**Nurses’ Knowledge of Palliative Care**

**Abstract**

**Introduction.** Palliative care has evolved to identify the specific needs of patients with severe and incurable diseases. An estimated 46,000 patients in the Republic of Croatia require some form of palliative care. The aim of this study is to examine nurses’ knowledge of palliative care.

**Methods.** A cross-sectional study included 198 nurses. The survey was conducted during March and April of 2017. As a survey instrument, a 2-part questionnaire was used. The first part dealt with sociodemographic data and the second part consisted of a standardized palliative care quiz for nursing (PCQN) questionnaire.

**Results.** Respondents gave the most correct answers in the area of pain and other symptoms control. It was found that there was no significant difference in gender, age, or seniority in knowledge of palliative care. Respondents who received informal education showed better knowledge.

**Conclusion.** From the study conducted, we can conclude that nurses have insufficient knowledge of palliative care.
Introduction

In 2002, the World Health Organization (WHO) defined palliative care 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 (1). Its focus is on the patient and their family, and the main goal is to promote the patient’s quality of life through various stages of the disease, relieving the patient of pain and suffering. Palliative care does not only relate to the final days of life, since it is often required during periods lasting for months, even years - from the diagnosis of a terminal disease to the period of mourning after a patient's death. It is provided by a competent and highly educated multidisciplinary team consisting of doctors, nurses, physical therapists, psychologists, social workers, priests, occupational therapists, etc. Many authors state that nurses are indispensable links in the chain of palliative care. They spend the most time with patients and therefore their role in palliative care is of immense importance (2). According to current estimates, slightly more than 60% of patients suffer from some oncological disease, while the remaining (40%) represent a spectrum of various diseases, from dementia and cerebrovascular stroke to end-stage liver disease, cardiac insufficiency, and chronic obstructive pulmonary disease (3).

Important factors influencing the successful delivery of palliative care to patients are knowledge, attitudes, beliefs, and experience of healthcare professionals, and those factors determine not only their procedure but also their behaviour during the assessment and treatment of patients (4). Existing studies have shown that, in contrast to many other countries around the world, the education of nurses in the field of palliative care in the Republic of Croatia is still insufficient. This study provides proof of that, as do other studies cited in this paper.

Objectives

The overall objective of this study is to determine the level of nurses’ existing knowledge of palliative care in order to achieve a higher quality of care for palliative patients and their families.

The specific objective is the following:

- To examine whether there is a correlation between age, gender, educational level, and work experience of the respondents and their knowledge of palliative care

Methods

The study was conducted at “Dr. Josip Benčević” General Hospital in Slavonski Brod, Croatia and Našice General County Hospital, Croatia. A total of 198 nurses participated in the study. The Data were collected during March and April of 2017. The PCQN questionnaire, created by Margharet M. Ross and colleagues at the University of Ottawa, Canada, was used for the purpose of this study. The questionnaire consists of 20 questions pertaining to the philosophy of palliative care, mental and spiritual issues, and control of pain and other symptoms. The questionnaire is intended to test nurses’ basic knowledge of palliative care, and the possible answers are: true, false, and I do not know (5). It is scored in such a way that each correct answer amounts to one point, which makes a possible score ranging from 0 to 20. Depending on the total score, the respondents could show insufficient, sufficient, or good knowledge. “Good knowledge” as a result was initially defined as >75% of correct answers (15/20), but due to the needs of this study, the limit was reduced to the level of “sufficient knowledge”, which was defined as >50% of correct answers (10/20). Furthermore, demographic questions related to age, gender, education, workplace, work experience, and education were also included in the survey.
Ethics

The Ethics Committee of Našice General County Hospital and „Dr. Josip Benčević“ General Hospital in Slavonski Brod approved the study. All respondents were informed of the purpose of the study and received written notice for the respondents and a statement and a document of consent and consent of the informed respondent for participation. They voluntarily agreed to participate in the study, which they confirmed with their signature. All data were collected through an anonymous questionnaire, which the respondents completed independently. The study was conducted in accordance with ethical principles and human rights in research.

