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ORIGINAL RESEARCH

Assessment of knowledge in palliative care of physical therapists students at a university hospital in Brazil

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Abstract
Background: In Brazil there are several challenges to reach a humanized health care. Among them is the well-known lack in academic education and training in palliative care field. This lack is mostly due to the modern medical care culture that prioritize curative medicine ahead of palliative care. As the goal of saving lives is rooted in medical training, death is still confronted as the main enemy of the health professionals.
Objective: To analyze the knowledge of palliative care among the physical therapists of a University Hospital.
Method: This is a cross-sectional and descriptive study. The volunteers were physical therapists, who had worked in the hospital for more than six months, were included undergraduate students, experienced professionals and graduate students. A questionnaire with closed questions about palliative care was applied during the volunteers working hours. Data were analyzed descriptively.
Conclusion: We conclude that, the vast majority of the evaluated professionals presented basic palliative care knowledge, but not in palliative care core components. The palliative care practice seemed often guided by the knowledge acquired in other fields, always with an intuitive character. Therefore, we detected a lack in the physical therapist training regarding palliative care. Summarily, physical therapists should receive a general training in palliative care still as an undergraduate, for a more effective and consistent professional practice later on.
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Introduction

The number of palliative care programs is increasing globally. According to the World Health Organization (WHO) ''The need for palliative care has never been greater and is increasing at a rapid pace due to the world's aging population and increases in cancer and other non-communicable diseases''.[1,2] In this scenario, Brazil was placed as 42 in the 'quality of death index',[3] therefore underlining the importance and necessity of investment in palliative care.

Every year, over 20 million people worldwide are estimated to require palliative care at the end of life. Among then, 69% are adults over 60 years old, and the remain 6% are children.[1] Nevertheless, death still is a topic approached with caution, as the finitude of life remains stigmatized. Moreover, modern medical care tends to prioritize curative medicine ahead of palliative care, as the goal of saving lives is rooted in medical training, death is confronted as the main enemy of the professional. Therefore, the integration of palliative care alongside curative treatment is needed. Healthcare professionals who deal with death often, should receive proper training to enable them to practice palliative care.[1,4]

Although many national institutions have opened space for discussion about palliative care, academically the training of healthcare professionals is still fragmented, and has little consistency integrating palliative care methods alongside curative care procedures.[5,6] This lack of training leads the healthcare professionals to avoid contact, approach and dialog, with patients in palliative care.[7,8] Thus, healthcare professionals should be trained with the core constituents of palliative care to attend the new global demand.[2,6,7]

According to WHO, worldwide, the need for palliative care remains for chronic diseases or conditions such as congestive heart failure, cerebrovascular disease, HIV/AIDS, neurodegenerative disorders, chronic respiratory diseases, drug-resistant tuberculosis, and aging-associated diseases.[1] Such diseases are mostly treated by physical therapists.[4] Furthermore, physical therapy has a significant variety of techniques for pain relief, functionality, and to provide quality of life, which are useful in palliative care.[2,7] However, a variety of studies have shown lack in the training of the physical therapist in palliative care.[8,9] The aim of this study is to evaluate the knowledge about palliative care among the physical therapists in a University Hospital. We hypothesized that the physical therapist lacks training academically, to deal with aspects related to palliative care and death.

Method

Forty-seven physical therapists from a university hospital in the state of Sao Paulo, volunteered for this study. Were included undergraduate students, experienced professionals and graduate students. The study followed a cross-sectional quantitative descriptive model. A questionnaire of Palliative Care was applied to assess the knowledge of professionals on palliative care. The questionnaire was prepared by the authors based on previous studies.[5,10,11] The questionnaire consisted of closed questions, and the volunteer was anonymous. The questions addressed four main parts: 'Professional Training in Palliative Care', 'Palliative Care in Professional Life', 'General Knowledge in Palliative Care', and 'Specific Knowledge in Palliative Care'. The questionnaire was applied in all wards in which the physical therapists worked, such as, cardiology, orthopedics, neurology, emergency care, women's health, transplantation and oncology. This study followed the Guidelines and Regulatory Standards for Research Involving Human Beings (Resolution 466/2012 of the National Health Council) and approved under the number: 32784614.1.0000.5505, by the Research Ethics Committee of Universidade Federal de São Paulo (UNIFESP), São Paulo, SP, Brazil. All the volunteers signed a consent form.

