

Knowledge of Palliative Care among Bachelors Nursing Students

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Abstract

Background: Palliative care clinical nurse specialists play an important role in specialist palliative care. They spend time with patients and their families, helping them come to terms with an array of complex emotional and practical problems, facilitating communication, giving information and advice about treatments and also offering expertise in controlling pain and other distressing symptoms. **Aim of the study:** The purpose of this study was to assess the PC knowledge using PCQN of BSN students in Arab American University/ Jenin, Palestine. **Subjects and methods:** Descriptive, cross sectional study was used for conducting the study, A convenience sample 198 nursing students were included from the two respective nursing levels third year and fourth year. Data collected through; demographic characteristic and PC knowledge. The PCQN scale was used as the tool to assess the PC knowledge level. **Results:** The total percentage rate on the PCQN was 40.58% ($SD=13.89011$). There is no statistically significant difference at ($p < 0.05$) between PC knowledge and gender, academic level, personal or professional experience with palliative care, and course of palliative care (0.377, 0.896, 0.741, and 0.829) respectively. Highly statistically significant relation according age ($p>0.000$). **Conclusion:** Clinical Relevance: third and fourth level BSN students had lack adequate information on palliative care, and did not meet the AACN expectation of a generalist registered nurse.

Keywords: Knowledge, Nursing students, Palliative care

1. Background

The word "palliative" is derived from the Greek language. It is translated as "to cloak". In the care of the dying, the interventions are meant to prevent the experience of pain and other agonizing symptoms. The National Hospice and Palliative Care Organization (NHCO) in the USA defines palliative care as "treatment that enhances comfort and improves the quality of an individual's life during the last phase of life." (Connor, 2009). Palliative care can be defined as an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual (World Health Organization (WHO), 2014). Palliative care is the active, total care of patients and their families by a multidisciplinary team; at a time when the patient's disease is no longer responsive to curative treatment and life expectancy is relatively short (Twycross 2003). Lynn & Adamson's model (2003) indicates that the principles of palliative care are already applicable in an early stage of the disease and can go together with therapies that are initially aimed at the prolongation of life. A system approach is important, as the palliative process progresses the relief of symptoms will get more attention; the family care becomes more intensive (Visser, 2006). Palliative care is not limited to cancer or even to the terminal stages of illness; it can last for years, and can be applied to any life-threatening disease, though it is most often associated with cancer. Palliative care is not an alternative to other care, but is a complementary and essential component of total patient care (Costello 2004). Palliative care is not restricted to a certain setting but takes place in different environments, both at home, in hospitals, in nursing and old-people's homes, in psychiatry and in hospices (Ahmedzai et al., 2004). In Europe palliative care is considered as general care, which means that every professional health-care provider must be able to provide care for palliative patients in different healthcare services. General care promotes the accessibility and availability of palliative care (Ahmedzai et al., 2004). Palliative care is an essential part of the nursing care that can be delivered at different levels of complexity (De Vlieger et al., 2004). Palliative care clinical nurse specialists play an important role in specialist palliative care (Skilbeck et al. 2002). They spend time with patients and their families, helping them come to terms with an array of complex emotional and practical problems, facilitating communication, giving information and advice about treatments and also offering expertise in controlling pain and other distressing symptoms. These nurses are equipped with specialist skills to assess the complex palliative care needs of patients referred to the service. However, Bliss et al. (2000) found that referral to services is dependent upon the individual who initiates it and, although unintentional, may result in a form of gate-keeping with patients and carers not receiving services relevant to their needs. The positive impact of palliative care is well documented, including improving patient pain symptoms and patient satisfaction with care (Strasser, 2004; Lautrette et al, 2007; Ciemins et al, 2007) as well as decreasing hospital costs (Temel et al., 2010; Ferris et al., 2009). Furthermore, a recent study showed that palliative care provided from the time of diagnosis for lung cancer patients may increase patient survival in

