

Effect of Death Preparation Program on Nursing Students' Meaning of Life, Death Anxiety and their Attitude toward Care of Dying Geriatric Patients

Neamit Ibrahim Elemam Ahmed Elashri⁽¹⁾, Abdel-Hady El Gilany⁽²⁾, and Heba Noshay Abd El-Aziz Mohamed⁽¹⁾

⁽¹⁾ Assistant Professor of Gerontological Nursing, Faculty of Nursing - Mansoura University

⁽²⁾ Professor of Public Health, Faculty of Medicine - Mansoura University

Corresponding Author: neamaelashry@gmail.com

Abstract

Background: Death is one of the most stressful events nursing students' experiences during their clinical training. Provision of death preparation education has become a critical priority for nursing students to reduce their death anxiety, change their negative attitudes and improving their sense of meaning in life. **Aim of the study:** Was to evaluate the effect of death preparation program on nursing students' meaning of life, death anxiety and attitude toward care of dying geriatric patients. **Subjects and Methods; Research design:** A quasi-experimental research design was used. **Setting:** The study was conducted at Health Technical Institute affiliated to the Ministry of Health and Population. **Subjects:** A total number of 105 nursing students enrolled in the gerontological nursing course during the second term of the academic year 2023-2024. **Tools of data collection:** Structured Interview Questionnaire, Meaning in Life Questionnaire, Death Anxiety Scale, and Frommelt Attitude toward Care of the Dying Scale. **Results:** A statistically significant improvement was observed in meaning of life, death anxiety and attitude toward care of dying geriatric patients' scores among the nursing students post the program implementation. A significant positive relation was observed between meaning in life and death anxiety and meaning in life and attitude toward care of the dying patients for each. Moreover, inversely relation was found between nursing students' death anxiety and their attitude toward care of dying geriatric patients. **Conclusion:** The death preparation program was significantly effective in improving the score of meaning in life and attitude toward dying geriatric patients. Also, the total mean score of death anxiety was significantly decreased post the program with statistically significant difference. **Recommendation:** Implementation of specialized and systematic death preparation educational program on nursing and members of interdisciplinary team more broadly.

Key words: Death Preparation, nursing students, Meaning of Life, Death Anxiety, Attitude, Dying geriatric patients.

Introduction:

Research on aging has become increasingly prominent due to the world's aging population, which is causing social and economic concerns. In fact, advances in medicine over the past few decades have contributed significantly to an increase in life expectancy globally. Therefore, by 2050, it is anticipated that almost two billion people will be older than 60⁽¹⁾.

The onus of handling death is moving from patients' families to medical facilities and healthcare providers in general, and nurses in particular, as societal patterns change. This pattern aligns with the growing reliance of elderly patients with terminal illnesses on nurses, who frequently build strong bonds with them by providing devoted nursing care and spending a lot of time with patients⁽²⁾.

Undergraduate nursing students' sufficient knowledge and favorable attitudes towards care of dying geriatric patients will impact the future care quality, and indeed play a pivotal role in providing palliative care to terminally ill patients in the final stages of their lives will impact the quality of treatment in the future. In fact, they are essential to the palliative care of these patients⁽³⁾.

Nursing students need to develop the attitudes and interpersonal competence necessary to give compassionate care in addition to possessing the necessary knowledge, and skills to deliver a high-quality care to patients toward the end of their lives⁽⁴⁾.

Attitude toward death is considered one of the most crucial factors in figuring out an individual's way of life and perspective which encompasses their cognitive, emotional, and behavioral responses to death^(5, 6). Health professionals, especially nurses who give health services to patients uninterrupted, frequently confront death, dying patients, and their relatives and take an active role in the process of coping with death and satisfying care⁽⁷⁾.

Nurses' views about death, their own experiences with death, their religious beliefs, and their philosophies about life and death all have a significant impact on their attitudes toward providing care to patients with terminal illnesses⁽⁸⁾. It has been underlined that lowering death anxiety is crucial to lowering the level of psychological discomfort nurses endure^(9, 10).

A generally stable personality trait known as "death anxiety" refers to a pessimistic outlook, bad emotions, and negative thoughts about dying whether they be for oneself, significant others, or the concept of death in general⁽¹¹⁾. An assortment of negative emotional responses at varying frequencies brought on by visions of bodily harm is known as death anxiety.

This viewpoint emphasizes the importance of both the cognitive approach and emotions⁽¹²⁾. It has been noted that nursing students typically avoid the situation with an apathetic expression instead experience tension and anxiety when required to care for patients on their deathbed without developing their own personal philosophy of death⁽¹³⁾.

Since nursing involves making decisions that can mean the difference between life and death, ethics are essential to the integrity of the nursing profession. Positive psychological states have a substantial impact on both physical and mental health, and one's comprehension and appreciation for life determine one's meaning in it. As a result, enhancing nursing students' sense of purpose in life has emerged as a crucial area of focus for educating future nurses⁽¹⁴⁾. When faced with a patient's death without reflecting on life and death, nursing students should spend some time to consider the meaning of life; they will experience internal and external confusion even about their self-identities, including conflicts pertaining to their lives and the world⁽¹³⁾.

Nursing students' attitudes regarding death can influence their nursing education. Nursing students play a vital part in providing health care, and they are also the most exposed to death, therefore dread of death and attitude toward death play an important role in their mental health⁽¹⁵⁾. Failure to address this emotional burden when caring for a dying patient leads to physical and mental tiredness, as well as unfavorable attitudes toward death and anxiety^(16, 17).

Innovative education contributes significantly to the professionalism of undergraduate nursing students. The development of future nurses through innovative behaviors education. Nursing student should encompass the principles and standards that guide nurses' actions. It reflects their dedication to values like compassion, integrity, and

accountability, as well as their deep understanding of nursing concepts and best practices⁽¹⁸⁾. Nursing education is critical in training nurses to deliver high-quality end-of-life care. One of the most significant challenges to providing end-of-life care services is the lack of nurses' knowledge⁽¹⁹⁾.

There is no published research on nurses' anxiety levels or attitudes toward dying are available in the literature. Professionals' attitudes towards caring for patients who are dying are influenced by death attitudes inter-professional teamwork, decision-making, and clinical practices in end-of-life care⁽²⁰⁾. Health practitioners should be able to express their views about death, understand the death process, and promote awareness of the dying patient's physical and psychosocial characteristics and their needs⁽²¹⁾.

