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Knowledge and opinions of nursing students on palliative care: A university example

Esra Usta[1]
Dilek Aygin[2]
Elvan Sağlam[3]

Abstract
Objectives: This study was conducted to determine the level of knowledge of nursing students about palliative care.
Methods: The descriptive study was conducted with 324 graduate students who received training at a state university. Data were collected by using a questionnaire prepared by the researchers to determine the students' level of knowledge about palliative care and the notion of death. The analysis was performed using parametric and non-parametric tests on computers.
Results: The average age of students was 20.56 ± 1.39, 82.7% of them were female, 16.4% graduated from Healthcare Vocational High School, and 40.1% of them were second grade students. The average palliative care knowledge score of students was calculated as 70.54 ± 11.01. The knowledge scores of female students were significantly higher than male students ($p = 0.001$), and the scores of the third- and fourth-year students were significantly higher than the second-year students ($p = 0.001$). The palliative care knowledge scores of the respondents who defined the concept of death as "a new beginning for eternal life, rebirth" were significantly lower than those who defined it as "the end of life" ($p = 0.02$).
Conclusions: It was found that the average palliative care score of students is above the intermediate level, and the scores are affected by gender, level of knowledge, age, grade, having received palliative care training, having provided care to patients in the terminal stage and defining ways of death.

Keywords: Knowledge; Nursing; Palliative Care; Student; Turkey

1. Introduction

Recently, there has been a demographic aging process throughout the entire world, especially the developed countries, and the number of individuals aged over 65 years has increased. There are numerous reasons for this increase, including recent advances in medicine, the prevention of diseases, and the reduction in the related deaths. However, while the infection-related deaths have declined among the elderly population,, the incidence of chronic diseases such as heart disease, cancer, cerebrovascular diseases and obstructive pulmonary disease has been increasing (Graham & Clark, 2007; Aydoğan & Uygun, 2011).

Life-threatening diseases cause a decrease in the quality of life and they bring about various problems including physical, psychosocial, spiritual ones, and especially pain. In patients with diseases which cannot be treated despite the advances in medicine, approaches aiming at reducing

[1]Ph.D. Students, Sakarya University, Institute of Health Sciences, Department of Nursing, esrakillikliogl u@gmail.com
[2]Assoc. Prof., Sakarya University, School of Health, Department of Nursing,Serdivan, daygin@sakarya.edu.tr
[3]Ph.D. Students, Sakarya University, Institute of Health Sciences, Department of Nursing, elvanatalan@gmail.com

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the patient's distress and improving the quality of life should be applied. In accordance with this view, the approach of palliative care has been developed in order to meet the needs of patients and their relatives (Mountand et al., 2006; Elçigil, 2012).

The term "palliative" is derived from the Latin word "pallium" meaning cloth or curtain (Pastrana et al., 2008). Palliative care is a multidisciplinary approach of care performed to prevent or relieve the symptoms that might occur in patients who have a severe disease for obtaining the highest quality of life. It is not only a type of care which is applied in the last period of life when the therapeutic approaches come to an end, but a type of care integrated with therapeutic approach from the diagnosis of a life-threatening disease. According to the World Health Organization's definition, "palliative care is an approach that improves the quality of life of patients and their families, when faced with a life-threatening problem, by preventing suffering by carefully determining, evaluating, and treating pain and other physical, psychosocial, and spiritual problems from early stages of the disease" (WHO, 2014).

Palliative Care in Turkey

According to the 2015 data of the Turkish Statistical Institute, Turkey has a population of 78.7 million. 50.2% of the population is male and 8.2% is elderly (aged 65 and over) (Turkish Statistical Institute, 2015). The life acceptancy at birth is 73.7 years for men and 79.4 for women (Turkish Statistical Institute, 2014). The death rate is 0.7%, and cardiovascular diseases rank first among the causes of death, followed by cancer, stroke and chronic obstructive respiratory disease (The Republic of Turkey, the Ministry of Health, 2013). The number of inpatient treatment institutions is 1528 and the number of beds is 206,000 (Turkish Statistical Institute, 2016).

The approach of palliative care, which began to emerge in the 1980's in a global perspective, is a much recent concept in our country. As of 2015, there are 17 centers affiliated with the Ministry of Health serving as palliative care centers with a total bed capacity of 228 in Turkey. This developing approach of care is also a new concept for health care disciplines that will offer service (Meghani, 2004; Turkish Social Security Institution General Directorate of General Health Insurance, 2015).

