

Knowledge and Awareness about Palliative Care and Physiotherapy Management in Palliative Care among Student and Working Physiotherapists in Malaysia: A Comparative Study

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Abstract

Background: Palliative care (PC) needs are increasing in Malaysia. All healthcare providers including physiotherapists have an inescapable role in increasing the quality and development of end-of-life care. The purpose of this study is to compare the level of knowledge and awareness about PC and physiotherapy management in PC between students and working physiotherapists in Malaysia. **Methods:** A cross-sectional study using a self-administered online questionnaire referenced to the Palliative Care Awareness Assessment Questionnaire published by Sujatha and Jayagowri (2017) was sent to final-year physiotherapy students and working physiotherapists in Malaysia. **Results:** 107 physiotherapists and 107 students were included. Most of the participants from both groups never received training and courses about PC. Participants recognized the benefits of physiotherapy management in PC but showed inadequacy in knowledge and awareness about the skills and techniques. Overall, no significant difference ($p > 0.05$) was shown between the groups. **Conclusion:** This study revealed the insufficiency of awareness and knowledge about PC from both students and working physiotherapists. It suggests that an emphasis on the development and establishment of PC in Malaysia is clearly needed especially for the working physiotherapist.

Keywords

Palliative care, awareness, knowledge, physiotherapy.

Introduction

There are approximately 61 million people worldwide suffering from diseases that require Palliative Care (PC) such as cancer, chronic organ failure, and frailty that cause patients to experience pain or other complications (Ministry of Health Malaysia, 2019). However, only 14% of the patients received sufficient PC support. In Malaysia, about 70% of the total mortality rate per year were people requiring PC. This number is increasing steadily every year and is estimated

Submission: 28 February 2023; **Acceptance:** 13 April 2023



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to reach 239,713 by the year 2030 due to the growing population (Abdullah et al., 2019). The number of Malaysians who require PC yearly is about 56,000 with the top cause of PC requirement being non-communicable diseases, followed by cardiovascular disease and cancer (Winy et al., 2016). However, about 91.7% of the country's PC needs are not being met.

Poor awareness of PC and a shortage of clinicians qualified in palliative treatment might be one of the major barriers slowing down its progress in Malaysia (Lau & Pickersgill, 2019). Thus, the Ministry of Health Malaysia had implemented some policies and strategies to improve the quality of end-of-life care in Malaysia. To achieve the three main components (equity, sustainability, and quality) of these policies and strategies, all healthcare providers should have at least basic knowledge of PC. Physiotherapists (PTs) who serve as members of the multidisciplinary healthcare team also have an inescapable responsibility and role in helping the development of the PC field by possessing PC knowledge and providing high-quality PC services to patients. The current study aimed to compare the awareness and knowledge about PC and physiotherapy management in PC between students and working PTs in Malaysia.

Methodology

This was a cross-sectional study. The inclusion criteria for this study were (i) final year physiotherapy students studying in Malaysia without working experience in the physiotherapy sector and (ii) graduated Malaysian PTs working in Malaysia with more than six months of working experience in the physiotherapy sector. Subjects who cannot understand English were excluded. The total sample size of 214 participants was calculated using G-power using an effect size of 0.32 based on a study by Puranik et al. (2013). Ethical approval was obtained from the Research and Ethic committee of INTI International University (reference no: INTI-IU/FHLS-RC/BPHTI/7NY12021/011). An online self-administered questionnaire was modified from the Palliative Care Awareness Assessment Questionnaire published by Sujatha and Jayagowri (2017) to assess the basic knowledge and awareness about PC among working and student PTs. The questionnaire was distributed through social media to the physiotherapy centres and physiotherapy departments in both private and government hospitals. The data was analysed using SPSS version 21. Comparison between both groups were analysed by using Chi-Square (χ^2).

