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Investigation of College Students' Attitude towards Death with Dignity and the Teaching of Death with Dignity

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Abstract: This paper is to assess the attitude of college students (social populations) towards death with dignity using the Attitude Scale for Death with Dignity developed by us, and to explore the teaching strategy of death with dignity. This attitude scale, based on three elements of attitude (i.e. cognition, affection, and behavioral intention), was developed in the form of Likert 5 subscale. Subsequently, the attitudes of 392 college students were evaluated following reliability and validity analysis of this scale. Additionally, a questionnaire was used to investigate the preference for teaching methods related to death with dignity among these students. The scale demonstrated the satisfactory dispersion degree and discrimination of items, the Cronbach's α of 0.86, each dimension's composite reliability of more than 0.8, and correlation indexes for structural validity (i.e. chi-square=81.54, df=74, p=0.26, GFI=0.97, AGFI=0.96, CFI=1.00, RMSEA=0.02). College students had a positive attitude towards death with dignity and preferred to choose the media pathway for teaching related to death with dignity. The Attitude Scale for Death with Dignity by us had good reliability and validity. The instruction of death with dignity to college students should be diversified, such as the application of media propaganda technology in school teaching.

Keywords: Death with Dignity; Attitude; College Student; 5-Point Likert Scale; Teaching

1. Introduction

Since the mid-20th century, the concept and discussion of death with dignity have been mentioned abroad and even legislated in some countries [1][2]. However, its definition or concept has not yet been unified in China. For instance, the 1991 edition of the "New Language Dictionary" [3]and the 2016 edition of the "New Dictionary of Gerontology" [4]provide different definitions and scope definitions for "death with dignity." In order to clarify its specific medical implications, this paper defines "death with dignity" as the abandonment of futile attempts at short-term or unpreventable death-prolonging treatments that cause suffering for terminally ill patients, in favor of palliative care, to allow for a dignified natural death, provided that it aligns with personal wishes.

Although there are still some academic controversies surrounding death with dignity, such as the duration of life extension and the responsibilities of the executing parties [1], discussions in medical, legal, and sociological circles in China are gradually expanding and deepening. For example, the term "dignity" has been included in Article 1002 of the Civil Code, and the National Health Commission has acknowledged the challenges in the legislation process of death with dignity in response to the proposal "Suggestions on Accelerating the Legislation Process of Death with Dignity." Furthermore, the revised draft of the "Shenzhen Special Economic Zone Medical Regulations" passed by the Shenzhen Municipal Government marks the first time in mainland China that "advance directives" (related to death with dignity) have been included in the legal system [5]. These developments indicate increasing national and societal attention to the concept. However, there is still a lack of psychological measurement tools or survey scales to assess attitudes towards death with dignity among the Chinese population, making it difficult to gauge public sentiment or determine the need for educational outreach and corresponding strategies. This gap hinders both the legislative process and deeper exploration of the topic. Therefore, there is an urgent need for a scale or survey to measure public attitudes towards death with dignity, guiding the development of educational strategies and supporting death

education and palliative care efforts in society.

Current research on attitude scales related to death with dignity is still rare, and existed studies focus primarily on terminal patients, their families, and healthcare professionals. These studies mainly explore cognition and related aspects of death education, palliative care, advance directives, and death quality [6][7][8]. However, there is still much to be explored in terms of depth and breadth. Additionally, both domestic and foreign scales related to death with dignity and attitudes towards death with dignity include: the Patient Dignity Inventory (PDI) developed by Chochinov et al. , the Good Death Inventory (GDI) developed by Miyashita et al., which have been adapted into Chinese by Liu et al. ; the Palliative Patients' Dignity Scale (PPDS) constructed by Rudilla et al. [based on a dignity model framework to assess factors influencing the maintenance and threats to dignity in terminally ill patients; and the Dignity Card-Sort Tool (DCT) developed by Periyakoil et al. to evaluate factors affecting end-of-life dignity. These scales are primarily used to assess the end-of-life dignity or factors related to attitudes towards death with dignity in patients, and there are no other measurement scales directly assessing the attitudes of the general population towards death with dignity. This indicates the need for a scale that can evaluate the attitudes of ordinary people towards death with dignity who has no relation with the dying person.

