

Palliative care knowledge among medical students

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Abstract

The aim of the study was to assess the knowledge of palliative care among medical students at three institutions in northern Minas Gerais. This is a cross-sectional, descriptive study carried out with 320 students from the 1st, 6th and 11th terms, using a survey instrument on philosophy, pain, dyspnea, psychiatric problems, gastric problems and communication. The results were evaluated by the mean percentage of correct answers, with unsatisfactory answers being up to 50%, acceptable between 51% and 70%, desirable between 71% and 80%, and excellent above 80%. The number of correct answers grew as the terms progressed, but with unsatisfactory or acceptable means. Although the students in the 11th term had completed all of the course's theory, their mean scores were inadequate. These results highlight the need to implement the provisions of CNE/CES Resolution 3/2022 of the National Education Council in undergraduate medical courses to encourage assertive behavior in palliative care.

Keywords: Palliative care. Knowledge. Students, medical.

Resumo

Conhecimento em cuidados paliativos entre estudantes de medicina

O objetivo da pesquisa foi verificar o conhecimento em cuidados paliativos entre estudantes de medicina de três instituições do norte de Minas Gerais. Trata-se de estudo transversal e descritivo, realizado com 320 estudantes do 1º, 6º e 11º períodos, no qual se utilizou um instrumento de pesquisa sobre filosofia, dor, dispnéia, problemas psiquiátricos, problemas gástricos e comunicação. Avaliaram-se os resultados pela média das porcentagens de acerto, sendo insatisfatório o acerto de até 50%, aceitável entre 51% e 70%, desejável entre 71% e 80%, e excelente acima de 80%. Observou-se aumento de acertos com o avanço dos períodos, mas com médias insatisfatórias ou aceitáveis. Apesar dos estudantes do 11º período terem obtido toda a carga teórica do curso, suas médias de acerto não foram adequadas. Esses resultados evidenciam a necessidade de implementar na graduação em medicina o disposto na Resolução CNE/CES 3/2022, do Conselho Nacional de Educação, a fim de fomentar condutas assertivas relacionadas aos cuidados paliativos.

Palavras-chave: Cuidados paliativos. Conhecimento. Estudantes de medicina.

Resumen

Conocimientos en cuidados paliativos entre los estudiantes de medicina

Este estudio pretendió identificar los conocimientos en cuidados paliativos entre los estudiantes de medicina de tres instituciones en el norte de Minas Gerais (Brasil). Se realizó un estudio transversal y descriptivo a 320 estudiantes del 1.º, 6.º y 11.º períodos, quienes respondieron un cuestionario sobre filosofía, dolor, disnea, y problemas psiquiátricos, gástricos y de comunicación. El análisis se basó en el promedio de los porcentajes de respuestas correctas: Insatisfactoria (hasta 50%), aceptable (entre 51% y 70%), deseable (entre 71% y 80%) y excelente (por encima del 80%). Conforme avanzaba los períodos, había más respuestas correctas pero con promedios insatisfactorios o aceptables. Aunque los estudiantes del 11.º período cumplieron casi toda la carga del curso, sus promedios de precisión no fueron adecuados. Es necesario implementar en el grado de medicina lo establecido por la Resolución CNE/CES 3/2022 del Consejo Nacional de Educación para fomentar conductas asertivas relacionadas con los cuidados paliativos.

Palabras-clave: Cuidados paliativos. Conocimiento. Estudiantes de medicina.

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The World Health Organization (WHO)¹ initially defined palliative care (PC) as holistic assistance offered to cancer patients, focusing on end-of-life care. Later, the concept was revised and expanded to include all chronic diseases and programs for older adults. Currently, PC is described as active holistic care provided to people of all ages who are experiencing intense health-related suffering, especially those nearing the end of life^{2,3}.

Despite the differences found in the literature on how and when to introduce PC, integrating it with curative procedures may help control symptoms and improve quality of life, regardless of the prognosis or disease stage^{2,4}. Students exposed to PC during their undergraduate studies develop skills to provide comprehensive care in all phases of a patient's life⁵.

