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## A Telehealth Palliative Care Objective Structured Clinical Examination

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A Telehealth Palliative Care Objective Structured Clinical Examination

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A Dissertation Submitted to the Graduate School at the  
University of Missouri – St. Louis in partial fulfillment of the requirements for the degree  
Doctor of Nursing Practice with an emphasis in Family Nurse Practitioner

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## Abstract

*Problem:* Palliative care is a service focused on symptom management and improved quality of life for persons with serious or chronic illnesses and is widely underutilized. Although advanced practice registered nurses (APRNs) possess a unique skillset to contribute to palliative care, there is minimal reporting on palliative care training for this professional group. The purpose of this clinical scholarship project was to implement the End-of-Life Nursing Education Consortium (ELNEC) online training program for APRN students in the BSN-DNP program and evaluate its effect on student performance during a telehealth objective structured clinical examination (OSCE).

*Methods:* An observational, descriptive design at a Midwestern public university's college of nursing. This quality improvement initiative implemented the online ELNEC training program into a BSN-DNP curriculum. The BSN-DNP students who had completed at least one diagnosis and management course were evaluated during an OSCE for their ability to communicate and explain palliative care.

*Results:* A total of 85 BSN-DNP students ( $N = 85$ ) completed the telehealth palliative care OSCE. Scores for students' explanation of palliative care were significantly higher among students who had completed two diagnosis and management courses when compared to those who had completed one course for their populations of focus ( $p = .048$ ).

*Implications for Practice:* The ELNEC online palliative care training resulted in BSN-DNP students successfully explaining and communicating the role of palliative care during simulation.

### A Telehealth Palliative Care Objective Structured Clinical Examination

Palliative care is widely underutilized, resulting in decreased quality of life for patients with chronic or terminal illness. Despite recommendations for early initiation, current literature demonstrates profound underuse of the unique and focused service. Efforts to improve the quality of healthcare for patients facing serious illness should aim to promote the incorporation of palliative care and to increase the number of providers who receive specialized training in this service.

Palliative care is focused on the management of symptoms for a chronic health condition affecting a person's quality of life. Often these symptoms are associated with a serious or terminal illness, but palliative care can be beneficial at any stage of the chronic disease and is best integrated at the time of diagnosis (U.S. Department of Health and Human Services [HHS], National Institutes of Health [NIH], National Institute on Aging [NIA], 2017). Frequently confused with hospice care, palliative care does not depend on terminal care and can be provided concurrently with curative treatment. In addition to the emphasis on comfort, quality of life, and symptom management, a palliative care team will typically assist patients and families in understanding the full range of choices for treatment of the chronic condition (HHS, NIH, NIA, 2017). Chronic illness and end-of-life care are complex, and while early initiation of palliative care has demonstrated improvement in quality of life symptoms, it is often initiated when all other measures have been exhausted (Haun et al., 2017). This results in a subtherapeutic benefit of the service.

Advanced Practice Registered Nurses (APRNs) are well-positioned to contribute to palliative care due to their abilities in therapeutic communication, relationship

development with patients and their families, and knowledge of patient-specific progression of disease (Burgunder-Zdravkovski, Guzman, Creech, Price, & Filter, 2020). APRNs are leading many palliative care teams in the United States and are key team members for their roles in leadership, practice, education, and research (American Association of Colleges of Nursing [AACN], 2020). Despite the nursing strength in this role, many graduate nursing students, including those seeking a Doctor of Nursing Practice (DNP) degree, receive little to no training specific to palliative care. When offered, palliative care training may support the transition for students into practice (Donne, Odrowaz, Pike, Youl, & Lo, 2019).

The End-of-Life Nursing Education Consortium (ELNEC) project is a global education initiative to advance palliative care (AACN, 2020). Launched in 2000, ELNEC is a collaboration between City of Hope (a comprehensive cancer center) and the AACN. ELNEC provides focused palliative care training for nurses and other healthcare professionals. Of the more than 500 nursing schools in the country, only 160 have accessed the ELNEC Graduate online curriculum to date (AACN, 2020).

