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THE IMPORTANCE OF PHYSICAL THERAPY AND OCCUPATIONAL THERAPY IN PALLIATIVE AND HOSPICE MEDICINE (review)

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Key words: physical therapy, occupational therapy, palliative care, hospice care **Ключові слова:** фізична терапія, ерготерапія, паліативна медицина, хоспісна медицина

Abstract. The importance of physical therapy and occupational therapy in palliative and hospice medicine (review). Raznatovska O.M., Kanygina S.M., Yasinskyi R.M., Fedorec A.V., Svitlytska O.A. Higher level of functional incapacity and invalidity is noted in palliative patients, as a result of disease progression, which is the reason for a significant decrease in the quality of life not only of these patients, but also of the family members who care for them. Physical therapy and occupational therapy are aimed at improving the patient's quality of life through rehabilitation measures to restore body function, ensure physical independence and activity, optimal physical condition and well-being, and patient adaptation in the environment. Aim: to review modern literary sources regarding the

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relevance of physical therapy and occupational therapy in palliative and hospice care. The search for literary sources was carried out in international scientometric databases: PubMed, Scopus, Web of Science, Google Scholar. The search depth is 13 years (from 2010 to 2022). The review indicates that physical therapy and occupational therapy in palliative and hospice medicine around the world are not used enough today. These two specialties of interdisciplinary treatment in palliative and hospice medicine play an important integral role, which is manifested in improving the quality of life of both patients and their family members who care for them through the use of a wide variety of methods. Hospice physical therapists not only help patients to support/keep functional abilities as long as possible, but also to reduce the burden on persons who care for terminally ill patients. Physical and occupational therapy have numerous benefits for patients with progressive life-threatening illnesses in palliative and hospice care. Physical therapy in palliative and hospice care can have a preventive, educational, and/or supportive function depending on the patient's situation. There is especially large deficiency in palliative physical therapy and occupational therapy among adolescents and young people, which requires wide implementation with high-quality training of relevant specialists. Physical therapy and occupational therapy play an important role in palliative and hospice care; all patients in palliative and hospice care, regardless of illness or severity, should have access to physical and occupational therapy based on individual needs.

Реферат. Значення фізичної терапії та ерготерапії в паліативній та хоспісній медицині (огляд літератури). Разнатовська О.М., Кангигіна С.М., Ясінський Р.М., Федорець А.В., Світлицька О.А. У паліативних пацієнтів у результаті прогресування захворювання відзначається більш високий рівень функціональної непрацездатності та інвалідності, що є причиною значного зниження якості життя не лише цих пацієнтів, а й членів сімей, які доглядають за ними. Фізична терапія та ерготерапія направлені на поліпшення якості життя пацієнта шляхом проведення реабілітаційних заходів для відновлення функцій організму, забезпечення фізичної самостійності та активності, оптимального фізичного стану та самопочуття, адаптацію пацієнта до навколишнього середовища. Мета роботи: провести огляд літературних джерел щодо значення фізичної терапії та ерготерапії в паліативній та хоспісній медицині. Пошук літературних джерел проведено в міжнародних наукометричних базах даних: PubMed, Scopus, Web of Science, Google Scholar. Глибина пошуку становила 13 років (з 2010 р. до 2022 р.). Проведений огляд свідчить про те, що на сьогодні фізична терапія та ерготерапія в паліативній та хоспісній медицині у всьому світі використовується недостатньо. Ці дві спеціальності в рамках міждисциплінарного лікування в паліативній та хоспісній медицині відіграють важливу невід'ємну роль, що проявляється підвищенням якості життя як пацієнтів, так і членів їхніх сімей, які здійснюють догляд за ними, шляхом використання найрізноманітніших методів. Фізичні терапевти хоспісу не тільки допомагають пацієнтам підтримувати/зберігати функціональні здатності якомога довше, а й знизити навантаження на осіб, які здійснюють догляд за інкурабельними хворими. Фізична терапія та ерготерапія мають численні переваги для пацієнтів з прогресуючими небезпечними для життя захворюваннями в умовах паліативної та хоспісної допомоги. Фізична терапія паліативної та хоспісної допомоги може мати профілактичну, освітню та/або підтримуючу функцію залежно від ситуації пацієнта. Особливо великі прогалини має паліативна фізична терапія й ерготерапія серед підлітків та молодих людей, що потребує широкого впровадження з якісною підготовкою відповідних фахівців. Фізична терапія та ерготерапія мають важливе значення в паліативній та хоспісній медицині; усі пацієнти, які перебувають на паліативному та хоспісному лікуванні, незалежно від захворювання та його тяжкості, повинні мати доступ до фізичної терапії та ерготерапії з огляду на індивідуальні потреби.

