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Palliative Care Practices and Self-Efficacy of Students Taking Online Palliative Care Course: Quasi-Experimental Study

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Abstract

Background: It is important for nursing students to have sufficient knowledge, skills, practice ability, and self-efficacy to provide palliative care.

Aim: This study was conducted to examine the palliative care practices and self-efficacy status of students taking online palliative care course.

Methods: This study is a single-group, pre-test-post-test, and quasi-experimental study. The sample of the study consisted of 46 nursing students who continued their education at a university in the spring semester of the 2020–2021 academic year and volunteered to participate in the study. Data were collected using the "Student Introduction Form," "Palliative Care Self-Reported Practices Scale (PCPS)", and General Self-Efficacy Scale." To conduct the research, ethical permission, application permission from the relevant institution where the study was carried out, usage permission from the scale owners, and consent from the students were obtained. The number and percentage distributions, means, standard deviation, Wilcoxon signed-ranks test, and paired sample t-test were used to analyze the data.

Results: Of the students, 71.7% are 4th-year students and 58.7% are women. In addition, 78.3% of the participants stated that they chose the nursing profession voluntarily and 80.7% of them stated that they had heard the term "palliative care" before. While the total mean score of the General Self-Efficacy Scale of the students was 63.41 ± 11.85 before the education, it was determined as 68.60 ± 10.09 after the education. While the pre-test total score average of the PCPS was 69.43 ± 3.44, the post-test mean score was 81.19 ± 6.79. While there was no relationship (r = .223, P > 0.05) between the PCPS and the General Self-Efficacy Scale before the palliative care education, a strong positive correlation (r = .402, P < 0.05) was found after the palliative care education.

Conclusion: As a result of the study, it was found that the online palliative care course contributed to the development of students' self-efficacy. It is recommended that the palliative care course be added to the nursing education curriculum as an elective or compulsory course.

Keywords: Nursing, online course, palliative care, palliative care practices, self-efficacy

Introduction

Care is at the center of the nursing profession and underpins its uniqueness.[1] As an important part of the care team, nurses play a key role in the care of patients at the end of their lives but also in the care of their families.[2,3] The main aim of palliative care, which starts as soon as the disease is diagnosed and continues regardless of whether the individual is receiving treatment or not, is to provide care to the patient coping with multiple symptoms and support to the family. However, an estimated 40 million people worldwide need palliative care each year, but only 14% of those who need palliative care are currently receiving it.[4]

It is stated that it is important for healthcare personnel to have sufficient knowledge and skills to provide palliative care in the most appropriate way, to be aware of their experiences, and to receive appropriate training to overcome existing deficiencies.[5,6] However, it is also stated that the mediator between knowledge and practice is self-efficacy and there is a close relationship between self-efficacy and individual performance in fulfilling the given tasks.[3,7] The concept of self-efficacy is the ability to successfully perform a given task, and a high level of self-efficacy increases the quality of care and consequently improves individual and organizational performance.[3,8-10] However, the low level of knowledge and self-efficacy of healthcare personnel in palliative care remains one

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of the most common barriers to providing qualified care.[11-13] Studies have shown that although palliative care is what patients and their families deserve the most, most nurses are not sufficiently prepared to provide this type of care, need more training to provide this care, and therefore, the care process becomes more difficult for nurses.[1,3,14] For this reason, it is stated that it is important to start palliative care education during nursing education and to add subjects related to these areas to the curriculum while creating programs.[11,15,16] Although there are various studies in the literature examining the effectiveness of palliative care education,[3,6,16] it is thought that it is important to evaluate palliative care practices and self-efficacy status in students taking online palliative care courses with the change in the education process in the pandemic. The fact that many courses and applications have been carried out online for more than 2 years has revealed the need to evaluate whether distance courses and education are effective, especially in professions such as nursing where the practice is important. It is thought that such evaluations are important in terms of identifying and correcting the problems that arise during distance nursing education and preparing for the profession. In this context, the aim of the study was to evaluate palliative care practices and self-efficacy in students taking online palliative care courses.