addition to benefitting mood and quality of life (Ferris et al., 2009). Nurses find it difficult and emotionally heavy to deliver palliative care to patients and often do not feel competent enough (Cooke, 1996; Linder et al., 1999; De Veer et al., 2003; White et al., 2004). Nurses as well as other healthcare workers often feel not well-prepared for their task in palliative care and are much in need of more expertise in the field of pain and symptom management, communication and dealing with ethical dilemmas. They would moreover like to be supported in the coordination of the care when many different care providers are involved (Armes & Addington - Hall, 2003; Yates et al., 2004; Andershed, 2006; Osse et al., 2006). It can be argued that nursing and palliative care are natural partners in clinical practice and that the knowledge and skills required in this area are applicable to all nurses. People die in many environments and all have a right to supportive and palliative care, regardless of diagnosis or circumstances (the National Comprehensive Cancer Network (NICE), 2004). The effects of palliative courses on different levels can be measured both with the students themselves and with the patients. A frequently occurring outcome indicator is the satisfaction of the student him/herself with the education and self-perceived knowledge (Jordan, 2000). It is important to develop adequate programs in the field of palliative care for nurses at all levels, as these discipline is seen as core disciplines (Ahmedzai et al., 2004). The nurses make up a large part of the healthcare profession, yet they are falling behind on instituting palliative care within the curriculum (Karkada, Nayak, and Malathi, 2011). This is impressive considering how prevalent nurses are in initiating patient care and being the primary caregiver to those hospitalized. When entering the healthcare field, death of a patient is unavoidable and becomes part of the job as a nurse. It is important to integrate PC education within the BSN degree to better prepare new graduates for the inevitable care of a terminally ill patient. Nursing students and new graduate nurses are not adequately prepared for caring for this specific population (Brajtman et al., 2007; Karkada et al., 2011; Kuebler, 2012; Sadhu et al., 2010). The challenge with integrating PC education into nursing curricula are time constraints and the volume of materials necessary to prepare BSN nurses for the complexities of caring for terminally ill patients and their families (Brajtman et al., 2007; Brajtman et al., 2009; Karkada et al., 2011; Malloy et al., 2006). Nursing schools have not adequately incorporated palliative care into the curriculum to increase awareness of PC content and skills (Sadhu et al., 2010). Sadhu et al. (2010) asserted that students are lacking in knowledge on PC. Students cannot be expected to be experts in any capacity due to lack of experience in the clinical area; however, schools and hospitals are holding students and new graduates accountable for this material and expect an adequate competency level despite lack of training and teaching on the subject (Sadhu et al., 2010). In order to better prepare students to care for dying individuals, implementation of PC experiences within the nursing curriculum is critical (Brajtman et al., 2007). Cross-sectional survey of 363 nurses in a multispecialty hospital in India conducted by Prem, Karvannan, Kumar, Karthikbabu, Syed, Sisodia, Jaykumar (2012) to assess the knowledge about palliative care amongst nursing professionals using the palliative care knowledge test (PCKT). Results showed that, the overall total score of PCKT was 7.16 ± 2.69 (35.8%). The philosophy score was $73 \pm .65$ (36.5%), pain score was 2.09 ± 1.19 (34.83%), dyspnea score was $1.13 \pm .95$ (28.25%), psychiatric problems score was 1.83 ± 1.02 (45.75%), and gastro-intestinal problems score was $1.36 \pm .97$ (34%). ($P = .00$). Weber, Schmiedel, Nauck and Alt-Epping (2011) assess the knowledge and attitude of final year medical students in Germany towards palliative care an inter institutional questionnaire based study. The study designed a composite, three-step questionnaire (self estimation of confidence, knowledge questions, and opinion on the actual and future medical curriculum) conducted online of final- year medical students at two universities in Germany. Results showed that from a total of 318 enrolled students, 101 responded and described limited confidence in dealing with specific palliative care issues, except for pain therapy. With regard to questions examining their knowledge base in palliative care, only one third of the students (33%) answered more than half of the questions correctly. Only a small percentage of students stated they had gained sufficient knowledge and experience in palliative care during their studies, and the vast majority supported the introduction of palliative care as a mandatory part of the undergraduate curriculum. Karkada, Nayak, and Malathi (2011) assessed PC knowledge and attitudes of 83 Indian diploma nursing students. The aim of the study was to pinpoint the needs of the students in the coursework in regards to palliative care, and to identify strategies for incorporating PC practices throughout the curriculum. Karkada et al. administered a structured twenty question multiple choice questionnaire to ascertain the level of knowledge held by the students about PC. Results revealed that 79.5% of students had poor knowledge on PC practices. Despite this low finding, 92.8% of the students expressed favorable attitudes towards PC. Kuebler (2012) conducted a project where she compared senior BSN students' self-perceived knowledge with actual PC knowledge at a southeastern U.S. university ($n = 36$) and a northeastern U.S. university ($n = 54$). The study goal was to identify the learning needs of students in relation to PC. Kuebler administered a 4-point Likert scale to determine students' self-perceptions of knowledge, and then a 45 question multiple-choice quiz, the chronic disease objective knowledge examination, to assess students' knowledge of pathophysiology and symptom management. Results revealed that both cohorts scored low on the 45 question quiz, with a mean score less than 50%. There were a weak correlation between perceived and actual PC knowledge in both groups. Sadhu, Salins, and Kamath (2010) assessed PC knowledge among BSN students, undergraduate medical students, and allied health science students in India ($n = 326$). The study used a

