

BRIDGING THE GAP IN RURAL REHABILITATION: A PALLIATIVE CARE CENTRE'S HALFWAY HOME APPROACH

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Abstract

Background: Despite providing palliative care, most patients have a decreased quality of life. Furthermore, there is a disparity in the quality of services provided by different centers. This study aimed to explore palliative care patients' demographic and clinical characteristics and assess changes in functional independence using Functional Independence Measure (FIM) scores. **Materials and Methods:** This pilot descriptive study was conducted at Pallium India's halfway home rehabilitation facility between May 2022 and April 2023. Data from 14 participants were analysed using Epi Info 7.2.1.0, with categorical variables presented as proportions and continuous variables as means with standard deviations. **Result:** The mean age of 39.3 years (SD 15.8) challenged the misconception that palliative care primarily caters to older people. The gender distribution showed 71.4% males and 28.6% females and a notable residence distribution of 57.1% rural and 42.9% urban, emphasizing diverse backgrounds seeking palliative care. The diagnoses included Cerebrovascular Accidents (42.85%), Spinal Cord Compression (14.28%), and Spinal Cord Injuries (42.85%). The FIM scores assessed at admission (57.2, SD 22.8) and discharge (80.71, SD 30.10) indicated improved functional independence. **Conclusion:** The potential of a planned admission goal approach, emphasizing multidisciplinary expertise, community integration, and home care teams to address rehabilitation needs in rural stroke and paraplegia patients, offers a novel and promising avenue for improving outcomes in this population.

INTRODUCTION

Patients undergoing palliative care experience heightened levels of physical and functional debilitation associated with the gravity of their ailments. Despite these circumstances, the use of physical therapy is suboptimal.^[1,2] A mounting body of empirical evidence substantiates that physiotherapy confers multifaceted advantages to individuals with advanced life-threatening illnesses.^[2,3] Nevertheless, substandard access to physical therapy poses a potential hazard to the optimal realization of benefits for patients and their familial support systems. The comprehensive role of physiotherapy within the domain of palliative care may not yet be fully understood, and a meticulous delineation of the activities conducted by physiotherapists (PTs) in addressing the physical, psychological, social, and existential requisites of patients and their families may prove beneficial.

Individuals afflicted with both incurable cancer and non-cancer diagnoses typically have a substantial symptom burden, including fatigue, dyspnoea, pain, lack of energy, weakness, and appetite loss.^[4,5] As the disease advances, patients manifest diminishing levels of physical function and mobility, accompanied by a reduced capacity to engage in routine activities of daily living.^[3,6,7] This progression often gives rise to heightened apprehensions regarding functional deterioration, inadequately managed symptoms, and an augmented burden on caregivers.

In palliative care, the primary aim is to enhance the quality of life of patients and their families.^[1] To effectively assess and address the multidimensional aspects of suffering, known as "total pain", it is vital to involve a multi-professional team that works closely together.^[8] In Sweden, self-referral to physiotherapists (PTs) is available to ensure accessibility for all individuals. However, in

palliative care, self-referral is rarely utilised; instead, referrals typically emanate from other palliative team members, most notably registered nurses (RNs).^[9] In palliative care, physiotherapy aims to preserve and enhance physical function, mitigate or eliminate complications, and alleviate discomfort and pain. Incorporating exercise into the care of patients with palliative needs is viable, and a diverse array of suitable physiotherapy techniques and treatments for respiratory function, pain management, and relaxation has been delineated.^[10] Interventions by physiotherapists among patients with various chronic conditions in palliative care, including cancer, chronic respiratory diseases, advanced heart failure, and neurodegenerative disorders, have yielded positive outcomes. These include reductions in pain, fatigue, and dyspnoea and improvements in mobility, physical function, mood, and overall quality of life.^[11-14]



Figure 1: Half-way home rehabilitation facility at Pallium India: Pictures showing Gait Training by Physiotherapist, modified kitchen with low slab for cooking therapy, recreational activities, and provision of assistive devices.

