I was able to arrange my own affairs.	4	3	2	1
15	I can imagine myself passing away peacefully.	4	3	2	1

Data analysis and descriptive statistics were conducted using SPSS Windows software version 18.0. We conducted reliability and item analyses of the indicators and conducted an independent sample *t*-test using high and low grouping to evaluate each item. Further, we assessed the correlation between the average score of each item and the total scale score. Following the testing phase, exploratory factor analysis (EFA) was conducted, incorporating the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity as criteria for extracting factors. Given that this indicator tool was initially developed through qualitative research and categorized into 15 items across three factors, the EFA results were used to re-arrange the order of the items based on the analysis. Finally, confirmatory factor analysis (CFA) was conducted using AMOS version 24.

Results

Demographic Characteristics of the Participants

A total of 144 participants were successfully invited to participate in this study, with an average age of 57.54 ±11.195 years, 76 men and 68 women. Among religious beliefs were 28 Christians, 42 Buddhists, 45 Taoists, five other religions, and 23 non-religious individuals. Occupational classification of the patients included seven civil servants, 21 industrial workers, eight commercial workers, 11 service workers, 10 freelancers, one student, 60 retired individuals, and 26 others. Regarding education level, 61 participants had junior high school degrees or below, 45 had senior high school degrees, and 36 had college degrees or above. Cancers of the upper and lower digestive systems were the most common, accounting for 30 cases each. The remaining 19 patients had head and neck cancer, 18 breast cancer, 17 respiratory system-related cancers, 16 reproductive system-related cancers, and 14 other cancers (Table 3).

Item Analysis

According to item analysis, the average total score of LED-GDI is 49.43 ± 5.834. The highest scoring item in this analysis is Q8, "I have a good relationship with the medical team." The average score of Q8 is 3.54 ± 0.527. The second

Table 3 Demographic Characteristics of the Participants (N = 144)

Item	*N*(%)
Sex	
Men	76(52.8)
Women	68(47.2)
Religion	
Christianity	28(19.4)
Buddhism	42(29.2)
Taoism	45(31.3)
Others	5(3.5)
No religion	23(16)
Occupation	
Civil servants	7(4.9)
Industrial workers	21(14.6)
Commercial workers	8(5.6)
Service workers	11(7.6)
Freelancers	10(6.9)
Student	1(0.7)
Retired individuals	60(41.7)
Others	26(18.1)
Education level	
Junior high school or under	61(42.4)
Senior high school	45(31.3)
College degree or above	36(25)

(*Continued*)

Table 3 (Continued).

Item	*N*(%)
Cancer category	
Head and neck	19(13.2)
Respiratory system	17(11.8)
Breast	18(12.5)
Upper digestive system	30(20.8)
Lower digestive system	30(20.8)
Reproductive system	16(11.1)
Others	14(9.7)
Ward category	
Palliative care units	45(31.3)
Cancer care units	80(55.5)
Internal medicine wards	19(13.2)

highest scoring item is Q10, "I can feel good interaction and caring with others." The average score of Q10 is 3.47 ± 0.566. The third highest scoring item is Q6, "I can maintain good connections with individuals who are important to me." The average score for Q6 was 3.45 ± 0.624.

Conversely, the three questions with the lowest scores were Q2, Q3, and Q12. The Q2 question was, "I can build new lifestyles." The average score is 3.08 ± 0.762. The Q3 question was, "I feel that my life has value." The average score is 3.15 ± 0.757. The Q12 question was, "I know how to face the end of life." The average score is 3.16 ± 0.799.

There were significant differences in each item of the high-low grouping according to the *t*-test. Correlation analysis was conducted between each item and the total score of the indicator, and each item had a significant correlation (Table 4).

Table 4 Item Analysis of LED-GDI (N=144)