At a large, public, Midwestern university's college of nursing, there was an opportunity to integrate palliative care training into a DNP program. The purpose of this clinical scholarship project was to implement the ELNEC online training program for APRN students in the BSN-DNP program and evaluate its effect on student performance during a telehealth objective structured clinical examination (OSCE). The Iowa Model of Evidence-Based Practice guided the planning, design, implementation, and analysis of this project. The aim of the project was to evaluate the outcomes of the ELNEC training modules in 100% of DNP students completing the didactic components of the curriculum

for their nurse practitioner population of focus. The primary outcome measure of interest was the performance of the DNP student in a telehealth palliative care OSCE. This project sought to answer the following study question: in BSN to DNP students who have completed at least one diagnosis and management course for their population of focus (i.e., adult-geriatric, family, pediatric, psychiatric/mental health, or women's health), how does the implementation of online ELNEC palliative care training affect student performance during a telehealth palliative care OSCE?

### **Review of Literature**

A review of current literature was conducted to investigate palliative care utilization and its associated benefits. The following databases were accessed: Cochrane Library, CINAHL, and Medline. Key search terms included *palliative care*, *benefits*, AND *training*. Variations of these terms were also included to guarantee exhaustive search results. The initial keyword search yielded 44 publications from the Cochrane Library, 2401 from CINAHL, and 3524 from Medline. Inclusion criteria were applied to narrow search results. Publications were limited to those published between 2015 and 2021; those with a source type of journal or academic journal; and inclusion of *palliative care* (along with its variations) in the title field. After applying inclusion criteria, publications were narrowed to 21, 588, and 766 from Cochrane Library, CINAHL, and Medline, respectively. Exclusion terms were applied using the following: NOT *hospice*. After applying exclusion criteria, literature was narrowed to 18 from Cochrane Library, 369 from CINAHL, and 414 from Medline. From this search, 10 publications were selected for a review of literature. An ancestry search was also conducted, originating

from the systematic review by Haun et al. (2017). This yielded an additional two publications, bringing the total number of selected publications to 12.

A frequent outcome measure in the study of palliative care was quality of life. Four systematic reviews included analysis of 33 total randomized controlled trials (RCTs). Early palliative care significantly improved quality of life (Haun et al., 2017; Hoerger, Wayser, Schwing, Suzuki, & Perry, 2019). Despite the effect size often being small, the results in a palliative care study may underestimate its true benefits (Hoerger et al., 2019). This was an important consideration because statistically significant or not, the intervention was often clinically significant by improving life for a patient(s) struggling with advanced disease or end-of-life symptoms. In fact, Sahlollbey, Lee, Shirin, and Joseph (2020) and Zhou and Mao (2019) examined RCTs in their systematic reviews of patients with heart failure and found modest improvement (15%) and significantly increased quality of life ( $p = .03$ ), respectively.

The selected individual RCTs of palliative care more frequently demonstrated improved quality of life. Kluger et al. (2020) found patients with Parkinson's disease and similar diseases had better quality of life ( $p = .009$ ) after six months of palliative care. Maltoni et al. (2016) concluded patients who received early, automatic palliative care reported better quality of life on two different scales ( $p = .008$  and  $.022$ ) when compared to those who received on-demand palliative care. Vanbutsele et al. (2020) examined quality of life scores for patients with advanced cancer who were near or at the end of life. The greatest discrepancy existed at one month prior to death, suggesting the clinically meaningful difference palliative care can make on quality of life at the end of life (Vanbutsele et al., 2020). Unique to the body of literature was a study by Nipp et al.

(2016) where outcomes were compared based on age and gender. Nipp et al. (2016) found males and younger patients receiving palliative care experienced better quality of life and improved mood when compared to females and older patients. The researchers concluded palliative interventions may be most effective when tailored to a patient's age- and gender-specific care needs (Nipp et al., 2016).

Aside from quality of life, current literature demonstrated additional benefits of palliative care. Bakitas et al. (2015) determined patients in their RCT who received early palliative care had a 15% one-year survival advantage when compared to those whose palliative care initiation was delayed. McDonald et al. (2017) placed emphasis on the effects by caregivers and found satisfaction with care significantly improved over three months in the palliative care intervention group ( $p = .007$ ). Additional outcomes of all sources included symptom burden, anxiety and depression, hospitalizations, and rates of advanced directive completion. While not always statistically significant, the palliative care intervention consistently produced more positive effects for patients suffering from serious or terminal illness, yielding clinical significance.