From a patient's perspective, various studies have consistently reported that physiotherapy engenders relief, well-being, and hope for time-limited enhancements in specific areas. Consequently, these improvements may contribute to achieving functional independence and sustaining an active lifestyle. The participants in these studies expressed a sense of active involvement in the planning and executing of physiotherapy sessions, fostering feelings of empowerment and control and an overall enhancement in quality of life. Recognising the pivotal role of the physiotherapist as a guide and

motivator, patients derive hope for improved physical function and elevated quality of life.^[15,16]

Half-way home is a flagship program provided by Pallium India (Trivandrum Institute of Palliative Sciences). It was started in the year 2015 and consists of two dedicated beds and facilities such as a modified kitchen and living rooms. The purpose of this facility is to provide rehabilitation to those patients who have completed the initial phase of rehabilitation and is planned for discharge to the community. The aim is to foster a real-life scenario to the patients and provide rehabilitation to regain the maximum possible quality of life.

This pilot descriptive study aims to highlight the half-home approach as a continuum care model for rehabilitation patients, focusing on the rural population. This study represents one of the initial efforts in the Indian region to advocate the role of rehabilitation in palliative care among rural populations and to bridge the gap that exists during the transition from acute care to community living.

MATERIALS AND METHODS

This pilot descriptive study reviewed and extracted data from the medical records of beneficiaries enrolled at the halfway home rehabilitation facility of Pallium India between May 2022 and April 2023.

Inclusion criteria

- Patients requiring palliative care
- Patients who provided consent for the study
- Patients with neurological conditions (CVA, spinal cord injuries, compressions)

Exclusion criteria

- Patients who did not provided consent for the study
- Patients who requires additional intensive care facilities such as ICU, hospital admission, and additional clinical interventions.

Data analysis was performed using Epi Info 7.2.1.0, and categorical variables were presented as proportions, while continuous variables were presented as means with standard deviations.

RESULTS

The mean age of the studied population is 39.3 years, with a standard deviation of 15.8. Of the 14 participants, 71.4% were male and 28.6% were female. Regarding residence, 57.1% were from rural areas, while 42.9% lived in urban settings. In terms of diagnosis, a total of six patients were reported with cerebrovascular accidents comprising 42.85% of the overall patients, followed by spinal cord injuries (42.85%). In addition, the incidence of spinal cord compression was in two patients (14.28%) [Table 1]. Functional Independence Measure (FIM) scores were assessed at admission and discharge. The mean FIM score at admission was 57.2, with a standard deviation 22.8. Upon discharge, the mean FIM score increased to 80.71, with a standard deviation 30.10.

This indicates improved functional independence among the study population during care [Table 2].

Table 1: Demographic and clinical characteristics of palliative care patients

		Number of patients	Percentage
Gender	Male	10	71.4%
	Female	4	28.6%
Area of residence	Rural	8	57.1%
	Urban	6	42.9%
Diagnosis	Cerebrovascular Accidents	6	42.85%
	Spinal cord compression	2	14.28%
	Spinal Cord Injuries	6	42.85%

Table 2: FIM score comparison

FIM Score	Mean	SD
Admission	57.2	22.8
Discharge	80.71	30.10

DISCUSSION

In this study, we sought to explore palliative care patients' demographic and clinical characteristics and assess changes in functional independence as measured by FIM scores. Our findings shed light on the key aspects of the study population, providing valuable insights for healthcare practitioners and researchers in the palliative care domain. The mean age of our cohort was 39.3 years, with a standard deviation of 15.8. This relatively young age profile underscores the importance of palliative care across a broad spectrum of age groups, challenging the common misconception that palliative care primarily caters to the elderly. Understanding the unique needs and characteristics of younger patients in palliative care is vital to tailoring effective interventions and support.

