

RESEARCH ARTICLE

Nursing students' attitudes towards death and caring for dying patients

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Abstract

Aim: To examine the attitudes of undergraduate Jordanian nursing students towards death and caring for dying patients.

Design: A cross-sectional correlational design.

Methods: The Frommelt Attitude Toward Care of the Dying and Death Attitude Profile-Revised scales were used in this study with a convenience sample of 555 students from nursing schools in Jordan.

Results: Nursing students had positive attitudes towards death ($M = 153.7, SD = 21.5$) and a positive attitude towards caring for dying patients ($M = 98.1, SD = 9.2$). Fear of death, escape acceptance and death avoidance were significant negative predictors, while neutral acceptance, higher academic level and female gender were significant positive predictors of caring for dying patients ($F = 4.5$).

Conclusion: Nursing students had positive attitudes towards caring for dying patients that was influenced by university type, academic level and gender. Nursing education must further focus on death, dying and end-of-life care across the core courses of nursing curricula, theory and practicum.

KEYWORDS

attitudes, death, dying patients, nursing students

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 (Al'a et al., 2018). They also have

a responsibility to assist and support holistic patients' needs (Al'a 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

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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.

2 | BACKGROUND

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 post-graduate 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.

3 | METHODS

3.1 | 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.

3.2 | 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.

3.3 | Data collection instrument

We used 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.

3.3.1 | 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.

3.3.2 | 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.

3.4 | 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 hierarchical 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.

4 | 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.

5 | RESULTS

5.1 | 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.

5.2 | 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,

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

Abbreviations: DAP-R, Death Attitude Profile-Revised; FATCOD, The Frommelt Attitude Toward Care of the Dying; P₂₅, 25th percentile; P₇₅, 75th percentile.

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."

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 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).

5.3 | 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.

5.4 | 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 ($p < .05$).

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);

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)				
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				
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		

(Continues)

TABLE 2 (Continued)

Variable	Mean	SD	t Test	p
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
Private university	96.76	8.89		

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).

5.5 | Predicting caring for dying patients

Two-step multiple hierarchical 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

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			

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.

6 | 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.

The results of the current study indicated positive attitudes towards caring for dying patients. In the current study, the FATCOD-Form B score was 98.1 ± 9.2 . The score in this study was higher than that in Indonesia (93.88 ± 5.66) (A'la et al., 2018), Palestine (96.96) (Abu-El-Noor & Abu-El-Noor, 2016) and the UK (80.86) (De Witt Jansen et al., 2013). However, the score was lower than the score in the USA (126.75) (Dobbins, 2011), Sweden (125.5) (Hench et al., 2014) and Iran (105) (Jafari et al., 2015). The cultural context of the Arabian nursing students may have a significant impact on the nursing students' attitudes since most of the students are Muslims and death and dying issues have special considerations and protocols for them. Muslims believe that death is a transition between life on earth and life after death, and winning life after death is the ultimate goal for Muslims (Razban et al., 2013; Sarhill et al., 2001). In the Arabic culture, diversity in thinking of death is considerable (Al-Meshhedany & Al-Sammerai, 2010), but death is accepted and understood and considered a part of every person's faith in God. Therefore, for the students raised in this culture (Rosdahl &

Kowalski, 2012), they developed a positive attitude towards caring for dying patients and their families. On the other hand, the nursing students received training in hospital settings and probably encountered issues related to death and dying, which may have also influenced their attitudes. The results of this study partially correspond with previous reports. While some studies have showed that nursing students have positive attitudes towards dying patients (Berndtsson et al., 2019), others have reported that nursing students have moderately negative to neutral attitudes towards caring for dying patients (Abu-El-Noor & Abu-El-Noor, 2016; Jafari et al., 2015). The nursing students in this study had a more positive attitude towards caring for the families of dying patients. This may indicate that students' attitudes towards end-of-life care are influenced by the involvement of the patient's family. Nursing students understand that the families of dying patients need support. A meta-analysis review of qualitative studies describing nursing students' experiences when caring for dying patients and their families found that nursing students advocated for more caring for patients' families (Wang, 2019).