Hypotheses of the Study

H_0: There is no significant difference in the palliative care practices and self-efficacy of the students in the online palliative care course.

H_1: There is a significant difference between palliative care practices and the self-efficacy status of students taking online palliative care courses.

Materials and Methods

Study Design

This is a one-group, pre-test-post-test, and quasi-experimental design study.

Sample of the Study

The population of the study consisted of the students of the Faculty of Health Sciences, Department of Nursing of a University enrolled in the spring term of the 2020–2021 academic year. The study's sample consisted of 46 students who continued their education in the spring term of the 2020–2021 academic year, took the elective palliative care course, and volunteered to participate in the study. No sample selection was made in the study, the purpose of the study was explained to the students in detail and the volunteer students participated in the study by clicking the Google Form link and giving their consent. The inclusion criteria were taking this course and volunteering to participate in the study. Exclusion criteria are not attending the course for more than 4 weeks or not following the registered course. No pre-application was made before the study.

Data Collection Instruments

The data were collected using the "Student Introduction Form," "Palliative Care Self-Reported Practices Scale (PCPS)", and General Self-Efficacy Scale."

Student Introduction Form

This form was created by the researcher in light of the relevant literature information.[3,11,15,16] The form consisted of sociodemographic characteristics of the individual such as age, gender, place of residence, family type, mother and father's education level, and questions related to palliative care such as willingly choosing the profession, students' metaphorical perception of palliative care, and where they have heard the term palliative care before.

Palliative Care Self-Reported Practices Scale

It is a self-report scale developed by Nakazawa et al. to assess how nurses implement palliative care recommendations.[17] The Turkish validity and reliability study of the scale was conducted by Kudubes et al.[5] The scale consists of 18 items and is answered on a five-point Likert scale (1 = Never, 5 = Always). The scale consists of six subscales; care provided during the dying phase (articles 1–3), patient and family-centered care (articles 4–6), pain (articles 7–9), delirium (articles 10–12), respiratory distress (articles 13–15), and communication (articles 16–18). A minimum of 18 and a maximum of 90 points can be obtained from the total scale and a minimum of 3 and a maximum of 15 points can be obtained from each subscale. An increase in the score obtained from the scale indicates an increase in palliative care practices.[5] The Cronbach's alpha internal consistency coefficient for this study was 0.79 in the pre-test and 0.87 in the post-test.

General Self-Efficacy Scale

The original form of the scale developed by Sherer et al. consists of 23 items.[18] The scale is a five-point Likert-type scale with responses ranging from "not at all" to "very good." The score of each question on the scale varies between 1 and 5, and items 2, 4, 5, 6, 7, 10, 11, 12, 14, 16, and 17 are scored in reverse. The total score on the scale varies between 17 and 85, and an increase in the total score indicates an increase in self-efficacy belief. The Turkish validity and reliability study was conducted by Yildirim and Ilhan and Cronbach's alpha coefficient was found to be 0.80.[19] In this study, the General Self-Efficacy Scale, which is a commonly used 17-item form of the scale, was used. However, instead of considering each factor as a subscale, it is suggested that the 17 items of the scale should be evaluated as a whole and that it would be appropriate to work on a single total score obtained from the whole scale.[18,19] The Cronbach's alpha internal consistency coefficient for this study was 0.91 in the pre-test and 0.90 in the post-test.

