Investigation of Student Nurses' Attitudes towards End-of-Life Care and Their Influencing Factors

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Abstract

Background: This cross-sectional investigative study aimed to determine student nurses' attitudes towards end-of-life care. **Methods**: This study used a descriptive research design with stratified sampling to survey student nurses enrolled in one of four nursing colleges in China from January 2023 to December 2023. Student nurses' general demographic and prior related information, attitudes towards death and attitudes towards end-of-life care were determined using a general information questionnaire, the Death Attitude Profile—Revised scale and the Professional End-of-Life Attitude Scale (PEAS), respectively. **Results**: The total PEAS score was 122.91 ± 16.123. Significant differences were noted in the attitude towards end-of-life care scores according to sources of end-of-life care knowledge ($P < 0.05$). However, no significant differences in student nurses' attitudes towards end-of-life care scores were observed according to sex, religion, only-child status, place of origin, education level, student cadre status and voluntariness in selecting the nursing career ($P \geq 0.05$). **Conclusions**: Student nurses lacked an optimistic attitude towards end-of-life care, which was influenced by differences in the sources of end-of-life care knowledge.

Keywords

Nursing Students, End-of-Life Care, Attitude

1. Introduction

As society advances and people ascribe ever increasing importance to life, the attention placed on end-of-life care has become more and more widespread.

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End-of-life care refers to the provision of wholistic support and care, encompassing the physical, psychological and social aspects, to terminally ill patients and their families by healthcare providers. Such support and care aim to improve the quality of life of terminally ill patients, complete their final journey of life painlessly and comfortably, and maintain and enhance the physical and mental health of their families [1]. One of the concepts of end-of-life care is to transition patients from medical-based treatment to nursing-based care, thereby establishing the important role of nurses in end-of-life care [2].

With the ageing of China's population, the social demand for end-of-life care is rapidly increasing. Nurses assume an extremely important role in end-of-life care, and their attitudes towards end-of-life care are the basis for developing end-of-life care services [3]. Nursing education, which is an important approach for training nursing personnel, may produce educators, instructors and practitioners of end-of-life care in the future whose their attitudes towards end-of-life care will directly affect the quality of care provided. Therefore, helping student nurses students establish correct attitudes towards end-of-life care will have a profound impact on the profession they will pursue in the future [4].

Some studies have shown that most student nurses possess a positive attitude towards end-of-life care and can recognise the importance of relatives' companionship, psychological comfort and active care by medical staff in the patient's dying stage [5]. However, evidence has shown that professional attitudes towards end-of-life care were unsatisfactory, with only 1.67% of student nurses expressing willingness to engage in long-term end-of-life care. Some reasons for their unwillingness to engage in end-of-life care include their inability to bear the depressing atmosphere of the end-of-life ward (72.50%), their inability to address grieving family members (66.67%), their inability to process the patient's death (60.83%) and their fear of disputes caused by mood swings of grieving family members (30.83%) [6]. Furthermore, some studies have shown that student nurses' attitude towards end-of-life care were not optimistic. Taken together, student nurses cannot appropriately care for dying patients and often feel like a bystander when dealing with dying patients. Student nurses tend to fear terminally ill patients and their families and do not know how to communicate effectively [7] [8].

Previous studies have concluded that several factors can influence student nurses' attitudes towards end-of-life care, including sex, education, voluntariness in selecting the nursing career, end-of-life care education or training, participation in a clinical nursing internship and attitudes towards death [5] [6] [7] [8]. However, the results of each influencing factor on student nurses' attitudes towards end-of-life care have been inconsistent. Thus, the current study aims to explore student nurses' attitudes towards end-of-life care and their influencing factors.

2. Introduction

2.1. Study Design and Setting

This study employed a cross-sectional investigative design. Convenience sam-

pling was used to select students enrolled in one of the four schools of nursing in China from January 2023 to December 2023.

2.2. Participants

The inclusion criteria were 1) age older than 18 years and 2) understanding of, support for, and voluntary participation in this study. The exclusion criteria were 1) patients with verbal communication disorders and 2) those with psychiatric disorders, severe intellectual or cognitive dysfunction. All student nurses provided informed consent and volunteered to participate in this study.

2.3. Data Collection

2.3.1. Sociodemographic Questionnaire

Participants filled out a self-designed general information questionnaire that collected information regarding general demographic information and relevant past experiences. General demographic information (*i.e.,* demographic characteristics) included sex, ethnicity, place of birth, religion, only-child status, educational level, student leadership experience, voluntariness in selecting the nursing profession, willingness to care for terminally ill patients, willingness to engage in end-of-life care and internship experience. Relevant past experiences included previous experiences in caring for terminally ill patients and their families and sources of end-of-life care knowledge.