Statistics

Categorical data are represented by absolute and relative frequencies. Differences of categorical variables were tested by the Hi-square test and, if necessary, by Fisher’s exact test. All P values are two-sided. The significance level was set at α = 0.05. The SPSS statistical program (version 23, SPSS Inc., Chicago, IL, USA) was used for statistical analysis.

Results

Out of the total number of respondents (n=198), 100 were employed at “Dr. Josip Benčević” General Hospital in Slavonski Brod and 98 of them at Našice General County Hospital. The majority of participants were females, n=128 (64.6%). Regarding age, most participants were in the ranges of 25-34 years of age (25.3%) and 45 years of age and above (47.9%). According to years of work experience, the majority of respondents has 31 or more years of experience, n=60 (30.6%).

In their daily work, participants from Slavonski Brod, 68.2% of them, work with as much as 135 patients in need of palliative care (Fisher’s exact test, p<0.001), which is significantly higher than in the case of participants from the Našice General County Hospital. During education, 98 (49.5%) of the respondents were educated on palliative care as a part of a school program, of whom significantly more were from Slavonski Brod (Fisher’s exact test, p=0.03), while 103 (52%) received informal education on palliative care, of whom significantly more were from the Našice General County Hospital (Fisher’s exact test, p<0.001). As many as 146 (73.7%) of the respondents indicate that palliative care education would help them in their work with patients, with no significant difference between the hospitals (Table 1).

<table>
<thead>
<tr>
<th>Question</th>
<th>GH SLAVONSKI BROD</th>
<th>GCH NAŠICE</th>
<th>TOTAL</th>
<th>p*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you meet patients who need palliative care in your daily work?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>51 (52)</td>
<td>84 (84)</td>
<td>135 (68.2)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>No</td>
<td>47 (48)</td>
<td>16 (16)</td>
<td>63 (31.8)</td>
<td></td>
</tr>
<tr>
<td>Were you educated on palliative care as part of your school’s program?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>41 (41.8)</td>
<td>57 (57)</td>
<td>98 (49.5)</td>
<td>0.30</td>
</tr>
<tr>
<td>No</td>
<td>57 (58.2)</td>
<td>43 (43)</td>
<td>100 (50.5)</td>
<td></td>
</tr>
<tr>
<td>Have you undergone informal palliative care education?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>71 (72.4)</td>
<td>32 (32)</td>
<td>103 (52)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>No</td>
<td>27 (27.6)</td>
<td>68 (68)</td>
<td>95 (48)</td>
<td></td>
</tr>
<tr>
<td>Would palliative care education help you in your work with patients?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>78 (79.6)</td>
<td>68 (68)</td>
<td>146 (73.7)</td>
<td>0.06</td>
</tr>
<tr>
<td>No</td>
<td>5 (5.1)</td>
<td>15 (15)</td>
<td>20 (10.1)</td>
<td></td>
</tr>
<tr>
<td>I do not know</td>
<td>15 (15.3)</td>
<td>17 (17)</td>
<td>32 (16.2)</td>
<td></td>
</tr>
</tbody>
</table>

* Hi-square test
The Respondents’ knowledge of palliative care was tested using more than twenty questions, which had to be answered correctly. Table 2 lists the correct answers. The claim that the manifestation of chronic pain is different from that of acute pain received the greatest number of correct answers, while the least number of correct answers was provided for the question of whether the loss of a person with whom we are not close is more easily tolerated than the loss of a close person.