Implementation of the Study

The palliative care course is included in the curriculum of the department in the spring term, in the 4th year, and in the form of theoretical 2 h/14 weeks per week. This is an elective course, and 3rd-year students with an academic average of three or above can electively choose this course from the upper semesters. The courses were conducted online through the Distance Education Center provided by the university for 14 weeks, with each class hour lasting 15 min for a total of 30 min. In the content of the course in general, the concept of palliative care and end-of-life care, historical development, general diagnosis of patients, symptom management (pain, dyspnea, dry mouth/dysphagia, cachexia/dehydration, nausea/vomiting, diarrhea/constipation, fatigue, delirium, anxiety, etc.), and good death and mourning process are discussed. In this process, the theoretical knowledge was conveyed to the students by a single lecturer, and online examinations were conducted in the middle (week 7) and end (week 15) of the semester. The topics covered in the lessons can be explained through power point presentations, related visuals, and visualization as the system allows writing/drawing. Moreover, students can ask questions during the lecture and the lectures can be recorded by the

Distance Education Center program so that students can watch them again later.

The data collection forms were administered twice: At the beginning of the semester, before the palliative care course started (before), and at the end of the semester, after the course was completed (after). The study data were collected using E-mail and electronic communication tools of the Google Form link.

Data Analysis

SPSS 24 (IBM SPSS Statistics for Windows, Version 24.0. Armonk, NY IBM Corp.) package program was used to analyze the data. Descriptive tests (percentage, arithmetic mean, standard deviation, and min-max values) were used to analyze individual characteristics. The suitability of the data for normal distribution was evaluated by Kolmogorov–Smirnov test. Wilcoxon signed-ranks test was used for the comparison of the scale mean scores within the group because the PCPS did not show normal distribution, and paired sample t-test was used because the General Self-Efficacy Scale showed normal distribution. Cronbach alpha reliability coefficients were calculated to test the internal consistency reliability of the scales. The statistical significance level was accepted as $P < 0.05$.

Ethical Considerations

This study was conducted in accordance with the principles of the Declaration of Helsinki. To conduct the study, ethical permission was obtained from Aksaray University Human Research Ethics Committee (Date: February 22, 2021, Decision no: 2021/01–37), permission from the institution where the study was conducted (date: March/02/2021, number: 91350869-600-00000588660). In addition, permission to use was obtained from the scale owners. The students who participated in the study were informed about the study and they started to answer the questionnaire questions after they gave their consent for voluntary participation in the study in the relevant form.

Results

It was determined that 71.7% of the students participating in the study are in the fourth grade, 58.7% of them are female and more than half of them are living in the city center (58.7%). The majority of the participants (89.1%) stated that they had a nuclear family type and 93.5% stated that they live with their families due to the pandemic. In addition, 67.4% of the students stated that their family's income is equal to their expenses and 47.8% stated that their mother's education level is literate/primary school graduate. Of the participants, 78.3% of them reported that they chose the nursing profession willingly and 80.7% reported that they had heard the term "palliative care" before. In addition, when the open-ended question (Palliative care is like.....because.....) asked to evaluate that the metaphorical perception of the students in the student introduction form was evaluated; 30.4% of the students expressed palliative care as "End of life/end stage/severe patient care;" 19.6% as "Quality of life/enhancing well-being" and 15.2% as "Supportive/integrated care" (Table 1).

Table 2 shows the mean scores of the students before and after the palliative care course on the total subscales of the PCPS and the total General Self-Efficacy Scale. The mean total score of the General Self-Efficacy Scale was 63.41 ± 11.85 before the training and 68.60 ± 10.09 after the training and the difference was statistically significant ($P < 0.05$). The mean total score of the PCPS, which was 69.43 ± 3.44

Table 1. Descriptive Characteristics of Students (n = 46)

