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EDITORIAL



## Occupational therapy in cancer rehabilitation: going beyond physical function in enabling activity and participation

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Many cancer patients and cancer survivors experience physical, psychological, and social problems due to the disease and its treatment, which impact negatively on their health-related quality of life [1,2]. Frequently reported symptoms include fatigue, cognitive dysfunction, peripheral neuropathy, pain, lymphedema, physical impairments and deconditioning, as well as psychosocial problems [3,4]. Many of these problems may restrict the ability to participate in daily activities, including personal care, social activities, employment, and education [1]. In fact, the most commonly reported unmet supportive care needs of adult cancer survivors relate to everyday functioning [1,5,6].

In the biopsychosocial perspective of the International Classification of Functioning, Disability and Health (ICF) [7], problems related to everyday functioning are classified considering the integrity of anatomical structure and body functions (i.e. muscle strength or attention span) as well as the ability to perform activities and participate in society (i.e. preparing a meal, being employed). A further distinction is made between capacity (being able to perform a certain task under standardized circumstances) and performance (the actual success of performing the task in everyday life). There are reciprocal interactions between these domains, which are also moderated or mediated through personal factors (i.e. coping strategies) and environmental factors (which includes social as well as physical environmental factors).

From this perspective, it is not surprising that oncology rehabilitation generally involves some form of exercise. The rationale behind most exercise-based cancer rehabilitation interventions is that exercise reduces symptoms and improves physical capacity, which in turn is expected to improve daily functioning. Although the effectiveness of exercise is supported by many studies, effect sizes of quality of life outcomes are often small to moderate [8]. Because of the distinction between physical capacity and functional performance, improving daily activities may require more than only physical rehabilitation. Instead, or in addition, behavioral changes, adaptations of the physical environment, and support for the social environment may be necessary to bridge the gap between capacity and performance, or to improve adaptation to irreversible physical impairments.

Such interventions are within the domain of occupational therapy (OT). Yet, several studies reported underutilized occupational services in supportive oncology care [4]. This underutilization may be related, in part, to lack of awareness among caregivers and patients of what OT is and how it can contribute to improve daily functioning and quality of life after cancer treatment.

Therefore, the goal of this paper is to explain why and how OT can contribute to cancer rehabilitation, and to discuss the available evidence in this context.

### 1. OT explained

OT is a person-centered health intervention concerning health and wellbeing through occupation. The primary goal is to enable people to participate in the activities of daily life. Occupational therapists achieve this outcome by working with people to enhance their ability to engage in the activities they want to, need to, or are expected to do, by improving their physical capacity, or by modifying the activity or the environment to better support their occupational engagement [9]. OT integrates the biomedical with the psychosocial model. It is a so-called translational profession; it translates medical diagnoses, and treatment expectations into consequences for the everyday life [10]. Clinical reasoning of occupational therapists is called a two-body practice. The first focus is the functional problem that falls within the biomedical context. The second focus is the everyday life: illness does not just affect the body and mind but interrupts people's whole life [11]. In the context of cancer care, OT is among the supportive care services and provides assessment, intervention, and support during, between, and after active treatment, as well as care at end of life [12]. The skills of occupational therapists are well suited to support people with cancer throughout the disease continuum [12], by minimizing barriers and maximizing the ability for satisfying occupational performance [4].

The impact of cancer and its treatment on daily functioning is determined to a large extent by biomedical factors, such as anatomical localization and stage of the disease, treatment modalities used, and resulting symptoms and impairments in

physical functions. However, on an individual level, the impact of these biomedical factors is mediated by environmental and personal factors [7]. The person-centered approach taken in OT recognizes that the same impairments may have very different impact on quality of life in different patients, dependent on these factors. During OT treatment, the therapist aims to influence those factors that are most likely to improve occupational performance and meaningful activities in daily life, be they physical, behavioral, or contextual. In the context of multidisciplinary rehabilitation, the added value of occupational therapists lies specifically in the way they can empower patients to translate their increased capacity to better (occupational) performance, and in their expertise on how adaptations to the physical environment can improve performance even when increased capacity is unattainable or insufficient. As an example of the OT approach, consider a patient who has problems returning to work after breast cancer treatment, due to fatigue and lymphedema in the arm. OT for this patient could include energy conservation techniques to better cope with cancer related fatigue both at work and in the home situation, while at the same time providing on-site guidance on ergonomic performance of daily activities which involve the affected arm, including ergonomic alterations to the chair to better support the arm.

## 2. OT in cancer rehabilitation; the evidence reviewed

Besides lack of awareness among patients and health care professionals of the possible benefits of OT, the scarcity of studies supporting its effectiveness in cancer care may also contribute to its underutilization in this population. Some evidence supports the positive effects of multidisciplinary rehabilitation, including OT, on quality of life of cancer survivors [13]. However, isolating the effects of OT in the context of multidisciplinary interventions is, of course, impossible.

In a recent systematic review on physical activity and symptom management interventions, Hunter et al. included a total of 138 studies of interventions that they judged to be within the scope of OT, many of which showed positive effects on quality of life and symptom burden [14]. However, the vast majority of the included studies did not actually concern interventions delivered by an OT, and few studies included outcome measures explicitly capturing occupational performance or activities of daily living. While this review shows the lack of robust direct evidence supporting the OT approach, it does provide an evidence base for interventions as employed in the context of OT. At the same time, the review illustrates the preoccupation with symptom control and improvement of physical function that characterizes the research on cancer rehabilitation to date. Although we do not dispute the importance of these targets for cancer rehabilitation, we do point out that generic exercise interventions lack specificity for improving activities of daily life [15]. This is where OT could be of additional value [5], as a single intervention, or in the context of multidisciplinary cancer rehabilitation.

Summarizing, OT contributes a unique focus to cancer rehabilitation, which goes beyond physical function, to address activity and participation needs of cancer survivors. Although robust evidence specifically supporting the

effectiveness of the OT approach is currently lacking, OT practitioners working with this target group do have some evidence to support their choice of interventions for achieving intermediate outcomes related to activities of daily life. We would therefore encourage clinicians to consider occupational therapy as an intervention for patients who have supportive care needs, which are clearly related to everyday functioning.

Meanwhile, more research is needed to explicitly evaluate the effectiveness of occupational therapy for improving activities of daily living and quality of life for cancer patients and survivors.

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