Questionnaire Items	Mean	SD	Skewness		Kurtosis		t	95% Confidence Interval		Correlation with Total Score
			Statistic	Std. Error	Statistic	Std. Error		Lower	Upper	
Total score of Index	49.43	5.834								
Q1	3.17	0.778	−0.855	0.202	0.643	0.401	−6.538***	−1.196	−0.639	0.550**
Q2	3.08	0.762	−0.623	0.202	0.258	0.401	−9.009***	−1.300	−0.830	0.606**
Q3	3.15	0.757	−0.741	0.202	0.510	0.401	−8.627***	−1.332	−0.833	0.622**
Q4	3.30	0.604	−0.243	0.202	−0.598	0.401	−8.664***	−1.057	−0.662	0.607**
Q5	3.35	0.629	−0.598	0.202	0.290	0.401	−12.019***	−1.145	−0.820	0.628**
Q6	3.45	0.624	−1.040	0.202	1.715	0.401	−9.677***	−1.085	−0.715	0.566**
Q7	3.35	0.607	−0.726	0.202	1.542	0.401	−6.955***	−0.907	−0.504	0.482**
Q8	3.54	0.527	−0.459	0.202	−1.161	0.401	−7.252***	−0.813	−0.464	0.488**
Q9	3.33	0.637	−0.915	0.202	1.990	0.401	−11.674***	−1.082	−0.768	0.584**
Q10	3.47	0.566	−0.709	0.202	0.885	0.401	−8.448***	−0.964	−0.597	0.616**
Q11	3.19	0.836	−0.949	0.202	0.495	0.401	−6.932***	−1.262	−0.700	0.530**
Q12	3.16	0.799	−0.713	0.202	0.042	0.401	−6.891***	−1.182	−0.653	0.518**
Q13	3.29	0.613	−0.265	0.202	−0.609	0.401	−10.384***	−1.136	−0.771	0.695**
Q14	3.33	0.669	−0.781	0.203	0.720	0.403	−12.323***	−1.237	−0.894	0.648**
Q15	3.28	0.694	−0.816	0.202	0.896	0.401	−8.814***	−1.183	−0.748	0.549**

Notes: *** At a significance level of 0.001 (two-tailed), the correlation was significant. **At a significance level of 0.01 (two-tailed), the correlation was significant.

Exploratory Factor Analysis and Reliability

In the pilot study, through qualitative analysis after in-depth interviews, it was found that patients with terminal illness would experience and recognize their own "good death" experience from three perspectives: L, E, and D. In this study, the appropriateness of sampling was further measured by KMO at 0.805, and the Bartlett sphericity test showed a significant difference ($p < 0.001$), indicating that the LED-GDI could be used for factor analysis.

In the process of factor analysis, to avoid losing the three aspects of L, E, and D that were analyzed in the pilot study, the researchers limited the number of factors to three through principal component analysis. After limited factor analysis, it was found that Q4–Q5 were initially ranked in Factor 2 (E) in qualitative analysis, and Q6 and Q8 were ranked in Factor 1 (L). However, after exploratory factor analysis, the researchers adjusted the ranking of item classification with factors (Table 5).

Finally, to test the reliability of the total index tool and each factor, the LED-GDI Cronbach's alpha value was 0.854, living in dying (L) was 0.766, experiencing the existential self (E) was 0.718, and dying in living (D) was 0.788. All LED-GDI factors were significantly correlated with the indicator tools (Table 6).

Table 5 Rotated Factors for Principal Components Analysis of LED-GDI

Questionnaire Items	Factor Loading		
	I	II	III
Factor 1: Living in dying (L)			
LED.Q1 I can recall my good old days.	0.759		
LED.Q2 I can build new lifestyles.	0.757		
LED.Q3 I feel that my life has value.	0.688		
LED.Q4 I can find peace through religion or other means.	0.580		
LED.Q5 I can face my sick experience with a positive attitude.	0.479		
Factor 2: Experiencing the Existential self (E)			
LED.Q7 I can face the dilemma of therapy.		0.686	
LED.Q9 I can maintain my autonomy.		0.678	
LED.Q8 I have a good relationship with the medical team.		0.671	
LED.Q6 I can maintain good connections with individuals who are important to me.		0.559	
LED.Q10 I can feel good interacting and caring with others.		0.525	
Factor 3: Dying in Living (D)			
LED.Q11 I know very well that my days are limited.			0.853
LED.Q13 I realize that my days are limited through my deteriorating body.			0.840
LED.Q12 I know how to face the end of life.			0.683
LED.Q15 I can imagine myself passing away peacefully.			0.562
LED.Q14 I was able to arrange my own affairs.			0.480

Table 6 Reliability of the LED-GDI (N = 144)

Components	Mean	SD	Cronbach's α	Correlation between 3 Factors and Total Score[a]
Total score of the scale	49.43	5.834	0.854	
Factor 1: Living in dying(L)	16.05	2.551	0.766	0.819**
Factor 2: Experiencing the Existential self(E)	17.15	2.0.5	0.718	0.800**
Factor 3: Dying in Living(D)	16.24	2.669	0.788	0.796**

Note: [a]: Spearman's rank correlation coefficient, ** $p < 0.01$.