Significance of the study:

Death preparation education is particularly vital for nursing students because it helps them become more optimistic and less fearful of death, which is a fundamental aspect of caring for dying geriatric patients. Accordingly, through the development and implementation of death preparation program, this study's aim was to promote comprehension of the meaning and value of life and help in the formation of positive attitudes toward death in nursing students⁽¹³⁾. End-of-life care must be comprehensive and compassionate, and that is the obligation of nurses. This entails identifying when death is imminent and communicating that information to families. Nurses should collaborate with other members of the health care team to promote effective symptom management and give support for the patient and family⁽²²⁾.

Aim of the study:

The aim of the study was to evaluate the effect of death preparation program on nursing students' meaning of life, death anxiety and their attitude toward care of dying geriatric patients.

Research hypotheses:

1. Nursing students' perception about meaning of life will be improved after implementation of death preparation program.
2. Nursing students' low level of death anxiety will be improved after implementation of death preparation program.
3. Nursing students' attitude toward care of dying geriatric patients will be improved after implementation of death preparation program.

Subjects and Method:

Design:

A quasi-experimental research design was used.

Setting:

The Ministry of Health and Populations' affiliated Health Technical Institute in Mansoura City served as the study's site. This institution follows a conventional two-year curriculum with a six-month internship.

Subjects:

All second-year nursing students enrolled in the gerontological nursing course during the second term of the academic year 2023-2024 made up the study subjects. There were 136 nursing students in total, 105 (77.0%) of whom were involved in the research, from both sexes, full time students and voluntary participated was selected. Thirty-one nursing students (23.0%) did not reply to the study because they did not want to be part of it.

Tools for data collection:

In order to gather data, **four tools** were used:

Tool I: Structured Interview Questionnaire: The researchers created it to collect data about; age, sex, marital status, place of residence, prior experiences, prior handling of elderly patients who were dying, and the number of deaths attended by nursing students.

Tool II: Meaning in Life Questionnaire (MLQ): Was developed by Steger et al. ⁽²³⁾ to assess the perception of the meaning of life. It comprises ten items, which are divided into two distinct constructs. They are the search for meaning (MLQ-S; e.g., "I am seeking a purpose or mission for my life") and the presence of meaning (MLQ-P; e.g., "My life has a clear sense of purpose"). This instrument has five dimensions, each of which is measured using a seven-point Likert scale.

Scoring system:

Higher scores indicate higher levels of meaning presence and search (the scores range from 5 to 35). Item 9 in the subscale intended for meaning has one reverse-coded item. The higher the score, the greater the perception of the meaning of life.

Tool III: Death Anxiety Scale (DAS): Templer ⁽²⁴⁾ developed this scale. It was translated into Arabic language and tested for its validity and reliability by Hassan et al. ⁽²⁵⁾ to assess the level of death anxiety in nursing students. A 15-item scale with true or false ratings is included. Questions 1, 4, 8, 9, 10, 11, 12, 13, and 14 are classified as follows: true answers are assigned a number 1, and false answers are assigned a number 0. Regarding questions 2, 3, 5, 6, 7, and 15, select 0 for the true answer and 1 for the false answer. These categories apply to this scale: there is no death anxiety when the score is 0; death anxiety is present when the score is 1-6; and death anxiety is present when the score is 7-15.

Tool IV: The Frommelt Attitude toward Care of the Dying (FATCOD) Form B Scale: Was validated and reliable by Frommelt ^(26, 27). It's easy to fill and acceptable. According to Mastroianni et al. ⁽²⁸⁾ FATCOD-Form B was designed with students enrolled in palliative care program in mind, to determine the attitude level of the students. Thirty items on a 5-point

Likert scale (strongly disagree, disagree, uncertain, agree, and strongly agree) describing students' attitudes towards caring for patients who are dying were included in the FATCOD-Form B. The tool consisted of fifteen statements with positive wording and fifteen statements with negative wording that were reversed during analysis.

Scoring system:

Strongly disagree received a score of 1, and strongly agree received a score of 5. A score in the 30-150 range could indicate a more positive attitude towards providing care for patients who are dying. The interquartile range was employed to determine the attitude level of the students.

Content validity and reliability:

Study tools were assured of their content validity by a jury of five experts in Gerontological nursing and Geriatric medicine. The study tools, in their judgment, were clear and practicable, and no changes were suggested. The tools' reliability for internal consistency was statistically examined using Cronbach's alpha score, which revealed that tool II was 0.85, and tool III was 0.78 and tool IV was 0.88.

Pilot study:

In order to assess the feasibility of the research process and the clarity of the data collection form, a pilot study was carried out on 10% (11) of nursing students, who were subsequently excluded from the study.

Method:

1. Preparatory phase:

- Tool I (Demographic Data and Structured Interview Questionnaire) was developed by the researchers after reviewing pertinent literature.
- Arabic version of tool III Death Anxiety Scale was used. While, tool II the Meaning in Life Questionnaire and tool IV the Frommelt Attitude toward Care of the Dying (FATCOD) Form B Scale were translated into

Arabic. An English language specialist from the Mansoura University English Department's Faculty of Education utilized back translation to confirm the accuracy of the tool translation.

Development of the program:

Death preparation educational program was designed based on a literature review^(2, 29, & 30) and nursing students need. It conducted by the research team and validated by expert in the relevant filed. The program's duration, was established based on looking at earlier research, included of one-hour session^(30, 31). Nursing students watched a film or attended a teaching session every week, and then they participated in role-playing and discussions. The death preparation educational program included content suited for nurses working in hospitals, which was designed and evaluated based on prior studies and a literature review through assessing the content, methods, time, and number of sessions. In addition, the validity of the content was guaranteed through collaboration of two nursing professors. In light of suggestions that a greater emphasis on sharing each other's experiences may be more beneficial in lectures.

2. Implementation phase (Field work):

Data collection began on March 1st, 2024, and ran through April 10th, 2024.

Five groups and twenty-one students in each group were formed by the researchers to facilitate deliberate and purposeful debate discussion among them. Twenty minutes were allotted for each session followed by twenty minutes for sharing and group discussion. There was one session every week for a total of five weeks throughout the program with a total of 5 sessions.

Death preparation educational sessions as follow:

▪ **1st session (Understanding of death):**

Introduction to understanding life and death, suicide and euthanasia, through: Definition of death and judgment, meaning of death, the meaning of life, sorrow and loss, establishment of life attitude in relation to life and death and death concept and philosophy.