nonrandomized sample and administered an internally valid 39 point questionnaire. The questionnaire consisted of ten subscales. Sadhu and colleagues reported that students scored in the range of 50-70%, lack of education on end-of life care in the sample, and recommended curricular revision in the form of establishing a holistic approach to end-of-life care and educating on communication, pain management, and spirituality. Brajtman, Fothergill-Bourbonnais, Casey, Alain, and Fiset (2007) studied the attitudes, knowledge, and skills of graduating BSN students ($n = 58$) in relation to PC. The study utilized a demographic questionnaire, the palliative care quiz for nursing (PCQN), and Frommelt attitudes toward care of the dying scale (FATCOD). The students scored 61% on the PCQN, and 86% on the FATCOD. While knowledge level was low, attitudes were positive towards PC. Brajtman et al. (2009) have found that nursing faculty have a similar level of basic PC knowledge as the students they are teaching. In order to educate students, it is important for faculty to possess PC knowledge and to seek out resources to assist with the successful implementation of PC material within the curriculum. As Ferrell and colleagues (2005) reported, instituting PC modules was effective in helping to improve students' PC knowledge, as well as encouragement and accountability from faculty. Cross sectional study conducted by Ayed, Sayej, Harazneh, Fashafsheh, and Eqtait (2015) to assess the nurses' knowledge and attitudes towards PC among nurses working in selected hospitals in Northern districts, Palestine. A purposive sample consisted of 96 nurses. Results showed that 20.8 % of the respondents had good overall knowledge towards PC, 59.4 % had training of palliative care, and 6.2 % of participants had good attitude towards PC. There was a significant difference between Nurses' qualification, experience, and training of palliative care towards Knowledge of PC.

2. Subjects and Method

2.1 Aim of the study: The purpose of this study was to assess the PC knowledge using PCQN of BSN students in Arab American University/ Jenin, Palestine.

2.2 Research Questions: The following research questions and hypothesis were proposed:

1. What is the PC knowledge level of third and fourth level BSN nursing students?
2. Is there a difference in PC knowledge level towards selected demographic variables?

2.3 Research Hypothesis: There is no significant differences between PC knowledge scores as measured by the Palliative Care Quiz for Nursing (PCQN) than age, gender, academic level, personal and professional experience, and attending courses of palliative care.

2.4 Study Design: This study used a non-experimental quantitative, cross-sectional, survey design that focused on BSN students at Arab American university/ Jenin and their knowledge of PC. A non-experimental, cross-sectional survey design was appropriate for this study and the participants completed the Palliative Care Quiz for Nursing (PCQN) created by Ross, McDonald, and McGuinness (1996) at one time point.

2.5 Study Setting and period: The setting for this study was nursing Department of the Arab American University. The study conducted between June and August 2015.

2.6 Study Sample: The population for this study was third level and fourth level BSN students at nursing department in the Arab American university.

2.7 Inclusion criteria: The following inclusion criteria were used for this study:

1. Participants had to be in third or fourth year level
2. had to be a current student in the Arab American university/ nursing department.