Our analysis of the gender distribution revealed that 71.4% of the participants were male, and 28.6% were female. Additionally, we observed a notable residence distribution, with 57.1% residing in rural areas and 42.9% in urban settings. These demographic variations highlight the diverse backgrounds of individuals seeking palliative care, emphasizing the need for flexible and context-specific care models that account for urban and rural healthcare disparities. The diagnostic profile of our cohort showed a range of conditions, with 42.85% of the patients experiencing Cerebrovascular Accidents, 14.28% with Spinal Cord Compression, and 42.85% with Spinal Cord Injuries. This diversity underscores the complex nature of palliative care, necessitating a tailored and multidisciplinary approach to address their unique medical needs.

The activities outlined above aim to enhance and preserve the patients' and their families' independence and well-being. Many of these activities are driven by an underlying intention to assist and support patients and their families in navigating the challenges between their current reality and their ideal everyday life. Numerous studies have highlighted that unmet needs and loss of the ability to manage daily living significantly contribute to distress among severely ill patients. In

essence, the multifaceted nature of physiotherapy interventions in SPC extends beyond physical aspects, encompassing a holistic and compassionate approach to improve the overall quality of life for patients and their families.^[17,18]

The assessment of functional independence using FIM scores provides valuable insights into the impact of palliative care interventions. At admission, the mean FIM score was 57.2, indicating a moderate level of functional independence, with a standard deviation of 22.8, reflecting variability within the cohort. A noteworthy improvement was observed upon discharge, with the mean FIM score rising to 80.71. Although this positive trend suggests an enhancement in functional independence during care, a wide standard deviation of 30.10 indicates significant variability in individual responses. A similar study finding was also reported by Olsson et al. in palliative care patients, where an adequate approach to the rehabilitation center with a high-quality team was proven to be beneficial in improving the overall quality of patients.^[19]

This study contributes to the growing body of literature on palliative care by offering a nuanced understanding of the demographic and clinical characteristics of patients undergoing such care. The observed improvement in functional independence underscores the potential benefits of palliative interventions, encouraging further exploration of tailored strategies to optimize patient outcomes in diverse palliative care settings.

CONCLUSION

By establishing a halfway home and implementing a planned admission goals approach, a palliative care center equipped with multidisciplinary expertise, in conjunction with link centers, community nurses, and home care teams, can effectively address the rehabilitation needs of rural patients with stroke and paraplegia. This novel approach demonstrates great potential for improving rehabilitation outcomes and the overall well-being of individuals confronting these challenges.