▪ **2nd session (Family bereavement care):**

Through change in life, understanding of the death process, understand the various issues and needs of the dying geriatric patients, right to know and medical decisions for dying geriatric patients and funeral arrangements, design, insurance, wills, etc. actually coping.

▪ **3rd session (Communication and End-of-life patient care):**

By explaining how to prepare for death, experiencing death, communication related to end-of-life patient care, palliative care, pain management and symptoms management.

▪ **4th session (Professional role):**

By explaining the role of nurses in the proper grief-loss process, acceptance of death, professional attitude and anxiety management, understanding of the grief, its process, and loss associated with death, grief process and how to overcome and understanding the psychology of bereavement and family cope process

▪ **5th session (Ethics and legal issues):**

By explaining the ethical and legal issues related to dying.

Teaching methods:

A variety of instructional methods, including group discussions, demonstrations and visual aids such

as PowerPoint, videos and posters were used. Handouts were distributed.

3. Evaluation phase:

After implementing death preparation educational sessions each student was evaluated using tools II, III, and IV to evaluate the effect of death preparation program on nursing students' meaning of life, death anxiety and attitude toward care of dying geriatric patients (posttest).

Administrative and Ethical considerations:

- Through letters from the director of the Health Technical Institute, official permission was obtained from the administration of the study settings at Mansoura city, affiliated to Ministry of Health & Populations. The letter explained the purpose and procedures of the study and included a copy of the form used to collect data. Mansoura University's Faculty of Nursing research ethics committee accepted the conduct of the current study and assigned it reference number (0507).
- The purpose of the study was explained to nursing students, who were then asked to sign a written consent form. Anonymity, privacy, confidentiality, and the option to withdraw at any time were guaranteed. At the time of recruitment, all nursing students provide written informed consent. The study maneuvers didn't cause actual or potential harm to participants.

Statistical analysis:

Data were analyzed using with statistical package for social science (SPSS) version 22. The normality of data was first tested with one-sample Kolmogorov-Smirnov test. The following descriptive appropriate statistical tests were used: mean, standard deviation, frequency, and percentage. When the dependent variable is normally distributed, two related samples are compared using the paired sample t-test. Pearson's

correlation coefficient was used to assess the correlation between the variables. Regarding data visualization, Microsoft Excel was used to create graphs. When the probability of error is less than 5% level, the results are deemed significant (p-value).

Results:

Table 1: Clarifies that, the nursing students' age ranged from eighteen to twenty years, with a mean of 18.9 ± 0.7 years. Females were more prevalent compared to males they constituted 61.0% of the nursing students. Regarding marital status 74.3% were single. As regards residence 76.2% of the nursing students are residing in rural areas. 87.6% of the nursing students reported that they have previous contact with geriatric patients and 62.9% of them didn't have any previous training in caring of dying geriatric patient.

Table 2: Shows that, 78.1% of the nursing students had no previous caring of dying geriatric patients. 47.8% of them reported that they having the first expose to the dying geriatric patients since 1 to 3 years. 87.6% of the nursing students reported that they have a previous death experience. 41.9% of them perceived that terminally ill dying geriatric patients need all types of care such as physical, spiritual, and psychological care.

Table 3: Effect of death preparation program on nursing students' meaning of life. This table reveals that, the mean score of presence meaning of life subscale among the nursing students was significantly increased to 25.20 ± 6.30 post the program compared to 19.87 ± 6.33 pre the program, and there is a statistically significant difference ($P=0.001$). As regards the search for meaning subscale, the mean score was significantly increased to 26.19 ± 5.98 post the program compared to 20.81 ± 6.79 pre the program, and there is a statistically significant difference ($P=0.001$). The

total meaning in life score was significantly increased to 51.39 ± 11.65 post the program compared to 40.69 ± 12.93 pre the program and there is a statistically significant difference ($P=0.001$).

Table 4: Represent that the percentage of low death anxiety among the studied nursing students was significantly decreased post the program 36.2 % compared to 85.7% pre the program. Also, the percentage of high death anxiety was significantly decreased post the program 0.0% compared to 14.3% pre the program. The total mean score of death anxiety was significantly decreased post the program 0.61 ± 1.09 compared to 2.76 ± 1.94 pre the program and the difference is statistically significant ($P=0.001$).

Table 5: Reveals that, the nursing students' attitude mean score towards caring for a dying person was significantly increased to 84.04 ± 13.50 post the program compared to 61.67 ± 19.49 pre the program and the difference is statistically significant ($P=0.001$). Also, the mean score of nursing students' attitude toward dying patients' families was significantly increased to 44.95 ± 13.73 post the program compared to 33.54 ± 18.82 pre the program. The overall mean score, of nursing students' attitude towards dying geriatric patients significantly increased to 129.42 ± 26.48 post the program compared to 95.21 ± 38.17 pre the program and the difference is statistically significant ($P=0.001$).

Figure 1: Types of nursing students' attitude toward caring dying geriatric patients' pre and post death preparation program implementation. This figure reveals that nursing students' positive attitude toward caring dying geriatric patients was improved and their negative attitude was decreased post death preparation program implementation.

Table 6: Shows that there was a significant positive relation between meaning in life and death anxiety

($p=0.004$) and meaning in life and attitude toward care of the dying patients ($p<0.001$). Moreover, a negative significant relation was found, between death anxiety of nursing students and their attitude toward care of the dying ($p<0.001$) post the program implementation.

Discussion:

Nursing students face particular challenges when providing care for elderly patients who are dying. Requiring them to possess specific qualities to deliver morally sound and comprehensive nursing care. Nursing students must possess sufficient knowledge, comprehend the dying process, and be aware of ethical issues. End-of-life nursing envelops numerous perspectives of care; pain and symptom management, culturally sensitive practices, helping geriatric patients and their families through the death and dying process⁽³²⁾.

As a stand-alone course: Gerontological nursing is important for nursing students training in earlier years to empower them with an extensive education and instill a favorable attitude towards geriatric patients⁽³³⁾. Educational gaps in nursing care for the dying exist even though the majority of nursing schools offer a basic curriculum on death and dying, but it mostly consists of required readings, case studies, and quick lectures.

Furthermore, there is little information on end-of-life care in the current nursing textbooks. Nurses rated the lack of nursing education in end of life care as an obstacle⁽³²⁾. From an educational perspective, the literature includes little description of how nursing student learn end of life intervention for dying geriatric patients. Caring for patients who are dying is one of the most emotionally taxing aspects of nursing, and nursing education is crucial to preparing future nurses for this duty⁽³⁴⁾.