The 2014 National Curriculum Standards for undergraduate medical courses⁶ provides that health promotion and understanding of human physiological processes, such as gestation, birth, growth, development, aging and death, should be part of the curricula and educational approach of such courses. Similarly, the standards for organizing PC in the Unified Health System aim to enhance the introduction of subjects and content on end-of-life care during the undergraduate and graduate education of healthcare providers^{8,9}.

Therefore, systematically including palliative medicine in students' education is a challenge for medical schools. Due to increased longevity, professionals with PC training are necessary to alleviate the suffering of the growing population¹⁰.

Considering PC knowledge as a cornerstone in clinical care and health promotion, its incipient teaching in Brazilian medical schools constitutes a paradigm regarding effective learning among students throughout their education. Therefore, this study aimed to assess specific PC knowledge among medical students from three institutions in northern Minas Gerais, at the initial, intermediate and final terms of their undergraduate education.

Method

This is a cross-sectional, quantitative, descriptive study conducted with students in the 1st, 6th, and 11th terms from three medical schools in Montes Claros/MG, one public and

two private. The public institution has about 110 students, whereas one of the private institutions has approximately 180 students and the other around 160.

The questionnaires were answered by the students during break time so as not to interfere with the theoretical, practical or theoretical-practical lessons of the selected classes. Following an explanation of the study, students who agreed to participate signed the informed consent form, authorizing the use of their data for research purposes, and then answered the data collection instruments.

First-term students under 18 years old were excluded from the study, as were those who were not found during break times after three attempts, those who were not regularly attending the medical course due to leave of absence, and those whose questionnaires were not fully completed. With approximately 30% loss, the sample consists of 320 students.

Besides sociodemographic data such as age, gender, course term, school (public or private) and religion, the questionnaire contained the Palliative Care Knowledge Test (PCKT)¹¹.

The study used a version modified by Conceição and collaborators¹² consisting of six domains (philosophy, pain, dyspnea, psychiatric problems, gastrointestinal problems and communication), totaling 23 questions with three response options: "true," "false," and "I do not know." The results were evaluated by the percentage of correct answers in the six domains, considered unsatisfactory when below 50%, acceptable when between 51% and 70%, desirable when between 71% and 80% and excellent when above 80%¹².

The data were analyzed descriptively (mean, standard deviation [SD], variability, and absolute and relative frequency). The answers to specific knowledge questions were calculated according to the correct answer and compared with the arithmetic mean of the domains and terms by using the IBM SPSS 20.0 statistical program.

Results

Of the total number of students, 72.8% were enrolled in the private school and 27.2% in the public school; 40.9% were in the 1st term, 36.3% were in

the 6th term and 22.8% were in the 11th term. The mean age of participants was 22.5 years (SD=3.7) with a minimum age of 18 and a maximum 45 years. Regarding gender, 61.3% were women.

In the assessment of specific PC knowledge (Table 1), an unsatisfactory mean of correct

answers was observed in the domains of dyspnea (16.9%), gastrointestinal problems (17.4%), pain (29.7%) and psychiatric problems (33.9%). The communication (69.7%) and philosophy (82.2%) domains were considered acceptable and desirable, respectively.

Table 1. Number and percentage of correct answers per item

Specific knowledge	Correct answer	No. of correct answers	% of correct answers
<i>Philosophy</i>			
1. Palliative care should only be provided to patients who do not have access to curative care.	F	241	75.3
2. Palliative care should not be provided alongside cancer treatments.	F	285	89.1
<i>Pain</i>			
1. When opioids are taken regularly, anti-inflammatories and steroids should not be used.	F	150	46.9
2. Long-term opioid use can often lead to dependence.	F	15	4.7
3. Opioid use has no influence on survival time.	T	67	20.9
4. When a cancer patient experiences pain, opioids should be administered first.	F	133	41.6
5. Some antidepressant and antiseizure drugs help relieve cancer pain.	T	198	61.9
6. The use of laxatives is effective in preventing opioid-induced constipation.	T	85	26.6
7. Opioid dosage increases should be limited because respiratory depression may occur as a side effect.	F	18	5.6
<i>Dyspnea</i>			
1. Morphine should be used to relieve dyspnea in cancer patients.	T	49	15.3
2. Oxygen saturation levels are correlated with dyspnea.	F	25	7.8
3. Anticholinergic medications or scopolamine hydrobromide are effective for relieving bronchial secretions.	T	89	27.8
4. If the ambient temperature is kept higher (warm), patients with dyspnea often experience relief.	F	53	16.6

continues...