Nursing Education in Turkey

In Turkey, nursing education at university level (undergraduate) started about 60 years ago. It is possible to start undergraduate education for nursing following the high school education. The education period is at least four years and involves 4600 hours of theoretical and practical training. Moreover, after the undergraduate studies, master and doctorate programs are also available (Ergöl 2011). Turkey is one of five European countries in which basic nursing education is offered at university level (Thobaben et al., 2005). However, the number of institutions that offer undergraduate nursing education has rapidly increased in recent years as a result of the restructuring in higher education in our country. This increase might result in a lack of teaching staff and insufficient infrastructure and negatively affect the quality of education.

Literature Review

One essential characteristics of palliative care is the necessity of the team approach. The nurse, who spends a long time with patients and aims to give them the best quality care, has a prominent place in this team. This is because the member of health discipline who deals with diseases threatening life and who directly provides care to patients whose death is imminent within the health system is nurse (Prem et al., 2012; Bassah et al., 2014; Elçigil, 2012). However, in qualitative and quantitative studies carried out in different countries across the world, it has been shown that there are certain barriers to nurses to give palliative care service, a recent approach of caregiving. The most important of these barriers are nurses' lack of knowledge on the topic (Turgay, 2010; Prem et al., 2012; Al Qadire, 2014(a); Ronaldson et al., 2008), their experiences(Kassa et al., 2014; Shelly et al.,

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2013), and their attitudes towards and beliefs about the concept of death (Ay and Gençtürk, 2013; Koç and Sağlam, 2008). In the study by Turgay (2010), in which the opinions of health professionals working at hospitals (n=369) on palliative care were investigated, it was observed that more than half of the participants had inaccurate knowledge about the philosophy of palliative care. In another similar study carried out by Prem et al. (2012) in India (n=363), it was determined that the knowledge levels of nurses about the principles of palliative care were low (the mean total score was 7.16 of 20 [SD, 2.69]). In a study that examined the clinical experiences and palliative care knowledge levels of nurses, it was found out that knowledge levels were higher among nurses who worked in clinics such as the oncology unit, in which more patients are found wh oare in need of palliative care (Shelly et al., 2013). In the literature, it is indicated that another barrier to nurses to provide palliative care service is the fact that palliative care is not adequately covered in the curriculum of general nursing programme (Dickinson et al., 2007; Bassah, 2014). In a systematic review that examined the trainings offered in nursing about palliative care, it was seen that the topic is covered in the curriculum of nursing education in resource-rich countries like the USA, Australia and Canada, which have achieved high standards in terms of the general health system, which have a high budget for health expenditures and which place emphasis on humanitarian development. However, it is observed in resource-poor countries that palliative care is not given much importance in the curriculums of nursing education. Furthermore, it is emphasized that the trainings are implemented through innovative methods like simulation by individuals experienced in their areas rather than didactic techniques. There are scarcely any studies in Turkey that encompass the knowledge, attitudes and beliefs of nurses about palliative care, too. Based on this, the present study was designed in order to determine the knowledge levels of nursing students about palliative care.

2. Materials and methods

2.1. Study design

This descriptive study was conducted to determine the level of knowledge of nursing students trained as health professionals about palliative care.

2.2. The population of the study and sample

The population of the study consisted of a total of 357 undergraduate students studying in the second, third and fourth grades in the nursing department of a state university in 2014-2015 educational year. The sampling method was not employed; instead, the study targeted the whole study population. However, a total of 324 students were included in the study, except those who did not wish to participate in the study or who did not attend the school for any reason during the data collection period.

2.3. Data collection methods and tools

The data were collected by using a questionnaire prepared by the researchers, during October-November 2014. The questionnaire included questions about socio-demographic characteristics, care giving to terminally ill patients or those who were diagnosed with a chronic disease and/or cancer, receiving palliative care training, views about death, and knowledge about palliative care. The questionnaire included 20 questions that can be answered as "right", "wrong" or "I do not know". The option "I do not know" was considered wrong and each correct answer was given 5 points and a maximum of 100 points can be obtained from the measurement instrument. It was interpreted that the knowledge level was higher as the scores increased.

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2.4. Data analysis

The data were analyzed using the SPSS 21.0 software after being coded and transferred to the computer environment. Continuous variables were expressed as mean ± standard deviation or median [interquartil range]; categorical variables were expressed by number and percent. Kolmogorov-Smirnov test was used to evaluate normality of distribution of the variables. Mann-Whitney U-test, Kruskal-Wallis H test, and Pearson correlation analysis were used for statistical comparisons. A value of $p<0.05$ was accepted as statistically significant (Çelik, 2011).