2.8 Tool of data collection: A demographic information form was administered in addition to the PCQN via face to face (Appendix A). Demographic data included the student's age, gender, current level in school (third or fourth level), personal or professional experience with PC, and if they were enrolled in the PC course. The PCQN, created by Ross et al. (1996), at the University of Ottawa, Canada, was used as the tool to assess the PC knowledge level among the two groups of students. Permission to use the PCQN was obtained prior to data collection from one of the authors, Margaret M. Ross, via email. The PCQN was designed to assess basic PC knowledge among nurses. The PCQN was appropriate for use on nursing students as the original authors sampled nursing students to determine reliability and difficulty of the PCQN.

The PCQN is a twenty question quiz with the choices of true, false, and don't know. Ross et al. (1996) scored the quiz by giving each participant one point for a right answer and zero points for wrong or don't know responses for a maximum score of 20. The authors scored the test using total mean percentages among the various samples (Ross et al., 1996).. The total score of both groups was expressed as a percentage and was used to describe the general PC knowledge level of the BSN students.

3. Validity and reliability of the study: The validity of the tool was verified by Ross et al. (1996) by the large sample size of nursing students ($n=200$) and registered nurses ($n=196$).

4. A pilot study: A pilot study was conducted with ten nurse's students from third and fourth level of Al-Najah university to determine the clarity of questions, effectiveness of instructions, completeness of response sets, time required to complete the questionnaire and success of data collection technique. Pilot subjects were asked to comment on the applicability and appropriateness (validity) of the questionnaire. All questions were answered no clarity of questions was required. The researchers determined that it would take twenty (20) minutes to complete the questionnaire.

5. Data analysis: The quantitative data were entered and analyzed using the SPSS (Statistical Package for Social Sciences version 20.0), and the level of significance (α) was set at 0.05. Demographic and baseline variables were analyzed using frequency, percentage, and bar chart. Hypothesis were tested and analyzed by using t. test and Anova one way test.

6. Ethical considerations: This study was approved by the nursing department, Arab American University. Approval from nurses' students were obtained. Several strategies were utilized to protect the nurse's rights who agreed to participate in this study. First, oral verbal consent of the nurses was obtained prior to the administration of the questionnaire. The nurses were informed of the purpose of the study, and that they had the right to refuse to participate. Also the voluntary nature of participation was stressed as well as confidentiality. Furthermore, the nurses were told that they can refrain from answering any questions and they can terminate at any time. Anonymity of the nurses was maintained at all times.

7. Results

7.1 Sample Characteristics: The sample ranged in age from 19-32 years. The mean age was 21.9 ($SD = 1.74436$) (Table 1). More half of respondents 113 (57.1%) were females and 85 (42.9%) males. Around two third of them 125 (63.1%) were third year but 73 (36.9%) fourth year. When asked if there was prior palliative care experience, whether it be personal or professional, more than half of the sample stated "no" ($n=108$, 54.5%). For individuals indicating that they did have palliative care experience ($n=90$, 45.5%), there was no differentiation between personal or professional experience. Only 61 (30.8%) indicated that he/she had taken the palliative care course. (Table 2).

Table 1. Assessment the age of the sample

Parameters	N	Minimum	Maximum	Mean	Std. Deviation
Age	198	19.00	32.00	21.8611	1.74436

Table 2. Assessment the base line demographic and characteristics of the sample

Parameters	No.	%
Gender	Male	42.9
	Female	57.1
Academic level	Third year	63.1
	Fourth year	36.9
Personal or professional experience with palliative care	Yes	45.5
	No	54.5
Course of palliative care	Yes	30.8
	No	69.2

7.2 Research Question 1

The first research question asked in this study was regarding the overall knowledge level of third and fourth level BSN nursing students. The range of scores for the total sample of this study on the PCQN was 0 to 100 out of a possible 20 points. The students scored, as a whole, 40.58% ($SD=13.89011$) on the PCQN which is considered poor. (Table 3).