The questionnaire was applied between May and June (2014). The volunteers should be physical therapists working at the University Hospital for more than six months. The volunteers were instructed to answer the questions accordingly to the ward in which they were working at the moment of the survey; to not check any material regarding palliative care while conducting the survey; and to not fill their names on the questionnaire as their identification should be numeric only. Volunteers that did not followed the questionnaires instructions were excluded. Descriptive analyzes were performed with IBM SPSS Statistics software package, version 23.0 v (IBM Corporation, USA).

Results

Forty-seven physical therapists were evaluated (36 women and 11 man), with a mean age of 26 (SD = 5) years. Among then, 19 had already graduated and 35 were currently undergoing a graduate program. No one was excluded.

All professionals had heard about palliative care in general (Table 1). The vast majority of the volunteers reported interest in the area of palliative care (Table 2). Almost half of the physical therapists disagreed that the need for palliative care is stated early in the workplace. Thirty-six professionals agreed that they are able to provide palliative care, but 45.7% disagreed that their team had proper training to provide this service (Table 2).

Sixty-eight percent chose the correct definition of 'Palliative Care' in the 'General Knowledge in Palliative Care' section. Almost all the professionals were aware of the concept of euthanasia, orthanasia, and dysthanasia. Most of the professionals did not associate palliative care to terminal care and lack of treatment. Almost all professionals believed in the possibility to give hope to the patient and his family (Table 3).

Pain relief was considered by 100% of the professionals as important. Almost 100% disagreed that 'affirm life and regard death as a normal process' is part of the treatment. Only one of the therapists was in favor of speeding death in case of pain.

Regarding the last hours of life, were rated as essential and very important goals: 'pain management' (80%), 'acquisition of comfortable postures' (44.4%), 'promoting muscle relaxation' (40%), 'prioritization of ventilator conditions' (39.1%) and 'avoid complications' (33.3%). The objectives classified as unimportant/dispensable in palliative care were: 'improve range of motion and work coordination and muscle strength,' 'maintain respiratory muscle strength and fitness', 'improve march' and 'maintaining and improving

Table 1 Professional training in palliative care (PC).

	Strongly disagree	Disagree	Do not know	Agree	Strongly agree
1. Have you ever heard about PC?	0	0	0	40.4	59.6
2. Have you ever heard about physical therapy in PC?	2.1	2.1	4.3	48.9	42.6
3. Have you ever had lectures about PC?	19.6	10.9	8.7	34.8	19.6
4. Do you believe the content about PC to benefit your professional formation.	0	0	2.2	15.2	30.4
6. Do you believe that the content you had about PC was enough to your professional prepare.	8.5	29.8	2.1	19.1	2.1

Table 2 Professional life in palliative care (PC).

	Strongly disagree	Disagree	Do not know	Agree	Strongly agree
1. I have interest in PC	2.2	10.9	8.7	41.3	37
2. I deal with PC in my work routine	0	6.5	4.3	60.9	28.3
3. The need for PC is early stated in the hospital I work	13.3	48.9	15.6	13.3	2.2
4. I believe I am well trained to provide PC	6.5	21.7	26.1	32.6	13
5. I believe my team is well trained to provide PC	8.7	45.7	21.7	19.6	4.3
6. My team often have multiprofessional meetings about patients	8.7	15.2	2.2	32.6	41.3
7. The multiprofessional meeting in my work place often address PC.	6.5	34.8	4.3	32.6	6.5
8. I believe that it would benefit the team and the patients a multiprofessional meeting about PC in my hospital.	0	0	4.4	22.2	55.6
9. I believe that it would benefit the team and the patients a specific training to provide PC.	0	0	0	28.3	71.7

functional capacity'. The most used techniques in palliative care were: the positioning in bed, suctioning when needed, manual therapy and stretching. Cryotherapy and osteopathic techniques were the least used, followed by Transcutaneous Electrical Nerve Stimulation (TENS) analgesic, muscle strengthening and routine suctioning. A small portion of the therapists also cited techniques such as 'training activities of daily life', 'mechanical ventilation' and 'noninvasive ventilation'. Physical therapists were asked to point which techniques they would use in case they worked in ideal conditions. Most therapists reported that they would use TENS analgesic and relaxation techniques. The positioning in bed and verbal communication stood out among the prioritized techniques. Osteopathy, routine suctioning and muscle strengthening, were the least chosen interventions.