Undergraduate nursing students have been in desperate need to death

education program to impart content knowledge about and gaining insight into death process attitudes. There is clear near-universal agreement on the importance of including death education in undergraduate nursing student training⁽³⁵⁾. This study is an attempt to fill this void in the literature and aims to close this gap in the literature by clarifying the impact of death preparation program on attitude toward death and death anxiety and meaning in life among nursing students.

The current study was applied on one hundred and five homogeneous nursing students at the Health Technical Institute, as it was found that there was similarity in their general characteristics. Almost two thirds of them are females ranging in age from 18 to 20 years with a mean of 18.9 ± 0.7 years. It might be related to the criteria of the academic study in the health technical institute of nursing, affiliated to Ministry of health accepts students after graduation from secondary schools and almost all students aged 17 years old. Similar finding was found by **Abdu et al.**⁽³⁶⁾; **Ferri et al.**⁽³⁴⁾; **Ibrahim and Abd Elsalam**⁽³⁷⁾ found that most of their respondents were female. On contrary an Egyptian study done by **Ibrahim and Abd Elsalam**⁽³⁷⁾ reported that the mean age of studied sample was 21 ± 0.7 , while a Chinese study carried out by **Lee and Hong**⁽¹³⁾ found that mean age of their participant in the both groups were 20.11 years and 20.14 years, respectively.

As for marital status, approximately three-quarters of them were single. This result may be related to that this outcome may be connected to the fact that the majority of participants were young and their objectives and intention was directed to complete their studies first. In the same way, **Abdu et al.**⁽³⁶⁾ revealed that more than one third of their respondents were single.

Based on the current study results, most nursing students who were

studied had prior experience contact with geriatric patients. This outcome may be explained by the fact that the majority of nursing students complete their clinical rotations at several hospitals, increasing their chances of interacting and dealing with elderly patients. Furthermore, aging population's recent growth, raises the likelihood youth interaction with elderly in their homes. Particularly, in the culture of rural areas, caring for elderly individuals is considered a duty for the younger generation in the family. This result supported by a study carried out in Southwest, Ethiopia by **Abdu et al.**⁽³⁶⁾ and in Zanzibar Island by **Muhsin et al.**⁽³⁸⁾ revealed that the studied nursing students having contact with elderly individuals as nurses.

With aging, complex care management of multi-morbid conditions and changing functional capacities has become core clinical business for many stakeholders in health care systems. Senior citizens need care that is of a higher caliber. Nonetheless, a small portion of nursing undergraduates select aged care as their professional careers. Thus, to be ready to give end-of-life care, nursing students require specialized training and expertise in dealing with elderly patients⁽³⁹⁾.

The present study found that approximately two thirds the studied nursing students didn't have any previous training in caring of dying geriatric patients. This finding may be due to geriatric care is recently new field and the Egyptian society hardly pays attention to the importance of spreading the culture of caring for the elderly among youth, integrating this specialty into the medical and nursing sector, and making it at the forefront **Sampaio et al.**⁽⁴⁰⁾ decided that there weren't enough participants discussing death and dying-related issues in nursing education. Also, **A'la et al.**⁽⁴¹⁾ noticed that most of their students lacked experience in providing care for patients who were dying. Furthermore, **Szczupakowska et al.**⁽⁴²⁾ stated that

their students believe that does not prepare in a satisfactory manner related to the care of a dying patient.

Nursing student who have uncertainty feelings about death may steer clear of death-related issues⁽⁴³⁾. Likewise, this current research found that, the majority of the nursing students had no previous experience in caring of dying geriatric patients, more than one half of them reported having the first expose to the dying geriatric patients since 1 to 3 years. This might be due to end of life geriatric care is sensitive topic, being hidden and denied to be integrated into the medical and nursing sector. The health care system lack of structured training; in its theoretical and practical aspects and qualifications related to care for the dying geriatric patients. Comparable result was found by A European study done by **Ferri et al.**⁽³⁴⁾ that the students studying nursing feel only somewhat prepared to care for those who are dying.

Also, **A'la et al.**⁽⁴¹⁾ reported that there were more students with no prior experience caring for patients who were dying than there were with experience.

Hence, confronting death and the dying process is an exclusive experience; the nursing Students reported feeling unprepared for the situation when they experienced their first deaths in clinical practice, which caused them great anxiety. The existing gap in the academic education related to the theme of death is known and entails insecurity with regard to the experiences they go through in the face of finiteness⁽⁴⁴⁾. The majority of the nursing students in the current study revealed that reported that they have a previous death experience. Parallel finding was founded by **Carvalho et al.**⁽⁴⁵⁾ who reported that the majority of the studied nursing students reported having previous experience with death, with fewer students reporting past presence with death witnessed firsthand. On the

same line **Szczupakowska et al.**⁽⁴²⁾ revealed that most of their respondents have already experienced a situation related to patient death.

Nearly one half of the studied nursing student perceived that terminally ill geriatric patients should receive all forms of care including physical, spiritual, and psychological care. Similar finding reported by **Costello**⁽⁴⁶⁾ who found that psychosocial aspects, such as spiritual and emotional care, were deemed significant by nurses, despite a lack of evidence supporting their practical orientation towards this. A greater sense of meaning in life frequently motivate nursing students to provide more effective care for the elderly and to be more involved in their profession⁽⁴⁷⁾. As for the effect of death preparation program on the studied nursing students' meaning of life. The mean score of meaning of life presence subscale among the nursing students improved significantly post the program and there is a statistically significant difference

With regards to the search for meaning subscale, the mean score improved significantly post the program compared to pre the program with statistically significant difference. Furthermore, the total meaning in life score improved significantly post the program compared to pre the program and the difference was statistically significant. The same finding was reported by **Kim et al.**⁽³¹⁾ who showed that the program for death education was efficient to improve the meaning in life among college students. Moreover, another Korean study done by **Lee and Hong**⁽¹³⁾ reported that their students in the experimental group showed increased level of meaning of life and confirmed that the dying program is an efficient interventional approach to enhance their understanding of the meaning of life.

Our culture is deeply rooted in death anxiety related to the dying process, and helping professionals are

not exempt from the impact of their beliefs about death on their direct practice efforts ⁽¹⁶⁾.

