Healthcare professionals training on palliative care: results of an evaluation in southeast of Brazil

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ABSTRACT

In Brazil, palliative care has shown significant growth through the consolidation of the previously established services such as the Brazilian Society for Pain Studies (SBED), the National Cancer Institute (INCA) and the Brazilian Association of Palliative Care (ABCP), the foundation of new specialized centers such as the National Academy of Palliative Care (ANCP) and development of the theme in universities. In this way, this work aims to evaluate the formation of bachelor courses in nursing, pharmacy and medicine and the comprehension of students about palliative care. This is a cross-sectional study, using descriptive and exploratory analysis of the courses and a survey comprised by 30 nominal questions to evaluate health students perceptions about being prepared to deal with patients out of therapeutic possibility of cure. The palliative care is little addressed in health courses, mainly in pharmacy curricula when compared to other courses. Students’ knowledge on palliative care and pain management was notoriously low, in addition to the unpreparedness to deal with suffering and death. Only 20.54% of the students felt prepared to work with patients in palliative care. Finally, it is possible to verify the lack of proper training and confidence to provide assistance to these patients.

Formação dos profissionais de saúde em cuidados paliativos: resultados de uma avaliação no suidente do Brasil

RESUMO - No Brasil, os cuidados paliativos têm mostrado um crescimento significativo pela consolidação dos serviços previamente estabelecidos como a Sociedade Brasileira para Estudos da Dor (SBED), o Instituto Nacional do Câncer (INCA) e a Associação Brasileira de Cuidados Paliativos (ABCP), fundação de novos centros especializados como a Academia Nacional de Cuidados Paliativos (ANCP) e desenvolvimento do tema nas universidades. Desta forma, este trabalho teve como objetivo avaliar a formação de cursos de bacharel em enfermagem, farmácia e medicina e a compreensão dos alunos sobre cuidados paliativos. Trata-se de um estudo transversal, utilizando-se análise descritiva e exploratória dos cursos e uma pesquisa composta por 30 questões nominais para avaliar as percepções dos estudantes de saúde sobre estarem preparados para lidar com pacientes fora de possibilidade terapêutica de cura. Os cuidados paliativos são pouco abordados nos cursos de saúde, principalmente nos currículos de farmácia quando comparados a outros cursos. O conhecimento dos alunos sobre cuidados paliativos e tratamento da dor foi notoriamente baixo, além do despreparo para lidar com o sofrimento e a morte. Apenas 20.54% dos alunos se sentiram preparados para trabalhar com pacientes em cuidados paliativos. Finalmente, é possível verificar a falta de treinamento adequado e confiança para prestar assistência a esses pacientes.
1. Introduction

Quality of life can be defined as a sense of comfort, well-being or happiness in physical, intellectual and psychic functions, both within the family, at work and in the community to which the individual belongs (1). In this context, born the palliative care, that is a group of measures directed toward the improvement of the quality of life of patients with terminal and severe diseases. This approach focus on prevention and suffer relief of patients and their family, through support and control of pain and other physical, psychosocial and spiritual issues (2,3). In Brazil, palliative care was introduced in the decade of 1980 and, in the last years, shown a significant growth due to the consolidation of previously established services such as the Brazilian Society for Pain Studies (SBED), the National Cancer Institute (INCA) and the Brazilian Association of Palliative Care (ABCP) and by the foundation of new specialized centers such as the National Academy of Palliative Care (ANCP) (4,5). Currently, the country counts with courses that allow healthcare professionals to assist in palliative care, however, teaching strategies directed towards this type of science is disperse and a resistance to debate this topic can be found in the academy (6).

Education in health is strictly connected to the promotion of health and, thus, it is essential the preparation of students and professionals to deal with aspects that relate to palliative care, once diseases and death phenomena are seen with frequency on their daily lives (7, 8). In this scenario, the acquisition of knowledge and skills in palliative care are paramount and, as a consequence, the scarcity of education and training consists in a barrier for integration of palliative care in the healthcare system (9).

In general, palliative care has been considered as a critical field where the presence of healthcare professionals with higher instruction level and a multidisciplinary team has been showed ultimately necessary (10). Thus, this study aims to evaluate the student’s knowledge about palliative care, in three undergraduate courses in the health area, taking into account the curricular analysis of the courses and the student’s perception about the subject.

2. Material and methods

Study design

This is a cross-sectional study conducted through a documentary / curriculum analysis and a survey about palliative care with graduate students of nursing, pharmacy and medicine, that are the most required and prevailing professionals in a palliative care team.