There is an increased level of functional disability and impairment as a result of disease progression in palliative patients, leading to a significant reduction in the quality of life not only for these patients, but also for the family members who care for them.

Physical therapy is aimed at improving the patient's quality of life by implementing rehabilitation measures to eliminate/reduce pain, restore bodily function, promote physical independence and activity, optimize the physical condition, and enhance the well-being of patients [1].

Occupational therapy is a rehabilitation method that improves the patient's quality of life by restoring/enhancing/developing their lost activity due to illness, ensuring patient safety during any activity, adapting patients to their environment, and facilitating the performance of daily living tasks for comfortable functioning in their familiar environment

[2]. Therefore, the goal of an occupational therapist is to make an individual as independent as possible, which contributes to the restoration of functions or adaptation to dysfunctions in the patients' bodies.

The aim – to review literature sources about the significance of physical and occupational therapy in palliative and hospice medicine.

The search for literary sources was carried out in international scientometric databases: PubMed, Scopus, Web of Science, Google Scholar. The search depth is 13 years (from 2010 to 2022).

Palliative care includes the interdisciplinary management of patients and their family members facing life-threatening and incurable illnesses [3]. Today, physical and occupational therapy to varying degrees are integrated into palliative and hospice care worldwide. Physical therapists and occupational therapists play a key role in the interdisciplinary team



providing palliative care, focusing on the physical and functional aspects of patients' suffering and improving their quality of life [4, 5, 6]. There should be more opportunities for professional development in both pre- and post-graduate education for these specialists in the field of palliative care [3], as their involvement may extend until the end of a patient's life, whether in palliative treatment or hospice care [4].

Thus, physical therapy and occupational therapy are integral components of palliative care as they aim to improve the quality of life by restoring/enhancing functional abilities and independence, reducing suffering associated with life-threatening illnesses in patients, requiring palliative and hospice care. Physical therapy and occupational therapy help palliative patients maximize their functional and movement potential until the end of their lives.

Hogdal et al. [5] investigated the nature of symptoms and needs in patients with advanced chronic illnesses, receiving specialized palliative care. The authors found that patients in this category most frequently reported serious symptoms/issues related to fatigue (81%), impaired physical activity (77%), difficulties in performing work and daily tasks (77%), pain (72%) and anxiety (58%). The need for assistance was expressed in relation to physical activity (79%), work and daily activities (77%), fatigue (70%), pain (65%), concentration of attention (58%) and anxiety (51%). Based on the obtained results, the researchers emphasized the importance of involving physical therapists and occupational therapists in the interdisciplinary palliative care team for patients with advanced chronic illnesses.

Therefore, the focus of physical therapists and occupational therapists in palliative care should be focused on processes and procedures aimed at improving function and quality of life for patients in the end stage of life, using the following non-pharmacological treatment methods: symptom management (especially pain control), improving flexibility, mobility, endurance, gait, balance, coordination, energy expenditure, and physical tolerance; supporting optimal breathing and cardiovascular function; enhancing sensorimotor activity and enabling the performance of essential activities that enhance people's daily lives [7, 8].

Anna Elisabeth P. et al. [9] noted that physical therapy and occupational therapy, as part of comprehensive palliative care, can enable severely ill patients to participate in an autonomous manner until the end of their lives. However, to achieve this, specialized personnel are required to consider the individual life situation of each patient. Through their research, the authors found that in Germany, physical therapy and occupational therapy are frequently used

in all areas of palliative medicine. However, occupational therapy services are utilized half as much as physical therapy services, and the primary reasons for this are a shortage of professionals and a lack of understanding of the role of occupational therapists.

Kumar S.P. et al. [4] noted that physical therapy methods such as exercises, electrical modalities, thermal modalities, radiation therapy, mechanical methods, manual physical therapy, and assistive devices are beneficial for a range of life-threatening or life-limiting conditions (oncology, HIV, neuro-degenerative disorders, mental illnesses, etc.).

In progressive diseases, especially in an incurable state, patients experience decline in physical function and mobility, as well as a diminished ability to perform activities of daily living. This leads to functional decline, uncontrolled symptoms, and increased burden on caregivers [10]. Physical therapy in patients receiving palliative care leads to a significant reduction in fatigue [11] and an improvement in general well-being [12].

Bernabeu-Wittel M. et al. [13] in their study presented the results of evaluating the effectiveness of a 30-day physiotherapy program on the psychological well-being and quality of life of both patients with progressive chronic diseases and cancer, as well as their caregivers. The authors found that the investigated individualized physiotherapy program in the palliative stage improved psychological well-being and quality of life both in patients and in caregivers, providing care.