With regard to the impact of the death preparation program on the death anxiety of the nursing students under study, the percentage of nursing students with low death anxiety was considerably lower after the program than it was before. As well; the percentage of high death anxiety was significantly decreased post the program compared to pre the program and the total mean score of death anxiety was significantly decreased post the program compared to pre the program with statistically significant difference. This result can be linked to the impact of the educational program influences students' theoretical knowledge, as well as how they build the interpersonal skills and capabilities needed to handle situations like these circumstances and considerably lessen their death anxiety.

Likewise, **Lee and Hong** ⁽¹³⁾ reported that, participant in the experimental group exhibited decreased death anxiety level when compared to the control group and confirmed that the dying program is an efficient interventional approach to facilitate reduce death-related anxiety among nursing students. Also, another study conducted in Korea by **Chu and Jang** ⁽²⁾ reported a significant difference between the both groups related to death anxiety and assured that the proposed program lessen death anxiety of their participants. Moreover, **Cho and Kim** ⁽⁴⁸⁾ reported the same results.

Nursing curricula represent a fundamental part of nursing student's preparation to care for dying geriatric patients and to naturally embrace the challenges associated with dying. Nursing students may be less likely to decide on a career in geriatric nursing if they exhibit negative attitudes towards death and a sense that life has no purpose ⁽⁴³⁾. The current study addressing the effect of death preparation program on the studied

nursing students' attitude toward dying geriatric patients. The mean score of nursing students' attitude toward caring for a dying person improved significantly post the program compared to pre the program and the difference was statistically significant.

Also, the mean score of nursing students' attitude toward dying patients' families improved significantly post the program compared to pre the program and the total mean score of nursing students' attitude toward dying geriatric patients improved significantly post the program compared to pre the program and the difference was statistically significant. These results can be attributed to the impact of our educational program which clarifies the strategies for coping with the negative emotions associated with dying and methods of dealing with dying geriatric patients and the stress conditions triggered by coping with death which changes the nursing students' attitude.

Comparable finding was reported by **Chu and Jang** ⁽²⁾ who revealed that the experimental group who received death preparation education showed higher scores for death attitudes than the control group, with a statistically significant difference and confirmed that the death preparation education program had a positive effect on death attitudes. Also, an interventional study was done in by **Dobbins** ⁽⁴⁹⁾ reported the same results as the approaches for delivering educational content that had a considerable impact on students' attitudes towards dying and death to some degree. Inversely, a study done in Ankara, turkey by **Inci and ÖZ** ⁽⁵⁰⁾ reported the attitude scale regarding death and dying patients did not show a statistically significant difference in average scores between the pre- and post-tests.

The current study clarified that, positive attitudes of the studied nursing students towards caring for dying geriatric patients improved and their negative attitude was decreased post death preparation program

implementation. Similar finding was reported by **Berndtsson et al.** ⁽⁵¹⁾ who noticed that their students' mean scores indicated a statistically significant shift towards a more positive attitude towards caring for dying patients. The students with the lowest pre-course scores demonstrated the highest mean progress. On the same line, **Cho and Kim** ⁽⁴⁸⁾ reported that the experimental group was improved in degree of positive attitude towards nursing care of the dying patients.

Additionally, there was a significant positive relation between meaning in life and death anxiety and meaning in life and attitude toward care of the dying patients post the program implementation among nursing students. Similar finding was reported by **Liu and Yih** ⁽⁴⁷⁾. Also, **Baltacı et al.** ⁽⁵²⁾ reported a significant and positive correlation between the subscale scores of searches of meaning and the mean score of death anxiety.

Lastly, the present study revealed that significant inversely negative relation between death anxiety, and attitude toward caring of the dying patients post the program implementation among nursing students. Similarly, a study done in Edirne, Turkey by **Gurdogan et al.** ⁽⁵³⁾ reported the level of death anxiety is inversely related to the attitude toward the care of the dying patients. As the lower the level of death anxiety, positive attitudes toward caring for the dying patient increased. Another study done in China by **He and Li** ⁽⁵⁴⁾ reported a significant relationship was found between death anxiety and attitudes toward the elderly for the entire study sample. Finally, to helping nursing students comprehend the value and purpose of life, this program emphasizes the significance of death as a normal part of life. This significantly lessens death anxiety,

and emotional burden associated with dying and it encourages nursing students, to actively participate in delivering end-of-life care.

Conclusion:

Our death preparation program achieved its aim in enabling nursing students hold positive attitudes toward care of dying geriatric patients and maintain appropriate significant meaning of life because it confirms that a death preparation education relieved nursing students' death anxiety and brought significant improvements in their meaning in life and death attitudes. The studied nursing students meaning of life was positively correlated with death anxiety and their attitude toward care of dying geriatric patients. While, inversely relation was found between studied nursing students' death anxiety and their attitude toward care of dying geriatric patients.

Recommendations:

Based on the study findings, the following recommendations can be deduced:

1. Implementation of specialized and systematic death preparation education on nursing and members of interdisciplinary team more broadly.
2. Integration of theoretical and practical aspects on end of life care in nursing student clinical internships will promoting their professional skills, qualifying them to provide professional care.
3. End-of-life care for elderly patients nursing education must be a fundamental component of undergraduate nursing curricula programs. and should be offered as a core part in theoretical and practicum courses.
4. Further studies are needed in the expansion of curriculum on caring of dying geriatric patients.

Table (1): The studied nursing students' distribution according to their demographic characteristics and their experiences with geriatric patients

Items	N= 105	%
Age by years		
• 18-	35	33.3
• 19-	39	37.1
• 20 +	31	29.5
Mean ± SD	18.96±0.79	
Sex		
• Male	41	39.0
• Female	64	61.0
Marital Status		
• Single	78	74.3
• Married	27	25.7
Residence		
• Rural	80	76.2
• Urban	25	23.8
Previous contact with geriatric patients		
• Yes	92	87.6
• No	13	12.4
Previous training in caring of dying geriatric patients		
• Yes	39	37.1
• No	66	62.9

Table (2): Data related to dealing with dying geriatric patients among the studied nursing students

Variable	N=105	%
Previous caring of dying geriatric patients		
• Yes	23	21.9
• No	82	78.1
First exposed to the dying geriatric patients N₂₃		
• Since 3 months	4	17.4
• Since 3 Months to 1 year	8	34.8
• Since 1 to 3 years	11	47.8
Previous death experience		
• Yes	92	87.6
• No	13	12.4
What are the perceived types of care for terminally ill geriatric patients?		
• Physical care	21	20.0
• Spiritual care	8	7.6
• Psychological care	32	30.5
• All types of care	44	41.9

