Review of the attitude of Nursing students toward death

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Abstract:

Nursing students often show distress when called to care for dying patients. A'la et al. found that nursing students had avoidant thoughts towards caring for dying Patients. Nursing curricula represent a core phase in the preparation of nurses to deal with death and dying. Nursing students had avoidant thoughts towards caring for dying patients and nursing students need a more natural acceptance of death and death education before starting clinical placement as they may encounter working with dying patients on their first day of clinical placement. Therefore, nursing students need ongoing support and opportunities to discuss their experiences about death and dying throughout their education. Palliative care is seen as supportive therapy throughout the illness rather than around the time of dying. Working with dying patients requires a natural acceptance of death and dying process. Studies show nursing students should have positive attitudes towards dying patients to give quality care. The final concept concentrates on the quality of life until death and clarifies that the centre of care is maintaining comfort and supporting the patients' last wishes, and this requires morally prepared, skilful and knowledgeable nurses. According to Orem's theory, nurses should be aware of patients' needs and their environment and should intervene when it is possible to ease the end-of-life stage Therefore, this study aims to examine undergraduate nursing students' acceptance or avoidance of their role in the end-of-life stage, including their attitudes towards death and caring for dying patients.

Keywords:

1. Introduction:

Death is one of the most intense emotional experiences that people encounter regardless of their cultural, ethnic and religious beliefs. Everyone will have to go through it or probably through watching someone dying at some point in their lives. However, for nurses, the issue is a bit different (Jafari et al., 2015). Nurses encounter situations where they care for dying patients and witness death on daily basis. They may experience difficulties in coping with their responsibilities to care for dying patients (A'la et al., 2018). They also have a responsibility to assist and support holistic patients' needs (A'la et al., 2018). To be able to do so, nurses should have positive attitudes towards caring in general, and during the dying process, in particular (Hebert et al., 2011). Although the main role of nurses is the preservation of life, death is an inevitable event in every individual's life (Sinclair, 2011). Nurses deliver care to those individuals, and their attitudes towards death are essential in the delivery of care (Grubb & Arthur, 2016). Feelings of uncertainty about death may cause nurses to avoid topics related to death, to develop escape acceptance from death and dying issues and to avoid palliative care tasks (Broom et al., 2015). Providing palliative care is only possible if nurses are educationally equipped (Jafari et al., 2015). Some parts of this education are acquired during the academic years in nursing schools (Jafari et al., 2015).

Internationally, there is widespread interest in research documenting inadequacies in undergraduate nursing education related to the death, dying and end-of-life care (Jafari et al., 2015). For nursing students' education, knowledge about their attitude towards caring for dying patients is necessary. Nursing curricula represent a core phase in the preparation of nurses to care for dying patients and to develop a natural acceptance of issues related to death and dying. Studies have showed that nursing students often show distress when called to care for dying patients (Jafari et al., 2015). Sampaio et al. (2015) concluded that the participants involving death and dying issues in nursing education were insufficient. Jafari et al. (2015) reported moderate negative to neutral attitudes among nursing students towards caring for dying patients. A'la et al. (2018) found that nursing students had avoidant thoughts towards caring for dying patients. Xu et al. (2019) concluded that nursing students need a more natural acceptance of death and death education before starting clinical placement as they may encounter working with dying patients on their first day of clinical placement. Therefore, nursing students need ongoing support and opportunities to discuss their experiences about death and dying throughout their education (Ek et al., 2014). Some research that studied the attitudes towards caring for dying patients in Asia, Africa, Europe and USA used The Frommelt

Attitude toward Care of the Dying (FATCOD-B) to explore these attitudes (Frommelt, 2003; Iranmanesh et al., 2010; Wang, 2019). The results revealed that education about caring for dying patients could be effective in changing nursing students' attitude. However, studies in this regard are considered limited. It is, then, essential to examine their attitudes towards death before they embark on their nursing career.