Table 1. Continuation

Specific knowledge	Correct answer	No. of correct answers	% of correct answers
<i>Psychiatric problems</i>			
1. Benzodiazepines should be effective for delirium.	F	94	29.4
2. Some terminally ill patients will require continuous sedation to alleviate suffering.	T	205	64.1
3. Morphine is often a cause of delirium in terminal or cancer patients.	F	55	17.2
4. Delirium often occurs in patients who are prone to mental symptoms.	F	80	25.0
<i>Gastrointestinal problems</i>			
1. Higher caloric intake is required in terminal stages of cancer compared to initial stages.	F	74	23.1
2. Steroids should improve the appetite of patients with advanced cancer.	T	38	11.9
3. Intravenous infusion will not be effective in relieving dry mouth in terminal patients.	T	55	17.2
<i>Communication</i>			
1. Good communication between physician and patient can be learned and improved.	T	312	97.5
2. Information requested by patients and relatives and the extent to which patients and relatives participate in decision-making may change according to the course of the illness and condition.	T	288	90.0
3. Uncertain information should not be given to the patient or family as it may cause additional anxiety.	F	79	21.6

In the comparison between terms, a higher number of correct answers was observed in the 11th term in almost all domains, except for philosophy and communication, in which more

correct answers were observed in the 6th term. Overall, there was a progression of the percentage of correct answers from the initial to final terms, as shown in Table 2.

Table 2. Mean of correct answers and scores by domain in each term

Domains	1st term	6th term	11th term
Philosophy	75.5% (desirable)	87.1% (excellent)	86.3% (excellent)
Pain	9.5% (unsatisfactory)	37.3% (unsatisfactory)	53.7% (acceptable)
Dyspnea	5.9% (unsatisfactory)	16.9% (unsatisfactory)	36.6% (unsatisfactory)
Psychiatric problems	16.0% (unsatisfactory)	43.1% (unsatisfactory)	51.3% (acceptable)
Gastrointestinal problems	11.9% (unsatisfactory)	18.8% (unsatisfactory)	23.2% (unsatisfactory)
Communication	66.9% (acceptable)	72.4% (acceptable)	70.3% (acceptable)

Discussion

The participants showed poor knowledge of PC concepts, with little difference in the progression of this knowledge between the initial and final terms. Additionally, they showed incapacity in dealing with specific demands of patients who do not undergo disease-modifying treatment.

The fragmentation of medicine, evidenced by the emergence of multiple specialties and subspecialties, results in unpreparedness to deal with patients from a holistic approach¹³. This reality is often reproduced in the university environment, where there are limitations in undergraduate syllabuses, disregarding aspects such as end-of-life care management and communication of bad news¹⁴. This situation creates a gap between physicians and patients, so that when the technique is no longer effective and patients are close to death, without a prospect of cure, healthcare providers are unable to assist them¹⁵.

A study conducted at the Federal University of Sergipe¹⁶ with 135 students from the 9th to 12th terms, and using the same instrument as this research, showed a lower frequency of correct answers in the domains of dyspnea and gastrointestinal problems. There was a higher frequency of correct answers in philosophy and communication, which presented broader concepts and intuitive responses, and greater variability in the percentage of correct answers in the pain domain. The similarity of the results indicates that the data obtained in this study are part of a pattern replicated in medical education.

Another study¹⁷, conducted at University of South Santa Catarina with 188 students between the 9th and 12th terms, found that more than half felt unprepared to deal with life-threatening illnesses and family grieving. Just over 20% reported having heard of PC but claimed to have no knowledge on the subject, and about 84% said they did not receive the necessary training during their undergraduate studies to provide care for dying patients. Thus, as in this work, one notes the low impact of undergraduate education on the acquisition of PC knowledge by students.