Confirmatory Factor Analysis for Construct Validity

In this study, CFA was tested under Structural Equation Modeling for three factors: "living in dying(L), experiencing the existential self(E),dying in living(D)" and goodness of fit. There are 15 items in the CFA for the three factors. The results of CFA for the model showed that $\chi 2 = 208.701$, df = 87, $\chi 2/df = 2.399$, p = 0.000, GFI = 0.847, AGFI = 0.789, and RMSEA= 0.09. The results validated the effectiveness of the three-factor model and satisfactory goodness of fit of the overall LED-GDI model (Figure 1).[21–23]

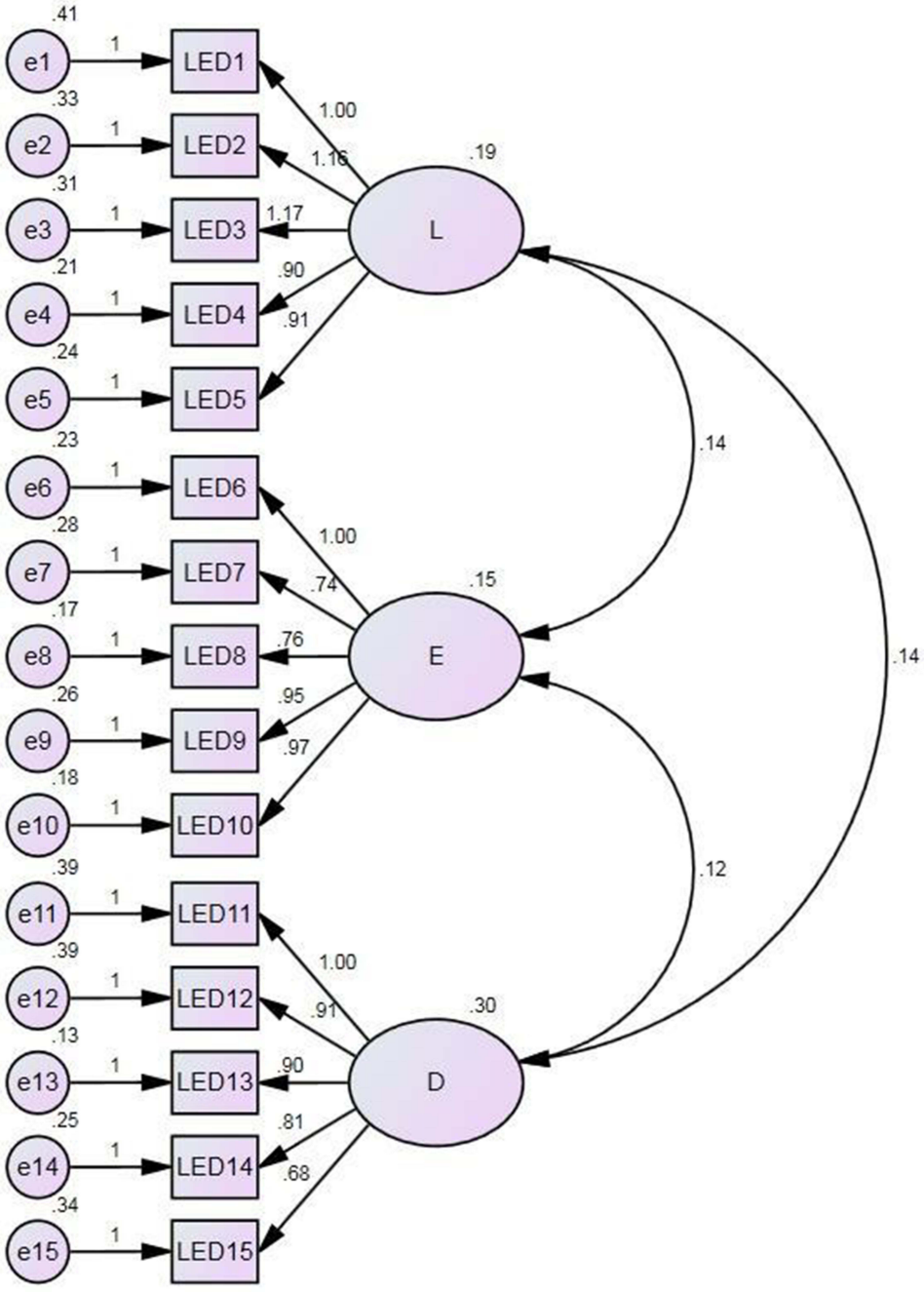

Figure 1 Confirmatory factor analysis of the three-factor model of the LED-GDI. (L) Living in dying, (E) Experiencing the Existential self, (D) Dying in Living.

Discussion

To the best of our knowledge, this is the first study to design a tool for directly assessing whether patients are approaching a good death experience. The research team reviewed relevant studies and found that many assessment tools involved family members evaluating the patient's good death experience after the patient has passed away, rather than the patients themselves assessing their own good death process.[10,16,24,25] However, Taiwan began implementing the Patient Autonomy Act in January 2019, marking an era in which patients have the autonomy to make medical decisions. This is particularly significant as the choice to refuse futile treatments or to accept palliative care has increasingly been elevated from medical ethics practice to legal standards.[18] The Institute of Medicine defined a good death in 1997 as: "A good death is one in which patients and their families are spared from suffering; their wishes are honored, within the context of clinical, cultural, and ethical considerations." [26]

Emanuel found that patients are more concerned about issues related to dignity, dependency, being a burden, and loss of control than about physical or psychological symptoms.[27] Steinhauser also suggested that physiological care is just the starting point; psychological, spiritual, and social issues are equally important to patients and their families.[28] Thus, a "whole person" perspective is essential to understanding the patient's "suffering" situation. Ensuring the dignity and good death of each individual, helping families understand the patient's true wishes, and alleviating the guilt and self-blame that families experience when facing a patient's death are societal expectations and vital indicators of fundamental human rights in Taiwan. Therefore, the LED-GDI is a tool that allows patients to self-assess their expectations of a good death, and helps others understand whether they have achieved a good death.

