

Knowledge and attitude towards end of life care among nursing students in a private nursing college, Penang

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ABSTRACT

Background : End of life (EOL) care is a holistic approach for patients and their families, that involves physical, emotional, spiritual, and social needs. There are approximately 80,000 Malaysians requiring EOL care annually but only 2,000 patients have access to the service. Despite an increasing demand for EOL care in Malaysia, many healthcare professionals are still unfamiliar and inadequately trained in dealing with the EOL issue. The purpose of study is to evaluate the Diploma in Nursing students' level of knowledge and attitude towards EOL care.

Method : A cross-sectional descriptive study on 127 nursing students from a private nursing college in Penang, through simple random sampling was conducted. The Palliative Care Quiz for Nursing was used to determine the knowledge of EOL care, while Frommelt Attitude Towards Care of Dying Patients-Form B, was used to measure attitude towards EOL care.

Result : Overall, the participants had poor knowledge towards EOL care with mean overall score of 8.18 ± 2.14 . The mean overall score for attitude towards EOL care was 117.76 ± 11.12 , implying a positive attitude towards EOL care. There was a significant difference in the level of knowledge ($t = 5.250, p < 0.001$) and attitude ($t = 6.184, p < 0.001$) according to the years of study.

Conclusion : The student nurses had poor level of knowledge on EOL but positive attitude towards EOL care. Adding an additional module on EOL alone is inadequate; instead emphasis on its relevancy and understanding on how it can be used to improve patient care is of far more importance.

Keywords : *end-of-life care, knowledge, attitude, terminally ill patient, nursing students*

Introduction

End of life (EOL) care is a holistic approach for patients and their families from various aspects which include physical, emotional, spiritual, and social needs (World Health Organization, 2020). It is an act of providing care to improve their quality of life until death. EOL care was first established for cancer patients, but nowadays it is also applicable for patients with life limiting diseases such as heart disease, kidney disease, liver cirrhosis, cerebrovascular disease, neurodegenerative disorder and other chronic medical illness. The population across the globe is not only ageing but also suffering from serious illnesses. Thus, it is critically important to provide patient-centered EOL care. More serious life limiting chronic conditions such as dementia, cardiovascular and respiratory diseases, and cancers are also increasing and have changed the pattern of death (Connor & Bermedo, 2014; Dulce & Cruz-Oliver, 2017). According to Ross et al. (1996), knowledge on EOL can be categorised into three subscales, namely philosophy and principles of palliative care, management of pain and symptoms, and psychosocial and spiritual care. The attitudes or feelings shown in the behaviour of nurses towards death might influence the care they provide to terminal or dying patients. Factors that determine attitudes towards death and dying, depend not only on culture, society, values orientation, and religion but also on an individual's perception and personal attitudes of death and dying (Wang et al., 2018).

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The growth in chronic diseases will produce an increase demand for EOL care including symptom management. Current estimates suggested that approximately 75% of people approaching the EOL may benefit from palliative care. The growing numbers of older people and increasing prevalence of chronic illness in many countries mean that more people may benefit from palliative care in the future. Healthcare systems must start to adapt to the age-related growth in deaths from chronic illness, by focusing on integration and boosting of palliative care across health and social care disciplines. Countries with similar demographic and disease changes will likely experience comparable rises in their needs. (Etkind et al., 2017). According to Hospice Malaysia (2016) there are approximately 80,000 Malaysians requiring EOL care annually but only 2,000 patients have access to the service and 90% of people in Malaysia have not heard of EOL care. According to Hardip et al. (2016), despite an increasing demand for EOL care in Malaysia, many practitioners are still unfamiliar and inadequately trained in dealing with the EOL issue. Hospice or EOL care for the terminally ill cancer patients in Malaysia are available to inpatients, unfortunately they only cover 10% of the patients in need of hospice care. This does not include patients dying of other terminal illnesses. In comparison, hospice coverage is available to 66% and 80% of terminally ill cancer patients in Singapore and New Zealand respectively.