In this study, students' attitudes towards caring for dying people and their attitudes towards death were not associated with their age. Consistent results were found in previous studies where attitudes towards caring for the dying were not correlated with student age (Berndtsson et al., 2019; Jafari et al., 2015). This finding was inconsistent with other studies that reported a negative association between age and death anxiety (Rasmussen & Brems, 1996; Russac et al., 2007) and a positive correlation with attitudes towards caring for dying people (Iranmanesh et al., 2010; Sharour et al., 2017). Students' attitudes towards caring for the dying patients and their attitudes towards death could be influenced by other significant factors rather than age, such as their levels of religiosity, culture, education about palliative care and their previous experiences of dealing with dying patients. However, significant differences found between students at private and public universities would reflect the variation in teaching and training

scope about the concepts of death and dying. Such variation requires a global understanding of the death and dying concept rather than integrating the concepts across different courses as it is observed in the curricula in private and public universities. Inconsistent nursing education would influence attitudes towards caring for dying persons, which we have found.

In this study, 3rd year nursing students were more fearful of death compared to 2nd year nursing students. This finding was inconsistent with Sharour et al. (2017), where students with higher academic levels had less fear of death. Another study by Mondragón-Sánchez et al. (2015) compared the level of fear of death among nursing students from different academic levels. The study showed that 1st year nursing students did not have a greater fear of death compared to other levels, whereas 2nd and 3rd year nursing students had a higher fear of death, and the level of fear of death decreased by the 4th year (Mondragón-Sánchez et al., 2015). One possible explanation for this finding is that 2nd year nursing students may have lower levels of fear of death because they did not experience enough hospital practice and may not have had the chance to care for a terminally ill patient yet. However, 3rd year students have a greater level of fear since they have experienced caring for terminally ill patients, but they still have not acquired enough confidence to decrease their level of fear. A study by Wang (2019) showed that most nursing students were fearful when facing dying patients for the first time, but some students thought that fear decreases with practical experiences (Wang, 2019).

Even though students at a higher academic level were more fearful of death, they had more positive attitudes towards caring for dying people compared to students with lower academic levels. These findings are in agreement with the findings of Sharour et al. (2017), where students with higher academic levels had more positive attitudes towards providing nursing care for dying cancer patients compared to students with lower academic levels. As nursing students progress in their study, they obtain more experience, they become more frequently exposed to death, and their awareness, knowledge and ability to cope with such issues increase. One experimental study that used a single-group pretest-posttest design showed that training 1st year nursing students was effective at developing positive attitudes towards death and caring for dying patients (Cerit, 2019). In another study, nursing students believed that caring for dying patients helped them to manage clinical situations and to develop both personally and professionally. They thought that they could still help the dying patient even without expecting an improvement in the patient's condition or survival (Wang, 2019).

In the current study, female students had a more neutral attitude towards death (viewed death as a natural part of life and perceived it as inevitable) compared to male students. However, other national studies that included nursing students and nurses showed that females had a greater fear of death compared to males (Abu Hasheesh et al., 2013; Sharour et al., 2017). Female students in this study had more positive attitudes towards dying patients' families and towards caring for dying people compared to male students, and a female

gender was also a predictor of a more positive attitude towards the care of dying patients in this study. Similar findings were revealed by another study in which females had more positive attitudes towards caring for dying patients than males (Berndtsson et al., 2019). Other studies have showed no significant differences in nursing students' attitudes towards the care of dying patients based on the student's gender (Abu-El-Noor & Abu-El-Noor, 2016; Sharour et al., 2017). The results of the current study may be contributed to the traditional role of females in Arab culture in taking care of people inside the home, including older persons and preparing for the death process. They are considered the primary caregiver in the family; they have a very strong connection to their families and have loyalty and an obligation to provide care for the elders or even extended family members.

Since the female students who participated in this study had such women as role models, they are accordingly thought to have developed a positive attitude towards caring and acceptance of the concept of dying. This can also be explained from a feminist perspective since females tend to demonstrate greater empathy towards dying patients and try to offer more help (Strauss, 2004).

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.

7 | 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.

8 | IMPLICATIONS FOR NURSING PRACTICE

The results of this study provide several recommendations for academic institutions. First, education about death, dying and end-of-life care should be integrated into undergraduate nursing curricula as an independent course. Also, nursing students (especially male students) need to be exposed to the experience of caring for dying people during their clinical practice. Further research is needed to examine the knowledge of nursing students about caring for dying patients and the effect of education on their knowledge. A qualitative approach may provide new insight into understanding these attitudes.

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CONFLICT OF INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

AUTHOR CONTRIBUTIONS

We confirm that all listed authors meet the authorship criteria. All authors have made substantial contributions to all of the following: (i) conception and design, or analysis and interpretation of data; (ii) drafting the article or revising it critically for important intellectual content; and (iii) final approval of the version to be published. All authors approved the final version for submission.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are openly available in [repository name] at <https://doi.org/10.1002/nop2.1107>, reference number [17241219].

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