Variables	n	%
Age		
20	5	10.9
21	11	23.9
22	14	30.4
23	14	30.4
24	2	4.3
Gender		
Female	27	58.7
Male	19	41.3
Year in university		
Year 3	13	28.3
Year 4	33	71.7
Cohabitants		
With family	43	93.5
With friends at home	3	6.5
The most inhabited place so far		
City	27	58.7
County	11	23.9
Village	8	17.4
Family type		
Nuclear family	41	89.1
Extended family	5	10.9
Family income status		
Income is less than expenditure	6	13.0
Income is equal to expenditure	31	67.4
Income is more than expenditure	9	19.6
Maternal education level		
Illiterate	8	17.4
Literate/primary school graduate	22	47.8
Secondary school graduate	10	21.7
High school graduate	6	13.0
Paternal education level		
Literate/primary school graduate	16	34.8
Secondary school graduate	6	13.0
High school graduate	16	34.8
University graduate	8	17.4
Choosing the nursing profession willingly		
Yes	36	78.3
No	10	21.7
Metaphorical perception of palliative care (own expression)		
End of life/end stage/severe patient care	14	30.4
Such as baby/child care	5	10.9
Supportive/holistic care	7	15.2
Specialized/multidisciplinary care	4	8.7
Improving quality of life/well-being	9	19.6
Compassion/psychological care	4	8.7
Essential requirement	3	6.5
Place of hearing the term palliative care before*(n = 57)		
Nursing education	46	80.7
Internet	8	14.0
Friend	3	5.3
Total	46	100

*More than one answer was given, and percentages were taken according to 57 answers

Table 2. Students' Total Palliative Care Self-Reported Practices Scale and General Self-Efficacy Scale Pre-Test and Post-Test Score Averages (n = 46)

Scales	Test score averages			
	Pre-test $\bar{x}$±SS	Final test $\bar{x}$±SS	Statistics z/t	*P*
Dying-phase care	10.54±2.38	13.08±1.61	z = -5.181	0.000
Patient and family-centered care	11.82±.52	13.91±1.34	z = -5.317	0.000
Pain	11.78±.51	13.80±1.16	z = -5.671	0.000
Delirium (deliria)	11.60±.77	13.65±1.44	z = -5.133	0.000
Dyspnea	11.80±.58	13.71±1.42	z = -5.188	0.000
Communication	11.26±.90	13.02±1.40	z = -5.154	0.000
Palliative care self-reported practices scale total	69.43±3.44	81.19±6.79	z = -5.640	0.000
General self-efficacy scale total	63.41±11.85	68.60±10.09	t = -3.452	0.001

z: Wilcoxon test, t: Paired Sample t-test

before palliative care education, was 81.19 ± 6.79 after the training and this change was statistically significant ($P < 0.05$). Benzer in this way, the pre-training mean scores of all of the sub-scales of the PCPS, care provided at the stage of death, patient and family-centered care, pain, delirium (deliria), respiratory distress, and communication were lower than the post-training mean scores, and these changes were statistically significant ($P < 0.05$) (Table 2).

Table 3 and Figure 1 show the relationship between palliative care practices and self-efficacy status of students before palliative care education. It was found that there was no relationship ($r = .223$, $P > 0.05$) between the students' self-reported palliative care practices and the General Self-Efficacy Scale (Table 3 and Figure 1).

Table 4 and Figure 2 show the relationship between palliative care practices and self-efficacy status of students after palliative care education. It was determined that there was a strong positive relationship ($r = .402$, $P < 0.05$) between the PCPS and the General Self-Efficacy Scale. This finding shows that as the self-efficacy status of the students improved, palliative care practices increased (Table 4 and Figure 2).

Table 3. The Relationship Between Palliative Care Self-Reported Practices Scale and General Self-Efficacy Scale Before Palliative Education (n = 46)

Scales	Palliative care self-reported practices scale	General self-efficacy scale
Palliative care self-reported practices scale		
r	1	.223
P		0.136
General self-efficacy scale		
r	.223	1
P	0.136	

Discussion

Palliative care is an approach that provides support and care to the patient and his/her family from the diagnosis of a life-threatening disease.[4] In the study, it was found that there was a significant increase in the total score of the PCPS and the mean scores of all scale sub-dimensions after the training compared to before palliative care education. Although the method of education and study groups IS different from our study, a study was conducted by Kudubes and Bektas[16] in Türkiye to investigate the effect of web-based pediatric palliative care education with the same scale on students' knowledge levels and practices related to palliative care. As a result of the study, a statistically significant difference was found between the total and subscale pre-test and post-test scores of the students in the intervention and control groups regarding palliative care knowledge