As mentioned by the American Nurses Association Centre for Ethics and Human Rights (2016), the ability to provide the care that benefit the dying patient is the biggest challenge of EOL care in the 21st century. This will require all levels of health-care professionals, especially the nurses, who always have direct contact with patient and their family to have the knowledge

and communication skills to deliver quality EOL care. Knowledge deficit and negative attitudes concerning the EOL care are the major barriers for the current nursing to provide quality EOL care (Hussin, Wong, Chong & Subramanian, 2018).

The lack of education on EOL care has been reflected in the quality of EOL care provided to the patients by student nurses during their clinical practice (Jafari et al., 2015). Therefore, it is important to know the knowledge and attitude of student nurses on the EOL care to improve the current curriculum on the EOL care and to prepare the nursing students who are the future nurses to provide quality EOL care.

Currently in Malaysia, for the three-year Diploma in Nursing programme, nursing students are introduced to EOL in the Fundamental of Nursing module. Students are taught on how to meet the needs of the terminally ill which include care and comfort needs of the dying, bereavement process, customs and beliefs of different ethnic groups, and grieving process during their first year of nursing education. However, specific to this Nursing college, students are also required to undergo an additional compulsory module during their first year on after death. However, to date no follow up has been conducted as to how useful this module has been for the students' clinical practice. Therefore, the purpose of this study was to evaluate the Diploma in Nursing students' level of knowledge about EOL care and their attitude towards care of dying patients. Furthermore, this study will provide answers as to whether there are any significant differences between the knowledge and attitude towards EOL care according to their years of study. The null hypothesis is that there is no significant difference between the level of knowledge and attitude to their years of study.

Methods

Study design, setting and sample

This is a cross-sectional descriptive study done in a private nursing college in Penang with a total population size of 175 student nurses. Simple random sampling method, in the form of an online research randomiser tool was used to randomise the sample. Based on Raosoft sample size calculation of 5% margin error, 95% of confidence level, 50% of response distribution, and 10% of attrition rate, the minimum estimated sample size required was 133. Only second and third year Diploma in Nursing students who consented were included in this study while first year Diploma in Nursing students were excluded as they are still fresh and not fully immersed in the nursing course.

Ethical considerations

Ethical approval was obtained from the ethics committee of the International Medical University (BN 1/2020 (PR-01)). Approval for this study was also obtained from the management of the selected private hospital, and consent was obtained from the respondents prior to the conduct of the study. To ensure the anonymity and confidentiality of the respondents, the completed questionnaires were sealed in an envelope.

Measurement and instrument

A set of piloted and validated questionnaire which consisted of 3 sections was used in this study. Section A consisted of social-demographic variables which included age, ethnicity, religion, years of nursing programme, experience in caring of dying patient and whether any training or education on care of dying patient was received. The 20-item Palliative Care Quiz for Nursing, PCQN by Ross et al. (1996) was used in

Section B to assess nursing student's knowledge about EOL care. Knowledge on EOL was categorised into three subscales: (1) philosophy and principles of palliative care (4 items), (2) management of pain and symptoms (13 items) and (3) psychosocial and spiritual care (3 items). With each correct answer receiving 1 point while no point will be given for any wrong answer, the total maximum score is 20. The knowledge scores were classified into poor knowledge (< 50%), fair knowledge (50 to < 75%) and good knowledge for score of $\geq 75\%$ (Elsaman, 2017). Frommelt's Attitude Towards Care of Dying Patients-Form B, FATCOD-Form B by Frommelt (2003) was used in Section C to assess the attitude of participants towards EOL care. The tool consists of 30 items with a 5-point Likert scale, where 5 represent strongly agree, 3 represent uncertain and 1 represent strongly disagree. Scores are reversed for negative items. There are equal numbers of positively and negatively worded items used in this tool with scores ranging from 30 to 150, where 30 is a very negative attitude and 150 is a very positive attitude towards caring for the dying patients. The level of nursing students' attitude can be classified as positive attitude ($\geq 75\%$), fair attitude (50% to <75%) and negative attitude (< 50%) (Elsaman, 2017).