2.3.2. Attitudes towards Death

The original Death Attitude Profile—Revised (DAP-R) scale, which contains 32 items, is divided into five dimensions: fear of death, death avoidance, neutral acceptance, approaching acceptance and escape acceptance. Each item is assigned a score of 5, 4, 3, 2 and 1 corresponding to a response of 'strongly agree', 'agree', 'neutral', 'disagree' and 'strongly disagree', with the attitudes towards death being determined according to the level of the factor scores for each dimension [9]. The Chinese version of the DAP-R scale depicts the number of entries in the original scale from 'strongly disagree' to 'strongly agree', with lower scores reflecting a negative attitude towards death. The Chinese version of the DAP-R scale has shown good reliability when applied to nurse groups, with a Cronbach's *α* coefficient of 0.875 and Cronbach's α coefficients above 0.7 for most dimensions [10].

2.3.3. Attitudes towards End-of-Life Care

The original Professional End-of-Life Attitude Scale (PEAS) was divided into two dimensions based on experience, which were further subdivided into 9 entries for personal attitude towards end-of-life care and 31 entries for attitude assessment of professionalised end-of-life care, for a total of 40 entries. To understand nurses' experiences and worries about end-of-life care, Pearson's correlation coefficient showed that the Chinese version of the scale correlated well with the original scale in each dimension, r = 0.913, P < 0.01, suggesting that questionnaire was stable. The Cronbach's *α* coefficient showed a correlation between

the Chinese and original version of the scale according to each dimension and entry. The Cronbach's *α* reliability coefficient for the overall correlation between the entries of both scales was 0.897 [11].

2.4. Survey Method

A stratified sampling method was used to survey students enrolled in one of the four nursing schools in China. After obtaining the consent and cooperation of the instructors from the education department of the institutions, the researcher introduced the purpose, content and significance of this study to the instructors and student leaders of the nursing colleges who then explained this survey to the student nurses, obtained their cooperation and support, and distributed and collected the questionnaires in person on the spot or through a smartphone software.

2.5. Statistical Analysis

Following the empirical method, the maximum dimension of the scale was 5 × 20. After accounting for a 20% attrition of the total sample size, the sample size was finally set at 120 participants.

All statistical analyses were conducted using SPSS statistical analysis version 23.0. The appropriate statistical methods were selected according to the nature of the information and the purpose of the study. Variables were expressed as mean ± standard deviation, with comparisons between two groups being performed using the t-test. Count data were expressed as number of cases and percentages, with comparisons between two groups being performed using χ2 test. Multivariate logistic regression analysis was used to identify factors associated with nurses' attitudes towards end-of-life care. In all analyses, a P value of < 0.05 indicated statistical significance.

3. Results

A total of 171 valid questionnaires were finally obtained from the questionnaires distributed in this study. The 171 study participants had a mean age of 21 years (range, 17 to 24 years). Moreover, 98% of the student nurses were aware of end-of-life care, while sources of end-of-life care knowledge included classroom teaching (82.5%), the media (10.5%), medical journals and other magazines (3.5%), lectures and talks (1.8%) and others (1.7%) (Table 1).

The DAP-R scale had the lowest score (14.29 ± 2.816) on the neutral acceptance dimension of death, followed by escape acceptance (14.68 ± 3.328), death avoidance (16.21 ± 3.673) and fear of death (19.42 ± 4.652), whereas approaching acceptance had the highest score (30.84 ± 5.931). Grouping the participants according to sex, ethnicity, only-child status, place of birth, religion, education level, student leadership experience, willingness to engage in end-of-life care, voluntariness in selecting the nursing profession, willingness to engage in end-of-life care, previous experience with caring for terminally ill patients and

Table 1. Student nurses' sociodemographic characteristics (n = 171) from January 2023-December 2023 in China.

	n	%
Sex		
Male	18	10.5
Female	153	89.5
Ethnics		
Han	153	89.5
Minority	18	10.5
Only child		
Yes	54	31.6
No	117	68.4
Place of birth		
Rural	102	59.6
Urban	69	40.4
Religion		
No	159	93
Other	12	7
Education level		
Speciality	12	7
Undergraduate	159	93
Experience as a student leader		
Yes	93	54.4
No	78	45.6
Unsolicited application for Nursing		
Yes	84	49.1
No	87	50.9
Internship experience		
Yes	147	86.0
No	24	14.0
Willingness to engage in end-of-life care		
Yes	102	59.7
No	69	40.3
Previous experience with caring for terminally ill patients and their families		
Yes	75	43.9
No	96	56.1

Continued

Sources of knowledge on end-of-life care		
Classroom teaching	141	82.5
Medical journals and other magazines	6	3.5
Lectures and talks	3	1.8
Media (internet, TV, mobile phones, etc.)	18	10.5
Others	3	1.7

their family members and sources of end-of-life care knowledge, an chi-square test was conducted to compare the scores for each dimension pertaining to attitudes towards death between different groups. Our results showed no significant differences between the groups ($P \geq 0.05$) (Table 2).