All professionals knew some kind of pain scale; the most known scale was the Visual Analog Scale, and the second most known scale was the numerical scale and in sequence were the '*Emador*' scales, ESAS and MCGILL. Twenty-four percent reported to not use any pain scale in work routine. More than half knew some functional scale and 33.3% did not knew any. The best-known functional scales by professionals were: the MIF, Barthel, SF36, BERG, Fugel, and Palliative Performance Scale PPS. Among those who were aware of functional scales, only 66.7% reported use of them in their work.

Discussion

We found that the vast majority of the physical therapists presented basic palliative care knowledge, but lacked specific and conceptual context. The palliative care provided by then seemed often guided by the knowledge acquired in other fields and was mostly intuitive. However, the knowledge and training about palliative care is mandatory to the healthcare professional. According to WHO,[1] ''palliative care is 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.'' In this context, the physical therapist role is to preserve, maintain or restore the integrity of organs, systems and function. The therapist will work to relief the symptoms of dying, according to the patient's functionality.[10] This work requires solid preparation and proper training in palliative care.

A small portion of the professionals had never heard of palliative care in physical therapy. However, the majority of physical therapists choose the correct definition of palliative care, which was not observed by Beccaro et al.[12] among the healthcare professionals evaluated, only 25% pointed the right definition. Nevertheless, in a study of

Table 3 Question 4.

	True	False
a. PC is synonymous of terminal care.	21.7	78.3
b. PC is when we, healthcare professionals, do not have anything to do for the patient.	6.5	93.5
c. PC must begin the earlier as possible.	76.1	23.9
d. The concept of ''total pain'' is defined as a pain beyond physical dimension, also covering the social, emotional and spiritual dimensions of suffering.	95.7	4.3
e. The feeling of abandon is rare in patient during PC.	23.9	76.1
f. Communication skill is not one of the most imp ortant factors of PC	2.2	97.8
g. In PC it is important to omit the true in order to avoid stress for the patient and their families.	4.3	95.7
h. In PC it is not possible to give hope to patients or their families	23.9	76.1
i. Aging is one of the factors that enhance the PC need.	78.3	21.7
j. PC depends on a multi professional strategy.	97.8	2.2

the Medical University of Vienna in Austria the results were more satisfactory, 97.9% of students and 81.2% of healthcare professionals, reported familiarity with the concept of palliative care.[13] Also, a Chinese study showed that 77% of healthcare professionals reported familiarity with the concept.[14]

Most of the physical therapists correctly associated the concept of orthanasia to palliative care. The term means correct death (ortho: right; thanatos: death), and is associated with the concept of dignified death. Felix et al.,[15] reported that doctors who provide palliative care are opposed to euthanasia, and their argument is that this practice would reflect a poor health assistance. Only one of the evaluated therapists was in favor of death in case of suffering. However, in Brazil the law is against the practice of euthanasia, which is considered crime, punishable for three to six years of imprisonment.[16] The majority of the evaluated therapists were against dysthanasia, indicating that fortunately this is not an encouraged practice despite the lack knowledge of its concept. Although some professionals had reported experience providing palliative care, we found that the vast majority did not feel able to practice it. Cardoso[17] also identified inability of the professionals to deal with the death, which may be a result of the curative medicine training. The authors also found that many professionals would like to attend palliative care services in order to improve the lack of previous training. Likewise, in China, only 13%, and in Austria, 17.6%, of medical students reported yes when questioned whether medical students felt adequately trained to deal with symptoms of death.[13,14]