There was a dearth of research regarding the education of graduate nursing students on palliative care. The literature search revealed existing data often pertained to undergraduate nursing students and/or medical students. In a pilot study aimed to enhance students' abilities to communicate with end-of-life patients and their families, Bloomfield, O'Neill, and Gillett (2015) discussed the necessity of effective clinical communication. A lack of competence and confidence in communication by healthcare professionals may negatively affect the quality of care given to dying patients or patients suffering from chronic illness (Bloomfield et al., 2015). Bloomfield et al. (2015) found



not only was simulation an effective means for preparing students to communicate with end-of-life patients and their families, but students valued the opportunity to develop such skills. Furthermore, Donne et al. (2019) found the challenge of palliative care was the resulting psychological and emotional impact on providers caring for chronically ill or dying patients. Care delivered by students was favorable when an opportunity was provided for specialized palliative care training (Donne et al., 2019). These publications highlighted the need for additional research to determine the most effective method of palliative care education (Bloomfield et al., 2015; Donne et al., 2019).

Despite this deficit of research in palliative-specific training, OSCEs are considered to be one of the most important modalities in the comprehensive assessment of students in health professions (Craig, Kasana, & Modi, 2020). Used to assess clinical competencies in a safe environment, OSCEs have been found more reliable and valid than other traditional forms of assessment (Aronowitz, Aronowitz, Mardin-Small, & Kim, 2017). Students consistently reported better preparedness for clinical placement following an OSCE experience (Aronowitz et al., 2017). OSCEs are beneficial in APRN education because they minimize variation in student assessment, test higher levels of knowledge with application of skills and clinical reasoning, and ensure practice of communication skills (Aronowitz et al., 2017). Furthermore, the adoption of OSCEs for telehealth and virtual settings may be of value for clinical learning and assisting health professional programs to stay current in an internet-driven world.

The strength of this literature review was the high level of evidence from systematic reviews and RCTs. Additionally, many of the studies found statistical significance in the primary outcome (often quality of life). Several of the publications

were multicenter studies which increased the reliability. The literature was limited by the lack of overall consistency in the type of patients studied. Diagnoses of subjects included ‘advanced cancer’ and specific types of solid organ cancers, as well as Parkinson’s disease and heart failure, making it difficult to establish conclusions for various populations. Furthermore, the methods by which palliative care was delivered to subjects varied (i.e., single provider vs. palliative care team, standalone vs. in addition to usual care, and in person vs. telehealth). Some settings had well-established palliative care services, while others did not. Finally, several studies mentioned a lack of randomization or blinding due to the nature of the interventions.

In summary, publications differed in exactly how palliative care was compared to the alternative. While some studies examined palliative care versus standard or usual care, others sought to find significance in early or systematic palliative care versus later or on-demand palliative care. A palliative care service is most effective when provided as early as possible and integrated into standard chronic disease management. While aiding in symptom management, palliative care also eases disease burden, depression, and caregiver strain associated with serious illness. Gaps in the literature exist in the lack of current data examining the education of healthcare providers, primarily graduate students seeking a DNP degree, and its effect on confidence and competence levels.

The Iowa Model of Evidence-Based Practice was selected to guide this clinical scholarship project. Based on Rogers’ Diffusion of Innovations theory, the Iowa Model is well-known for its applicability and ease of use from both a clinician and systems perspective (Melnik & Fineout-Overholt, 2019). This model provides a comprehensive, step-by-step guide to the evidence-based practice process, including identifying triggers,

determining whether the topic is a priority, designing the pilot, and opportunities for reassembling and redesigning (Melnik & Fineout-Overholt, 2019). Palliative care training in graduate nursing programs is a knowledge-focused trigger. The university college of nursing identified palliative care as a priority for training of DNP students. This literature review provided a sufficient research base to test the change in the curriculum.