Table 3. Assessment the knowledge of the sample

Parameters	N	Range	Mean	Std. Deviation
Knowledge of palliative care.	198	100.00	40.5808	13.89011

Figure 1 Assessment of palliative care knowledge levels

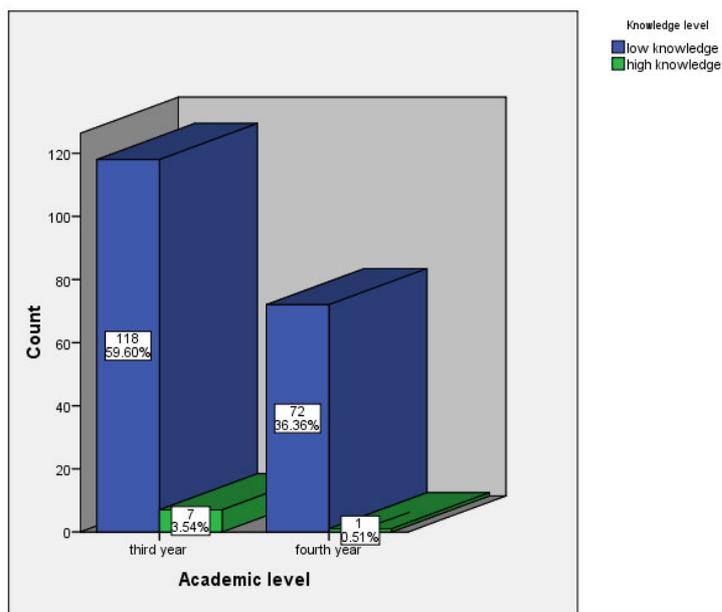


Figure 5 shows that palliative care knowledge level was low for both third and fourth year level (118(59.6%) and 72(36.4%)) respectively. Third year had high knowledge level better than fourth year (7(3.5%) and 1(0.5%)) respectively.

The following table is the PCQN broken down per question with the frequency and percentage of students who answered correctly and incorrectly (Table 4)

Table 4. Assessment of palliative care knowledge of the sample

No.	Item	Correct	Incorrect
1	Palliative care is appropriate only in situations where there is evidence of a downhill trajectory or deterioration.	95(48.0)	103(52.0)
2	Morphine is the standard used to compare the analgesic effect of other opioids.	105(53.0)	93(47.0)
3	The extent of the disease determines the method of pain treatment	46(23.2)	152(76.8)
4	Adjuvant therapies are important in managing pain.	158(79.8)	40(20.2)
5	It is crucial for family members to remain at the bedside until death occurs.	81(40.9)	117(59.1)
6	During the last days of life, the drowsiness associated with electrolyte imbalance may decrease the need for sedation.	75(37.9)	123(62.1)
7	Drug addiction is a major problem when morphine is used on a long-term basis for the management of pain.	38(19.2)	160(80.8)
8	Individuals who are taking opioids should also follow a bowel regime.	100(50.5)	98(49.5)
9	The provision of palliative care requires emotional detachment.	45(22.7)	153(77.3)
10	During the terminal stages of an illness, drugs that can cause respiratory depression are appropriate for the treatment for severe dyspnea.	60(30.3)	138(69.7)
11	Men generally reconcile their grief more quickly than women.	69(34.8)	129(65.2)
12	The philosophy of palliative care is compatible with that of aggressive treatment.	85(42.9)	113(57.1)
13	The use of placebos is appropriate in the treatment of some types of pain.	50(25.3)	148(74.7)
14	In high doses, codeine causes more nausea and vomiting than morphine.	109(55.1)	89(44.9)
15	Suffering and physical pain are synonymous.	71(35.9)	127(64.1)
16	Demerol is not an effective analgesic in the control of chronic pain.	82(41.4)	116(58.6)
17	The accumulation of losses renders burnout inevitable for those who seek work in palliative care.	63(31.8)	135(68.2)
18	Manifestations of chronic pain are different from those of acute pain.	116(58.6)	82(41.4)
19	The loss of a distant or contentious relationship is easier to resolve than the loss of one that is close or intimate.	61(30.8)	137(69.2)
20	The pain threshold is lowered by anxiety or fatigue.	88(44.4)	110(55.6)

Table 4 shows that most items answered incorrect except items 2,4,8, and 18 answered somehow with

correct answers. These items explain medications and manifestations of chronic pain in palliative care. These medications used generally for medical and surgical patients and the nurses students trained in medical, surgical and intensive care wards. This explain the high correct rate of these items. Also, Manifestations of chronic pain passed with them in many courses as fundamentals of nursing and medical surgical nursing.