Wilson C.M. et al. [14] surveyed 10 physical therapists with at least 5 years of experience and 5 years of working experience with patients receiving palliative and hospice care. Scientists identified their 3 main roles: providing care to patients/families, working as a member of interdisciplinary team and performance of professional duties not related to direct patient care.

Olsson Möller U. et al. [10] investigated the methods of physical therapy in addressing the needs and problems of patients and their families in specialized palliative care, as described by the physical therapists themselves. The authors concluded that all the applied methods of physical therapy in specialized palliative care were relevant and necessary. In doing so, physical therapists assist patients with life-threatening progressive illnesses and their families in bridging the gap between their real and ideal everyday lives, ensuring maximum safety, autonomy, and well-being.

The work of McLeod K.E. et al. [15] was dedicated to studying the experience of physical therapists, their perception of roles, and the value of their participation in palliative care. The physical

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therapists themselves described their role in palliative care as diverse, driven by the goals of the patients, and focused on the experiences of patients and their families. They recommended efforts to increase awareness of their potential contributions to palliative care. The authors themselves emphasized the value and significance of physical therapy in palliative care for both patients and their family members.

The literature describes various methods of physical therapy for patients requiring palliative care with various chronic diseases (oncological, pulmonary, cardiological, neurodegenerative disorders, etc.): control of pain and fatigue, pulmonary rehabilitation, improvement of physical function, etc. Engel J.M. et al. [16] reported about the relevance and necessity of using physical therapy and occupational therapy in rheumatic diseases. The effectiveness of these methods was manifested by a significant improvement in the quality of life of both the patients themselves and the family members who care for them.

Cobbe S. et al. [17] emphasized that the referral to physical therapy in the context of home-based palliative care largely depends on understanding the role of this therapy. Additionally, patients tended to have relatively high functioning and receive numerous physical therapy interventions. In their study of the profile of physical therapy in hospice care settings, the authors [18] found the following: 65% of hospice patients were referred to physical therapy, 52% of them received physical therapy in the last week of life. Physical therapy in hospice care included both rehabilitative interventions and measures to improve quality of life/supportive care. The most common physical therapy interventions were methods of physical activity such as gait training and exercises.

Soukkio P. et al. [19] conducted a non-blinded randomized controlled trial to examine the impact of a 12-month home-based physical therapy on the duration of home living and functional abilities in older adults with signs of senile dementia or recently operated for hip fracture, who were at risk of disability. The authors found that the application of intensive, long-term home-based physical therapy in such patients not only improved their functional ability but also significantly delayed the need for institutional care and reduced the utilization of social and medical services, which was economically advantageous.

The study conducted by Ramdharry G. et al. [20] presents recommendations for physical activity and exercises in individuals with rare neurological disorders such as Huntington's disease, hereditary spastic paraplegia, hereditary ataxias, motor neuron diseases and others. These recommendations significantly improved the quality of life of patients,

highlighting the relevance of the work carried out by physical therapists.

Ortiz-Campoy S. et al. [21], while studying the role of physical therapy in pediatric palliative care, analyzed the following data: the main treated pathologies (cerebral palsy and cancer); interventions used (respiratory and neurological physical therapy, therapeutic massage, virtual reality); achieved effects in the child and his/her family (with a focus on symptom control and improvement of quality of life) and the knowledge of physical therapists about pediatric palliative care. The authors found that the majority of physical therapists had not received training in pediatric palliative care. The use of physical therapy in children suffering from severe or life-threatening conditions requiring palliative care has not been thoroughly studied to date.

Physical therapy plays a vital role in hospice care by providing maximal support for patients' functional abilities and comfort, ultimately enhancing their quality of life. It ensures the safety of patients and caregivers, assists patients in adapting to changes in their lives and goals, and offers support in addressing various end-of-life issues [22].

By acknowledging the increasing dependence of hospice patients on caregivers, Turner F. et al. [23], based on their own experience, concluded that physical therapy methods can minimize the risk of injury to both the patient and the caregiver. The physical therapy method was to teach patients and caregivers how to move the patient safely with less risk of injury.

Ćwirlej-Sozańska A. et al., in their study [24], conducted an assessment of a multi-component individual physical therapy program on the functional-emotional status and quality of life of patients receiving hospice services at home. The physical therapy program included: breathing exercises, strengthening exercises, carrying, gait training, balance exercises, functional and ergonomic exercises and environmental adaptations to meet the patients' functional needs. After completing the program, the authors noted a significant improvement in activities of daily living, enhanced quality of life, reduced risk of falls, and decreased geriatric depression. The study results indicate a growing need for the application of physical therapy in palliative patients receiving hospice care.

Cobbe S. et al. reported about the high effectiveness of physical therapy in improving functioning and tolerance of various interventions in patients with malignant neoplasms receiving palliative care in a home hospice setting [17].