## **Methods**

### **Design**

This was a quality improvement project using an observational, descriptive design. The project sought to evaluate the ELNEC program through behavioral observation during a telehealth OSCE. This study occurred in the spring semester of 2021.

### **Setting**

The setting for study was the college of nursing at a Midwestern public university. The university is located in a suburban community of a greater metropolitan area. Regional data includes a population of 2,807,338 residents in the metropolitan area (U.S. Census Bureau, 2019). There are 14 nursing programs in the area with four schools having a DNP program.

### **Sample**

This project utilized a purposeful sample of BSN-DNP students. Inclusion criteria were students who have completed at least one diagnosis and management course for their population of focus in adult-geriatric, family, pediatric, psychiatric/mental health, or women's health. Exclusion criteria were those who have not completed at least one

diagnosis and management course for their population of focus. The approximate sample size was anticipated to be 100 students.

### **Procedures**

A team of key stakeholders was established and consisted of the DNP Program Director, a DNP who is experienced and practices in palliative care, select members of the DNP faculty, and the primary investigator (PI). The PI completed the online ELNEC training modules. The team decided to require ELNEC training for all BSN-DNP students. The training was conducted virtually during the spring semester.

Eligible BSN-DNP students were required to independently complete the six online ELNEC graduate training modules. The completion certificate at the end of the ELNEC program was a requirement for successful completion of a graduate assignment. A telehealth OSCE based on several ELNEC recommendations was developed. The OSCE was evaluated based on some ELNEC learning objectives. The OSCE grading rubric included two items developed by the PI and graduate nursing faculty: the student's ability to describe the essential elements of palliative care and the student's display of advanced communication skills. A student could score from 0 to 2 points on each rubric item based on the completeness of their OSCE performance.

### **Data Collection/Analysis**

The ELNEC online training modules developed by the AACN, a nationally recognized nursing organization, were used as the official training for palliative care. Observation and grading of student performance were conducted by a member of university graduate nursing faculty using a grading rubric. All data was deidentified and coded by faculty. Data was entered into Microsoft Excel and stored on a password-

protected computer owned by the PI and on a password-protected jump drive. The data collected was demographic data (age, gender, race, years of RN experience, and population of focus), the ELNEC completion certificates, and the telehealth OSCE grading rubric results. Demographic data were analyzed using descriptive statistics. A paired samples *t*-test was utilized to compare the means of rubric scores. An analysis of variance (ANOVA) was performed to determine whether there were significant differences in scores between student groupings.

### **Approval Processes**

This project was approved by the university College of Nursing, the DNP Program Director, the PI's DNP Project Committee, and the university Graduate School. The university Institutional Review Board (IRB) determined the project to be a quality improvement activity not requiring IRB review. No ethical concerns were identified. Risks were minimal since all participant identifiers were removed. The benefit of this study was to assist the DNP student with transition to practice in palliative care.

### **Results**

Data analysis was completed using Intellectus Statistics (2021). A total of 85 BSN-DNP students ( $N = 85$ ) completed the telehealth OSCE between April 10, 2021, and May 13, 2021. The number of students who completed one diagnosis and management course for their population of focus was 60 ( $n = 60, 70.59\%$ ). The number of students who completed two diagnosis and management courses was 25 ( $n = 25, 29.41\%$ ). Participants ranged in age from 24- to 55-years. The largest group of students were in the 26- to 30-year age range ( $n = 40, 47.06\%$ ) followed by 31- to 35-years ( $n = 17, 20\%$ ), 21- to 25-years ( $n = 9, 10.59\%$ ), 46-years and older ( $n = 8, 9.41\%$ ), 36- to 40-years ( $n = 7,$

8.24%), and 41- to 45-years ( $n = 4$ , 4.71%). The sample was predominantly female ( $n = 78$ , 91.76%) with seven male participants ( $n = 7$ , 8.24%).