According to the Center to Advance Palliative Care (CPAC), palliative care is recognized by a multidisciplinary working and leadership approach. It is provided along with curative treatment because it is applicable at any age and any stage of the illness (CPAC, n.d.). Palliative care is seen as supportive therapy throughout the illness rather than around the time of dying. It aims to reduce patient's suffering and improve the quality of life for patients and their families (World Health Organization, 2018). Working with dying patients, such as in palliative care units, requires additional knowledge and skills and the adoption of a more natural acceptance of death and dying process (Shi et al., 2019). This requires nurses to obtain the necessary knowledge and skills during their undergraduate education and to not avoid issues related to death and dying. This will improve the quality of nursing care provided and prevent the secondary traumatic effects on the nurses themselves (Shi et al., 2019).

A Jordanian palliative care initiative was first introduced in 2001 by adopting the World Health Organization's philosophy of palliative care (Bingley & Clark, 2009). The first palliative unit was established at King Hussein Cancer Center (KHCC) in 2004, which provides inpatient, outpatient and home care palliative care services (Shamieh & Hui, 2015). Generally, in Jordan, the healthcare system focuses on cures, acute care for dying patients and palliative care (Omran & Obeidat, 2015).

One of the most valuable nursing theories that provides a framework for palliative care is Orem's self-care deficit theory. The Orem theory describes six core concepts, which are self-care, self-care agency, therapeutic self-care demand, self-care deficit, nursing agency and nursing system. The final concept concentrates on the quality of life until death and clarifies that the centre of care is maintaining comfort and supporting the patients' last wishes, and this requires morally prepared, skilful and knowledgeable nurses (Borda et al., 2019). According to Orem's theory, nurses should be aware of patients' needs and their environment and should intervene when it is possible to ease the end-of-life stage (Borda et al., 2019). Therefore, this study aims to examine undergraduate nursing students' acceptance or avoidance of their role in the end-of-life stage, including their attitudes towards death and caring for dying patients.

Previous studies showed that students' attitude towards palliative care had been investigated (Berndtsson et al., 2019; Chua & Shorey, 2021; Grubb & Arthur, 2016; Mallory, 2003; A'la et al., 2018). These studies supported that nursing students should have positive attitudes towards dying patients to give quality care. Positive students' attitudes in caring for dying patients can be used as an indicator of effective therapeutic communication with dying patients (Grubb & Arthur, 2016).

From a global perspective, many nursing students are not prepared to encounter death and care for patients who are at the end of life (Berndtsson et al., 2019). Therefore, it is important to provide education for nursing students due to the complexity of end-of-life care. A systematic review of nine studies was done by Chua and Shorey (2021), to examine the effectiveness of end-of-life educational interventions in improving nursing students' attitude towards death and care of dying patients. The findings of the review show that sustainability of improvement of attitudes could not be determined due to the lack of follow-up assessments., some studies revealed that nursing students showed that attitudes improved, online educational courses were feasible, and attitude towards death may require longer interventions (more than 2 months) to show improvement (Chua & Shorey, 2021).

Zulfatul A'la et al. (2018) study explored the nursing students' attitude and its relationship with demographic profile in caring for the dying patients in Indonesia. Results showed that there was no significant relationship between gender and training experience and students' attitudes towards caring for the dying patients, while experiences in caring for dying patients and academic level were associated with students' attitudes.

Education on palliative and end-of-life care is increasing in Jordan. Nevertheless, the concepts of death and dying and palliative care nursing received little attention in the undergraduate or postgraduate curricula of many nursing schools in Jordan (Omran & Obeidat, 2015). Topics related to spirituality and grief management should be included in educational preparation. Studies recommended that future research is needed to examine the sustainability of nursing students' improvement in attitude towards death and care of dying patients, and how the change in their attitude affects their clinical practices (Chua & Shorey, 2021; Mallory, 2003). A few Jordanian studies have described this experience for nurses but not for nursing students. According to Sharour et al. (2017), nurses' attitudes towards caring for dying patients as part of palliative care determine the quality of life among patients with cancer. While palliative care concepts are impeded in the curricula for bachelor's degree nursing programs, the psychological and spiritual preparedness and the acceptance of nursing students of death and

caring for dying patients are not clear. Therefore, exploring students' attitudes towards death and issues related to caring is crucial to equipping them with the skills, knowledge and acceptance that will enable them to enhance their psychological and spiritual adaption during their training period and to improve their quality of care after graduation. The purpose of this study was to examine the attitudes of undergraduate nursing students towards death and caring for dying patients in Jordan. The specific objectives were the following: (a) to describe nursing students' attitudes towards death and caring for dying patients; (b) to assess the differences in students' attitudes towards death and caring for dying patients according to their demographic characteristics, including their gender, marital status, academic level and university type; and (c) to examine the association of attitudes towards death and dying on caring for dying patients controlling for sociodemographic characteristics among nursing students.