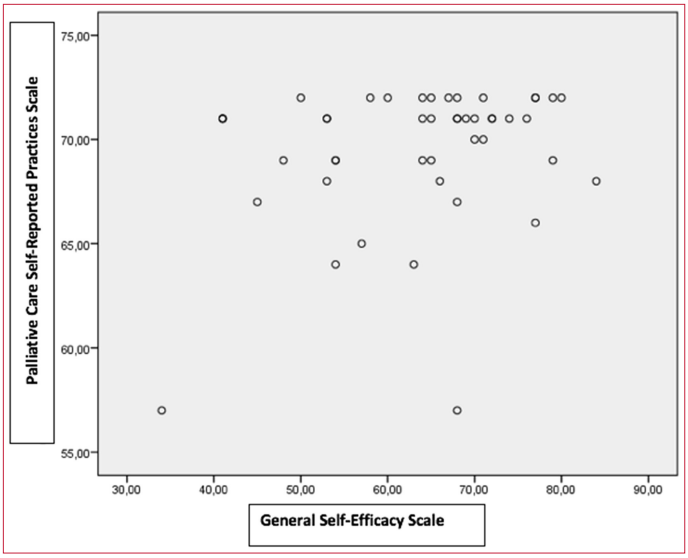

Figure 1. The relationship between palliative care self-reported practices scale and general self-efficacy scale before palliative care education (n = 46).

Table 4. The relationship between palliative care self-reported practices scale and general self-efficacy scale after palliative education (n=46)

Scales	Palliative care self-reported practices scale	General self-efficacy scale
Palliative care self-reported practices scale		
r	1	.402
P		0.006
General self-efficacy scale		
r	.402	1
P	0.006	

level and self-reported palliative care practices.[16] Previously, in a study examining the effect of face-to-face palliative care course on students' knowledge of palliative care, it was reported that the palliative care course given to students positively affected students' knowledge and increased their level of knowledge.[15] E-learning or learning facilitated and supported through the use of information and communication technologies helps to offer a learner-centered model consistent with adult learning theory where direct and active learner involvement is necessary to achieve a subsequent behavior change.[20,21] E-learning can give learners control of their own learning compared to traditional instructor-centered teaching. Online education programs offer practical benefits for students with computers and internet access and are rapidly gaining importance as an alternative to traditional education methods due to their flexibility and interactivity.[22] In addition, it is thought that the palliative care course given to the students positively affected the knowledge levels of the students. With the findings of the present study, it is not possible to say that online education can be superior or alternative to face-to-face courses. However, it is thought that the findings are important in terms of emphasizing the effectiveness of the changing education method in the pandemic process that has been going on for about 2 years all over the world.

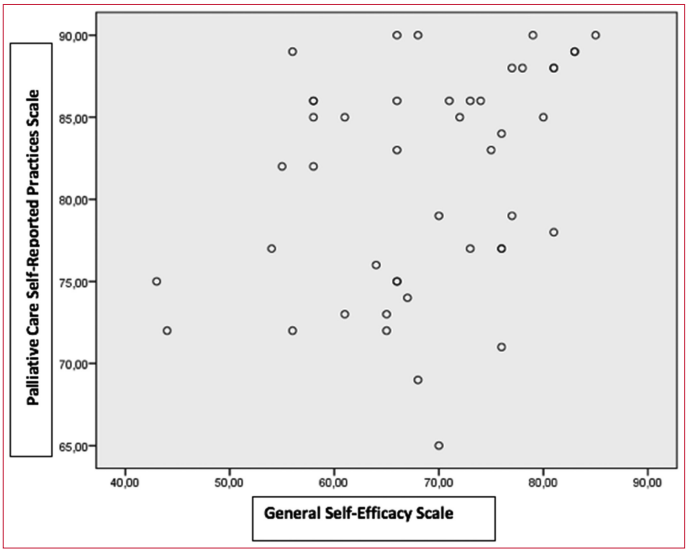

Figure 2. The relationship between palliative care self-reported practices scale and general self-efficacy scale after palliative care education (n=46).