The most frequently reported race was Caucasian or White ( $n = 67$ , 78.82%) followed by African American or Black ( $n = 13$ , 15.29%). There were very small populations of Asian ( $n = 3$ , 3.53%), Hispanic ( $n = 1$ , 1.18%), and Multiracial students ( $n = 1$ , 1.18%). The RN experience held by students ranged from 3- to 24-years with the largest group in the 5- to 6-year range ( $n = 27$ , 31.76%) followed by 3- to 4-years ( $n = 22$ , 25.88%), 7- to 8-years ( $n = 21$ , 24.71%), 11- or more years ( $n = 10$ , 11.76%), and 9- to 10-years ( $n = 4$ , 4.71%). One student did not report years of experience ( $n = 1$ , 1.18%). The most frequently reported nurse practitioner population of focus was family ( $n = 39$ , 45.88%) followed by pediatric ( $n = 17$ , 20%), psychiatric/mental health ( $n = 15$ , 17.65%), women's health ( $n = 8$ , 9.41%), and adult-geriatric ( $n = 6$ , 7.06%) (Appendix A).

There were two items on the grading rubric: explanation of palliative care and advanced communication skills for a palliative care conversation. A paired samples *t*-test was used to compare the two scores. During the OSCE, students scored higher overall on their display of advanced communication skills ( $M = 1.96$ ,  $SD = 0.24$ ) than they did on the explanation of palliative care ( $M = 1.71$ ,  $SD = 0.69$ ). The difference between the two means was statistically significant at the .05 level ( $t = -3.21$ ,  $df = 84$ ,  $p = .002$ ) (Appendix B).

An ANOVA was conducted to determine significance between age, gender, race, years of RN experience, population of focus, and number of diagnosis and management courses completed for the scores for students' explanation of palliative care. Race could not be included in statistical analysis due to the small sample sizes of some reported

ances. The ANOVA was examined based on an alpha value of .05. The results of the ANOVA were significant for explanation of palliative care ( $F[15, 68] = 2.28, p = .011$ ). Age was not significant ( $F[5, 68] = 1.82, p = .121$ ); years of RN experience was not significant ( $F[4, 68] = 1.65, p = .172$ ); and population of focus was not significant ( $F[4, 68] = 1.29, p = .284$ ). However, significant differences were found among gender ( $F[1, 68] = 4.36, p = .041$ ) and number of diagnosis and management courses completed ( $F[1, 68] = 4.85, p = .031$ ). The significance found between gender groups is likely due to skewness of data favoring female. A post-hoc analysis was conducted to further examine the difference between the number of diagnosis and management courses completed. A Tukey pairwise comparison was used to examine the scores for explanation of palliative care. The mean scores for students who had completed two diagnosis and management courses ( $M = 1.92, SD = 0.28$ ) were significantly higher than the mean scores for those who completed one course ( $M = 1.61, SD = 0.79$ ) ( $p = .048$ ) (Appendix C).

A second ANOVA was conducted to determine significance between age, gender, race, years of RN experience, population of focus, and number of diagnosis and management courses completed for the advanced communication skills scores. Race could not be included in statistical analysis due to the small sample sizes of some reported races. Due to homogeneity of results with almost all students scoring the maximum points possible ( $n = 83$ ), there was no significant difference between any group for students' display of advanced communication skills ( $F[15, 68] = 0.42, p = .967$ ) at the .05 level. Age was not significant ( $F[5, 68] = 0.26, p = .931$ ); gender was not significant ( $F[1, 68] = 0.00, p = .975$ ); years of RN experience was not significant ( $F[4, 68] = 0.26, p$

= .905); population of focus was not significant ( $F[4, 68] = 0.76, p = .554$ ); and number of diagnosis and management courses was not significant ( $F[1, 68] = 1.19, p = .280$ ).

### **Discussion**

The implementation of ELNEC training for BSN-DNP students positively affected student performance during a telehealth palliative care OSCE. Most students scored well on both palliative care items in the OSCE. When providing an explanation of palliative care to the simulated patient, 71 out of 85 students received full credit. For the display of advanced communication skills item, 83 out of 85 students received full credit. Communication skills are part of any nursing curriculum; therefore, communication skills displayed in a palliative care conversation were not surprising.

The significance found between the number of diagnosis and management courses completed suggested students who had more didactic and clinical training were better prepared to have a palliative care conversation in a simulated environment. In addition, the ELNEC training program likely influenced the students' ability to lead a conversation about palliative care initiation. Regardless, most students were able to easily engage in communication with a simulated patient about palliative care using advanced techniques, such as open-ended questions, empathy, and attentive listening. While these skills are not exclusive to palliative care, they are essential in palliative care, and students' overall success is a positive outcome.