To develop a model of handbook on occupational therapy in palliative care, Essential Yeh H.H. et al. conducted a systematic review of peer-reviewed



literature specifically focused on this topic [25]. It has been established that, the following aspects need to be combined for effective occupational therapy in palliative care: the importance of meaningful occupations at the end of life; studying professional changes on the trajectory of incurable diseases; balance between affirming life and preparing for death; valuing occupations related to being, becoming, or familial roles and emphasizing a safe and supportive environment.

Through their study on the application of occupational therapy in palliative care, Eva G. and Morgan D. [2] identified limitations in the provision of supportive services to patients and caregivers. The authors also emphasized the need for continuous education and increased awareness of the role of occupational therapy in palliative care. Similar conclusions were made by Talbot-Coulombe C. et al. [26].

According to Tavemark S. et al. [27], the implementation of occupational therapy in palliative care involves setting priorities and planning activities according to the preferences and capabilities of the clients. As for the occupational therapists themselves [28], significant professional engagement changes over time as the level of professional effectiveness decreases and patients prepare for death.

Ellison N. et al. [29] conducted a study aimed at understanding the professional engagement of individuals with obesity, which presents additional challenges. It was found that occupational therapists have excellent opportunities to interact with such individuals in various care settings and should utilize their potential to provide services that lead to improved health and well-being.

Evaluating a workplace strategy to improve the professional self-care of occupational therapists, working with palliative care patients, living with life-limiting illnesses, Apostol C. et al. [30] found that the strategy did not affect occupational therapists' complex emotional reactions and life experiences at workplace. However, the strategy had a positive effect on patients by increasing their confidence in accessing self-care support. Simultaneously, with increased awareness of available support resources, half of the occupational therapists expressed a persistent unmet need for professional care for this patient group.

Currently, it was recognized that the work of occupational therapists thrives in the mental health sector by enhancing well-being related to work [31, 32].

In assessing the experience of professional grief (often encountered in relation to patient death and dying) among occupational therapists working in palliative care settings, Treggalles et al. [33] identified the following – in their lived experience of professional grief there are 4 main interrelated

themes: "self-awareness," "permission for connection and emotions," "experience filtering," and "presence at work and home."

It has been established, that patients receiving hospice care have a variety of occupational problems, and only a few of them undergo occupational therapy intervention, which can enhance their quality of life and help them live with dignity towards the end of life [34]. Patients who receive occupational therapy have a shorter length of stay in hospice compared to their counterparts.

Morgan D.D. et al. [35] investigated the impact of accessory equipment used in physical therapy and occupational therapy in patients with progressive diseases and caregivers. It was found, that patients themselves were motivated to use accessory equipment when it optimized their functions, allowed them to participate in performing exercises, and supported their values, roles, and interests. Caregivers emphasized that accessory equipment facilitated their caregiving.

According to Wallis A. et al. [36], the current needs of adolescents and young adults in oncology palliative care were not being met due to the lack of age-appropriate palliative care facilities. The authors also noted the insufficient development of occupational therapy services to meet the needs of young people with oncological conditions requiring palliative care. They concluded that changes in services are necessary to provide age-appropriate and occupation-focused care for adolescents and young adults within the context of palliative care in cancer.

CONCLUSIONS

- 1. The review indicates, that physical therapy and occupational therapy are not used enough today in palliative and hospice care worldwide. These two specialties, physical therapy and occupational therapy, play a crucial and integral role in palliative and hospice care by improving the quality of life for both patients and their caregiving family members through the use of various methods and approaches.
- 2. Hospice physical therapists not only help patients maintain or preserve their functional abilities for as long as possible but also reduce the burden on caregivers of terminally ill patients.
- 3. Physical therapy and occupational therapy have numerous benefits for patients with progressive lifethreatening illnesses in the context of palliative and hospice care.
- 4. Physical therapy in palliative and hospice care can have a preventive, educational, and/or supportive function depending on the patient's situation.
- 5. Palliative physical therapy and occupational therapy, particularly among adolescents and young adults, have significant gaps and require widespread

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implementation with quality training of relevant professionals.

6. Physical therapy and occupational therapy are important in palliative and hospice medicine. All patients receiving palliative and hospice care, regardless of their illness or its severity, should have access to physical therapy and occupational therapy based on their individual needs.

Contributors:

Raznatovska O.M. – conceptualization, methodology, validation, investigation, writing – original draft, visualization, supervision, project administration;

Kanygina S.M. – conceptualization, writing – review & editing, supervision;

Yasinskyi R.M. – writing – review & editing, supervision;

Fedorec A.V., Svitlytska O.A. – investigation, writing – original draft.

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