2. Methods:

2.1. Design:

A cross-sectional correlational design was used. Data were collected using an electronic self-administered questionnaire from nursing students in Jordan, both public and private sectors. We used the STROBE cross sectional reporting guidelines to report this paper.

2.2. Sampling and settings:

Participants were recruited from all nursing schools in Jordan. There are 15 universities that award bachelor's degree in nursing (Khalaf, 2021). The total number of undergraduate nursing students officially documented in Jordan is 6,159 students (Ministry of Higher Education, 2017).

A convenience sampling technique was used, and it included 555 students from different nursing schools in Jordan, both public and private. The inclusion criteria were the following: full-time student, having cared for or participated in the caring of a dying patient that was a non-family member; ability to read and write in Arabic; and having access to electronic and internet devices. We did not exclude 1st year students because many bridging students already have diploma degrees and previously attended clinical courses. Moreover, many 1st year nursing students can take the first clinical course in the summer semester. Networking and snowball‖ technique in addition to official nursing students' social media groups such as Facebook were used to reach the target sample (due to lockdown measures during the COVID-

19 and moving to online teaching). The sample size was calculated with the G power program 3.0.10. (Faul et al., 2009). The *F* test was utilized using an Alpha level of 0.05, a medium effect size of 0.20 and a power of 0.09. The estimated required sample size will be 390 students.

2.3. Data collection instrument:

We used an electronic self-administered questionnaire to collect data using google forms platform. The FATCOD and Death Attitude Profile-Revised (DAP-R) scales were used in this study. The FATCOD was used to assess the students' attitudes towards caring for dying patients, and the DAP-R was used to measure students' attitudes towards the concept of death.

2.2.1. The Frommelt Attitude toward Care of the Dying (FATCOD) Form B Scale:

The FATCOD is one of the most valid, reliable (Frommelt, 1991, 2003), acceptable and easy to fill instruments (Mastroianni et al., 2015). Two versions of the tool are available: FATCOD-Form A, which is targeted towards nurses, and FATCOD-Form B, which is targeted towards students involved in palliative care. The FATCOD-Form B was used in this study; it contains 30 items with 5-point Likert scale responses (strongly disagree, disagree, uncertain, agree and strongly agree) describing students' attitudes towards caring for dying patients. The tool consists of 15 positively worded statements and 15 negatively worded statements that were reversed during analysis. Response scores ranged from 1 for strongly disagree to 5 for strongly agree. The possible scores ranged from 30–150, with higher scores indicating more positive attitudes towards caring for dying patients. The interquartile range was used to identify the level of students' attitude. The FATCOD-Form B was found to be a valid and reliable tool, with a Cronbach's alpha of 0.81 (Frommelt, 2003; Mastroianni et al., 2015). In this study, the scale showed good internal consistency with a Cronbach's alpha of 0.78.

2.2.2. Death Attitude Profile-Revised (DAP-R) Scale:

The DAP-R is a revision of the DAP, a multidimensional measure of attitudes towards death, and was developed by Gesser et al. (1988). In its original form, the DAP consisted of four dimensions. The revised version (DAP-R) consists of five dimensions, as follows: (a) fear of death: negative thoughts and feelings about death (included seven items); (b) death avoidance: avoidance of thoughts of death as much as possible (included five items); (c) neutral acceptance: death is neither welcomed nor feared (included five items); (d) approach acceptance: death is viewed as a passageway to the happy afterlife (included 10 items); and (e) escape acceptance: death is viewed as an escape from a painful existence (included five items).