A strength of this study was the validity and reliability of the ELNEC program as a means of providing palliative care training. Furthermore, the AACN has recommended the ELNEC program to be implemented in all graduate nursing programs. The APRN students at the university of interest demonstrated knowledge and behavior conducive to



facilitating palliative care conversations and services after completion of the ELNEC program. On the contrary, the study was limited by the small sample size and predominantly female, Caucasian representation. Further research is needed to examine a more diverse nursing population and to examine palliative care training as APRNs transition into practice.

Due to the challenge of initiating palliative care training into an existing curriculum, universities with BSN-DNP programs may want to consider implementing ELNEC training for students who are nearing program completion. The ELNEC program has been an effective, affordable way to provide training for students. Similarly, the ELNEC program was an easily accessible, online program requiring about 5-6 hours and could be completed at the student's convenience.

### **Conclusion**

The ELNEC program was incorporated into an existing BSN-DNP curriculum, and APRN students demonstrated foundational skills in palliative care. The knowledge and skills acquired through ELNEC training can be adapted to care for patients throughout the lifespan. The provision of palliative care training for APRNs, specifically BSN-DNP students, may improve the initiation and utilization of palliative care services. Palliative care facilitates a better quality of life for patients with chronic health conditions, and APRNs are well-positioned to provide such a service.

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## Appendix A

Table 1

*BSN - DNP Student Characteristics*

Variable	<i>n</i>	%
<b>Number of Diagnosis and Management Courses Completed</b>		
One	60	70.59
Two	25	29.41
<b>Age</b>		
21 – 25 years	9	10.59
26 – 30 years	40	47.06
31 – 35 years	17	20.00
36 – 40 years	7	8.24
41 – 45 years	4	4.71
46 years & older	8	9.41
<b>Gender</b>		
Female	78	91.76
Male	7	8.24
<b>Race/Ethnicity</b>		
Caucasian/White	67	78.82
African American/Black	13	15.29
Asian	3	3.53
Multiracial	1	1.18
Hispanic	1	1.18
<b>Years of RN Experience</b>		
3 to 4	22	25.88
5 to 6	27	31.76
7 to 8	21	24.71
9 to 10	4	4.71
11 +	10	11.76
Not reported	1	1.18
<b>Population of Focus</b>		
Family	39	45.88
Pediatric	17	20.00
Psychiatric/Mental Health	15	17.65
Women's Health	8	9.41
Adult-Geriatric	6	7.06

*Note.* Table depicts number of required courses completed by student participants as well as self-reported age, gender, race, years of RN experience, and population of focus. Due to rounding errors, percentages may not equal 100%; *N* = 85.