Given the importance of the three elements of attitude—cognition, emotional affect, and behavioral inclination—in quantifying attitudes (Ellis et al., 1992; Yuan et al., 2022), as well as the increasing university enrollment rates in China, which make college students more representative of the youth population, we will develop a dignity attitude scale for college students based on these three elements. This scale aims to effectively quantify attitudes towards death with dignity and explore corresponding educational strategies.

2. Methods

2.1 Scale Development

Due to the lack of a unified definition for death with dignity and the uncertain extent of its societal awareness and promotion, to avoid the cognitive bias of the subjects on the meaning of "death with dignity", a standardized definition of "death with dignity" is presented at the outset of the scale.A total of 19 items were derived from cognition, emotion, and behavioral tendencies, including 7 reverse-scored items, and together with the defined concept of death with dignity, constitute the Death with Dignity Attitude Scale (initial version available in the appendix at the end of this article). The scale was assessed using a 5-point rating system, ranging from 1 (strongly oppose) to 5 (strongly support), with higher scores indicating a more favorable attitude towards death with dignity. Two psychological experts were consulted to validate the theoretical framework of the attitude structure of death with dignity and to enhance the clarity and appropriateness of the items, while an initial version of the preliminary test was administered to 118 college students.. a total of 99 valid responses received in the initial assessment, comprising 50 male students and 49 female students, with 26 at college level or below, 50 at undergraduate level, and 23 at graduate level. The participants were from 12 provinces/municipalities/autonomous regions. Following testing, censoring, and screening procedures, a final version of the scale consisting of 14 items, including 3 reverse-scored items, was obtained (see Table 2 for the item list).

Additionally, a questionnaire was used to investigate preferences for educational methods on death with dignity, including hospital education, policy advocacy, media campaigns, and school-based education.

2.2 Participants

Inclusion criteria for participants: ① Undergraduate, graduate, and doctoral students enrolled in universities nationwide. ② Participants were informed and wiling to participate in the study.

Exclusion criteria: ① Perverting the test (e.g., answering for less than 180s, selecting a fixed option or bulk selecting fixed options). ② Respondents who submitted answers multiple times from the same IP address.

The survey was distributed via a web platform(Wenjuanxin) and promoted through social networks of teachers and classmates, resulting in 457 respondents and 392 valid responses. The characteristics of the valid sample are shown in Table 1.

2.3 Statistical Methods

SPSS 26 software was used to conduct

Chi-square test, reliability analysis, t-test, Pearson product-moment correlation and other exploratory analysis.. Confirmatory factor analysis and validity analysis were performed by AMOS 26 software.

Table 1. Description of the Distribution of Sample Characteristics(*n*=392)

Variables	Option	Frequency	Percentage
Gender	Male	198	50.5%
	Female	194	49.5%
Categories of Major	Medical related majors	214	54.6%
	Non-medical related majors	178	45.4%
Environment of growth	Rural areas	221	56.4%
	Cities	171	43.6%
Education background	College or below	86	21.9%
	Undergraduate	258	65.8%
	Master's student	33	8.4%
	Doctoral student	15	3.8%
Total		392	100.0%

3. Result

3.1 Describe Statistical and Normal Distributions

The scores for each item are described statistically in the form of $\bar{X}$±S. According to the statistical results (see Table 2), it is found that the mean scores for each variable range from 3.26 to 3.61. This indicates that participants in this study demonstrated an above-moderate level of positivity towards dignity in the dimensions of cognition(RZ), emotion(QG), and behavioral tendencies(XW). Skewness and kurtosis tests were conducted to examine the normality of the distribution of participant samples for each item. Because if the absolute values of skewness coefficients are within 3 and kurtosis coefficients are within 8, it is considered that the data meet the requirements of approximate normal distribution, so, according to the statistical results, the absolute values of skewness and kurtosis coefficients for each item in this measurement are within this standard range (see Table 2). Therefore, the obtained data satisfy the requirements of approximate normal distribution.