The DAP-R used in this study contains 32 items with 7-point Likert scale responses (strongly disagree, disagree, moderately disagree, uncertain, agree, moderately agree and strongly agree) describing respondents' attitudes towards death. Scores for all items were from 1–7 in the direction of strongly disagree (1) to strongly agree (7). The interquartile range was used to identify the level of students' attitude. The alpha coefficient of internal consistency ranged from 0.61–0.95 for the subdomains. The total DAP-R alpha coefficient had good to very good reliability. Alpha coefficients ranged from a low of 0.65 (neutral acceptance) to a high of 0.97 (approach acceptance). Stability coefficients ranged from a low of 0.61 (death avoidance) to a high of 0.95 (approach acceptance) (Wong et al., 1994). In this study, internal consistency ranged from 0.71 (approach acceptance) to 0.87 (for escape acceptance).

The FATCOD scale and the DAP-R scale were originally developed in an American culture, which is different from the Jordanian cultural context. In this study, both scales were translated into Arabic by two experts in the field. Then, back-translation was performed for both tools by a bilingual translator. The back-translated versions were compared to the original version to detect any changes in the meanings. The validity of both scales was assessed through content and face validity in Jordanian culture. Three specialized experts in the field of palliative care and care of dying reviewed both scales for face validity to ensure the appropriateness of the translated items to the study. No items were changed, omitted or added to the translated scales. Furthermore, the translated tools were reviewed by qualified religious personnel (Islamic and Christian) who ensured the suitability of the tools from religious perspectives.

The translated Arabic instrument was piloted before data collection began for clarity and average time for completion. The respondents in the pilot testing were excluded from the study. In addition, demographic information was obtained from students about age, gender, marital status, academic level and type of university.

2.4. Data analysis:

Descriptive statistics using central tendency (mean and median) and dispersion measures (standard deviation, range) were used to describe the variable of the study. Item analysis was conducted using percentages and frequencies per scale. The *t* test, ANOVA and Pearson's correlation were used to test differences and associations. The two-step multiple hierarchal regression analysis was generated to assess predictors of attitudes towards caring for dying patients, controlling for selected demographics and personal characteristics of students. The VIF value has been used to decide on the multicollinearity. The analysis showed that values were moderate. The interquartile range was used to identify level of students' attitude. Before

conducting the analysis, data screening and cleaning was conducted, and assumptions of normality and linearity were checked. Skewness values between -1 and 1 were accepted for normality based on Barton and Peat (2005). Outliers were checked and identified. Some outliers were related to data entry errors. So, these outliers were corrected by returning to the questionnaires. The alpha was set at 0.05.

3. Ethics:

Research Ethics Committee approval was obtained from the Ethics Committee at the researchers' university. The data collection process took place during the COVID-19 pandemic during which all students received online education. Students were reached through networking and snowballing, and data collection took place through an electronic self-administered questionnaire. Because of that, no permissions were obtained from the universities. Participation was completely voluntary, and students were assured that their responses would be confidential. The anonymity of the participants was ensured throughout the study. All submitted questionnaires were automatically saved in the principal researcher's private Google drive. Data were secured in a password-protected computer. The front page of the questionnaire included the study objectives, confidentiality issues and anonymity and privacy of the respondents. Permission to use the questionnaires was obtained from the original authors.

4. Results:

4.1. Descriptive characteristics:

A total of 555 students participated in the study and completed the survey electronically (online). The age of the students ranged from 18–50 years, with a mean of 21.0 years ($SD = 4.1$), and 50% were between the ages of 20–22 years. Of the students, 47.2% ($N = 262$) were male, while 52.8% ($N = 293$) were female. The vast majority were single (90.5%, $N = 502$). Students were almost equally represented in the academic years (about 20%–28% per category), and 57.1% ($N = 317$) were enrolled in private universities compared to 42.9% ($N = 238$) in public universities.

4.2. Attitudes towards death:

The analysis (see Table 1) showed that the mean total score for attitudes towards death was 153.7 ($SD = 21.5$), with scores ranging from 32–221. The analysis also showed that 50%

(interquartile range) of the students had scores of 139–169, indicating that, in general, students had a moderate to high level of attitudes towards death. In other words, students demonstrated more positive attitudes towards the concept of death. The mean item score was 4.8 (*SD* = 0.81), ranging from 3.35 "I am disturbed by the finality of death" to 6.46 "I believe that heaven will be a much better place than this world."

