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Contemporary Clinical Trials Communications

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Exercise therapy in medical rehabilitation: Study protocol of a national survey at facility and practitioner level with a mixed method design



Wolfgang Geidl^{a,*}, Judith Deprins^b, René Streber^a, Nina Rohrbach^a, Gorden Sudeck^b, Klaus Pfeifer^a

ARTICLE INFO

Keywords: Physical activity Health services Chronic disease Therapy concept Therapy process

ABSTRACT

Background: The importance of physical activity and the orientation of exercise therapy in rehabilitation has changed for many chronic health conditions. Exercise therapy is the most applied therapy form within multi-disciplinary rehabilitation programs for almost all chronic health conditions. Despite the scientifically discussed need to refine exercise therapy, there is relatively little knowledge of how exercise therapy is actually conducted. This study protocol describes the methodological procedure used in the project "Exercise therapy in medical rehabilitation: a survey at facility and practitioner level", which aims to take a national survey of exercise therapy in rehabilitation practice in Germany.

Methods: The project was implemented using an explanatory sequential mixed method design. Quantitative and qualitative methods were integrated in two consecutive project phases. Phase 1 used a standardized, quantitative written survey of the heads of exercise therapy departments to compile a national overview of concepts and process features of exercise therapy of individual rehabilitation facilities. Phase 2 recorded individual perspectives and opinions concerning exercise therapy goals, content and methods and current developments in the rehabilitation context (e.g., physical activity promotion, interdisciplinarity, standardization) of exercise therapy practitioners. Over the course of two one-and-a-half day workshops, central themes were introduced and prepared with standardized written individual surveys from Phase 1 and combined with qualitative surveys using facilitated group discussions (focus groups in mixed methods design).

Discussion: The project generates a comprehensive picture of exercise therapy in medical rehabilitation at facility level and inserts further information at the practitioner level into this context. The chosen methodology of a mixed method design combines the perspective of the facility with that of the practitioner, thus allowing for a complex and multifaceted description of the status quo in exercise therapy practice and makes it possible to identify facilitators and barriers for the refinement of exercise therapy in specific everyday rehabilitation. These findings form the basis for the systematic development of quality exercise therapy in rehabilitation, in particular in terms of the refinement, implementation and dissemination of biopsychosocial concepts of exercise therapy.

1. Background

The project "Exercise therapy in medical rehabilitation: a survey at facility and practitioner level" aims to take a national survey of exercise therapy in rehabilitation practice in Germany. The focus is on a) concepts and process features in rehabilitation facilities and b) individual perspectives and opinions concerning exercise therapy goals, content and methods and current developments in the rehabilitation context of

exercise therapy practitioners. This study protocol contains a detailed description of the methodology of explanatory sequential mixed method design [1,2].

The importance of physical activity and orientation of exercise therapy in rehabilitation has changed for many chronic health conditions: *Firstly*, the increasing lack of exercise in the general public has been identified as an independent risk factor in the emergence and development of chronic non-communicable diseases [3]. *Secondly*,

^a Department of Sport Science and Sport, Division Exercise and Health, Friedrich-Alexander University Erlangen-Nürnberg (FAU), Germany

b Institute of Sport Science, Department Education and Health Research, Eberhard Karls University Tuebingen, Germany

List of abbreviations: DGRW, Deutsche Gesellschaft für Rehabilitationswissenschaft (German association for rehabilitation science); DRV, Deutsche Rentenversicherung Bund (Germany Statutory Pension Insurance Scheme); ICF, International Classification of Functioning, Disability and Health; KTL, Klassifikation therapeutischer Leistungen (classification of therapeutic services system)

^{*} Corresponding author. Department of Sport Science and Sport (DSS), Friedrich-Alexander University Erlangen-Nürnberg (FAU), Gebbertstrasse 123b, 91058 Erlangen, Germany. E-mail addresses: wolfgang.geidl@fau.de (W. Geidl), Judith.deprins@uni-tuebingen.de (J. Deprins), rene.streber@fau.de (R. Streber), nina.rohrbach@tum.de (N. Rohrbach), gorden.sudeck@uni-tuebingen.de (G. Sudeck), klaus.pfeifer@fau.de (K. Pfeifer).

there is now strong evidence for the positive effects of physical activity in the rehabilitation of chronic diseases [4,5]. *Thirdly,* exercise therapy has become the most commonly applied form of therapy for almost all chronic health conditions within multidisciplinary rehabilitation programs in Germany [6]. *Further,* the objectives of exercise therapy have advanced and become more differentiated. An extensive system of biopsychosocial objectives of the exercise therapy working group of Deutsche Gesellschaft für Rehabilitationswissenschaft (German association for rehabilitation science; DGRW) [7] includes traditional biomedical objectives (e.g., regaining physical functioning) but also pedagogical psychological aspects. *Finally,* among other goals, committing to increasing physical activity is of central importance [7–9], as changes in favor of a physically active lifestyle often fail [10] and the prevalence of physical inactivity among people with chronic diseases is high [11–14].