Results

107 working PTs and 107 final year physiotherapy students were included in the study. Most of the working PTs were aged between 18-27 years old (51.4%) and female (62.6%). 47.7 % of them had six months to less than three years of working experience. 64.5% of them worked at private centres. 95.3% of the working PTs have heard about PC. However, 74.8% of them reported that they did not attend any training or courses on PC before despite 67.3% of them having treated patients who required PC. Most of the final year physiotherapy students were aged between 18-27 years old (98.1%), female (72.9%) and were taking their degree program (87.9%). Similarly, 95.3% of the students have heard about PC. 78.5% of them reported never received training and courses about PC and 45.8% of them had experience on treating patients who require PC during their clinical placements.

The awareness and knowledge of working PTs on the prime definition of PC did not show significant difference from the students' group. The working PTs were significantly more aware than the students that PC can help to affirm life and recognize dying as a normal process ($p < 0.05$). Most of them from both groups wrongly assumed that PC is suitable for all dying patients and patients with rheumatoid arthritis ($p > 0.05$). Working PTs were significantly more aware that vomiting and constipation are also commonly experienced by patients who require PC compare with students ($p < 0.05$). No significant difference was found between groups that prognosis should not only be informed to the family members, but a good death should also include pain and symptom management, clear decision making, and good preparation for death ($p > 0.05$). 65.4% of the students and 70.1% of the PTs agreed that morphine will not cause death in dying patients and more than half of them agreed that morphine can help to improve quality of life. However, majority of students and PTs were unaware that morphine cannot help to relieve all kinds of pain and will not cause addition to patient, with no significant difference was shown between groups ($p > 0.05$). Besides, 50.5% of the students and 35.5% of the PTs selected "Don't know" for the common side effects of morphine, especially constipation.

More than half of the students and PTs respectively answered correctly on the role of physiotherapy, benefits of physiotherapy in PC, and the suitable types of massage that can be used for PC patient, with no significant difference between groups ($p > 0.05$) [Table 1]. Only 4.7% of the participants from each group were aware of the duration of TENS that can be used for patients who require PC ($p > 0.05$).

Table 1. Comparison of awareness and knowledge about physiotherapy management in PC between working PTs and physiotherapy students.

| Questions | Answer | S N (%) | W N (%) | p-value |
|--|----------------------------|------------|------------|---------|
| 1. Role of physiotherapy in PC | | | | |
| (i. HIV/AIDS; ii. Cancer patients; iii. Alzheimer's disease; iv. Psychiatric disorders) | | | | |
| | i, ii | 16(15) | 10(9.3) | .555 |
| | i, ii, iii | 26(24.3) | 32(29.9) | |
| | All of the above (correct) | 63(58.9) | 63(58.9) | |
| | None of the above | 2(1.9) | 2(1.9) | |
| 2. Benefits of physiotherapy in PC | | | | |
| (i. Reduce fatigue; ii. Improve quality of life; iii. Emotional improvement; iv. Maintain functional capabilities) | | | | |
| | i, iii | 5(4.7) | 0(0) | .403 |
| | i, iv | 5(4.7) | 7(6.5) | |
| | i, ii, iii | 5(4.7) | 4(3.7) | |
| | All of the above (correct) | 92(86) | 96(89.7) | |
| 3. Duration of TENS in PC | | | | |
| | 5-15 minutes | 49(45.8) | 35(32.7) | .867 |
| | 15-30 minutes | 22(20.6) | 44(41.1) | |
| | 30-60 minutes (correct) | 5(4.7) | 5(4.7) | |
| | Not sure | 21(19.6) | 18(16.8) | |

| | | | |
|---|----------|----------|------|
| Contraindicated in this population | 10(9.3) | 5(4.7) | |
| 4.Types of massage used in PC | | | |
| (i. Kneading; ii. Effleurage; iii. Foot massage; iv. Light touch massage) | | | |
| i, ii | 12(11.2) | 23(21.5) | .145 |
| i, ii, iii | 6(5.6) | 4(3.7) | |
| ii, iii, iv | 16(15) | 19(17.8) | |
| All of the above (correct) | 70(65.4) | 59(55.1) | |
| None of the above | 3(2.8) | 2(1.9) | |

S, Physiotherapy students; W, Working Physiotherapist. Chi-square test was used for comparison.