Table. 1: Description of attitudes towards death and attitudes towards caring for dying patients (N = 555)

Variable	*M*	*SD*	P$_{25}$	P$_{75}$	Student Min	Student Max	Scale Min	Scale Max
DAP-R (total score)	153.7	21.5	139	169	32	221	32	224
Fear of death	29.1	7.7	24	34	7	49	7	49
Death avoidance	21.5	7.0	16	27	5	35	5	35
Neutral acceptance	27.6	4.6	25	31	5	35	5	35
Approach acceptance	53.9	9.3	48	61	10	70	10	70
Escape acceptance	21.5	7.4	16	27	5	35	5	35
FATCOD (total)	98.1	9.2	93	104	68	137	30	150
Attitudes towards caring for a dying person	62.2	7.3	58	67	42	92	20	100
Attitudes towards dying patients' families	35.9	4.3	33	38	20	47	10	50

The subscales of the attitude scale showed that the fear of death subscale had a mean of 29.1 (*SD* = 7.7). Students' scores ranged from 24–34 (expected range is 7–49) indicating a moderate fear of death. About the subscale of death avoidance, the analysis showed that the students mean was 21.5 (*SD* = 7.0). Scores ranged from 16–22 (expected is 5–35) indicating that students moderately avoided discussion of the concept of death. The mean of the neutral acceptance subscale was 27.6 (*SD* = 4.6) with students' scores ranging from 25–28 (expected

is 5–35), indicating a high level (higher score) of neutral acceptance subscale inferring that students' neutral acceptance is high. The mean of the approach acceptance was 53.9 ($SD = 9.2$) with students' scores ranging from 48–61 (expected is 10–70), indicating that students moderately accept death as a gateway to a better afterlife (approach acceptance). About the escape avoidance subscale, the analysis showed that students' mean was 21.5 ($SD = 7.4$) with students' scores ranging from 16–27 (expected is 5–35) indicating that students do believe that death is a better alternative to a painful existence (escape acceptance).

4.3. Attitude towards care of the dying:

About the attitudes towards care of the dying, the analysis (see Table 1) showed that the total mean score of students was 98.1 ($SD = 9.2$) indicating that students do possess attitudes towards caring for dying patients. The mean item scores of the total scale ranged from 1.8 "family should be involved in the physical care of a dying person" to 4.4 "giving care to the dying person is a worthwhile experience," with a mean of 3.3 ($SD = 0.73$).

About attitudes towards caring for dying patients, the analysis showed that the mean score was 62.2 ($SD = 7.3$), with scores ranging from 42–92 and 50% (interquartile range) of the students' scores ranging from 58–67 (expected range of scores was 20–100), indicating that students possess positive attitudes towards caring for dying patients. The mean score for attitudes towards the families of dying patients was 35.9 ($SD = 4.2$), with scores ranging from 20–47% and 50% of the students' scores ranging from 33–38 (expected range of scores 10–50), indicating a moderate to high level of attitudes towards caring for dying patient families.

4.4. Differences and relationship in attitudes towards caring for the dying and attitudes towards death in relation to demographics:

To assess the differences and relationship of attitudes towards caring for the dying and attitudes towards death in relation to demographics and personal characteristics, the analysis showed that attitudes towards caring for the dying and attitudes towards death and all subscales were not associated (Pearson r) with student age ($p > .05$). About differences related to gender, the analysis (see Table 2A) showed that male and female students were different in the scores on the subscale's neutral acceptance, attitudes towards dying patients' families and attitudes towards caring for the dying ($p < .05$).