Contemporary exercise therapy concepts and processes address, above all else, empowering persons to adopt and maintain physically active lifestyles starting after medical rehabilitation and to use physical activity and exercise to enhance health resources and to manage illness. This implies the need for the refinement of traditionally dominant (body) function-oriented training approaches towards elaborate biopsychosocial therapy concepts [15–17].

1.1. Status of research

In scientific works in the fields of physical therapy [18,19] and exercise therapy [7] there is more and more emphasis on a biopsychosocial approach aligned with the International Classification of Functioning, Disability and Health (ICF) [20]. This is linked to an increased interest in psychosocial and behavioral goals of exercise therapy as a whole. Further, there is also an emphasis on the goal of positively influencing the physical activity behaviour over the long term and systematically developing corresponding content and methods [21]. In Germany, the DGRW exercise therapy working group recently – based on the projects funded by Germany's Statutory Pension Insurance Scheme (Deutsche Rentenversicherung Bund; DRV) ¹ – prepared evidence-based recommendations for exercise therapy with the goal of encouraging patients to adopt a physically active lifestyle [9,22,23].

However, international studies show that interventional models with a biomedical focus and a primary goal of increasing physical fitness continue to be commonplace. Physical therapy and exercise therapy-related research [18,24], the education for physical and exercise therapy professions [25,26], along with the targets and actions of the therapy staff [27–29] all focus on the (short-term) improvement of physical functioning. Correspondingly, various studies show that exercise therapy content working towards behavioral and psychosocial goals in a targeted manner are seldom used and that many exercise therapy practitioners are also unaware of such content [17,30,31].

Despite the scientifically discussed need to refine exercise therapy, there is relatively little knowledge of how exercise therapy is actually implemented in German rehabilitation practice regarding content, methods and didactic-methodological use. As far as representative information on the provision of exercise therapy is concerned, at a national level there are "only" the current quality assurance tools and the related documentation practice of the DRV, which do not provide deep understanding of the mentioned aspects.

To date there has not been a systematic survey of Germany-wide exercise therapy practice within medical rehabilitation that could provide insights into the concepts and process features. In addition, there is only a rudimentary knowledge of how individual perspectives are catered for in terms of goals, content and methods of exercise

therapy practitioners [32] and how these perspectives (can) inform therapeutic action within the framework conditions of a specific rehabilitation facility.

1.2. Questions and aims of the study

As a result, the *first* question asks how exercise therapy concepts and processes are actually implemented in individual rehabilitation facilities across Germany as they constitute the basis for refinement of existing concepts. The *second* key question asks which individual perspectives do physical and exercise therapists have concerning exercise therapy goals, content and methods as it is the therapists who ultimately structure and "live with" potential change processes and refinements in the rehabilitation facility. The survey aimed to include therapists (e.g., physical, exercise therapist) who are responsible for the implementation of physical activity, exercise or physical training as therapy content as described in the German classification system of therapeutic services (Klassifikation therapeutischer Leistungen; KTL). This standardized classification system by the DRV must be used in rehabilitation facilities to document the therapeutic services provided.

In addition to the therapeutic services listed in the areas A "Sport and exercise therapy" and B "Physical therapy", it lists information and training (C), clinical social work and social therapy (D), ergotherapy (E). In this respect, we have decided to hereinafter refer to as exercise therapist or in terms of the therapy form as exercise therapy.

The project was implemented in two consecutive phases as follows (Table 1): Phase 1 involved a quantitative Germany-wide baseline survey of exercise therapy concepts (Topic A1) and of process features in exercise therapy (Topic A2) at the level of individual rehabilitation facilities.

Topic A1 addresses concepts of exercise therapy practice in rehabilitation facilities:

- What characteristics do exercise therapy concepts and processes have in rehabilitation practice in relation to target groups, goals, content and methods?
- What problems are seen amongst rehabilitation patients and how is exercise therapy seen to be capable of influencing these problems?
- What written exercise therapy concepts are available in rehabilitation facilities?
- How do exercise therapy concepts differ for different health conditions?

Topic A2 relates to process features of exercise therapy in rehabilitation facilities:

- How is the planning and control of exercise therapy carried out? What assessment methods are used in relation to the allocation and control of exercise therapy, and what information is passed on by other professionals in the interdisciplinary rehabilitation team to the exercise therapy team?
- What organizational forms exist in the provision of exercise therapy (individual therapy versus groups), what is the global content gearing (practice, theory, linking theory and practice) and how high is the respective level of standardization of exercise therapy interventions?
- How significant is content to promote a physically active lifestyle considered to be, and how are measures for long-term promotion of physical activity implemented methodologically and didactically? For example, how is information on the health effects of physical activity disseminated (presentation, group discussions, one-to-one discussions, integrated in practice) and are media aids (therapist and participant materials) used for this purpose?
- In view of the multiple objectives and the implementation of rehabilitation measures in multi-professional rehabilitation teams, how is the collaboration within exercise therapy teams and inter-

 $^{^1}$ Project to develop evidence-based concepts for exercise therapy in rehabilitation, see http://forschung.deutsche-rentenversicherung.de/ForschPortalWeb/contentAction.do?key = main_reha_ep_bewegung.

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