2.5. Ethical considerations

The approval of the university ethical committee was obtained before collecting study data. Then, informed consent of the participants were obtained orally.

3. Results

The average age of students were 20.56 ± 1.39; 82.7% of them were female, 16.4% of were graduates of health care vocational high school, and 40.1% were second grade students. Among the participants, 56.5% stated that they encountered with a terminally ill patient, 56.8% that they had provided care to patients with an advanced stage chronic disease, 42.9% that they had provided care to cancer patients with a chronic disease, 38.9% that are not willing to provide care to terminally ill patients, and 70.4% that they do not consider themselves sufficient for providing palliative care (Table 1).

Table 1. Socio-demographic characteristics and status of providing care of the students. (n=324)

Socio-demographic characteristics and status of providing care		n	%
Gender	Male	268	82,7
	Female	56	17,3
Age (Mean ± SD Years)	20,56±1,39	(Min-Max:18-26)	
Grades	2nd grade	130	40,1
	3rd grade	104	32,1
	4th grade	90	27,8
High school graduated from	Health care vocational high school	53	16,4
	Anadolu/Regular/Science high school	271	83,6
Providing care to terminally ill patients	Yes	183	56,5
	No	141	43,5
Providing care to patients with advanced stage chronic diseases	Yes	184	56,8
	No	140	43,2
Providing care to cancer patients with a chronic disease	Yes	139	42,9
	No	185	57,1
Willingness to providing care to terminally ill patients	Yes	198	61,1
	No	126	38,9
I consider myself sufficient for providing palliative care	Yes	96	29,6
	No	228	70,4

When the quantitative data regarding the definition of death are grouped, it is seen that 56.5% of the students defined death as "the end of life and the end of everything", 37.9% as "a new beginning and rebirth to eternal life", and 5.6% as "loss for the others" (n = 306).

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The ratio of those who did not receive palliative care training during the undergraduate education was 57.1%. The students suggested that topics of a training program about palliative care should include the basic concepts and principles of palliative care (84.9%), spiritual care (70.1%), loss and grief process (67.9%), communication (62.3%), legal and ethical issues (54.9%) and symptom management (51.9%) (Figure 1).

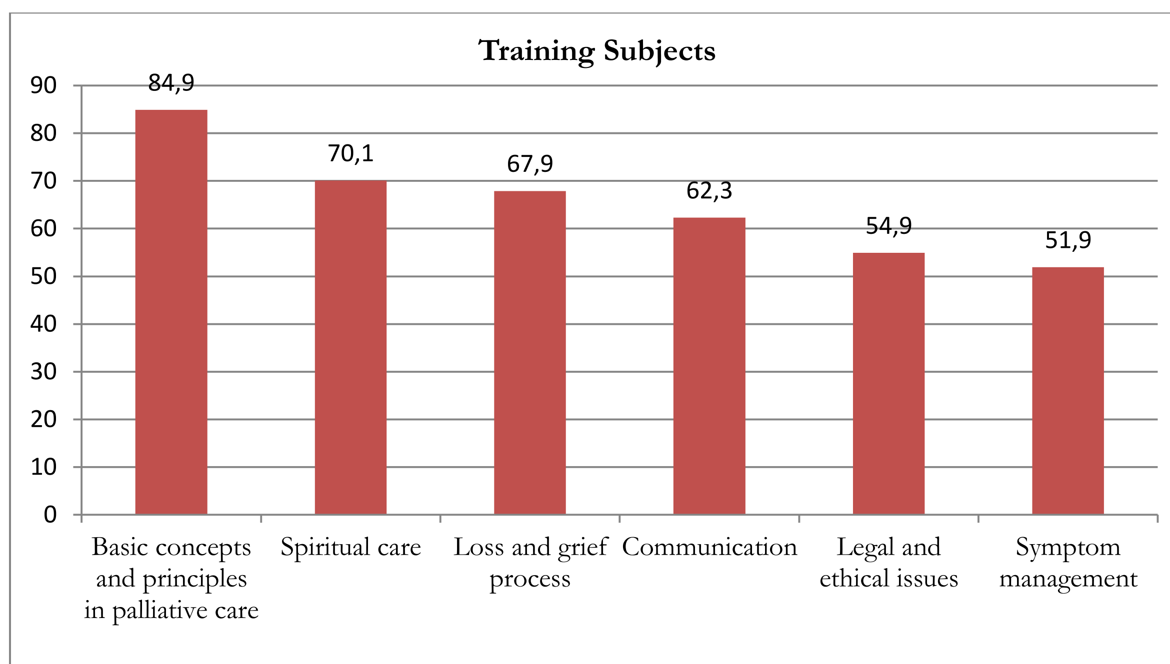

Figure1. Subjects that were suggested to be included in PalliativeCare Training Program (n = 324)