Table. 2: A, Gender differences in attitudes towards caring for the dying and attitudes towards death and subscales (N = 555). B, Differences in attitudes towards caring for the dying and attitudes towards death and subscales related to the type of university (N = 555)

Variable	Mean	SD	t Test	p
(A)				
Fear of death				
Male	28.45	7.39	–1.95	.052
Female	29.73	7.99		
Death avoidance				
Male	21.87	6.92	1.10	.272
Female	21.21	7.07		
Neutral acceptance				
Male	27.12	4.99	–2.39	.017
Female	28.06	4.24		
Approach acceptance				
Male	53.43	9.77	–1.09	.272
Female	54.30	8.77		
Escape acceptance				
Male	21.37	7.40	–0.48	.625
Female	21.68	7.41		
Death attitudes (total score)				

Variable	Mean	SD	t Test	p
Male	152.25	23.47	–1.49	.135
Female	154.99	19.61		
Attitudes towards caring for dying patients				
Male	61.92	7.17	–0.89	.373
Female	62.48	7.40		
Attitudes towards dying patients' families				
Male	34.61	4.29	–6.7	<.001
Female	36.96	3.90		
Attitudes (total score)				
Male	96.53	8.93	–3.77	<.001
Female	99.45	9.21		
(B)				
Fear of death				
Public university	28.09	7.86	–2.73	.007
Private university	29.89	7.56		
Death avoidance				
Public university	20.10	6.93	–2.72	.006
Private university	22.59	6.87		
Neutral acceptance				

Variable	Mean	*SD*	*t* Test	*p*
Public university	28.07	4.47	–4.21	<.001
Private university	27.27	4.72		
Approach acceptance				
Public university	54.85	9.20	2.02	.044
Private university	53.16	9.25		
Escape acceptance				
Public university	21.49	7.32	2.13	.033
Private university	21.57	7.47		
Death attitudes (total score)				
Public university	152.62	20.88	–1.01	.309
Private university	154.50	22.03		
Attitudes towards caring for dying patients				
Public university	63.12	7.14	2.54	.011
Private university	61.53	7.34		
Attitudes towards dying patients' families				
Public university	36.68	4.16	4.05	<.001
Private university	35.23	4.219		
Attitudes (total score)				
Public university	99.81	9.30	3.9	<.001

Variable	Mean	SD	t Test	p
Private university	96.76	8.89		

About differences related to academic year and type of university (see Table 2B), the analysis showed that students in public and private universities were different in fear of death, escape acceptance, death avoidance, neutral acceptance, attitudes towards caring for dying patients, attitudes towards dying patients' families and approach acceptance and the total score of attitudes towards caring for the dying ($p < .05$). About the academic year, the analysis, using ANOVA, showed that there were differences between students in relation to fear of death, attitudes towards caring for dying patients, attitudes towards dying patients' families and the total score of attitudes towards caring for the dying ($p < .05$). The post-hoc comparison (Scheffe) showed that the difference in fear of death occurred between 2nd and 3rd year students (mean = 27.4, 30.4, respectively); the difference in attitudes towards dying patients' families was between 1st and 4th year students (1st had lower mean = 34.7, 36.8; respectively), and the difference in the total score of attitudes towards care of the dying was between 1st year, 2nd year and 3rd year students (1st year students had a lower mean score than the 2nd and 3rd year students; means = 95.6, 99.1 and 98.4, respectively).

4.5. Predicting caring for dying patients:

Two-step multiple hierarchal regression analysis was generated to assess predictors of attitudes towards caring for dying patients, controlling for the selected demographics and personal characteristics of the students (see Table 3). The analysis showed that model 1, which contained the total scale and subscales for attitudes towards death, was significant ($F = 20.0$, $p < .001$) and explained 15.4% ($R^2 = 0.15$) of the variance in attitudes towards care of the dying among students. In this model, fear of death, escape acceptance and death avoidance were significant negative predictors ($p < .05$), while neutral acceptance was a significant positive predictor ($p < .05$). Neither total score nor approach acceptance was significant predictors. Model 2, where age, gender, academic year and type of university were entered into the model, remained significant ($F = 4.5$, $p < .001$). The model was able to explain 18.3% of the variation in caring for the dying. Although the R^2 change was 3.4%, the changes in R^2 were significant. In this model, in addition to previous subscales that were found to be significant in the first model, gender and academic year were found to be significant positive predictors of caring for dying patients. In addition, the significant levels of the following subscales decreased but remained significant: fear of death, escape acceptance, death avoidance and neutral acceptance. The

results infer that students with lower scores in fear of death, escape acceptance and death avoidance attitudes were more likely to have higher scores in caring aspects, while a higher score in neutral acceptance attitudes, being higher in academic level and being females had positive attitudes towards caring for dying patients. Moreover, although controlling for the sociodemographics of the students was found to add to the level of significance, the changes in R^2 were minor.