Table 2. Item Descriptive Statistics of the Final Scale

Dimension	Item number	$\bar{X}$±S	Degree of deviation	Degree of kurtosis
Cognition(RZ)	5	3.54±1.11	–0.48	–0.42
	9	3.56±1.10	–0.62	–0.16
	13	3.55±1.12	–0.45	–0.42
	16	3.50±1.15	–0.47	–0.49
	21	3.61±1.07	–0.46	–0.40
Emotion(QG)	7	3.28±0.97	–0.11	–0.31
	12	3.27±0.90	–0.21	–0.22
	15	3.28±0.93	–0.19	–0.16
	18	3.26±0.93	–0.09	–0.20
Tendency to behave(XW)	6	3.33±0.90	–0.08	–0.42
	17	3.27±0.90	–0.09	–0.26
	19	3.28±0.92	–0.02	–0.20
	22	3.32±0.92	–0.12	–0.22
	23	3.29±0.91	–0.13	–0.27

3.2 Item Analysis

The participants (n=392) were sorted in ascending order based on their total scores. The lowest and highest 27% of participants were then allocated into low-scoring (top 27%, n=106) and high-scoring groups (bottom 27%, n=107), respectively. Independent sample t-tests were conducted on the total scores and scores for each dimension of the 14 items between these two groups. The results indicated significant differences in both the total scores and scores for each dimension of the scale between the two groups ($p<0.001$). These findings suggest satisfactory discriminant validity for all items (refer to Table 3).

Table 3. Independent Samples t-Test for the Top 27% and Bottom 27% Groups(*n*=213)

Variables	Top27%($\overline{X}$±*S*)	Bottom27%($\overline{X}$±*S*)	*T value*
Total	37.08±4.11	57.50±3.94	–37.05***
Cognition	13.25±4.02	21.99±2.58	–18.88***
Emotion	10.52±2.56	15.35±2.65	–13.53***
Tendency to behave	13.31±2.80	20.17±2.58	–18.58***

Note：*** represents $p<0.001$

Correlations between each item were calculated (n=392). The results revealed significant correlations between all items except for RZ21 and QG18 (p=0.08). The correlation coefficients between the other 13 items ranged from 0.10 to 0.68. Notably, RZ5 showed a correlation with QG18 at p=0.03, RZ13 with QG18 at p=0.049, and RZ21 with QG12 at p=0.03, with all other correlations having p<0.01. Correlations between each item and each dimension was calculated (n=392), and the correlation coefficients between 14 items and three dimensions were between 0.18 and 0.86, all p<0.01. The correlation between each dimension (n=392) was calculated, and the results showed that the correlation coefficient between each dimension was 0.23 to 0.38, all p<0.01.

The standard deviation of each item was used to measure the degree of dispersion of each item, and the results showed that the standard deviation of 14 items ranged from 0.90 to 1.15 (as Table 2), indicating that the degree of dispersion was high.

3.3 Scale's Validity and Reliability Analysis

3.3.1 The CFA Model Fitness Test of Scale

The Dignified Death Attitude Scale was developed to assess the attitude of a specific social group (college students) towards dignified death. It was constructed based on three components of attitude, namely cognition, emotion, and behavioral tendency. The scale, named "Attitude to Die with Dignity Scale," was designed as a Likert 5-point subscale. Its reliability and structural validity were examined using Cronbach's alpha coefficient and structural equation modeling respectively. The scale demonstrates satisfactory item differentiation and dispersion levels, with a Cronbach's alpha reliability coefficient of 0.94. Regarding its structural validity, the correlation indexes are as follows: chi-square=87.604, df=51, p=0.003; GFI=0.964; AGFI=0.946; CFI=0.987; RMSEA=0.043.The Dignified Death Attitude Scale exhibits robust reliability and validity while also possessing practical application value and research significance.