Discussion

This study compared the knowledge and awareness about PC and physiotherapy management in PC between final year physiotherapy students and working PTs. Sadhu et al. (2010) reported that many undergraduate healthcare students nowadays are not aware that PC skills are also considered as one of the fundamental clinical competencies, in-line with the current trend of increasing requirements for humane medical end-of-life care. Final year physiotherapy students were chosen in this study as they need to prepare for practice in healthcare settings once graduated. Thus, they should have basic awareness and knowledge about PC and understand their critical roles in PC settings in order to provide effective treatments (Sujatha & Jayagowri, 2017). They were studied as baseline data (control group) for comparison with the PTs.

Our study found that working PTs demonstrated greater understanding in the philosophy of PC and the common non-pain symptoms experienced by individuals who require PC compared to the students. This may be due to differences in PC clinical experience. Almost half of our participants were not aware that PC prognosis should be clearly informed and discussed with both family members and patients, and this result was consistent with the study done by Sadhu et al. (2010) among Indian undergraduate health-care students. Moreover, the benefits and role of morphine in PC, as well as its effects on patients' body systems were inadequately identified by both student and working PTs in the current study. Similar results were found by Sujatha and Jayagowri (2017) in which more than half of the students wrongly assumed that PC is needed for all dying patients and patients with debilitating illness. The authors also revealed that the common non-pain symptoms in PC, PC multidisciplinary care team members, and the role of morphine were not identified well by their participants (Sujatha & Jayagowri, 2017). In addition, the insufficient knowledge and awareness of the effects of morphine in PC found in this study were similar to the study done by Bogam et al. (2012), where only less than 15% of the participants opted for constipation and less than 3% of the participants opted drowsiness as common side effects of morphine. However, the results were in contrast to the study done by Sadhu et al. (2010), where more than 77% of the participants correctly recognised constipation and drowsiness as common side effects of morphine.

For the duration of TENS that can be applied for PC patients, only 4.7% of the participants from each group answered correctly. According to Wilson and Stanczak (2020), this might be because in entry-level education, PTs are generally taught that biophysical agents are contraindicated in cancer and malignancy cases. The authors mentioned that TENS had been

theorized to improve blood flow from a stimulated muscle contraction which may encourage metastasis and that stimulation-induced angiogenesis might also encourage the growth and spread of tumours. However, they suggested that electrical stimulation can be used in patients with known malignancy when the improvement in quality of life is greater than the possible risks associated with the treatments (Wilson & Stanczak, 2020).

The types of massage that can be used in PC settings include kneading, effleurage, foot massage, and light touch massage (Falkensteiner et al., 2011; Kutner et al., 2008; Cassileth & Vickers, 2004). However, more than 35% and 45% of the students and PTs respectively did not realise that these massage techniques can be used in PC. This might be due to insufficient training and courses provided to the students and PTs (Smith et al., 2009).

Although more than 95% of the participants from each group had heard about PC, our study showed insufficiency in PC awareness and knowledge among both groups which was similar to the finding reported by other studies (Bogam et al., 2012; Sadhu et al, 2010; Sujatha and Jayagowri, 2017). Nevertheless, Mawani et al. (2015) found that knowledge about PC was good among their Doctor of physiotherapy students, suggesting that the level of education in PT plays a role as well. However, although their knowledge in PC was good, these students still lacked awareness about PC (Mawani et al., 2015). In our study, despite having clinical experience delivering PC, most of the PTs did not receive adequate training and had limited knowledge and awareness on PC. A similar phenomenon was found in the study done by Morrow et al. (2017) on South African PT participants.