The present study was developed in two stages: analysis of the course's curricula and evaluation of student’s perceptions.

Analysis of the undergraduate health course’s curricula

A descriptive and exploratory investigation of the nursing, pharmacy and medicine bachelor degree curricula was made, seeking to evaluate how much of the palliative care theme is addressed on these courses.

Therefore, it was performed an electronic search of the following keywords selected by a consensus within the authors: “palliative”, “pain”, “death”, “hospital discharge” and “opioids”. These keywords were considered as essential in the palliative care process. According to the keywords occurrence number in each of the searched curricula, these words were quantified. Additionally, a thorough reading was done to search for expressions with the same meaning and context.
Assessment of student’s perceptions on palliative care

Study population
Study population was composed by students from the two last non-practical semesters from nursing, pharmacy and medicine courses from the same university from Brazil’s southeast region.
Criteria used for candidates’ inclusion were students of both genders and aged over 18 years and be present on the interview day.

Place of the study
The present study was performed at the Federal University of São João del Rei (UFSJ), Centro Oeste Campus “Dona Lindu”, located in Divinopolis, Minas Gerais, Brazil.

Questionnaire development
For the assessment of student’s perceptions on palliative care, a questionnaire comprising 30 structured questions was developed using an adapted Delphi process (11). It was established that the minimum consensus level expected on the questionnaire evaluation by the selected judges would be of 80%. Therefore, for each evaluation round, questions that did not obtain the stipulated minimum consensus were edited or excluded and a new round was performed.

The panel of judges comprised three professors who were selected; each representing an undergraduate course assessed. A questionnaire was sent to the judge panel, along with a letter clarifying the aim of the study. From its return, the answers were accounted, analyzed and reviewed, doing as suggested and, if necessary, sending again to the same judges for the second round of opinions. Then, the questionnaire was submitted to 15 subjects with no knowledge in the palliative care for face validity. This process is described in Figure 1.

Figure 1. Questionnaire development flowchart for student’s assessment.

Questionnaire composition description
The questionnaire was developed in order to assess student’s perceptions about the topics described as follows. It comprised 30 nominal questions (yes/no). The questionnaire was subdivided into four parts:
• Prior contact with palliative care;
Perception and knowledge about palliative care;
Perception and knowledge about pain management;
Perception and knowledge about suffering and death.

Collected data
All individuals involved in the data collection followed a protocol and were trained to standardize the questionnaire application technique, aiming to homogenize the data collection.

Analysis of collected data
Quantitative analysis was performed using the software STATA v. 12.2 (Stata Corp, College Station, Texas 77845 USA). Results were expressed as absolute and relative frequency. The comparison among the study groups (nursing, pharmacy and medicine), considering non-parametric, ordinal and independent data, was proceeded to a statistical analysis through the Kruskal-Wallis test.

Students were also grouped in three different groups according their academic activities if positively answered one or more of the questions as described on Table 1. Students answering questions from both groups G1 and G2 were included on G1. Comparison among the study groups (Extracurricular related academic activities, compulsory related academic activities and no related activities), considering the score of perception (calculated as the number of positive answers), parametric, independent data, was proceeded to a statistical analysis through the ANOVA test and Tuckey’s multicomparison test.

Table 1. Group distribution
<table>
<thead>
<tr>
<th>G1 Extracurricular related academic activities</th>
<th>G2 Compulsory related academic activities</th>
<th>G3 No related activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Participation on a project related to palliative care.</td>
<td>4. Completion of elective courses on palliative care.</td>
<td>None</td>
</tr>
<tr>
<td>2. Participation on study groups related to palliative care.</td>
<td>5. Previous contact with palliative care during their degree.</td>
<td></td>
</tr>
<tr>
<td>3. Participation on meetings, symposiums, conferences where palliative care were addressed.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Differences between populations were considered statistically significant using p-value of 5% for null hypothesis rejection criteria.

Ethical considerations
The study was approved by the Committee on Ethics in Research Involving Human Beings of the Federal University of São João del-Rei (UFSJ), Centro-Oeste Campus “Dona Lindu”, under the protocol 578.062.

3. Results
Course’s curricula analysis
In the undergraduate course's curricula analysis, the words "palliative, pain, death, hospital discharge and opioids" were searched. The words "death" and "hospital discharge" were observed more than once in course's curricula, however, were not counted when there was no relation to the palliative care context. After carefully reading of the course's curricula, no other study interference was identified. Word quantification is represented in Table 2.