Table. 3: Predictors of caring for dying patients (N = 555)

Model	Model 1				Model 2			
	B	*SE*	**Beta**	*p*	*B*	*SE*	**Beta**	*p*
Fear of death	–.198	.078	–0.167	.011	–0.222	.078	–0.187	.005
Death avoidance	–.277	.080	–0.211	.001	–0.235	.080	–0.179	.003
Neutral acceptance	0.439	.129	0.221	.001	0.405	.129	0.204	.002
Escape acceptance	–0.232	.087	–0.187	.008	–0.205	.087	–0.165	.018
Approach acceptance	0.056	.051	0.057	.226	0.048	.051	0.048	.347
Death attitudes (total)	0.056	.051	0.132	.266	0.048	.051	0.112	.347
Age					–0.172	.124	–0.077	.166
Gender					2.00	.803	0.109	.013
Type of university					–0.322	.830	–0.017	.698
Academic year					1.070	.367	0.138	.004
Model 1	*F* = 20.0, *p* < .001			R^2 = 15.4				
Model 2	*F* = 4.5, *p* < .001			R^2 = 18.3		R^2 change = 3.4		

5. Discussion:

Caring for dying persons is a core element of the functions of responsibilities of nurses thus, preparing nursing students to care for dying patients is an essential aspect of their practice. This study assessed the attitudes of undergraduate nursing students towards death and caring for dying patients and identified predictors of caring for dying patients.

In the current study, students who viewed death as a fearful event, as an escape from a painful existence, and who avoided thoughts of death had more negative attitudes towards caring for dying patients. Similarly, a comparative study revealed that attitudes towards death influenced nursing students' attitudes towards caring for people at the end of life. Fear of death increased the negative feelings towards caring for people at the end of life (Iranmanesh et al., 2010). A systematic review paper that explored nurses' attitudes to determine whether fear of death impacts nurses' caring for dying patients concluded that there was a negative association between nurses' fear of death and their attitude towards caring (Peters et al., 2013). Students who viewed death as a natural part of life in this study had positive attitudes towards caring for dying patients. This finding is consistent with a previous study (Iranmanesh et al., 2010). Attitudes towards death can be targeted to influence nursing students' attitudes towards caring for dying patients. For example, a Swedish study of nursing students showed that the change in conceptions about death after a course of palliative care had an impact on students' attitudes towards caring for dying patients (Berndtsson et al., 2019).

One limitation of this study was the use of a cross-sectional design, where a longitudinal approach might elaborate more on the influence of training across the different levels of nursing courses and types of training. Another limitation is related to the use of self-report questionnaires, which may have led to providing socially desirable responses. The use of networking and snowballing sampling further limits the generalizability of the study findings. The results should be interpreted with caution due to mass significant information provided by the inclusion of subscales and the total scale in the models of analysis. Cautions were related to multicollinearity and collinearity due to similarities and commonalities between the variables.

6. Conclusion:

The attitudes of nursing students towards death and caring for dying persons were influenced by university type, academic level and gender. Although nursing students had positive attitudes

towards caring for dying patients, they could be better prepared to care for dying patients through academic preparation. Further studies in the development of curriculum on dying patient care emphasizing on sociodemographic status are recommended.

7. References:

(1)   Abu Hasheesh, M. O., Al-Sayed AboZeid, S., Goda El-Zaid, S., & Alhujaili, A. D. 2013. Nurses' characteristics and their attitudes toward death and caring for dying patients in a public hospital in Jordan. *Health Science Journal*, 7(4), 384. [Google Scholar]

(2)   Abu-El-Noor, N. I., & Abu-El-Noor, M. K. (2016). Attitude of Palestinian nursing students toward caring for dying patients: A call for change in health education policy. *Journal of Holistic Nursing*, 34(2), 193–199. 10.1177/0898010115596492 [PubMed] [CrossRef] [Google Scholar]