Although knowledge is considered as a stable and fundamental element for nursing, enjoying knowledge has an indirect effect on self-efficacy by increasing the ability to perform and leading to optimal performance.[23] It is also stated that self-efficacy is an important predictor of nurses' behaviors.[3] Studies indicate that nurses with high self-efficacy perception provide better quality care than nurses with low self-efficacy perception and that these nurses are more committed to their work and more resistant to problems.[24-27] In this study, no relationship was found between the students' PCPS and the General Self-Efficacy Scale before palliative care education, but a strong positive relationship was found after palliative care education. It can be said that as students' self-efficacy improves, their palliative care practices also increase. As a result, high levels of self-efficacy improve the quality of care, which, in turn, improves individual and organizational performance. Similarly, in a study conducted by Dehghani et al.[3] to determine the effect of palliative care education on nurses' perceived self-efficacy, palliative care education significantly improved nurses' perceived self-efficacy, psychosocial support, and symptom management.[3] Again, it is similar to the results of another study examining the effect of palliative care intervention on increasing the knowledge and self-efficacy of nurses working in long-term care units.[28] In our findings, it can be said that the online palliative care course is useful with the strong relationship between palliative care practices and self-efficacy level. However, it should be taken into consideration that although the mean scores were higher after palliative education compared to before palliative education in all sub-scales of the PCPS such as care provided at the stage of death, patient and family-centered care, pain, delirium (deliria), breathing difficulties, and communication, the lack of contact with the patient can be considered a deficiency of online education. Although the palliative care course does not have an application other than theory during face-to-face education, students can practice in palliative clinics within the scope of the applications of different courses in normal time. Since all courses are conducted remotely during the pandemic process, it is thought that the fact that students have never been in contact with the patient may be a disadvantage for students in providing practical skills and symptom management.

Limitations of the Study

To evaluate this study properly, some limitations that may have affected the results should be taken into consideration. First of all, the number of participants is limited as the study was conducted in a single institution and only with the students who took this course, so the findings cannot be generalized to all students. Also, another limitation of this study is the inability to make a comparison with the face-to-face training provided in the period before the pandemic. In addition, the study method is a single-group, before and after design, so the absence of any control group is another limitation.

Conclusion

With the transition to the compulsory distance education during the pandemic process, it is thought that it is important to evaluate the effectiveness of the course and whether the goal has been achieved in students taking online courses. As a result of the study, it was determined that the online palliative care course contributed to the

development of students' self-efficacy. Although all members of the health care team play an important role in the provision of palliative care, it is especially important that nurses have sufficient knowledge, skills, and awareness on this subject during their nursing education. However, the addition of a palliative care course to the nursing education curriculum as an elective or compulsory course is recommended as it is an important step in maximizing the caring capacities of nurses. In future studies, it is recommended to include a control group similar to the intervention group in terms of influential factors and demographic characteristics to further evaluate the effectiveness of the intervention. However, further studies with larger sample sizes are recommended to determine the causal factors behind the identified knowledge gaps.

Ethics Committee Approval: Ethical permission was obtained from Aksaray University Human Research Ethics Committee (Date: 22.02.2021, Approval Number: 2021/01-37), permission from the institution where the study was conducted (Date: 02.03.2021, Approval Number: 91350869-600-00000588660).

Informed Consent: Consent was obtained from the students who agreed to participate in the study.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept – K.S.K.; Design – K.S.K.; Supervision – K.S.K.; Resources – K.S.K.; Materials – K.S.K.; Data Collection and/or Processing – K.S.K.; Literature Search – K.S.K.; Writing – K.S.K.; Critical Review – K.S.K.

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