A descriptive survey with a qualitative approach, conducted with 180 students from various medical

schools in Brazil in the last four terms of their undergraduate program, confirmed these same findings¹⁸. Regarding pain management, 73% said they did not acquire the necessary knowledge to treat pain symptoms during their course. More than two-thirds did not have a specific class on the subject and did not receive information on the care of terminal patients (83%) or treatment of common symptoms such as dyspnea, vomiting, constipation and cachexia (81%).

These data suggest that the lack of a theoretical foundation on managing the most common symptoms of patients in PC leads to unpreparedness and insecurity among medical students in treating terminal patients.

Another qualitative study involved students from various fields of healthcare, including 21 medical students in the 6th to 12th terms¹⁹. They were asked open-ended questions about communication challenges and how to deal with death. The results highlighted the students' insecurity and inability to establish a good communication channel for delivering difficult news, a skill that is one of the pillars of holistic care provided by the 2018 WHO palliative care guidance¹.

In a prospective longitudinal study conducted at a university in São Luís/MA²⁰, 232 students from the 1st to 12th terms were surveyed. It was observed that in the initial term, 76.2% reported not having acquired sufficient knowledge to control the symptoms of PC patients, being unaware of the effects, doses and action mechanisms of the medications used. Such insecurity persisted into the 6th term, with only 35% of students feeling capable of caring for PC patients.

There was an improvement in the 11th term, with 58.8% of participants stating they felt secure in prescribing medications indicated for the treatment of pain in such patients. However, it should be noted that about 40% of last-year students declared themselves unfit to handle these demands in direct patient care²⁰. These data show that although the course had some impact on PC knowledge, the training provided in medical school on this subject still requires improvement.

This deficiency in medical education is not limited to the sample of this study but also applies to other medical schools, as shown in previous

studies¹⁶⁻²⁰. Considering that most students reported not having received satisfactory education on basic PC topics such as pain and dyspnea, measures should be introduced aimed at effectively intervening in medical education. The most direct way to achieve this change is having specific classes on the subject during undergraduate studies, with targeted and clear teaching.

After the completion of this work, in November 2022, CNE/CES Resolution 3/2022 of the National Education Council²¹ was published in the *Official Federal Gazette*. This resolution amends previous articles of the National Curriculum Standards for undergraduate medical courses⁶, providing that medical students should have access to PC principles to provide good care to terminal patients. Although it did not establish the mandatory requirement for a specific discipline on the subject, the document opens new possibilities for the institutionalization of palliative medicine learning in universities.

It is worth noting that the scope of this work covers various aspects of undergraduate education, from philosophical inquiries to treatment of terminal symptoms, in an attempt to mitigate possible biases in the execution of the study. Some limitations were observed, such as difficulty in recruiting students due to the length

of the questionnaire and incompatible hours, as well as incorrect completion of the survey instrument, which increased the percentage of sample losses, close to 30%.

Moreover, as this is a cross-sectional study, it was not possible to assess the change or permanence of the resulting pattern over time in the same group at different stages of undergraduate education. Therefore, conducting a longitudinal study, especially after the release of the abovementioned resolution, would enable a more thorough analysis regarding the acquisition of PC knowledge in the current context.

Final considerations

Most students considered that they did not receive PC knowledge during their undergraduate education, and only a very small percentage achieved satisfactory results in specific questions about the management of terminal symptoms. This highlights the need for implementing CNE/CES Resolution 3/2022²¹ in the education of Brazilian physicians so as to promote correct and assertive approaches in the care of patients with no possibility of cure.

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Maria Luisa Ribeiro Brant Nobre contributed to the research project design, data collection, discussion of results, and manuscript writing and review. Débora Ribeiro de Lira and Sammantha Maryanne Soares Brito contributed to data collection and final approval of the manuscript. Luiza Augusta Rosa Rossi-Barbosa supervised the research project and assisted in project design, data analysis, discussion of results, critical review of intellectual content and final approval of the manuscript.

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