Table 2. Quantification of the words found in the course’s curricula according to Unit of Study after thorough readings

<table>
<thead>
<tr>
<th>Topic</th>
<th>Nursing</th>
<th>Pharmacy</th>
<th>Medicine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palliative</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Pain</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Death</td>
<td>4</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Hospital Discharge</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Opioids</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Questionnaire analysis

One hundred and twelve students were included in the study, following the inclusion criteria, and answered the questionnaire, being 32 (29%) from the nursing course, 47 (42%) from pharmacy and 33 (30%) from medicine. The majority of students (68%) agreed to have had previous contact with the palliative care subject in compulsory Units of Study during the course. It was verified a significant statistical difference among the studied courses regarding the questions about previous contact with palliative care in scientific events (p=0.0196) and participation in elective courses (p=0.0481) (Table 3).

Table 3. Prior contact of nursing, pharmacy and medicine students with palliative care (positive answers / incidence)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Total (n=112)</th>
<th>Nursing (n=32)</th>
<th>Pharmacy (n=47)</th>
<th>Medicine (n=33)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Participation on a project related to palliative care.</td>
<td>21 (19%)</td>
<td>10 (31%)</td>
<td>5 (10%)</td>
<td>6 (18%)</td>
<td>0.2998</td>
</tr>
<tr>
<td>2- Participation on study groups related to palliative care.</td>
<td>8 (7%)</td>
<td>4 (12%)</td>
<td>1 (2%)</td>
<td>3 (9%)</td>
<td>0.7183</td>
</tr>
<tr>
<td>3- Participation on meetings, symposiums, conferences where palliative care were addressed.</td>
<td>37 (31%)</td>
<td>11 (34%)</td>
<td>7 (15%)</td>
<td>17 (52%)</td>
<td>0.0196</td>
</tr>
<tr>
<td>4- Completion of elective courses on palliative care.</td>
<td>26 (23%)</td>
<td>13 (41%)</td>
<td>4 (8%)</td>
<td>9 (27%)</td>
<td>0.0481</td>
</tr>
<tr>
<td>5- Previous contact with palliative care during their degree.</td>
<td>76 (68%)</td>
<td>26 (81%)</td>
<td>31 (66%)</td>
<td>19 (58%)</td>
<td>0.2473</td>
</tr>
</tbody>
</table>

*Statistics: Kruskal-Wallis – equality of population rank test.*
Assessing student’s knowledge perceptions on palliative care, it was observed that 96% of the students would like to see this subject deeper during their course. Additionally, a significant statistical difference among the studied courses regarding the question about knowledge and definition of palliative care published by WHO (p<0.0001) and about the readiness to deal with possible care to be taken with patients in palliative care (urinary catheter, food probe, tracheostomy, patient hygiene and pressure ulcers, among others). Results can be found in Table 4.

Table 4. Perception and knowledge of nursing, pharmacy and medicine students about palliative care (positive answers / incidence)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Total (n=112)</th>
<th>Nursing (n=32)</th>
<th>Pharmacy (n=47)</th>
<th>Medicine (n=33)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Knowing WHO’s definition of palliative care.</td>
<td>47 (42%)</td>
<td>24 (75%)</td>
<td>9 (19%)</td>
<td>14 (42%)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>2- Feeling of being prepared to work with patients on palliative care.</td>
<td>23 (20%)</td>
<td>12 (38%)</td>
<td>4 (8%)</td>
<td>7 (21%)</td>
<td>0.0924</td>
</tr>
<tr>
<td>3- Feeling of being prepared to educate a patient and his/her caregiver on palliative care for home care.</td>
<td>20 (18%)</td>
<td>11 (34%)</td>
<td>1 (2%)</td>
<td>8 (24%)</td>
<td>0.0397</td>
</tr>
<tr>
<td>4- Personal belief on receiving enough knowledge to handle patients on palliative care.</td>
<td>9 (8%)</td>
<td>6 (19%)</td>
<td>0 (0%)</td>
<td>3 (9%)</td>
<td>0.3668</td>
</tr>
<tr>
<td>5- Personal belief on receiving enough knowledge to handle the most common symptoms on patients on palliative care.</td>
<td>35 (31%)</td>
<td>11 (34%)</td>
<td>17 (36%)</td>
<td>7 (21%)</td>
<td>0.4917</td>
</tr>
<tr>
<td>6- Personal belief on receiving enough knowledge about patients on urinary catheterization, food probes, tracheostomy, patient’s hygiene and pressure ulcers.</td>
<td>36 (32%)</td>
<td>15 (47%)</td>
<td>5 (11%)</td>
<td>16 (48%)</td>
<td>0.0038</td>
</tr>
<tr>
<td>7- Desire of more ways of addressing this subject at University.</td>
<td>107 (96%)</td>
<td>30 (94%)</td>
<td>44/ (94%)</td>
<td>33 (100%)</td>
<td>0.8705</td>
</tr>
</tbody>
</table>

