

Behavioural exercise therapy for the optimisation of a multi-disciplinary rehabilitation for chronic non-specific low back pain

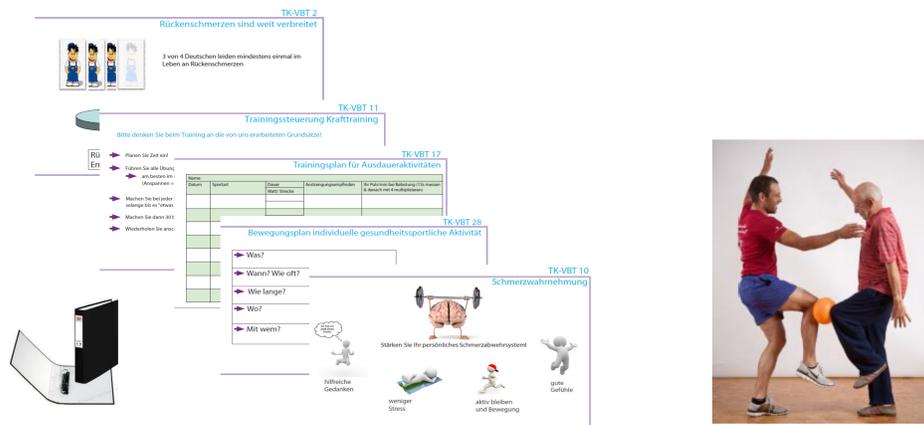
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BACKGROUND & OBJECTIVES

Standard exercise therapy (SET) is a central cornerstone within a German inpatient multidisciplinary rehabilitation called “behavioural medical rehabilitation” (BMR). There is a need to address psychosocial factors within SET and therefore to improve behaviour change with a focus on the development of self-management skills in dealing with clbp and to improve adherence to physical activity [1,2,3,4]. The effectiveness of such a behavioural exercise therapy (BET) within BMR has yet to be evaluated [5]. Accordingly, the major aim of this study is to compare the effectiveness of two different approaches of exercise therapy (SET and BET) within BMR on the effects of the BMR as a whole in two rehabilitation centres by conducting a prospective randomized controlled trial (RCT).

KEY ASPECTS BET- INTERVENTION (Intervention group)

- 15 sessions in closed groups (duration of 60 minutes each)
- Additional BET related modules (duration of 20-60 minutes each)
- Mean duration of 26 hours over three weeks
- Multidimensional aims
- Use of behavioural techniques for behaviour change to improve adherence to physical activity (see table 1)
- Detailed trainer manual
- Media, cards with a challenging character for therapists and patients



PARTICIPANTS

214 participants with chronic non-specific low back pain (ICD-10 M54.4-M54.9; M51.2-M51.9; M53.8-M53.9; F.45.4, F.45.41; F54; R.52.2).

OUTCOMES

Primary:

- Functional ability assessed with the Hannover Functional Ability Questionnaire directly before and after the rehabilitation program, as well as at a six and twelve-month follow-up

Secondary:

- Pain-related cognitions, pain coping strategies, back pain, physical activity, health related quality of life

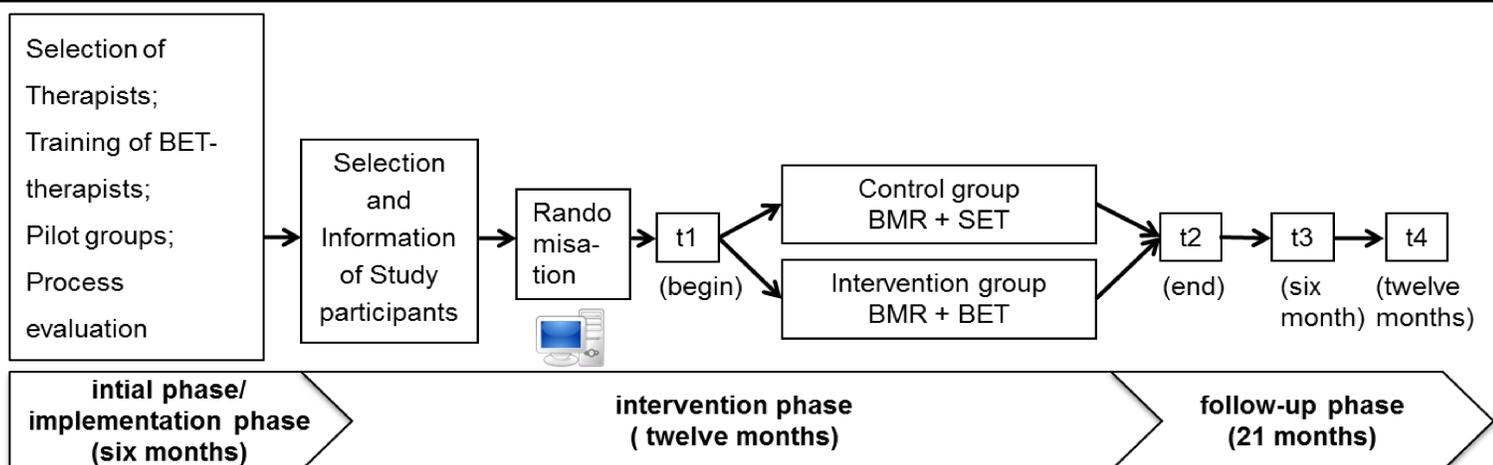
Table 1: Examples of the 23 behaviour change techniques used within BET

Motivational behavioural techniques	Determinants
Creation of broad variety of movement experiences	Self-efficacy, self-concordance
Information about consequences of physical (in-)activity	Risk perception, knowledge, outcome expectations
Appropriate level of difficulty of exercise programs	Self-efficacy
Provide feedback about the current exercise performance	Self-efficacy, outcome experiences and outcome expectations
Use of attention instructions/perception guidance	Self-efficacy, outcome experiences and outcome expectations
Mood management	outcome experiences, outcome expectations
Monitor changes of physical functioning	Self-efficacy, outcome experiences and outcome expectations
Volitional behavioural techniques	Determinants
Information about possibilities to stay active at home	Knowledge, action planning
Development of action plans	Action planning
Identify barriers	Coping planning
Preparation of coping strategies	Coping planning
Instruction and use of self-monitoring	Action control

KEY ASPECTS OF STANDARD EXERCISE THERAPY (Control group)

- Closed group
- Mean duration of 26 hours in three weeks
- Mainly biomedical approach
- Strengthening, stabilising, coordination, flexibility exercises, weight-lifting, endurance exercises (e. g. walking)
- Partly manualised

STUDY DESIGN



EXPECTED RESULTS

- Improved long-term effectiveness of BMR
- Development of „tools“ (methods and media for physical therapists and participants)
- Improved quality of BET within routine rehabilitation care
- Development of biopsychosocial curricula for the (continuing) education of physical therapists

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