7.3 Research Question 2 and Hypothesis Testing

The second research question asked in this study was regarding the difference in PC knowledge level towards selected demographic variables and the hypothesis was proposed there is no significant differences between PC knowledge scores as measured by the Palliative Care Quiz for Nursing (PCQN) than age, gender, academic level, personal and professional experience, and attending courses of palliative care. Anova one way test and t test were was conducted to explore PC knowledge towards gender, academic level, personal and professional experience, courses of palliative care, and age.

Table 5. The relationship between selected demographic data and knowledge of palliative care

Demographic data		N	Mean	Std. Deviation	F	Sig.
Gender	Female	113	39.8230	12.65845	0.783	0.377
	Male	85	41.5882	15.39581		
Academic level	Third year	125	40.6800	13.57987	0.017	0.896
	Fourth year	73	40.4110	14.49984		
Personal and professional experience	Yes	90	40.2222	13.10955	0.109	0.741
	No	108	40.8796	14.56261		
Course of PC	Yes	61	40.9016	13.05464	0.047	0.829
	No	137	40.4380	14.29051		

Table (5) revealed that no statistical significant relation among total mean of knowledge of palliative care with the gender, academic level, personal or professional experience with palliative care, and course of palliative care (0.377, 0.896, 0.741, and 0.829) respectively

Table 6. The relationship between knowledge of PC and Age

Item	Mean	N	Std. Deviation	t	df	Sig. (2-tailed)
Age	21.8611	198	1.74436	18.837	197	0.000
Knowledge of palliative care	40.5808	198	13.89011			

Table (6) revealed that a highly statistically significant relation between Nurses students' age and total mean of knowledge scores ($p > 0.000$).

8. Discussion

The first research question posed in this study addressed overall PC knowledge of BSN students. The BSN student participants in this study scored 40.58% ($SD=13.89011$) average on the PCQN. A score of 40.58% was expected by the researcher as it was hypothesized that the PC knowledge held by the BSN students would be low and insufficient for patient care. In a previous study, Ross and her colleagues (1996) found that registered nurses and nursing students scored an average of 61% on the Palliative Care Quiz for Nursing.

Other researchers who used the PCQN found similar results in their data analysis (Brajtman et al., 2007; Brazil et al., 2012; Knapp et al., 2009). Brajtman et al. (2007) performed a study examining PC knowledge among Canadian nursing students which resulted in an average score of 61% ($M=12.29$). Brazil et al. (2012) assessed the PC knowledge among long-term care nurses in three Ontario facilities, reporting in a 45%-75% average score among the three groups. Knapp et al. (2009) found pediatric nurses in Florida scored a mean raw score of 10.9 (54.9%) on the PCQN. Past researchers have reported an inadequate PC knowledge level among nurses and nursing students, similar to the findings in this study. The second research question in this study was: Is there a difference in PC knowledge level towards selected demographic variables? The study hypothesis was that there is no significant differences between knowledge scores towards age, gender, academic level, personal and professional experience, and attending courses of palliative care. It was found to be true according to gender, academic level, personal and professional experience, and attending courses of palliative care. At the same time, it was incorrect according to age. However, that amount of PC knowledge possessed by either group of students is not sufficient enough to care for a dying individual. Mean scores on the PCQN among both groups, despite statistical significance, are not considered a passing grade of 75% which is used as a minimal passing benchmark within the BSN program the students are attending. The AACN (2008) guidelines for newly licensed registered nurses to care for dying individuals across the lifespan are not being met by this specific program, as evidenced

by the low scores from the senior level participants.

9. Conclusion

The aim of this study was to assess the PC knowledge among BSN students, and to compare the difference between knowledge level and selected demographic variables. The research questions were answered using the PCQN to a satisfactory amount of responses. While there was a statistically significant difference between knowledge level and age, the students had a low level of PC knowledge overall. The difference in mean PC knowledge was not significant enough to meet the AACN guidelines of a baccalaureate prepared nurse to care for PC patients.

10. Recommendations

It is recommended to the university to take the data presented in this study and attempt to include more PC and pain management content within the courses in the program to help increase PC knowledge and understanding. Future studies focusing on PC and knowledge of BSN students would be to recruit a larger sample.

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