In our study, there was no significant difference regarding the knowledge and awareness about PC and physiotherapy management in PC overall between the groups. It was revealed that working PTs did not improve much from undergraduate days in knowledge and awareness about PC despite graduating and having exposure to PC in the clinical setting. This suggests insufficiency in training and courses on PC and physiotherapy management in PC among PTs. Head et al. (2016) revealed that PC education provided by medical schools was unstandardized and inconsistent across the world, which may have resulted in inadequate preparation of medical students to enter clinical settings. Studies proved that educative sessions and training programs were effective in improving the knowledge and awareness about PC among student and working PTs (Chiarelli et al., 2014; Kumar et al., 2011). Thus, it is crucial to provide a systematic and comprehensive PC education and training into the existing coursework and clinical practice to undergraduate students as well as PTs in the clinical setting.

As most of the PTs who participated in this study were from the private sector and consist of more female participants, future studies should involve more male PTs and those from the government sector. Besides, longitudinal designs may be better suited to observe changes in PC awareness and knowledge from the undergraduate to the working PT.

Conclusion

This study revealed the insufficient awareness and knowledge in PC settings from both groups. The prime definition, individuals in need of PC, common non-pain symptoms encountered in PC,

communicating prognosis in PC, and morphine and its effects in PC were not clearly recognized by the participants from both groups. In terms of physiotherapy management in PC, the PC conditions that require physiotherapy management as well as the techniques that can be used in PC such as TENS and massage were not well identified and practiced by the participants from both groups as well. Based on the findings of this study, there was no significant difference between final year physiotherapy students and working PTs regarding the knowledge and awareness about PC and physiotherapy management in PC. This suggests that an emphasis on the development and establishment of PC in the healthcare institutions of Malaysia are clearly needed. Thus, it is important to include training and courses about PC for the working physiotherapist as well as the undergraduate student's curriculum to improve the quality and standard of end-of-life care in Malaysia in the future.

Acknowledgements

We would like to thank Sujatha and Jayagowri (2017) for giving us permission to use their questionnaire in the current study.

References

- Abdullah, N. H., Hj Rohaizat bin Hj Yon, Hj Bahari, Awang Ngah, & Asmah Bin Samat (2019). National Palliative Care Policy and Strategic Plan 2019–2030. Ministry of Health. https://www.moh.gov.my/moh/resources/Polisi/BUKU_NATIONAL_PALLIATIVE_CARE_POLICY_AND_STRATEGY_PLAN_2019-2030.pdf
- Bogam RB, Kumbhar SM, Sahu SB, Mane AS, Sagare SM, Chowdhury YS. Knowledge of palliative care amongst undergraduate medical students in rural medical college of Maharashtra. *National Journal of Community Medicine* 2012, 3(4), 666-669.
- Cassileth, B. R., & Vickers, A. J. (2004). Massage therapy for symptom control: Outcome study at a major cancer center. *Journal of Pain and Symptom Management*, 28(3), 244–249. <https://doi.org/10.1016/j.jpainsymman.2003.12.016>
- Chiarelli, P. E., Johnston, C., & Osmotherly, P. G. (2014). Introducing palliative care into entry-level physical therapy education. *Journal of Palliative Medicine*, 17(2), 152–158. <https://doi.org/10.1089/jpm.2013.0158>
- Falkensteiner, M., Mantovan, F., Müller, I., & Them, C. (2011). The Use of Massage Therapy for Reducing Pain, Anxiety, and Depression in Oncological Palliative Care Patients: A Narrative Review of the Literature. *ISRN Nursing*, 2011, 929868. <https://doi.org/10.5402/2011/929868>
- Head, B. A., Schapmire, T. J., Earnshaw, L., Chenault, J., Pfeifer, M., Sawning, S., & Shaw, M. A. (2016). Improving medical graduates' training in palliative care: Advancing education and practice. *Advances in Medical Education and Practice*, 7, 99–113. <https://doi.org/10.2147/AMEP.S94550>
- Kumar, S. P., Jim, A., & Sisodia, V. (2011). Effects of Palliative Care Training Program on Knowledge, Attitudes, Beliefs, and Experiences Among Student Physiotherapists: A Preliminary Quasi-Experimental Study. *Indian Journal of Palliative Care*, 17(1), 47–53. <https://doi.org/10.4103/0973-1075.78449>