Validity and reliability testing

A pilot study was carried out with Cronbach's value of ≥ 0.70 as the acceptable value (Polit & Beck, 2017). The result of the pilot study showed that the Cronbach's value for PCQN and FATCOD-Form B was 0.969 and 0.983, respectively, which indicated that both instruments are reliable. Validity for both tools were reviewed by a three-member panel of experts that consists of a Nursing manager of an Intensive Care Unit, an anaesthetist and an education consultant. The

acceptable CVI (content validity index) values for three to five experts should be 1.0 (Polit & Beck, 2006; Polit, Beck, & Owen, 2007). Based on the calculation, I-CVI is 1.0 and S-CVI/UA is 1.0, hence the instrument is valid to measure the knowledge and attitude towards EOL care among nursing students.

Data collection

After obtaining approval from IMU-JC Research and Ethics committee and hospital management, a study information and questionnaire was emailed to all participants who fulfilled the inclusion criteria. Participants who consented, completed and submitted their online questionnaire. The data collection was carried out from June to August 2020.

Data analysis

Data were analysed using IBM SPSS Statistic Version 25.0. Descriptive statistics such as central tendency (mean), variation (standard deviation), percentage and frequency were used to describe the demographic data

and determine the knowledge and attitude towards EOL care among the nursing students. Inferential statistics, t-test was used to determine the difference between the level of knowledge and attitude according to their years of study with $p < 0.05$ to indicate statistical significance.

Results

Demographic data

A total number of 133 sets of questionnaires were forwarded via online where 127 participants responded (response rate was 95%). Majority of the participants were within the ages ranging from 19-24 with a mean age of 21.09 ± 1.84 (92.1%), came from Sabah and Sarawak (44.1%) and were Christians (54.3%) (Refer Table 1). Year 2 students took up 45.7% of the total respondents while the remainder, 54.3% were Year 3 students of the Diploma in Nursing programme. A total of 68.5% of them had experienced caring for dying patients while 75.6% reported that they had received some form of training on care of the dying patients.

Table 1 : Socio-demographic characteristic of participants (n = 127)

Variables	Variable categories	Frequency (n)	Percentage (%)	M±SD
Age (Years)	19-24	117	92.1	21.09±1.84
	25-30	10	7.9	
Ethnicity	Malay	15	11.8	N/A
	Chinese	37	29.1	
	Indian	19	15	
	Others	56	44.1	
Religion	Islam	15	11.8	N/A
	Buddhism	26	20.5	
	Hinduism	16	12.6	
	Christianity	69	54.3	
	Others	1	0.8	
Diploma Course Level	Year-2	58	45.7	N/A
	Year-3	69	54.3	
Experience Caring For Dying Patients	Yes	87	68.5	N/A
	No	40	31.5	
Training On Care Of Dying Patients	Yes	96	75.6	N/A
	No	31	24.4	

Table 2 showed that 31 (24.4%) student nurses scored more than 50% for subscale of philosophy and principles of palliative care, which was the highest as compared to the other two subscales, management of pain and symptoms, and psychosocial and spiritual care. The mean score for the subscale philosophy and principles of palliative care was 1.13 ± 0.78 , management of pain and

symptoms was 5.35 ± 1.79 , and psychosocial and spiritual care was 0.65 ± 0.77 . The mean overall score for PCQN was 8.18 ± 2.14 out of 20, indicating a poor level of knowledge on EOL care. A total of 72.4% of the nursing students had poor level of knowledge on EOL care (< 50%), 26% of nursing students had fair knowledge (50 to < 75%) and 1.6% had good knowledge ($\geq 75\%$).