REFERENCES

1. Montagnini M, Lodhi M, Born W. The utilisation of physical therapy in a palliative care unit. *J Palliat Med.* 2003;6:11–17. <https://doi.org/10.1089/10966210360510073>.
2. Putt K, Faville KA, Lewis D, McAllister K, Pietro M, Radwan A. Role of physical therapy intervention in patients with life-threatening illnesses: a systematic review. *Am J Hosp Palliat Care.* 2015;34:186–196. <https://doi.org/10.1177/1049909115623246>.
3. Javier NS, Montagnini ML. Rehabilitation of the hospice and palliative care patient. *J Palliat Med.* 2011;14:638–648. <https://doi.org/10.1089/jpm.2010.0125>.
4. Moens K, Higginson IJ, Harding R, Brearley S, Caraceni A, Cohen J, et al. Are there differences in the prevalence of palliative care-related problems in people living with advanced cancer and eight non-cancer conditions? A systematic review. *J Pain Symptom Manag.* 2014;48:660–677. <https://doi.org/10.1016/j.jpainsymman.2013.11.009>.
5. Cobbe SKN. Physical function in hospice patients and physiotherapy interventions: a profile of hospice physiotherapy. *J Palliat Med.* 2012;15:760–767. <https://doi.org/10.1089/jpm.2011.0480>.
6. Eyigor S, Akdeniz S. Is exercise ignored in palliative cancer patients? *World J Clin Oncol.* 2014;5:554–559. <https://doi.org/10.5306/wjco.v5.i3.554>.
7. Cobbe S, Nugent K, Slatery S, Lynch M, Real S. A profile of hospice-at-home physiotherapy for community-dwelling palliative care patients. *Int J Pall Nurs.* 2013;19:39–45. <https://doi.org/10.12968/ijpn.2013.19.1.39>.
8. Nelson LA, Hasson F, Kernohan WG. Exploring district nurses' reluctance to refer palliative care patients for physiotherapy. *Int J Pall Nurs.* 2012;18:163–170. <https://doi.org/10.12968/ijpn.2012.18.4.163>.
9. Jensen W, Bialy L, Ketels G, Baumann FT, Bokemeyer C, Oechsle K. Physical exercise and therapy in terminally ill cancer patients: a retrospective feasibility analysis. *Support Care Cancer.* 2014;22:1261–1268. <https://doi.org/10.1007/s00520-013-2080-4>.
10. Spill GR, Hlubocky FJ, Daugherty CK. Oncologists' and Physiatrists' attitudes regarding rehabilitation for patients with advanced cancer. *PM&R.* 2012;4:96–108. <https://doi.org/10.1016/j.pmrj.2011.08.539>.
11. Guidelines for Good Practice. Association of Chartered Physiotherapists in Palliative Oncology. London: Chartered Society of Physiotherapy; 1993.
12. Kumar SP, Jim A. Physical Therapy in palliative care: from symptom control to quality of life: a critical review. *Indian J Palliat Care.* 2010;16:138–146. <https://doi.org/10.4103/0973-1075.73670>.
13. Talbot Rice H, Malcolm L, Norman K, Jones A, Lee K, Preston G, et al. An evaluation of the St Christopher's hospice rehabilitation gym circuits classes: patient uptake, outcomes, and feedback. *Prog Palliat Care.* 2014;22:319–325. <https://doi.org/10.1179/1743291X14Y.0000000083>.
14. Clemens KE, Jaspers B, Klaschik E, Nieland P. Evaluation of the clinical effectiveness of physiotherapeutic management of lymphoedema in palliative care patients. *Jpn J Clin Oncol.* 2010;40:1068–1072. <https://doi.org/10.1093/jjco/hyq093>.
15. Oldervoll LM, Loge JH, Paltiel H, Asp MB, Vidvei U, Wiken AN, et al. The effect of a physical exercise program in palliative care: a phase II study. *J Pain Symptom Manag.* 2006;31:421–430. <https://doi.org/10.1016/j.jpainsymman.2005.10.004>.
16. Salakari MR, Surakka T, Nurminen R, Pykkänen L. Effects of rehabilitation among patients with advanced cancer: a systematic review. *Acta Oncol.* 2015;54:618–628. <https://doi.org/10.3109/0284186X.2014.996661>.
17. Lindqvist O, Tishelman C, Hagelin CL, Clark JB, Daud ML, Dickman A, et al. Complexity in non-pharmacological caregiving activities at the end of life: an international qualitative study. *PLoS Med.* 2012;9: e1001173. <https://doi.org/10.1371/journal.pmed.1001173>.
18. Edvardsson D, Winblad B, Sandman PO. Person-centred care of people with severe Alzheimer's disease: current status and ways forward. *Lancet Neurol.* 2008;7:362–367. [https://doi.org/10.1016/S1474-4422\(08\)70063-2](https://doi.org/10.1016/S1474-4422(08)70063-2).
19. Olsson Möller U, Stigmar K, Beck I, Malmström M, Rasmussen BH. Bridging gaps in everyday life - a free-listing approach to explore the variety of activities performed by physiotherapists in specialised palliative care. *BMC Palliat Care.* 2018;17:20. <https://doi.org/10.1186/s12904-018-0272-x>.