Appendix B

Figure 1. Student Mean OSCE Scores

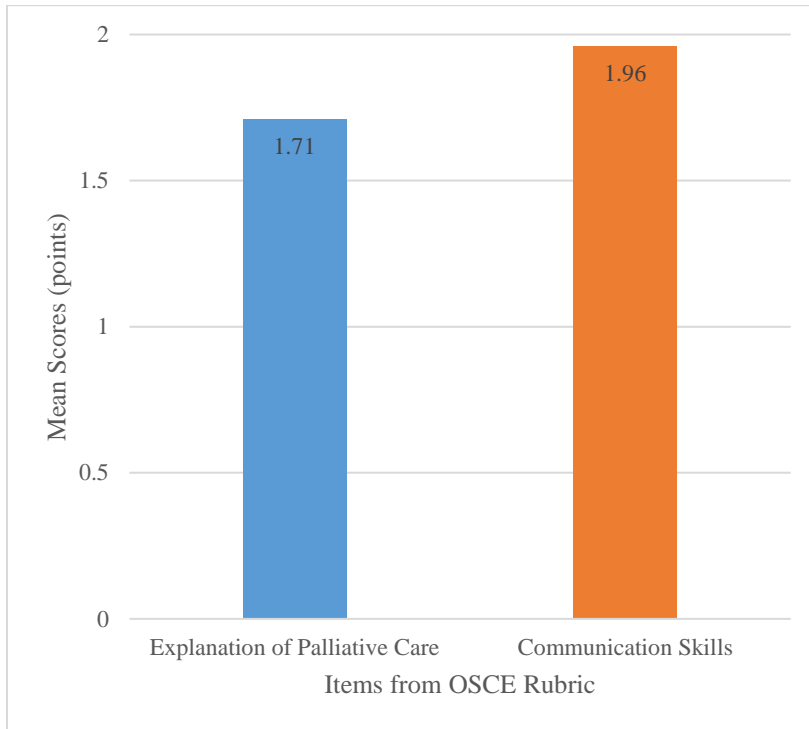


Figure 1. Displays the mean scores for both items on the OSCE rubric. Scores were graded on a scale of 0-2 points. Mean scores and statistical analysis are depicted in the table below:

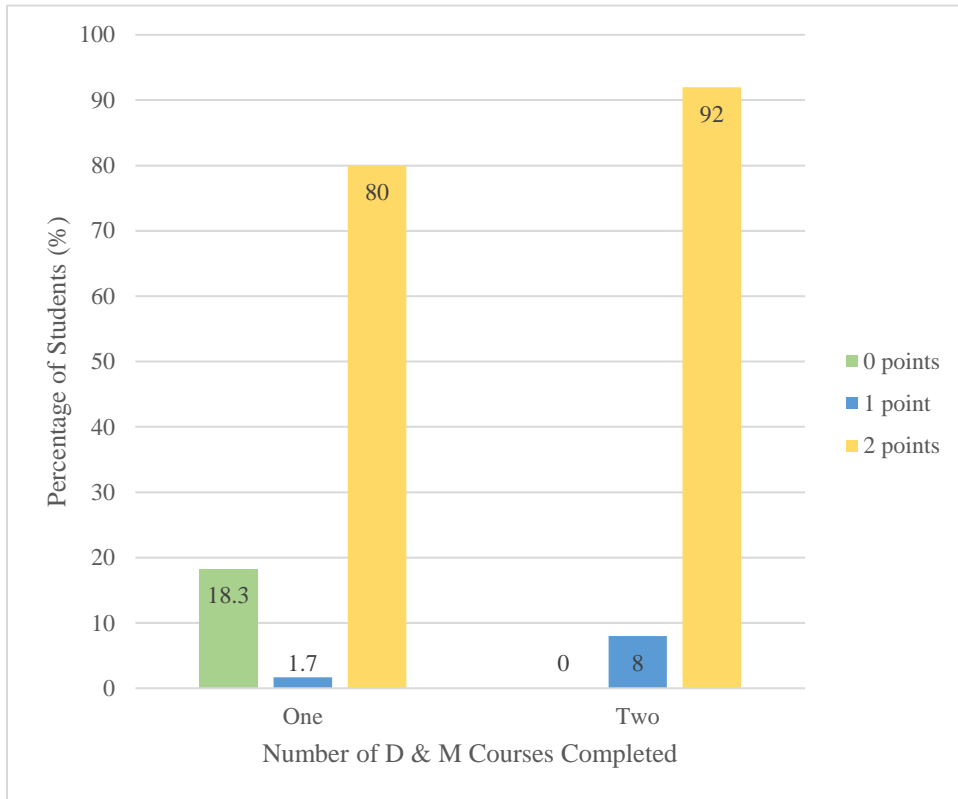
*Two-Tailed Paired Samples t-Test for the Difference Between Rubric Items*

Explanation of Palliative Care		Communication Skills		<i>t</i>	<i>p</i>	<i>d</i>
<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
1.71	0.69	1.96	0.24	-3.21	.002	0.35

Note. *N* = 85. Degrees of Freedom for the *t*-statistic = 84. *d* represents Cohen's *d*.

Appendix C

*Figure 2. Scores on Explanation of Palliative Care Based on Number of Courses Completed*



*Figure 2. Depicts the percentages of students who received scores of 0, 1, and 2 points as they are divided into two groups: those who have completed one diagnosis and management course and those who have completed two. D & M = diagnosis and management; N = 85.*