Table 4. Model Fitness Test(*n*=392)

Indicators	Standard of reference	Result
CMIN/DF	1-3 is excellent, 3-5 is good	1.10
RMSEA	<0.05 is excellent, <0.08 is good	0.02
IFI	>0.9 is excellent, >0.8 is good	1.00
TLI	>0.9 is excellent, >0.8 is good	1.00
CFI	>0.9 is excellent, >0.8 is good	1.00

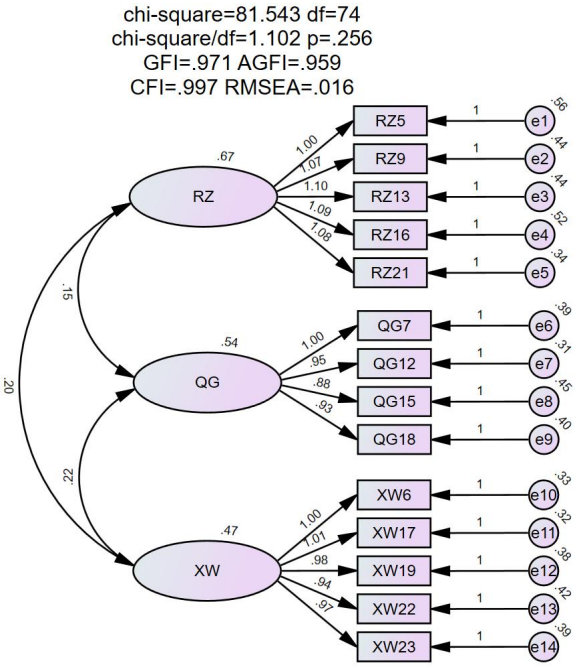

Figure 1. Chart of CFA Model for Scale Validation Factor Analysis

Tips: RZ, cognition; QG, emotion; XW, tendency to behave.

3.3.2 The convergent validity and reliability of the scale were analyzed

The analysis results from Table 5 indicate that in the validity test of the scale, the average variance extracted (AVE) values for each dimension exceeded 0.5. Overall, this suggests that each dimension exhibits good convergent validity, indicating a strong internal consistency for the scale. Additionally, the composite reliability (CR) values for the scale components all exceeded 0.8 (refer to Table 5). The overall Cronbach's alpha reliability coefficient for the entire scale was 0.86, indicating a high level of reliability for the scale.

3.4 Differences in Attitudes between Medical and Non-Medical Students

Independent sample t-tests showed no significant difference in attitudes towards death with dignity between medical(n=214) and non-medical(n=178) students (t = 0.48, p = 0.63). This suggests that medical students do not hold more positive attitudes towards death with dignity than non-medical students, highlighting the need for enhanced education on this topic in medical schools and make scientific, useful educational strategy.

3.5 Preferences for Educational Methods

A questionnaire was used to investigate the tendency of college students to choose the way of social education and promotion of death with dignity. The results showed that compared with hospital education, policy advocacy and media publicity with high support rate, school education was even less supported by the survey respondents (college students), and its support rate was less than 50% (see Figure 2A). There was no statistically significant difference in the support rate of the four education promotion methods between medical students and non-medical students (see Figure 2B). Similarly, gender and growing environment (rural and urban) did not affect the choice of education and promotion methods (gender X^2=0.61, p=0.89; Growth environment X^2=0.94, p=0.82). In terms of educational level, there is also no statistically significant difference in the support rate of the four education promotion methods among junior college and below, undergraduate and graduate students (master's degree and doctoral degree) (see Figure 2C).

Table 5. Scale Convergent Validity Analysis Table(*n*=392)

Dimension	Number	Parameter significance estimation				Factor loading	Item reliability	Reliability of composition	Validity of convergence
		Unstd.	*S.E.*	*t-value*	*P*	*Std.*	*SMC*	*CR*	*AVE*
Cognition	5	1.00				0.74	0.54	0.89	0.63
	9	1.08	0.07	15.31	***	0.80	0.63		
	13	1.11	0.07	15.53	***	0.81	0.65		
	16	1.09	0.07	14.95	***	0.78	0.61		
	21	1.09	0.07	16.10	***	0.84	0.70		
Emotion	7	1.00				0.76	0.58	0.83	0.56
	12	0.96	0.07	14.10	***	0.79	0.62		
	15	0.87	0.07	12.56	***	0.69	0.47		
	18	0.94	0.07	13.54	***	0.74	0.55		
Tendency to behave	6	1.00				0.77	0.59	0.86	0.55
	17	1.02	0.07	14.97	***	0.78	0.61		
	19	0.98	0.07	14.13	***	0.74	0.54		
	22	0.94	0.07	13.47	***	0.70	0.50		
	23	0.97	0.07	14.07	***	0.73	0.54		