The number and percentage of the correct answers given to the measurement tool for palliative care knowledge are given in Table 2. The questions that were answered correctly by more than 90% of the students are as follows: "Palliative care should be applied as early as possible in individuals with chronic and life-threatening diseases.", "The aim of palliative care is to increase the functional capacity of the individual to the highest level, by considering religious values and beliefs, culture and individuality. ","Individuals who benefit from palliative care should be able to contact with health professionals at any time.", " Palliative care allows patients to relief pain and improve the quality of life.", "Palliative care allows patients not to suffer from pain in the terminal periods and experience a good death without losing prestige.", and “Palliative care is a service only for patients with cancer.” The question that received the fewest correct answers (4.3%) was "A palliative care team consists of physicians, nurses, social workers, psychologists, physiotherapists, dieticians, pharmacists, chaplains, patients’ relatives and volunteers ".

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Table 2. Percentage of correct responses given by the students to the questions in the Evaluation Tool for Determining Knowledge of Palliative Care (n = 324)

Questions	Correct Answer*	n	%
1. Palliative care should be applied as early as possible in patients with chronic and life-threatening diseases.	T	304	93.8
2. Palliative care is one of the most important components of cancer prevention	F	92	28,4
3. Palliative care is a service which starts as soon as diagnosis is made in patients with cancer.	T	218	67,3
4. Palliative care is a service only for patients with cancer.	F	295	91,0
5. Palliative care is essentially the care for terminally ill patients.	F	179	55,2
6. Palliative care helps patients to relieve pain and to improve the quality of care.	T	302	93,2
7. The aim of palliative care is to improve the symptoms rather than investigating the underlying reasons for the symptoms.	T	248	76,5
8. Palliative care is a therapeutic care.	T	184	56,8
9. Palliative care seeks to maximize the functional capacity of the individual by being sensitive to religious values, beliefs, culture, and individuality.	T	304	93,8
10. Palliative care should be started when medical and surgical methods of treatment are ineffective.	F	181	55,9
11. Palliative care helps patients to relieve pain and suffering during the terminal period and provides a good death without losing one's dignity.	T	293	90,4
12. Palliative care is applied regardless of whether the individual receives treatment.	T	220	67,9
13. In the palliative care approach, family members are supported during disease process and during grief period after the death	T	291	89,8
14. Palliative care only consists of pain control.	F	271	83,6
15. Palliative care neither slows down nor accelerates death.	T	197	60,8
16. In palliative care the continuity of care is maintained by being together with the patient everywhere including hospital, home, mobile clinic, day care center, and nursing home.	T	269	83,0
17. Persons who benefit from palliative care should contact with health professionals at any time.	T	297	91,7
18. Chronic diseases such as chronic obstructive pulmonary disease are also included in the context of palliative care.	T	249	76,9
19. Palliative care and hospice care serve the same purpose.	F	163	50,3
20. Palliative care team includes physicians, nurses, social workers, psychologists, physiotherapists, dieticians, pharmacists, chaplains, patients' relatives and volunteers.	D	14	4,3

**T:True,F:False*

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When the measurement tool for palliative care knowledge was assessed over 100 points, it was found that the average score of the students was 70.54 ± 11.01. The study examined the personal characteristics of the students that may affect the knowledge of palliative care and their status of giving care to patients with different characteristics, whom they encountered in the fields of practice. At the end of the analyses, it was determined that high school graduated from (U = 7121.5, p = 0.92), providing care patients with advanced stage chronic disease (U = 12280; p = 0.47), providing care cancer patients with chronic disease (U = 11789 50, p = 0.20), and willingness to provide care to terminally ill patients (U = 12442; p = 0.97) have no effect on palliative care knowledge scores (Table 3).