The fact that palliative care is not appropriate only in situations where there is evidence of a downhill trajectory or deterioration was answered correctly by 119 (60.1%) respondents, of whom 71 (71%) work at the General Hospital in Slavonski Brod. The fact that in the last days of life, drowsiness is associated with electrolyte imbalance and thus the need for sedation is reduced was answered correctly by 87 (43.9%) of the respondents, of whom significantly more were from the Našice General County Hospital (Fisher’s exact test, \( p=0.006 \)). The fact that patients who take opioids need to also take laxatives was answered correctly by 92 (46.5%) of respondents, of whom significantly more were from the Našice General County Hospital (Fisher’s exact test, \( p<0.001 \)). The fact that medicines that could cause respiratory depression were suitable for the treatment of severe dyspnoea in the terminal phase of the disease was answered correctly by 47 (23.7%) participants, of whom significantly more were from the Našice General County Hospital (Fisher’s exact test, \( p=0.01 \)). The fact that the use of placebo was not appropriate in the treatment of certain types of pain was answered correctly by 44 (22.2%) respondents, of whom significantly more were from the Našice General County Hospital (Fisher’s exact test, \( p=0.002 \)). The statement that suffering and physical pain are one and the same was incorrect was answered correctly by 155 (78.3%) respondents, of whom significantly more were also from the Našice General County Hospital (Fisher’s exact test, \( p=0.04 \)). The fact that anxiety or fatigue reduce the pain threshold was answered correctly by 75 (37.9%) the respondents, of whom significantly more, 45 (45.9%) of them, were from the Našice General County Hospital (Fisher’s exact test, \( p=0.03 \)) (Table 2).

There is no significant difference in knowledge and attitudes regarding palliative care according to gender and age of respondents. Respondents with a bachelor’s degree have significantly better knowledge of palliative care, unlike those with only high school education. Furthermore, there is no significant difference in palliative care knowledge according to years of experience. Significantly more women believe that palliative care education would help them in their work with patients, but we can also attribute this result to a significantly larger number of female respondents.

Discussion

A total of 198 respondents participated in the survey. The conducted Hi square tests showed that there were significantly more women in the sample. The smallest group in the sample are individuals under 24 years of age, and the majority of respondents are nurses with secondary education. The largest share of respondents have more than 31 years of work experience. A significantly larger number of respondents encounter patients in need of palliative care on a daily basis, but a significantly larger number of respondents have not received formal palliative care education and believe that education would help them in their work with patients. A total of 135 (68.2%) respondents encounter patients who require palliative care on a daily basis.

A total of 119 (60.1%) respondents answered correctly that the statement “Palliative care is appropriate only in situations where the exacerbation of the disease and decay is evident” is incorrect. The claim that morphine is the standard used to compare the analgesic effect of other opioids is completely accurate, and was recognized as such by 81 (41%) subjects. A study using the same questionnaire was also conducted at “Dr. Tomislav Bardek” General Hospital in Koprivnica, and according to their results, 60 (42.2%) respondents answered this claim correctly (6).

The claim that the scope of a disease determined the treatment method of the disease was answered correctly by 33 (16.7 %) of the respondents. Margaret Ross, the author of the questionnaire, explains that the dosage and route of administration are primarily determined by the patient’s level of pain and his or her ability to swallow. Adjuvant therapy is essential in the treatment of pain (5). General recommenda-
tions for pain treatment state that adjuvant therapy should be administered depending on the type of pain (7). The same number of respondents from GCH Našice and GH Slavonski Brod considered this statement incorrect. A study conducted on a sample of students from the Kigali Clinical Hospital (Rwanda) found that 87 (62.6%) of the respondents considered adjuvant therapy to be essential in the treatment of
pain (8). Similarly, a study conducted at George Washington University examined the knowledge of nurses before and after palliative care education using the PCQN questionnaire. According to their results, 55 (90.2%) pre-education respondents and 58 (95.1%) post-education respondents answered that adjuvant therapy is essential in pain treatment (9).

Regarding the statement “It is very important that family members be at the patient’s bedside at the moment of death”, the majority of the respondents, i.e. 165 of them (83.2%), believed it to be correct, but it is actually incorrect. A survey conducted in Spain found that the majority of respondents answered this claim incorrectly, as did a study conducted in Jordan. The authors of both studies state that respondents may have misunderstood this claim. They argue that the claim does not state precisely whether it was related to the very moment of dying or a specific period after death (10,11). Ross, the author of the questionnaire, explains that it can be very exhausting for family members and that in such situations it is difficult to estimate when and how long the patient will live (5).