The GDI, developed by Japanese palliative care professionals, is a widely used tool for measuring the quality of a good death.[10] The GDI has been translated into Korean, Taiwanese, and Chinese versions and has demonstrated good reliability and validity.[16,24,25] The GDI is a retrospective method used by bereaved families to assess whether the deceased experienced a good death.[10,11] Thus, while the GDI can indicate whether the family believes the deceased had a good death, it cannot determine whether the patient receiving terminal care felt they experienced a good death. Evaluating the deceased's death from the perspective of the bereaved is consistent with Confucian culture in East Asia, where discussing death openly during illness is often considered taboo.[29,30] However, in clinical end-of-life care, it is becoming increasingly important, even in East Asia, to directly ask patients whether they feel they are approaching a good death.

However, the assessment tool developed by our research team differs from the GDI. The LED-GDI was designed based on the results of direct interviews with patients with terminal illness, and included three major domains. We believe that its distinction from other end-of-life assessment tools lies not only in who conducts the evaluation but also in philosophical differences. Specifically, this tool is based on the concept of "living in the moment", focusing on how to continue living well in the final days as a foundation for a good death. Kübler-Ross (1969) emphasized that "the dying is, in fact, living." She believed that for patients with terminal illness, although death is ever-present, life continues. Patients with terminal illness are still confronted with the issue of how to "live on."[31] Therefore, the first domain is named "living in dying" (L), reflecting that as long as patients are alive, they continue to experience all the moments of life, thus engaging with their existential selves. The second domain was "experiencing the existential self" (E). Although the patients are alive before death, they face their own end-of-life processes. Thus, the third domain was named "Dying in Living" (D).[18]

In the Confucian classic "Analects of Confucius", written 2400 years ago, Confucius expressed three ideas that resonate with the concept of a good death we have discovered. The first was, "If you do not understand life, how can you understand death?" This highlights the focus of Confucianism on how to live and thrive. The second was, "Life is lighter than a feather, and death is heavier than Mount Tai", which implies that one should die with meaning rather than live a life devoid of purpose. The third was, "If you hear the Dao (truth) in the morning, you can die in the evening." This reflects the Confucian belief that one should seek the truth of life regardless of when death may come.[20] These ideas embody the Confucian philosophy reflected in the LED-GDI. To ensure high-quality care and achieve a good death for patients, the average total score of the LED-GDI is 49.43 ± 5.834. Therefore, we recommend that clinical medical

professionals further investigate whether patients with terminal illness with a total LED-GDI score of less than 49 experience any distress that may cause existential suffering.

The limitations of this study are as follows. First, in developing the LED-GDI to allow patients to assess whether they are approaching a good death, we did not use other assessment tools, such as quality of life measures. Therefore, we can only understand patients with terminal illness' perceptions of their approach to a good death without addressing other issues related to end-of-life care. Second, this study was conducted in a single hospital, leading to a relatively consistent medical model of end-of-life care. Third, this study was limited to patients with terminal cancer, and it is unclear whether the LED-GDI is applicable to patients with terminal illness and other diseases.

Future studies should aim to simultaneously evaluate the concept of a good death from three perspectives: patients, family members, and medical staff, to enhance end-of-life care for patients with terminal illness. Further research is needed to determine whether the LED-GDI can be used as a good death assessment tool for patients with diseases other than terminal cancer. We also hope that palliative care teams in other regions, especially in East Asia, will have the opportunity to use the LED-GDI to assess whether patients with terminal illness are approaching good death.

Conclusion

The LED-GDI is a tool designed to assess whether patients feel they have achieved a good death based on interviews. A distinctive feature of this assessment tool is its use of existential concepts in three domains: L, E, and D. It has demonstrated satisfactory reliability, suggesting that even terminally ill cancer patients receiving palliative care can maintain a sense of their existence. In the 21st century, especially after the coronavirus disease 2019 pandemic, individuals have adopted a more autonomous view of their lives and deaths. Therefore, the most critical goal of clinical end-of-life care is to determine whether patients with terminal illnesses can approach a good death and live fully until their final moment.

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Disclosure

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