The total score for the PEAS was 122.91 ± 16.123, with the scores for the attitude assessment of professionalised end-of-life care (dimension 1) and personal attitude towards end-of-life care (dimension 2) being 118.18 ± 15.613 and 4.74 ± 2.040, respectively. A significant difference ($P < 0.05$) in the scores for the assessment of student nurses' attitudes towards end-of-life care (dimension 2) was observed according to sources of end-of-life care knowledge, whereas no significant difference ($P \geq 0.05$) in the scores for the assessment of attitudes towards specialised end-of-life care (dimension 1) or scores for the total scale were observed.

4. Discussion

After its introduction in China in the mid-1980s, end-of-life care has now become an important research component that facilitates adaptation to specific national circumstances and the ageing Chinese population in the 21st century, as well as the transformation of the medical care model [3]. Studies on student nurses have shown that attitude towards caring for dying patients was higher among male than among female students [5] [12]. However, findings regarding the influence of education on student nurses' attitudes towards end-of-life care have been inconsistent. In a previous study, undergraduate student nurses had more positive attitudes towards personal death and dying but more negative attitudes towards end-of-life care than specialist student nurses [13]. In contrast, a study on ICU trainee student nurses showed that undergraduate student nurses had more positive attitudes towards caring for dying patients than specialist student nurses [3].

Some studies found that student nurses who voluntarily chose the nursing profession had a better attitude towards end-of-life care than those who did not [14]. This may be attributed to the positive influence of student nurses' relatives who are engaged in nursing-related professions and have higher expectations for the nursing profession. They also found that nursing work is arduous after comprehensive study and that participation in clinical practice reduces the motivation

Table 2. Comparison of the different sources of end-of-life knowledge.

	Total	Dimension 1	Dimension 2
Classroom teaching	123.72 ± 16.242	118.98 ± 15.764	4.74 ± 1.787
Medical journals and other magazines	115.50 ± 2.121	112.50 ± 2.121	3.00 ± 4.243
Media (internet, TV, mobile phones, etc.)	100.00	91.00	9.00
Lectures and talks	124.33 ± 18.217	119.17 ± 16.425	5.17 ± 2.401
Others	114.00	113.00	1.00
F-value	0.713	0.881	2.636
P value	0.586	0.482	0.044*

*$P < 0.05$.

to practise nursing, especially end-of-life care. Moreover, the same study found that tensions in the nurse–patient relationship have increased in recent years. Indeed, the tension between nurses and patients and the increasing incidence of workplace violence against nurses have also undermined the confidence of student nurses in the nursing profession, which have increased their apprehension regarding end-of-life care from a personal perspective. Results regarding the relationship between end-of-life care education or training and attitudes towards end-of-life care have been inconsistent [15].

One study found that students who had received end-of-life care education during their basic nursing education were more confident in their understanding of end-of-life care but had a more negative attitude towards end-of-life care than did those who had not received such education [16]. In contrast, other findings showed that student nurses who received end-of-life care education or training or volunteered for the same had more positive attitudes towards caring for dying patients than did those who did not [10]. Some studies found that those who experienced internship had more negative attitudes towards end-of-life care than did those who did not, suggesting that student nurses' internship experience did not effectively improve their attitudes towards death and end-of-life care [14]. However, some studies have reported that end-of-life care nursing internships can effectively improve student nurses' attitudes towards death and end-of-life care [15].

Our assessment of end-of-life care attitudes found that student nurses were less optimistic towards end-of-life care but were more positive towards end-of-life care clients' needs. End-of-life care attitudes were less affected by sex, religious beliefs, only-child status, place of birth, education, student leadership experience and voluntariness in selecting the nursing profession. Sources of knowledge had a certain influence on the total score for end-of-life care attitude and personal attitude towards death. Accordingly, student nurses who had accumulated more relevant knowledge or cases in their daily study had better perception

regarding the patients' need for end-of-life care and understanding on how to face death than did those who had limited knowledge or experience.

5. Conclusion

Student nurses' lack of optimistic attitudes towards end-of-life care was influenced by various factors, such as sources of knowledge regarding end-of-life care.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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