Statistic: Kruskal-Wallis – equality of population rank test.

In relation to student’s knowledge perceptions on pain, most of students (96%) reported the need to improvement their knowledge on pain treatment. Additionally, the minority (5%) said to know the equivalences for opioid rotation. Results are shown in Table 5.

Table 5. Perception and knowledge of nursing, pharmacy and medicine students about pain management (positive answers / incidence)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Total (n=112)</th>
<th>Nursing (n=32)</th>
<th>Pharmacy (n=47)</th>
<th>Medicine (n=33)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Knowledge of any subject related to pain management.</td>
<td>75 (67%)</td>
<td>18 (56%)</td>
<td>37 (78%)</td>
<td>20 (61%)</td>
<td>0.1807</td>
</tr>
</tbody>
</table>
Concerning student’s ability to deal with suffering and patient’s deaths, it was observed a statistically significant difference in the questions related to the patient’s family support during grief (p=0.0003) and recognition of the psychological stages which patients will pass after receiving the incurable diagnosis (p=0.0252) (Table 6).

Table 6. Perception and knowledge of nursing, pharmacy and medicine students about suffering and death (positive answers / incidence)
6- Perception on supporting patients’ relatives during grief.

<table>
<thead>
<tr>
<th></th>
<th>29 (26%)</th>
<th>13 (41%)</th>
<th>4 (8%)</th>
<th>12 (36%)</th>
</tr>
</thead>
</table>

7- Perception on patients’ spiritual support.

<table>
<thead>
<tr>
<th></th>
<th>106 (95%)</th>
<th>30 (94%)</th>
<th>45 (96%)</th>
<th>31 (94%)</th>
</tr>
</thead>
</table>


Finally, students were stratified into three groups according to their means for seeking knowledge on the theme (G1, G2 and G3). The average perception score among the groups was 13.6 (SD 4.4) for G1, 10.7 (SD 3.5) for G2 and 10.3 (SD 2.6) for G3. A significant difference was noticed among the groups (p = 0.0015), being G1 showing difference against the other groups, as presented in Figure 2.

![Figure 2](image_url)

**Figure 2.** Association of perception scores and academic activities. G1: Extracurricular related academic activities; G2: compulsory related academic activities and; G3: no related activities; *G1 x G2 p=0.003; **G1 x G3 p=0.0028; G2 x G3 p=0.8814

4. Discussion

In the present study, it was evidenced that palliative care, as much as words related to the latter, are less addressed in the pharmacy curricula when compared to other courses. This goes against the current Public Health Model from WHO, in which the healthcare professionals’ education is considered to be one of the essential components to effectively integrate palliative care onto a society (12). In Brazil, Floriani et al. (13) highlighted the need of implementing a model of adequate care for patients with advanced diseases. But, for this, it is necessary that the palliative care subject become part of the Brazilian undergraduate healthcare course’s curricula, facilitated by educational regulatory entities.

Students from the present study did not considered themselves prepared to work with palliative care, feeling unpreparedness and lacking critical communications skills. Communication, as mentioned by Singh et al. (14), is related to the complex process of providing information of the unknown, empowering the receiver, elucidating the goals and course of actions. Fripp (15) elucidates communication is essential to achieve desirable
therapeutic results and, especially in this context, where patients are fragile, approximating to the families might be a vital strategy. As a consequence, actions focused on the student’s education in health centred on palliative care are required. At the study place, there are efforts in this topic, offering elective courses, extension projects and academic leagues. The correlation of student’s participation in extracurricular activities reflect an enhancement on the perception regarding their knowledge on palliative care, pain and death, observing correlation only on the knowledge of the palliative care concept. This can be explained by the “learning pyramid concept” by the National Training Laboratory, inferring practice promotes better learning when compared to regular lectures (16).