Table 3. Comparison of palliative care knowledge scores of the students with their socio-demographic characteristics and their status of providing care (n=324)

Characteristics		n	Knowledge score +	Test stasistics ++	p
Gender	Female Male	268 56	75[15] 65[18,75]	U= 4495	**0,001**
Grade	2nd grade (a) 3rd grade (b) 4th grade (c)	130 104 90	70[15](b,c) 75[20] 75[10]	χ²KW= 28,093	**0,001**
High school graduated from	Health care vocational high school Anadolu/Regular/Science high school	53 271	70[15] 70[15]	U= 7121,50	0,92
Receiving palliative care training	Yes No	139 185	75[15] 70[17,50]	U=11011	**0,03**
Encounter with a terminally ill patient	Yes No	183 141	75[10] 70[15]	U= 9774	**0,001**
Encounter with a patient with an advanced level chronic disease	Yes No	184 140	70[15] 70[20]	U=12280	0,47
Encounter with a cancer patient with a chronic disease	Yes No	139 185	75[15] 70[15]	U=11789,50	0,20
Willingness to provide care to terminally ill patients	Yes No	198 126	70[20] 70[10]	U=12442	0,97
Age	20,56±1,39	324	70,52	r= 0,182**	**0,001**

+Median [İnterquartile range] ++ U:Mann Whitney U, χ²KW: Kruskall Wallis, r:Pearson Correlation

Regarding gender, the average palliative care knowledge score of female students was statistically significantly higher than that of male students (U = 4495, P = 0.001). Educational year appears to affect the palliative care knowledge scores. The average palliative care knowledge score of the second-grade students was statistically significantly lower than those of the third- and the fourth-grade students (χ²kw = 28.093, p = 0.001). A weak positive correlation was observed between the palliative care knowledge scores and the ages of the students (r = 0.182; p = 0.001). The palliative care knowledge scores of those who had provided care to terminally ill patients, in field of practice were significantly higher than those who had not, and of those who received palliative care training

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in the scope of undergraduate courses were significantly higher than those who did not (U = 9774; p = 0.001, U = 11011; p = 0.03, respectively).

In the comparison of palliative care knowledge scores of students according to their definition of death, we found that the palliative care knowledge scores of those who defined death as a new beginning were statistically significantly lower than those of who defined death as the end of life (χ^2kw = 8.791; p = 0.02) (Table 4).

Table 4. The comparison of palliative care knowledge scores of students and their definition of death (n=306)

Definition of death	n	Knowledge score +	Test statistics++	p
A new beginning for an eternal life, rebirth(a)	116	70[15] (b)	**χ^2KW=8,791**	**0,02**
End of life, end of everything (b)	173	75[15]		
Loss for the reminder (c)	17	75[10]		

+Median [interquartil range]++χ^2KW:Kruskall Wallis

4. Discussion

At the end of this study, which was conducted in order to determine the knowledge levels of nursing school students about the philosophy and the main concepts of the approach of palliative care, it was determined that the level of knowledge of nursing students about palliative care was above the medium level. Despite the fact that the approach of palliative care is quite recent in Turkey, the mean knowledge score of 70.54 ± 11.01 of students (over 100 points) is promising. This finding shows that the students have awareness about the topic, at least in terms of the philosophy and basic concepts of palliative care. In the literature, various other studies conducted using different measurement tools, including the studies of Prem et al. (2012), Ronaldson et al. (2008), Al Qadire (2014a), Iranmanesh et al. (2014), which were conducted with working nurses, and the studies of Al Qadire (2014b), Karkada et al. (2011), Divyalasya et al. (2014), which were conducted with nursing students, reported the knowledge levels of the philosophy and basic concepts of palliative care, the management of pain and symptoms and spiritual care to be below the medium level.

In our study, more than 60% of the students answered 14 out of 20 questions prepared in order to measure the knowledge level of palliative care correctly. In particular, the six questions that were answered correctly by more than 90% of the participants were as follows: “palliative care is not an approach, exclusively for cancer patients”, “palliative care should be applied as early as possible in patients with chronic and life-threatening diseases”, “palliative care aims to increase the capacity of individuals to the highest level”, and “palliative care alleviates the suffering of patients, improves their quality of life, and allows them to experience a good death”. In a similar study conducted by Turgay (2010) on healthcare workers in Turkey, the rate of correct answers to the questions about the philosophy of palliative care health was found to be below 50%.

It has been found that the students in this study are informed about the concepts and principles of palliative care in the courses of undergraduate nursing curriculum, whereas approximately half of the students answered the questions about distinguishing the palliative care approach from hospice approach incorrectly. Although hospice care and palliative care are nested approaches covering each other, hospice care can be defined as the type of care given to dying patients, whereas palliative care is the type of care which encompasses hospice care, but is given to patients with life-threatening diseases as early as possible, and aims to alleviate the patient's pain and improve the quality of life (Elçigil, 2012). Given that not all of the students provided care to patients in the

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terminal stage (56.5%), patients with advanced stage chronic diseases (56.8%) or cancer patients with a chronic disease (42.9%) in their fields of practice, students' inability to distinguish between the differences between hospice care and palliative care can be expected. Nursing education is combined with practical training and therefore as the diversity of patients who are given care increases, the existing theoretical knowledge can be combined with practical applications and improved.