- Kutner, J. S., Smith, M. C., Corbin, L., Hemphill, L., Benton, K., Mellis, B. K., Beaty, B., Felton, S., Yamashita, T. E., Bryant, L. L., & Fairclough, D. L. (2008). Massage therapy versus simple touch to improve pain and mood in patients with advanced cancer: A randomized trial. *Annals of Internal Medicine*, 149(6), 369–379. <https://doi.org/10.7326/0003-4819-149-6-200809160-00003>
- Lau, C., & Pickersgill, M. (2019). Integrating, advocating, and augmenting palliative care in Malaysia: A qualitative examination of the barriers faced and negotiated by Malaysian palliative care non-governmental organizations. *Journal of Global Health Reports*, 3, e2019003. <https://doi.org/10.29392/joghr.3.e2019003>
- Mawani, A., Khazada, S., Talpur, M., & Talpur, F. (2015). Awareness of Palliative Care among Physical Therapy Student of ISRA University Hyderabad. <https://doi.org/10.6084/M9.FIGSHARE.1440757.V1>
- Ministry of Health Malaysia (2019). National Palliative Care Policy and Strategic Plan 2019-2030. https://www.moh.gov.my/moh/resources/Polisi/BUKU_NATIONAL_PALLIATIVE_CARE_POLICY_AND_STRATEGY_PLAN_2019-2030.pdf
- Morrow, B. M., Barnard, C., Luhaza, Z., Naidoo, K., & Pitt, S. (2017). Knowledge, attitudes, beliefs, and experience of palliative care amongst South African physiotherapists. *The South African Journal of Physiotherapy*, 73(1), 384. <https://doi.org/10.4102/sajp.v73i1.384>
- Puranik, A. K., Mishra, P., Kumar, S., & Dhodapkar, S. V. (2013). Dental Patient's Knowledge and Awareness Regarding Effects of Smoking on Oral Health among Smokers and Nonsmokers: A Comparative Study. *Journal of Orofacial Research*, 77–80.
- Sadhu, S., Salins, N. S., & Kamath, A. (2010). Palliative Care Awareness among Indian Undergraduate Health Care Students: A Needs-Assessment Study to Determine Incorporation of Palliative Care Education in Undergraduate Medical, Nursing, and Allied Health Education. *Indian Journal of Palliative Care*, 16(3), 154–159. <https://doi.org/10.4103/0973-1075.73645>
- Smith, M. C., Yamashita, T. E., Bryant, L. L., Hemphill, L., & Kutner, J. S. (2009). Providing Massage Therapy for People with Advanced Cancer: What to Expect. *Journal of Alternative and Complementary Medicine*, 15(4), 367–371. <https://doi.org/10.1089/acm.2008.0391>
- Sujatha, R., & Jayagowri, K. (2017). Assessment of Palliative Care Awareness among Undergraduate Healthcare Students. *Journal of Clinical and Diagnostic Research: JCDR*, 11(9), JC06-JC10. <https://doi.org/10.7860/JCDR/2017/29070.10684>
- Wilson, C., & Stanczak, J. (2020). Palliative Pain Management Using Transcutaneous Electrical Nerve Stimulation (TENS). *Rehabilitation Oncology*, 38, E1–E6. <https://doi.org/10.1097/01.REO.0000000000000188>
- Winy, Y. S., Stephen, C., Sylvia, M. C., & Ednin, H. (2016). Palliative Care Needs Assessment in Malaysia. *Hospis Malaysia*. <https://www.hospismalaysia.org/wp-content/uploads/2016/10/Palliative-Care-Needs-Assessment-Malaysia-2016.pdf>