The physical therapists demonstrated good notions of general knowledge in palliative care, and only few considered the practice synonymous of terminal care or related to the lack of treatment options. Palliative care is not related only to terminal care, but is needed in chronic as well as life threatening/limiting-conditions, and at all levels of care.[1,18] According to WHO, to affirm life and regard dying as a normal process is part of palliative care.[1] However, almost all physical therapists disagreed that 'affirm life and regard death as a normal process' is part of the treatment. Which might be a result of the curative medicine and its stigmatized perspective about death. A study conducted in Japan has identified an even smaller percentage of doctors who related palliative care with terminal care (12%).[19]

Pain relief was considered, by the majority of the evaluated physical therapists, as essential in palliative care. Which agrees with WHO, that recommends the prevalence of pain as an indicator of the need for palliative care services at the end of life.[1] Electrotherapy has quick results in pain relief, and can significantly reduce the use of painkillers. However, a Cochrane Systematic Review showed that, the literature has insufficient evidence to judge whether TENS should be used to manage palliative care related pain.[20] Even so, Marcucci[9] showed that TENS decreased by 47% the use of morphine, reduced the score of 'visual analog scale pain score' (VAS), the incidence of nausea and local itching. Borges et al.[21] identified through a questionnaire that only 3.7% healthcare professionals did not used any electrotherapy feature for pain relief in palliative care. Despite its effectiveness, we observed in our sample that few therapists used TENS into work routine, and the majority reported that would use it, if they worked in ideal conditions. Which may reflect a problem in the infrastructure of the hospital.

The patient evaluation is essential in palliative care, before, during and after treatment.[22] However, a significant number of the physical therapists did not use any pain scale in work routine, and this lack may impair the palliative care provision. Also, a significant number of the evaluated physical therapists used suctioning regularly, which may be a result of an automatized routine. Suctioning is a procedure that can cause discomfort and trauma and should not be used systematically, but only when it is needed. Furthermore, the use of suctioning can lead to hypoxemia and hemodynamic instability.[9] Manual therapy techniques were used by most of the physical therapists, and is related to pain relief, reduction of muscle shortening and tension, improvement of muscle perfusion and constipation relief.[23,24] Although the questionnaire addressed generically manual therapy, it was referring to the soft tissues techniques, such as myofascial release, trigger point therapy, muscle energy techniques, positional release techniques, traditional massage, deep tissue massage and abdominal massage. However, more studies are needed to affirm this techniques efficacy specifically in palliative care.

The communication skill is also an important feature in the relationship between therapist and patient, it helps to promote empathy and create a connection[25] and is essential in palliative care.[26,27] We found, through the questionnaire, that communication was rated as one of the most important factors in palliative care. However, the literature shows that many professionals are unable to communicate with patients in palliative care, due to the curative medicine

training that they received which creates a stigmatized death perspective.[27]

More than a half of the evaluated physical therapists reported the use of muscle stretching in palliative care, although only few evidences support its use, and usually accompanying a physical exercise program.[28] Half of the physical therapists reported using breathing exercises in palliative care, which also improves ventilation and reduces dyspnea, however, this effects were mostly studied for obstructive pulmonary disease.[29,30] Joint mobilization is also among the reported techniques for palliative care, although this technique is also not explored in literature for palliative care, it is well known that joint mobilization provides pain relief and prevents muscle shortening.[31–33]

The study had some limitations. The questionnaire was not validated, and the closed questions could have some influence to the volunteer's response. Moreover, not all participants answered the entire questionnaire. Thus, we evaluated from undergraduate students to experienced professionals and graduate students, which may explain the great variability in the results.

We conclude that, the vast majority of the evaluated professionals presented basic palliative care knowledge, but not in palliative care core constituents. The palliative care practice seemed often guided by the knowledge acquired in other fields, always with an intuitive character. Therefore, through the questionnaire, we detected a lack in the physical therapist training regarding palliative care. Summarily, physical therapists should receive a general training in palliative care still as an undergraduate, for a most effective and consistent professional practice later on.

Conflicts of interest

The authors declare no conflicts of interest.

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