(3)   A'la, M. Z., Setioputro, B., & Kurniawan, D. E. (2018). Nursing students' attitudes towards caring for dying patients. *Nurse Media Journal of Nursing*, 8(1), 25. 10.14710/nmjn.v8i1.17270 [CrossRef] [Google Scholar]

(4)   Al-Meshhedany, A. A. H., & Al-Sammerai, N. S. M. (2010). Facing finality: Cognitive and cultural studies on death and dying" Arabic culture". *English Language Teaching*, 3(1), 12–15. 10.5539/elt.v3n1p12 [CrossRef] [Google Scholar]

(5)   Barton, B., & Peat, J. (2005). *Medical statistics: A guide to data analysis and critical appraisal*. Wiley. [Google Scholar]

(6)   Berndtsson, I. E., Karlsson, M. G., & Rejnö, Å. C. (2019). Nursing students' attitudes toward care of dying patients: A pre-and post-palliative course study. *Heliyon*, 5(10), e02578. 10.1016/j.heliyon.2019.e02578 [PMC free article] [PubMed] [CrossRef] [Google Scholar]

(7)   Bingley, A., & Clark, D. (2009). A comparative review of palliative care development in six countries represented by the Middle East Cancer Consortium (MECC). *Journal of Pain and Symptom Management*, 37(3), 287–296. 10.1016/j.jpainsymman.2008.02.014 [PubMed] [CrossRef] [Google Scholar]

(8)   Borda, N. F., Ramírez-Pereira, M., Nurczyk, S., & Diaz-Videla, V. (2019). Nursing models and theories: Support for palliative care. *Enfermería: Cuidados Humanizados*, 8, 22–33. [Google Scholar]

(9)   Broom, A., Kirby, E., Good, P., Wootton, J., Yates, P., & Hardy, J. (2015). Negotiating futility, managing emotions: Nursing the transition to palliative care. *Qualitative Health Research*, 25(3), 299–309. 10.1177/1049732314553123 [PubMed] [CrossRef] [Google Scholar]

(10)   Cerit, B. (2019). Influence of training on first-year nursing department students' attitudes on death and caring for dying patients: A single-group pretest–posttest experimental study. *OMEGA - Journal of Death and Dying*, 78(4), 335–347. 10.1177/0030222817748838 [PubMed] [CrossRef] [Google Scholar]

(11)   Chua, J. Y. X., & Shorey, S. (2021). Effectiveness of end-of-life educational interventions at improving nurses and nursing students' attitude toward death and care of dying patients: A systematic review and meta-analysis. *Nurse Education Today*, 101, 104892. 10.1016/j.nedt.2021.104892 [PubMed] [CrossRef] [Google Scholar]

(12)   CPAC.(n.d.).*About Palliative Care*. Retrieved from: https://www.capc.org/about/palliative-care/. [Google Scholar]

(13)   De Witt Jansen, B., Weckmann, M., Nguyen, C. M., Parsons, C., & Hughes, C. M. (2013). A cross-national cross-sectional survey of the attitudes and perceived competence of final-year medicine, nursing and pharmacy students in relation to end-of-life care in dementia. *Palliative Medicine*, 27(9), 847–854. 10.1177/0269216313483661 [PubMed] [CrossRef] [Google Scholar]

(14)   Dobbins, E. H. (2011). 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*, 6(4), 159–166. 10.1016/j.teln.2011.04.002 [CrossRef] [Google Scholar]

(15)   Ek, K., Westin, L., Prahl, C., Österlind, J., Strang, S., Bergh, I., & Hammarlund, K. (2014). Death and caring for dying patients: Exploring first-year nursing students' descriptive experiences. *International Journal of Palliative Nursing*, 20(10), 509–515. 10.12968/ijpn.2014.20.10.509 [PubMed] [CrossRef] [Google Scholar]

(16) Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149–1160. [PubMed] [Google Scholar]

(17) Frommelt, K. H. (1991). The effects of death education on nurses' attitudes toward caring for terminally ill persons and their families. *American Journal of Hospice and Palliative Medicine*, 8(5), 37–43. 10.1177/104990919100800509 [PubMed] [CrossRef] [Google Scholar]