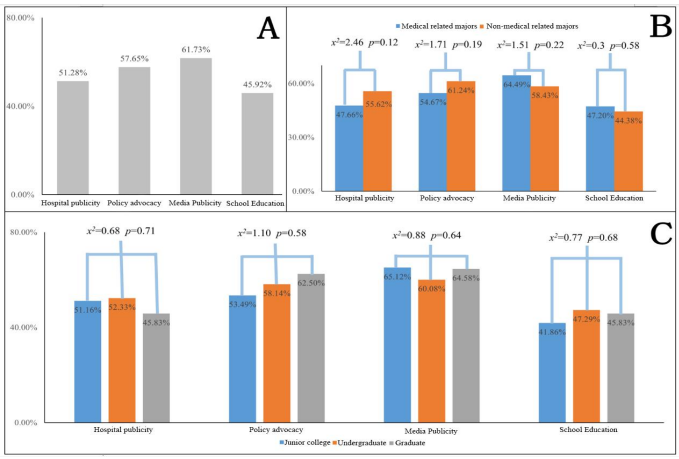

Figure 2. Analysis on the Tendency of College Students to Choose The Promotion of Death with Dignity

Explanation: Panel A shows the total sample's support for the four education methods; Panel B shows the comparison of the support of medical students and non-medical students in the same propaganda and education method; Panel C shows the comparison of the support of students with different educational levels in the same propaganda and education method.

4. Discussion

4.1 The Social and Scientific Nature of the Scale

Currently, mainstream scales related to death with dignity tend to focus on medical clinical aspects , with minimal consideration given to evaluating attitudes towards death with dignity or social psychology among the general population. However, attitudes towards death with dignity or social psychology among the general population not only have a close relationship with medical clinical practices but also play a crucial guiding role in related educational and legislative activities. Therefore, there is an urgent need for a scale capable of assessing attitudes towards death with dignity among the general population. Given that university students with higher levels of knowledge and cognitive abilities represent a significant proportion of contemporary youth, they are a suitable entry point for psychological assessment and social surveys among young populations. Thus, the construction of the "Death with Dignity Attitude Scale" targeting the general population (university students) holds certain social value, filling the gap in academia for scales assessing attitudes towards death with dignity among the general population and providing a research tool for death with dignity-related studies.

Due to the rarity of scales on the same topic, the existing space for scientific reference is limited. Therefore, the scale follows the laws of medicine, psychological science and social science as far as possible in terms of language design, factor control and variable integrity, and integrates the current social issues related to death with dignity and death education. CFA model has good fit, and all items have good discrimination and high dispersion, which can scientifically and effectively reflect the attitude of the subjects towards death with dignity. Therefore, the scale should be further used in quantitative and qualitative research of college students' attitude towards death with dignity.

4.2 Limitations of the Scale

The subjects of this scale are college students, so the language design does not take the elderly population with low education into account, so it should not be directly applied to the general population in society, such as the elderly population. Due to the influence of social customs, elderly psychology, death education and other factors, it is still a challenge to investigate death-related sensitive issues in the elderly population. However, the attitude of the elderly towards death with dignity is an important part of the attitude of the whole society towards death with dignity, which has an important impact on the education and legislation of death with dignity. Therefore, there is an urgent need for in-depth research on the attitudes of the elderly towards death with dignity.

In addition, the definition of death with dignity has not been unified and has not been widely promoted (which is closely related to cognition), thus affecting the development of the attitude scale. For example, in the design of items, in order to clearly express a certain topic, the language has to be academic, the sentence is long and the logic is complex, which may affect the understanding and choice of the subjects, which may affect the overall effect of the scale. The guidance part of the scale provides a unified definition of death with dignity, which may affect the subjects' scores in cognitive related items. Therefore, the social education and promotion of the concept of death with dignity and the improvement of social awareness should be paid attention to together with other humanistic education, social psychology and legal research related to death with dignity.