Regarding the claim “In the final days of life, drowsiness is linked to electrolyte imbalance and thus the need for sedation is reduced”, the majority of respondents working at CGH Našice provided a correct answer. Fluid reduction and electrolyte imbalance act as a natural anaesthetic on the central nervous system and therefore the need for patient sedation is reduced (5). A similar survey was conducted at the Bjelovar General Hospital, the results of which showed that a total of 18 (51.43%) respondents answered the above statement correctly (12).

A total of 168 (84.8%) respondents know that prolonged use of morphine does not cause addiction. If morphine is administered at the correct dosage in patients with chronic pain, no dependence can develop (5). A study examining students’ knowledge of palliative care in Canada found that a total of 93% of students know that morphine does not cause addiction (13).

The statement that individuals taking opioids must also take laxatives is correct. Opioid drugs often cause constipation in patients, and it is therefore very important that laxatives be introduced into therapy at the same time as opioids are introduced. Most of the respondents responded correctly. Similar results were obtained in a study conducted at the General Hospital in Bjelovar (12).

Furthermore, the majority of respondents felt that providing palliative care required an emotional detachment, but this was incorrect. Providing support and encouragement is a key and valuable component in dealing with palliative patients, and for it to be effectively implemented, there is a need for an emotional connection between the palliative care provider and the patient (5).

Regarding the statement that “Medicines that could cause respiratory depression are suitable for the treatment of severe dyspnoea in the terminal phase of the disease”, it was answered correctly by 47 (23.7%) respondents. A significant number of respondents consider men and women to deal with grief equally. The same results were obtained in most other studies that used the PCQN questionnaire (7,10,12,13).

Only 71 (35.9%) respondents know that palliative care philosophy is compatible with active treatment. The provision of palliative care is not necessarily associated with aggressive treatment, but sometimes the control of pain and other symptoms also requires such treatment (5). A survey conducted at the General Hospital in Bjelovar shows that their respondents were more aware that this was the case (12).

Only 44 (22.2%) respondents considered the use of placebo to be appropriate in pain treatment. A study conducted at the University of Ottawa found that 87.8% of nurses and 52.2% of students knew that placebo was not appropriate for pain management (5). Situations limiting the use of placebo in daily pain management are those in which patients receiving placebo may be at risk of progression of an underlying disease that is accompanied by pain, such as a tumour (14). The guidelines of the National Hospice Council and Specialist Palliative Care Services state that the use of placebo should not be the first choice in the treatment of pain, apart from the cases when no effective drug is available (15).

The statement “In large dosages, Codeine causes more nausea and vomiting than morphine” was recognized as correct by 87 (43.9%) of the respondents. McCaffery and Beebe noted that throughout their work they have recognized that codeine is more toxic than morphine when administered at high doses, and consequently causes vomiting, nausea and constipation (5).

The majority of respondents answered correctly that suffering and physical pain were not the same thing. Nurses at the General Hospital in Bjelovar, 114 of
them (80.3%), also marked this statement as correct (12). Twycross and Lack state that it is important to bear in mind that suffering is related to everything that the patient feels and that it cannot be associated with pain exclusively (5). Likewise, 167 (84.3%) respondents provided a correct answer to the statement that chronic pain manifestation was different from that of acute pain.

The claim that burnout due to accumulation of losses is inevitable for individuals working in palliative care is completely incorrect. This was recognized by 37 (18.7%) respondents. In a study conducted at the General Hospital in Bjelovar, only 18 participants knew this (12). Ross states that burnout syndrome in nurses involved in palliative care occurs because of work environment and not solely due to losses (5). Furthermore, there is the claim that the loss of a person with whom we are not close is more easily tolerated than the loss of a close person. Ross et al. found that 60.4% of students answered this claim correctly (5). In our study, 18 (9.1%) respondents considered the claim to be true. A total of 75 (37.9%) respondents know that anxiety or fatigue lower the pain threshold. The same result was obtained in a study conducted at the General Hospital in Bjelovar, where 36 (25.6%) of the respondents answered this claim correctly (12).