Table (3): Death preparation program effect on the meaning of life among the nursing students

Meaning in life	Pre		Post		Test of significance
	Mean	SD	Mean	SD	P
• The Presence of Meaning subscale	19.87	6.33	25.20	6.30	t ₂ 21.738 (<0.001)
• The Search for Meaning subscale	20.81	6.79	26.19	5.98	t ₂ 18.111 (<0.001)
Total meaning in life score	40.69	12.93	51.39	11.65	t₂ 29.953 (<0.001)

Table (4): Effect of death preparation program on nursing students' death anxiety

Death anxiety	Pre		Post		Test of significance
	N	%	N	%	P
• No death anxiety	0	0.0	67	63.8	
• Low death anxiety	90	85.7	38	36.2	
• High death anxiety	15	14.3	0	0.0	
Total mean score	2.76±1.94		0.61±1.09		t=17.547 (<0.001)

Table (5): Effect of death preparation program on nursing students' attitude toward dying geriatric patients

Attitude	Pre		Post		Test of significance
	Mean	SD	Mean	SD	P
• Attitudes toward caring for a dying person	61.67	19.49	84.04	13.50	t= 10.061 (<0.001) **
• Attitudes toward dying patients' families	33.54	18.82	44.95	13.73	t= 4.959 (<0.001) **
Total attitude score (FATCOD)	95.21	38.17	129.42	26.48	t= 7.598 (<0.001) **

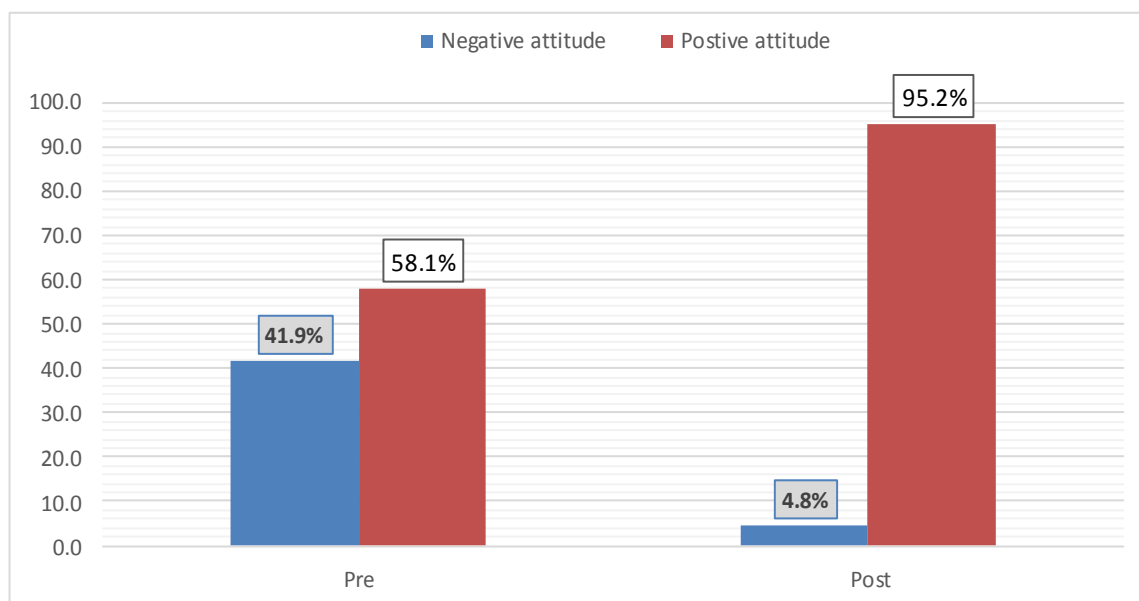


Figure (1): Types of nursing students' attitude toward caring dying geriatric patients' pre and post death preparation program implementation

Table (6): Correlations between meaning in life, death anxiety and attitude toward care of the dying patients post the program implementation among nursing students

Variable		Death anxiety	Attitude toward Care of the Dying
• Attitude toward Care of the Dying	Pearson Correlation	-0.507	1
	Sig. (2-tailed)	<0.001**	
• Meaning in life	Pearson Correlation	0.281	0.606
	Sig. (2-tailed)	0.004**	<0.001

References:

1. Tenchov, R., Sasso, J.M., Wang, X., and Zhou, Q.A. Aging Hallmarks and Progression and Age-Related Diseases: A Landscape View of Research Advancement. *ACS Chemical Neuroscience*. 2024; 15(1): 1-30.
2. Chu, E.Y., and Jang, S.H. The Effects of a Death Preparation Education Program on Death Anxiety, Death Attitudes, and Attitudes toward End-of-Life Care among Nurses in Convalescent Hospitals. *Journal of hospice and palliative care*. 2021; 24(3): 154-164.
3. Smith, M.B., Macieira, T.G.R., Bumbach, M.D., Garbutt, S.J., City, S.W., Stephen, A., Ansell, M., Glover, T.L., and Keenan, G. (2018). The Use of Simulation to Teach Nursing Students and Clinicians Palliative Care and End-of-Life Communication: A Systematic Review. *The American journal of hospice & palliative care*. 2018; 35(8): 1140-1154. <https://doi.org/10.1177/1049909118761386>
4. Ali, W.G.M., and Ayoub, N.S. Nurses' attitudes toward caring for dying patient in Mansoura university hospitals. *Journal of*