When questioned, almost 70% of the students agreed they had some previous contact with the subject in compulsory courses, even those who did not appear in the curricula. On the other hand, less than 10% believes the information acquired are enough to handle patients in this condition, displaying preference or desire for more content on this topic. This result, induces to consider that there is a instruction lack concerning the palliative care. Such condition was also observed in the study of Pinheiro (17), which reported that students of medicine from fifth or sixth years showed lack of confidence in using palliative care knowledge acquired during their graduation course.

Despite pharmacy student’s deficit on perception regarding previous contact with the theme palliative care and death, they showed better results on pain management. Currently, Bachelor of Pharmacy curriculum from the Federal University of Sao Joao del-Rei is focused on a generalist, technical and humanist formation, thus, it is necessary the specialization on the student’s field of interest after graduating. This approach is aligned and convergent to meet patients’ and their families’ requirements, prioritizing quality of life and dignity on the death process via the adequate assistance of a multidisciplinary healthcare professionals team (18).

Even though students showed better results about pain management, all medicine students and more than 90% of pharmacy and nursing students related the need to improve their knowledge on pain treatment. These contrasting results between the real perception and a desire to improve may be connected to the same results obtained by Furtsenberg et al. (19), showing that healthcare professionals are not prepared to deal properly with chronic pain. These findings are corroborated by other study, where healthcare professionals tend to underestimate patients’ pain (20).

Among participants of the study, only 23% know the WHO’s pain ladder and feel prepared to deal with analgesia. The pain ladder is a tool provided by WHO to nurture the drug treatment of pain, regarding each clinical case and need for adjustments in the therapy. In Brazil, protocols suggesting organization and standardization of analgesic treatment are used, based on a three-step ladder, according to the patient’s pain intensity (21, 22). Complimentarily, WHO’s pain ladder recommends that after the second degree, opioids should be used to treat pain. However, less than one fourth (21%) of the students know which medication and posology start a treatment with opioids. In addition, a small part (5%) of the students are aware of the equivalences for opioid rotation and more than half (78%) of students is insecure about the prescription / dispensation / administration of opioids. Data from Pinheiro (17) also highlight the lack of confidence from UNIFESP’s students in using their knowledge in palliative care acquired during their undergraduate courses.

When it comes to aspects related to the suffering and death, only 29% of the students showed to be able to deal frequently with death and 20% reported to possess enough knowledge regarding bad news delivering and posture in front of patients and their families. In general, the teaching strategies adopted in healthcare courses do not ensure the proper attention to these questions that show up constantly in practical situations and, so, unprepared professionals stills being formed unable to deal with these subjects (23).
However, such problems may be addressed by the insertion of policies regarding this topic, stimulating more extracurricular activities on palliative care.

Hence, it is verified that students, future nurses, pharmacists and physicians feel unprepared to perform care in patients with life-threatening diseases, which indicates the importance of instituting postgraduate courses geared towards palliative care and include more scientific studies about this subject in the universities, since it has not been addressed in undergraduate courses. Despite the results obtained in this study, it is worth mentioning that not all academic centers have a flawed curriculum regarding the palliative care approach. Finally, it is suggested the need to undertake further studies in other universities, in order to have a national scenery concerning the palliative care approach on universities and, consequently, propose minimum curriculum to prepare health professionals to work in palliative care. This process could be facilitated through a local or national education body, such as the Ministry of Education (MEC) in Brazil.

5. Conclusion

It was verified that the palliative care subject is rarely addressed on the nursing, pharmacy and medicine courses of the Centro Oeste Campus of the Federal University of Sao Joao del-Rei (UFSJ), indicating few inference about the subject on the mentioned course's curricula. Students showed a lack of confidence about how to handle with patients without chances of therapeutic cure and, therefore, the unpreparedness of this students is closely associated with the deficiency of the graduation curricula regarding to palliative care and, consequently, with the lack of intimacy and experience with the subject.

Moreover, the pharmacy results were below the two other healthcare bachelor degrees. It is important to introduce politics including transversally palliative care related units of study, from the first to the last year, since the pharmacist is intimately related to patients in several healthcare environments. Although the results for medicine and nursing courses are better than pharmacy, it is also necessary to improve palliative care subject on these courses.

Acknowledgement: Authors are thankful to Carl Schneider and Rebekah Moles for support and reviewing.

Conflict of interest: The authors declare no conflict of interest.

References