Palliative care is a multidisciplinary team approach. This team includes physicians, nurses, technical health professionals (pharmacists, physiotherapists, dieticians, occupational therapists, etc.), social workers, psychologists, chaplains, patients' relatives and volunteers (Palliative Care Australia, 2015). However, it was seen that only 4.3% of the students knew all the professional groups that should be included in the palliative care team. Most of the students stated that technical health professionals -social workers, chaplains, and volunteers- are not required for the palliative care team. Hence, it may be concluded that the students do not consider the palliative care approach from a broad perspective.

In general, it is expected that experience and knowledge increase as age and the duration of education increase. In Turkey, in the curriculum of nursing education, the emphasis is on theoretical knowledge during the first and second grades, and on clinical practice during the third and fourth grades. That is, students face more patients in the third and fourth grades, so their caregiving experiences also increase. It was also found in the study that the knowledge scores of palliative care of the elder students and the third- and fourth-grade students were higher. Al Qadire (2014b) and Karkada et al. (2011) found in their study with nursing students that students' knowledge scores increased as age and duration of education increased.

Regarding gender, one of the socio-demographic characteristics, it was found that the knowledge scores of palliative care of female students were higher than those of male students. Similar studies reported no difference between the sexes or higher scores of female participants (Prem et al., 2012; Iranmanesh et al., 2014; Divyalasya et al., 2014).

Unlike İnci and Öz (2009), the existing study points out that about half of the students consider death as a new beginning to eternal life and rebirth. Palliative care knowledge scores of the students who considered death in this manner were lower than the scores of those who thought death to be the end of everything.

It was found in the study that the scores of palliative care knowledge of the students differ according to their being received training in palliative care during undergraduate education. An awareness of the concept and an increased level of knowledge are expected as the ultimate outcomes of education. Several studies reported positive developments in the levels of knowledge, attitude, pain management (Divyalasya et al., 2014; Kim et al., 2011), symptom management, and self-efficacy (Adriaansen et al., 2005) after palliative care training was given.

In the present study, the students stated that they want to receive training about the basic concepts and principles related to palliative care, spiritual care, loss and grieving process, communication, legal and ethical issues, and symptom management. In the study by Turgay (2010), healthcare workers wanted to receive training on subjects other than spiritual care. Similar topics were included in postgraduate training programs conducted in different countries (Dickinson et al., 2008; Adriaansen et al., 2005; Kelly et al., 2011).

It was observed that even though more than half of the students want to provide care to terminally ill patients, more than half of them reported that they did not regard themselves competent for it.

We found that despite high levels of awareness, students cannot reach the theoretical knowledge and skills as they expected due to deficiencies in the curriculum and scarcity of application areas.

5. Conclusions and recommendations

At the end of this study, which was conducted in order to determine the knowledge levels of nursing students on palliative care, it was found that nursing students' knowledge about the philosophy and the basic concepts of palliative care was above the medium level and it was affected by socio-demographic characteristics such as age, gender, and grade. In addition, the knowledge levels of the students who provided care to terminally ill patients, who define death as the end of life, and who received palliative care training were significantly higher.

The limitations of the study include using a nonstandard measurement tool, being conducted in one single university, and not being able to make comparisons due to the lack of similar studies carried out in Turkey.

At the end of the study, there are several suggestions based on the findings of this study. First of all, a course on palliative care should be added to undergraduate nursing education curriculum. The philosophy and basic concepts of palliative care should be covered primarily within the scope of this course. Moreover, topics like symptom management, communication, spiritual care and ethical issues should be dealt with and these topics should be structured separately in the domains of the elderly, adults and children. In addition, the effectiveness of the education can be improved if the trainings are given by experienced specialists through contemporary and innovative educational approaches and its outcomes are measured and assessed. Also the practice areas of students should be broadened and their possibilities to provide care to patients who need palliative care should be increased. Along with this, courses to be organized for graduates and in-service training programs are an alternative way to eliminate the lacks in this field. It is thought that more comprehensive studies are required in Turkey to assess the knowledge and opinions of health professionals about palliative care.

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