Table 2 : Comparison of knowledge scores according to subscale of PCQN (n = 127)

Subscales of PCQN	Min to max score range (0 to 20)	M±SD	n (%) $\geq 50\%$ of total score according to subscale
Philosophy and principles of palliative care	0-4	1.13±0.78	31 (24.4)
Management of pain and symptoms	1-10	5.35±1.79	29 (22.8)
Psychosocial and spiritual care	0-3	0.65±0.77	17 (13.4)
Overall score	3-16	8.18±2.14	

Overall, no student had negative attitude towards EOL. The scores indicated that the nursing students had fair to positive attitude with scores ranging from 91-112 (n = 40, 31.5%) and 113 to 147 (n = 87, 68.5%) out of 150 as shown in Table 3. The overall mean score was 117.76 ± 11.12 with overall scores ranging from 91-147.

Table 4 showed that Year-3 nursing students (M = 9.01, SD = 2.08) scored higher on the PCQN than Year-2 nursing students (M = 7.18, SD = 1.77), indicating that the senior student nurses had better knowledge on EOL care as compared to their juniors. This difference was found to be statistically significant (p < 0.001).

Table 3 : Distribution of nursing students according to their attitudes level (n = 127)

Student nurse attitude level	Min to max score range (1 to 150)	Number of students n (%)
Negative attitude (< 50%)	0-74	0 (0)
Fair attitude (50 - < 75%)	91-112	40 (31.5)
Positive attitude (≥ 75%)	113-147	87 (68.5)
Overall score Overall M±SD	91-147 117.76±11.12	

Similarly, Year-3 nursing students scored higher on the FATCOD-Form B than Year-2 nursing students, implying that Year-3 students had more positive attitude towards EOL care (M = 122.68, SD = 10.79) as compared

to those in year two (M = 111.91, SD = 8.39). This difference was also found to be statistically significant (p < 0.001). In conclusion, the null hypothesis was rejected.

Table 4 : Difference between knowledge and attitude towards end of life care according to years of study (n = 127)

Variables	Year-2 students (n = 58) M±SD	Year-3 students (n = 69) M±SD	t-value	p-value
Knowledge	7.18±1.77	9.01±2.08	5.250	<0.001*
Attitude	111.91±8.39	122.68±10.79	6.184	<0.001*

*p < 0.001 statistically significant

Discussion

Majority of the students were between 19-24 years old which is similar to the study done in Greece (Dimoula et al., 2018), where 95.5% were also young students. This could be contributed to the minimal entry requirement of the nursing programme of the country. In this study,

more than half of the participants had experienced caring for dying patients and had received training on care of dying patients. This is in line with the study done in Indonesia (Agustini, Nursalam, Rismawan & Faridah, 2020), where 90% of their nursing students had also experienced caring for dying patients while 88.3% had

attended seminars or trainings on palliative care. This could be contributed to the similar nursing curriculum content to equip the students with basic knowledge on EOL care as part of their foundation in nursing.

Level of knowledge on EOL care among nursing students

The findings of this study showed that majority of the nursing students from this private nursing college had poor knowledge on EOL care despite having to undergo an additional compulsory module related to religion and after death. Similar findings were also reported in other countries such as Jordan, Greece, Saudi Arabia, Egypt, and Indonesia (Qadire, 2014; Elsaman, 2017; Dimoula et al., 2018; Aboshaiqah, 2020; Agustini, Nursalam, Rismawan, & Faridah, 2020). This study revealed that the knowledge on EOL care in the subscale for management of pain and symptom, and psychosocial and spiritual care was poor as compared with the philosophy and principles. This could possibly be contributed by the content of the additional compulsory module which include topics such as spiritual care in nursing, what is after death, and religion is health and healing, which focus mainly on moulding the attitude or affective domain of the nursing students. There is a lack of emphasis on pain management. The finding was supported by the study done in Greece which showed that their nursing students also had insufficient knowledge in the psychosocial and spiritual care as well as the pain and symptoms management dimension of palliative care (Dimoula et al., 2018).