- Medicine and Biomedical Sciences*. 2010; 1(1), 16-23.
5. Hassan, H. H., Abd Allah, E.S., and El-Badawy, R.E.S. Knowledge and attitudes regarding elderly care among nursing schools' students at Fakous city. *Zagazig Nursing Journal*. 2021; 17(1): 28-38.
 6. Bakhtiari, Z., Fathi, D., Ahagh, M.M., Hosseinijad, S., and Ahmadboukani, S. The Relationship Between Workplace Spirituality, Job Satisfaction and Attitude Toward Death Among the Staff of the Emergency Department. *Health in Emergencies and Disasters Quarterly*. 2018; 3(3), 159-166. <https://doi.org/10.29252/nrip.hdq.3.3.159>
 7. Cerit, B., Çoşkun, S., Çalışkan, M. A., and Temelli, G. The Relationship Between Nurses' Ethical Sensitivity Levels and Their Attitudes Toward Principles About Die with Dignity. *Journal of religion and health*. 2021; 60(1): 162-177. <https://doi.org/10.1007/s10943-020-01102-8>
 8. Achora, S., and Labrague L.J. An integrative review on knowledge and attitudes of nurses toward palliative care: Implications for practice. *Journal of Hospice and Palliative Nursing*. 2019; 21(1): 29-37. <https://doi.org/10.1097/NJH.0000000000000481>
 9. Kagan, M. Social support moderates the relationship between death anxiety and psychological distress among Israeli nurses. *Psychological Reports*. 2021; 124(4): 1502-1514. <https://doi.org/10.1177/0033294120945593>.
 10. Duran, S., and Polat, S. Nurses' Attitudes towards Death and Its Relationship with Anxiety Levels. *OMEGA - Journal of Death and Dying*. 2024; 88(4): 1530-1544. <https://doi.org/10.1177/0030228211065963>.
 11. Dursun, P., Alyagut, P., and Yılmaz, I. Meaning in life, psychological hardiness and death anxiety: individuals with or without generalized anxiety disorder (GAD). *Current psychology (New Brunswick, N.J.)*. 2022; 41(6): 3299-3317. <https://doi.org/10.1007/s12144-021-02695-3>.
 12. Urien, B., and Kilbourne, W. On the role of materialism in the relationship between death anxiety and quality of life. Eds.: Angela Y. Lee and Dilip Soman, Duluth, MN: Association for Consumer Research. *Advances in Consumer Research*. 2008; 35, 409-415.
 13. Lee, J.M., and Hong, S.J. Effects of the Heal-Dying Program on Meaning of Life, Death Anxiety, and Life Satisfaction in Nursing Students. *Annals of the Romanian Society for Cell Biology*. 2021; 25(1): 1567-1579.
 14. Zhao, Z., Mei, Y., Wang, X., Jiang, H., Wang, W., Lin, B., and Zhang, Z. Meaning in life among nursing students: a latent profile analysis. *BMC nursing*. 2023; 22(1): 264. <https://doi.org/10.1186/s12912-023-01425-3>
 15. Dadfar, M., Farid, A.A.A., Lester, D., Vahid, M.K.A., and Birashk, B. Effectiveness of death education program by methods of didactic, experiential, and 8A model on the reduction of death distress among nurses. *International Journal of Medical Research & Health Sciences*. 2016; 5(7): 60-71.
 16. Braun, M., Gordon, D., and Uziely, B. Associations between oncology nurses' attitudes toward death and caring for dying patients. *Oncology Nursing Forum*. 2010; 37(1): 43-49. DOI: [10.1188/10.ONF.E43-E49](https://doi.org/10.1188/10.ONF.E43-E49).
 17. Sharif Nia, H., Ebadi, A., Lehto, R.H., and Peyrovi, H. The

- experience of death anxiety in Iranian war veterans: a phenomenology study. *Death studies*. 2015; 39(1-5): 281–287. <https://doi.org/10.1080/07481187.2014.991956>
18. Shen, Y., Xie, W., Wang, X., Qu, J., Zhou, T., Li, Y., Mao, X., Hou, P., and Liu, Y. Impact of innovative education on the professionalism of undergraduate nursing students in China. *Nurse education today*. 2021; 98: 104647. <https://doi.org/10.1016/j.nedt.2020.104647>
 19. Ferrell, B., Malloy, P., Mazanec, P., and Virani, R. CARES: AACN's New Competencies and Recommendations for Educating Undergraduate Nursing Students to Improve Palliative Care. *Journal of professional nursing: official journal of the American Association of Colleges of Nursing*. 2016; 32(5): 327-333. <https://doi.org/10.1016/j.profnurs.2016.07.002>
 20. Bouri M., Papadatou D., Koukoutsakis P., Bitsakou P., and Kafetzis D. The impact of pediatric palliative care training on the death attitudes of health professionals. *International Journal of Caring Sciences*. 2017; 10(2), 676-689.
 21. Duran, S., and Polat, S. Nurses' Attitudes Towards Death and Its Relationship with Anxiety Levels. *OMEGA-Journal of Death and Dying*. 2022; 88(4): 1530-1544. <https://doi.org/10.1177/00302228211065963>
 22. American Nurses Association. Nurses' roles and responsibilities in providing care and support at the end of life. Revised position statement. 2016; 3(2).
 23. Steger, M.F., Frazier, P., Oishi, S., and Kaler, M. The Meaning in Life Questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology*. 2006; 53(1): 80-93. <https://doi.org/10.1037/0022-0167.53.1.80>
 24. Templer, D.I. The construction and validation of a death anxiety scale. *The Journal of general psychology*. 1970; 82(2):165-177.
 25. Hassan, O.A.A.E.H, Hassan, N.M., and Gaafar, M.M.E.S Relationship between purpose in life and death anxiety among Elderly Home Residents. *IJNRHN*. 2019; 6(2): 1217-1226.
 26. Frommelt, K.H.M. The effects of death education on nurses' attitudes toward caring for terminally ill persons and their families. *The American Journal of Hospice and Palliative Care*. 1991; 8(5), 37-43.
 27. Frommelt, K.H.M. Attitudes toward the care of terminally ill: An educational intervention. *The American Journal of Hospice and Palliative Care*. 2003; 20(1): 13-22. <https://doi.org/10.1177/104990910302000108>
 28. Mastroianni, C., Piredda, M., Taboga, C., Mirabella, F., Marfoli, E., Casale, G., Matarese, M., Frommelt, K.H., and De Marinis, M.G. Frommelt Attitudes Toward Care of the Dying Scale Form B: psychometric testing of the Italian version for students. *Omega-Journal of Death and Dying*. 2015; 70(3): 227-250. <https://doi.org/10.1177/0030222815568944>
 29. Corr, C.A., and Corr, D.M. *Death & Dying Life & Living*. Wadsworth publishing. 2013. 7th edition. P.p. 5-14.
 30. Kim, E.H., and Lee, E. Effects of a death education program on life satisfaction and attitude toward death in college students. *Journal of Korean Academy of Nursing*. 2009; 39(1): 1-9.

