Title: **Multimodal pain rehabilitation (MMR) with additional tailored web-based pain rehabilitation program, an RCT-study in the north of Sweden.**

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Design: The study design is a randomized controlled trial (RCT) within 18 primary health care centers in the north of Sweden. The interventions provided are 1) multimodal pain rehabilitation and access to a web-based pain rehabilitation program or 2) multimodal pain rehabilitation.

Aim: The aim is to evaluate the effects of the web-based pain rehabilitation program on perceived workability, health and well-being, pain and function in the musculoskeletal system, self-efficacy and coping with pain, satisfaction and perceived usability with the web-based support system and resource utilization in the primary health care system.

Metod:

Participants: So far 95 patients have been included in the study, 65 patients have completed the 4-month follow-up and 25 the 12 month follow-up, and we will continue inclusion until the power criteria is met. Inclusion criteria for participation are: patients with persistent or recurrent pain from the musculoskeletal system, aged 18-63 years, scoring ≥ 90 on Linton´s questionnaire, actively working or in disposition to work. The patients also had to be fluent in the Swedish language and in deposition of internet attached computer at home.

Procedure: The study is carried out at 18 primary health care centers certified for MMR in North Bothnia. The health care centers use multimodal pain rehabilitation (MMR) with a cognitive approach in accordance with the national guidelines for treatment of patients with persistent pain. The MMR at health care centers have a psychosocial perspective based on cognitive behavior principles. The inclusion of participants is performed by a rehabilitation coordinator at each primary health care center. After inclusion, the participants are randomly allocated to either MMR with web-based program (MMR-WEB) or MMR.

Intervention: The web-based program is based on CBT-principles, initially established by Livanda then further developed within the project. The web-program consists of eight modules comprising; pain mechanism, activity balance and health, physical activity and ergonomics, emotions, thoughts and behavior, stress, self-esteem, sleep, communication and conflicts, problem solving and planning for the future. The web-program includes informative texts, interactive media with questions for reflection. In addition, exercises to perform and instructional videos concerning for example ergonomics and relaxation exercises are included in the program. The aim of the web-based program is to increase each patient's knowledge, understanding and self-management of pain, body functioning, life and work situation to provide increased health and work-ability.

Analyses. The main outcome measure is perceived workability (WAI) and the following variables are measured: health-related quality of life (SF-36), pain (PDI, EQ-VAS), self-efficacy in relation to pain and symptoms and coping with pain. Satisfaction and perceived usability with the web-based support system and resource utilization in the primary health care system ware also studied. Repeated measures ANOVA will be used to evaluate the effect of the intervention over time and between groups.

Results: At the 4-months follow-up there were improvements within each group compared to baseline in most of the variables studied. Between-group comparisons showed tendencies for greater improvements for the MMR-WEB group compared to the MMR group in the variables studied, but no significant differences. There were tendencies for improvement for the MMR-WEB group in return to work self-efficacy and EQ-VAS-health also in perceived work ability, pain disability levels (PDI), pain intensity and self-efficacy in handing pain. The baseline values in work ability were low for both groups. We do not have full power yet and are including patients in the program until the end of 2014.

Conclusion: A follow-up after 4 months showed tendencies for better results for the MMR-WEB group. The study is on-going and a one-year follow up will be performed.