From everything stated above, it is evident that our nursing education system is not sufficient. This is a big problem because the nurse, as we have pointed out in the introduction, is one of the key participants in palliative care. A nurse in palliative care takes care of all the needs of patients - the most important thing is pain management, and other symptoms that occur in the patient. Gastrointestinal symptoms occur most commonly, and include nausea, vomiting, loss of appetite, and constipation, followed by respiratory symptoms, the most common being dyspnoea and cough, followed by skin changes, neurological and psychological problems: insomnia, anxiety, depression, impaired consciousness, and chronic fatigue. A nurse caring for a palliative patient should apply the knowledge of the entire field of nursing. Although palliative care has been discussed in the Republic of Croatia for many years, nurses are still not fully qualified to take care of a palliative patient. The Secondary Education Curriculum for Nurses and General Technicians in the Republic of Croatia does not have a separate subject that would allow students to receive education in the field of palliative nursing care.

Palliative nursing care is mentioned in various subjects in school, but not enough. At the level of nursing studies in the Republic of Croatia, a compulsory palliative care course was introduced three years ago. The course teaches students about the basic principles, philosophy, and organization of palliative care, and thus makes the students more proficient in assessing the needs, planning, implementation, and evaluation of palliative care (17).

Insufficient knowledge of palliative care methods and lack of awareness of its usefulness are significant deficiencies for the progress of palliative care in the Republic of Croatia.

Conclusion

Based on the study conducted and the results obtained, we can conclude that nurses have insufficient knowledge on palliative care. Respondents gave the most accurate answers in the area of control of pain and other symptoms. It was found that there was no significant difference in gender, age, and work experience regarding palliative care knowledge. Respondents who received informal education showed better knowledge. Respondents who felt that palliative care education would help them work with patients score higher on the PCQN compared to those who felt that it would not help them or those who were not sure.

This study, as well as many others conducted with the aim of advancing health care, should highlight the need for continuous acquisition of new knowledge and skills.
References

9. Balicas M.R. The Effect of Palliative Care Nursing Education to Improve Knowledge in Palliative Care of Hospital - Based Nurses Caring for Patients with Chronic, Serious Illness. Available from: https://hsrc.himmel-farb.gwu.edu/. Accessed: 02.08.2018.
Sažetak

**Uvod:** Palijativna skrb razvila se kako bi prepoznala specifične potrebe bolesnika koji boluju od teških i neizlječivih bolesti. Procjenjuje se da u Hrvatskoj oko 46 000 bolesnika treba neki oblik palijativne skrbi. Cilj je ovog istraživanja ispitati znanje medicinskih sestara/tehničara o palijativnoj skrbi.

**Ispitanici i metode:** Presječnom studijom obuhvaće no je 198 medicinskih sestara/tehničara. Istraživanje je provedeno tijekom ožujka i travnja 2017. godine. Kao instrument istraživanja upotrijebljen je anketni upitnik sastavljen od dva dijela. Prvi dio odnosio se na sociodemografske podatke, a drugi dio sastojao se od standardiziranog upitnika za procjenu osnovnog znanja o palijativnoj skrbi (PCQN).

**Rezultati:** Ispitanici su najviše točnih odgovora dali iz područja kontrole boli i drugih simptoma. Utvrđeno je da nema značajne razlike prema spolu, dobi i radnom stazu o znanju o palijativnoj skrbi. Ispitanici koji su prošli neformalnu edukaciju pokazali su bolje znanje.

**Zaključak:** Iz provedenog istraživanja možemo zaključiti da medicinske sestre / medicinski tehničari imaju nedostatno znanje o palijativnoj skrbi.

**Ključne riječi:** palijativna skrb, edukacija, medicinske sestre / medicinski tehničari, upitnik PCQN