4.3 The Attitude of College Students Towards Death with Dignity and the Education of Death with Dignity for Medical Students

Death with dignity, whether it is regarded as a social humanities or a medical related knowledge, has the social humanities attributes related to death education, so it should be valued and studied deeply. According to the above descriptive statistics of the attitude to death with Dignity scale, that is, the average scores of each variable are between 3.26 and 3.61, suggesting that college students have a positive attitude towards death with dignity, but there is still

much room for improvement. In addition, the data showed that at present, medical students did not have a more positive attitude towards death with dignity than non-medical students, but medical students are often the people who face clinical death and contact with death frequently, so they need to have a more scientific cognition and positive attitude towards death with dignity, suggesting that we need to strengthen the relevant education of death with dignity among medical students. At the same time, studies by other scholars also believe that the establishment of death with dignity and hospice care courses can help medical students establish a positive outlook on life and death, deepen career cognition, and thus make career development planning clearer . In summary, it is urgent to strengthen the social (college students) propaganda and education of death with dignity, especially for medical students, and establish scientific education content and efficient education methods, so as to provide assistance for death education, social promotion of death with dignity, and legislation related to death with dignity.

4.4 The Teaching Method of Death with Dignity for College Students

The survey of the above promotion methods of death with dignity showed that media publicity and policy advocacy had relatively high support rate, while school education had low support rate. But there is no doubt that the current college students receive school education, that is, school education, will still play an irreplaceable leading role. The latter and the former have formed a sharp contradiction and conflict, and the reasons need to be further discussed, and the corresponding countermeasures or solutions to the conflict must be further studied. Based on the fact that media publicity is more easily attracted and accepted by college students, and the important role of school education in college students' education, we believe that: On the basis of traditional curriculum education [20], school education of death with dignity or view of life and death needs to introduce network media education technology, especially network education technology with high interaction, such as short video platform (Douyin, Kuaishou, etc.) , social media (Wechat) and work platform (Dingding), etc. We can try to produce interesting and topical short videos, network tweets and other media education content for delivery to increase the attractiveness, adhesion and audience rate of education. The combination of school education and media education is also conducive to the social propaganda and promotion of dignified death outside school. Based on the current social and political development and the recognition and promotion of death with dignity in China [23], we believe that there is no social and political atmosphere or environment for the administrative department to come forward and advocate policies. However, college students still prefer to support policy advocacy, which may also reflect that there are deficiencies or defects in the current understanding of the content related to dignified death among college students, and they need more scientific and reasonable guidance and education.

In addition, this paper briefly discusses the reasons why school education is not highly regarded by college students. The author (some of them are college students) interprets from the perspective of students' experience and perspective that the current content and form of school education are generally relatively boring and too formal, and there is resistance. Therefore, when designing the education activities related to death with dignity, we should operate and manage them with the thinking of college students and adopt diversified education strategies.

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References

[1] Chen Yunliang, Chen Weiwei. Human Rights jurisprudence of end-of-life medical treatment: Thinking on the concept and boundary of "Death with dignity" [J]. Human Rights,2021,(03):110-127.DOI:10.16696/j.cnki.11-4090/d.2021.03.011.

[2] Jing Jun.Debate on Death with Dignity [J]. Open Era, 2022(4):162-178+10.

[3] Han Mingan. Dictionary of New Chinese Words [M]. Harbin: Heilongjiang People's Publishing House, 1991, 662–663.

[4] Li Xuchu, Liu Xingce. New Dictionary of Gerontology [M]. 8th edition, Wuhan: Wuhan University Press, 2016.604–605.

[5] Gong Xiaoyan, Zhang Jiajia, Sui Weijing, et al. Research progress of death with dignity in Modern medical context [J]. Modern Practical Medicine, 2022, 34(7):966-969.
[6] Deng Renli, Chen Liu-Liu, Shi Bao-Xin, et al. Research progress of pre-emptive medical care plan in Chinese cultural context [J]. Chinese Journal of Nursing, 2015, 50(9):1117-1121.
[7] Yu Wenshi, Gao Yun, Zhu Guoqing, et al. "Dying with Dignity" or "clinging to Life"?--Analysis of the ethical dilemmas of living Will in China and research on countermeasures [J]. Chinese Medical Ethics, 2018, 31(6):700-703.
[8] Li Ruiling, Le Siyi, Wu Ivan, et al. Research progress of hospice care at home and abroad [J]. Nursing Research, 2021, 35(23):4230-4234.