31. Kim, S.N., Choi, S.O., Lee, J.J., and Sin, K.I. Effects of death education program on attitude to death and meaning in life among university students. *Journal of Korean Society for Health Education and Promotion*. 2005; 22, 141-153.
32. Hebert, K., Moore, H., and Rooney, J. The Nurse Advocate in End-of-Life Care. *Ochsner journal*. 2011; 11(4): 325-329. <https://www.nursingworld.org/practice-policy/nursing-excellence/ethics/>
33. Attafuah, P.Y.A., Amertil, N., Sarfo, J.O., Deegbe, D.A., Nyonator, D., Amponsah-Boama, C., and Abuosi, A.A. I decided to attend to him because it's my duty': Student Nurses perception and attitude towards care of older adults. *BMC medical education*. 2022; 22(1): 23. <https://doi.org/10.1186/s12909-021-03090-z>
34. Ferri, P., Di Lorenzo, R., Stifani, S., Morotti, E., Vagnini, M., Jiménez Herrera, M. F., Bonacaro, A., Artioli, G., Rubbi, I., and Palese, A. Nursing student attitudes toward dying patient care: A European multicenter cross-sectional study. *Acta bio-medica: Atenei Parmensis*. 2021; 92(S2): e2021018. <https://doi.org/10.23750/abm.v92iS2.11403>.
35. McClatchey, I.S., and King, S. The impact of death education on fear of death and death anxiety among human services students. *OMEGA-Journal of death and dying*. 2015; 71(4): 343-361.
36. Abdu, M., Daniel, T., and Yesuf, M. Determinants of Nurses' Knowledge Toward the Elderly Care, Southwest, Ethiopia. *SAGE open nursing*. 2024; 10, 23779608241242889. <https://doi.org/10.1177/23779608241242889>
37. Ibrahim, E.E., and Abd Elsalam, E.A. Geriatric nursing course: It's effect on nursing students' knowledge and attitude regarding caring elderly. *Egyptian Journal of Health Care*. 2020; 11(3): 1032-1041.
38. Muhsin A.A., Munyogwa M.J., Kibusi S.M., and Seif S.A. Poor level of knowledge on elderly care despite positive attitude among nursing students in Zanzibar Island: findings from a cross-sectional study. *BMC Nursing*. 2020; 19, 96. <https://doi.org/10.1186/s12912-020-00488-w>
39. Roller-Wirnsberger, R., Thurner, B., Pucher, C., Lindner, S., and Wirnsberger, G. H. The clinical and therapeutic challenge of treating older patients in clinical practice. *British journal of clinical pharmacology*. 2020; 86(10): 1904-1911. <https://doi.org/10.1111/bcp.14074>.
40. Sampaio, A.V., Comassetto, I., Faro, A.C., Dos Santos, R.M., and Monteiro, F.S. The experience of nursing students facing death and dying. *Investigacion y educacion en enfermeria*. 2015; 33(2): 305-314. <https://doi.org/10.17533/udea.iee.v33n2a13>
41. A'la, M.Z., Setioputro, B., and Kurniawan, D.E. Nursing Students' Attitudes towards Caring for Dying Patients. *Nurse Media Journal of Nursing*. 2018; 8(1): 25-34. <https://doi.org/10.14710/nmjn.v8i1.17270>
42. Szczupakowska, M., Stolarek, P., Roszak, M., Głodowska, K., and Baum, E. Patient's Death from the Perspective of Nursing Students. *Frontiers in public health*. 2021; 9, 636582. <https://doi.org/10.3389/fpubh.2021.636582>.
43. Zahran, Z., Hamdan, K.M., Hamdan-Mansour, A.M., Allari, R. S., Alzayyat, A.A., and Shaheen,

- A.M. Nursing students' attitudes towards death and caring for dying patients. *Nursing open.* 2022; 9(1):614-623.
<https://doi.org/10.1002/nop2.1107>.
44. Parry, M. Student nurses' experience of their first death in clinical practice. *International Journal of Palliative Nursing.* 2011; 17(9): 448-453. DOI: [10.12968/ijpn.2011.17.9.448](https://doi.org/10.12968/ijpn.2011.17.9.448)
45. Carvalho, L.G., Hamilton, H.M., Burke, M.E., McDonald, C., and Griggs, S. End-of-Life Nursing Knowledge Among Nursing Students. *The Journal of nursing education.* 2020; 59(3): 154-157.
<https://doi.org/10.3928/01484834-20200220-06>.
46. Costello, J. Nursing older dying patients: findings from an ethnographic study of death and dying in elderly care wards. *Journal of advanced nursing.* 2001; 35(1): 59-68.
47. Liu, Q., and Yih, B. Geriatric Nursing: Relationship Among Death Attitude, Meaning in Life, and Career Choice Motivation. *The journal of nursing research: JNR.* 2024; 32(2): e322.
<https://doi.org/10.1097/jnr.0000000000000605>
48. Cho, H.J., and Kim, E.S. The effect of the death education program on the death anxiety and attitudes toward nursing care of the dying patients of nursing student. *Journal of Hospice and Palliative Care.* 2005; 8(2): 163-172.
49. Dobbins, E.H. The impact of end-of-life curriculum content on the attitudes of associate degree nursing students toward death and care of the dying. *Teaching and Learning in Nursing.* 2011; 6(4): 159-166.
50. Inci, F., and ÖZ, F. Effects of death education on nurses' death anxiety, depression regarding death, and attitudes towards the dying patient. *ANADOLU PSIKIYATRI DERGISI-ANATOLIAN JOURNAL OF PSYCHIATRY.* 2009; 10(4): 253-260.
51. Berndtsson, I., Karlsson, M., and Rejnö, A. Nursing students' attitudes toward care of dying patients: A pre-and post-palliative course study. *Heliyon.* 2019; 5(10): e02578.
52. Baltacı, U., Traş, Z., Ak, M., and Kesici, Ş. Examining the Relationships between Death Anxiety, Meaning in Life, and Parental Attitude. *Journal of Teacher Education and Lifelong Learning.* 2023; 5(1), 38-50.
<https://doi.org/10.51535/tell.1208379>.
53. Gurdogan, E.P., Kınıcı, E., and Aksoy, B. The relationship between death anxiety and attitudes toward the care of dying patient in nursing students. *Psychology, Health & Medicine.* 2019; 24(7): 843-852.
<https://doi.org/10.1080/13548506.2019.1576914>.
54. He, Y., and Li, T. Death attitudes and death anxiety among medical interns after the 2020 outbreak of the novel coronavirus. *Frontiers in Psychology.* 2022; 13, 698546.
<https://doi.org/10.3389/fpsyg.2022.698546>