Attitude towards end of life care among nursing students

In this present study, majority of the nursing students had a positive attitude. This might be due to the additional

knowledge that the nursing students were exposed to with regards to meeting the needs of terminally ill and theory on after death. In addition to that, since more than 50% of the participants experienced caring for the dying patients, either positive or negative experiences, this could be another possible factor that could have brought about a change in their attitude towards EOL care. Furthermore, the compulsory clinical attachments at the end of each semester according to the nursing curriculum in Malaysia would also be an influencing factor in building a positive or negative attitude towards EOL depending on how the clinical experiences were. Previous studies done in other countries had similar result of positive attitude towards EOL among nursing students such as Italy (115.20 ± 7.86) and Greece (111.9 ± 10.2) (Leombruni et al., 2013; Dimoula et al., 2018). These could be contributed by the years of life experiences, age and academic year as supported by the study done by Henoach et al. (2017). The final year students seemed to be more open and have positive attitude towards care of dying patient. A study done in UK, found that 91.9% out of 567 of nursing students in United Kingdom had a favourable attitude towards EOL care (Grubb & Arthur, 2016). The total mean score for attitude (FATCOD) reported by nursing students in Indonesia was 105 (SD = 7.5) with 226 (94.2%) had favourable attitude towards EOL care (Agustini, Nursalam, Rismawan & Faridah, 2020). These could be contributed to their experiences in giving care to dying patients or even family member. In contrast, another study done in Indonesia by A'la, Setioputro, and Kurniawan (2018) on 192 students who responded to the survey showed low attitude with total mean score 93.88 (SD = 5.66), scores ranging from 30-120. Lack of comprehensive curriculum about EOL care was said to contribute towards this finding (A'la, Setioputro,

& Kurniawan, 2018). Another study done by Jafari et al. (2015) in Iran showed negative to neutral attitudes towards EOL care as the item level statistics showed that the mean rating for the overall sample was 3.5 (SD = 0.43). Another previous study done by Yaqoob, Nasaif, and Kadhom (2018) in Gulf Region, included Bahrain had shown the nursing students had neutral attitude towards caring for dying patients with mean score 3.4 ± 0.3 . Scores 3.5 and above are indicative of positive and scores below 2.5 are indicative of negative attitudes. These could be contributed to lack of in-depth end of life care education in the nursing curriculum (Yaqoob, Nasaif, & Kadhom, 2018).

Differences in level of knowledge and attitude towards end of life care according to years of study

Senior students with higher education (Year three Diploma in Nursing course) had higher level of knowledge and positive attitude towards EOL care as compared to those who were in Year two. The possible reason for this might be that Year three nursing students had more exposure to caring for the dying patient during clinical practice. The final year Diploma in Nursing students are completing their training and should be work ready in both knowledge and competency to care for any patients including EOL care. The finding is similar to the studies done in Greece, United Kingdom, Turkey, Saudi Arabia, and Indonesia, where senior students had higher knowledge and attitude than juniors (Grubb & Arthur, 2016; Usta, Aygin, & Sa'lam, 2016; Ismaile, Alshehri, & Househ, 2017; Dimoula et al., 2018; A'la, Setioputro, & Kurniawan, 2018). However, in contrast with the study in Saudi Arabia, junior students had higher attitude as compared to senior nursing students (Aboshaiqah, 2020).

Recommendation

A longitudinal study involving an intervention such as providing a short-term palliative care course for three days to a week or even six weeks, and its effects should be considered for future research. Besides, future studies can also consider other influencing factors such as age, gender, experience caring for dying family members and experiences of palliative care training. A mixed methods study can also be used to provide a much more holistic understanding and obtain rich information on how nursing students perceive the importance of EOL care and how this will better prepare them upon graduation. Lastly, a review of the content of the compulsory module is recommended especially in the area of management pain and symptoms.

Limitation

One of the limitations of the study was the study population where it was confined only to student nurses from a private nursing college in Penang. Researchers would recommend conducting this study in other nursing colleges including both public and private nursing colleges or even cross the states to compare the level of knowledge and attitude towards EOL care among the nursing students.

Conclusion

The study revealed that majority of the Diploma nursing students in this study had poor level of knowledge about EOL care but there was a significant difference in their level of knowledge according to their years of study. The higher the academic level, the higher the score of knowledge they scored. The Diploma in Nursing students were perceived to have a positive attitude towards EOL care.

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