Multidisciplinary Approach to Fibromyalgia
A Pilot Study

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Summary
The aim of the study was to instruct a group of fibromyalgia patients how to solve problems related to activities of daily life. Sixteen female fibromyalgia patients completed a ten week multidisciplinary program, consisting of a cognitive and an exercise part. After ten weeks a reduction in general pain intensity (p < 0.05) was found. At six months follow-up sensory (somatic) pain intensity was reduced compared to baseline recordings (p=0.05). All patients had made adjustments to their everyday life after ten weeks. Eight patients reported that they regularly practised relaxation techniques, and seven patients had undertaken dietary changes. Thus, the study shows that adjustment of activities in daily living may reduce pain in patients with fibromyalgia. Controlled studies are needed in the future.

Key words
Fibromyalgia, Pain, Fatigue, Health Education, Activities of Daily Living.

INTRODUCTION
Fibromyalgia is a chronic pain condition characterized by musculoskeletal pain, fatigue and sleep problems of unknown aetiology (1-3). About three to five percent of the total population of Norway suffer from fibromyalgia (4).

The disability level of fibromyalgia patients is reported to be comparable to that of rheumatoid arthritis patients (5). Problems with activities of daily life (6), impaired ability to work (7, 8) and reduced physical capacity (9-11) have been reported among fibromyalgia patients. Other studies have revealed depression (12,13), high levels of stress (14) and reduced quality of life (15). Whereas physical fitness training (16,17) provided moderate pain reduction, EMG-biofeedback (18) and hypnotherapy (19) showed more pronounced pain reduction.

As the problems in fibromyalgia are multidimensional, several authors suggest a multidisciplinary approach to the care of fibromyalgia patients (20-23). Individuals with chronic diseases experience reduced personal control over their situation. Increased control may be achieved by utilizing active coping skills (24). Active coping skills (25) might be problem-focused (directed at solving or relieving a problem) or emotion-focused (directed to manage negative emotions associated with stress).

Gastrointestinal problems (26) and irritable bowel syndrome (27) are commonly reported among fibromyalgia patients. In this patient group, pain and swelling have been reported to be aggravated by the intake of certain food items (28).

The aim of the present study was to instruct a group of fibromyalgia patients how to solve problems related to activities of daily life.

MATERIAL AND METHODS
Patients
Among patients visiting the rheumatological outpatient clinic during the last six months, twenty-two patients with fibromyalgia were invited by mail to join the study. Ten patients were included. In addition six patients were recruited consecutively from the outpatient clinic. Before entering the study all patients were reexamined by a physician (KOF). Every patient (n=16) fulfilled the ACR-criteria for fibromyalgia (29). The mean age (range) of the patients was 46 (34-58) years and the duration of symptoms 14.5 (4-40) years. Fourteen patients were married. Five patients had a full or a part time job. All had previously been employed, but eleven received sick-leave or disability pension at the time of inclusion. The study consisted of a pretest at baseline and
a posttest after performing the program, as well as a follow-up test six months later.

The multidisciplinary program

Two groups, each including eight patients, met once a week for two hours during a period of ten weeks. The classes were instructed by a physician, a dietician and two physiotherapists. Two instructors were present each time. Each meeting consisted of two parts.

The cognitive part

- General information was presented by the instructors and addressed knowledge about fibromyalgia and its consequences for everyday life. Adjustments for daily life were proposed. The patients made a four-day food record, and the nutrient intake was calculated by the results of Norwegian Food Composition Table. According to the food records, the dietician informed about good food habits and suggested dietary improvements such as: intake of four regular meals a day, increased intake of fruits and vegetables, increased intake of fluid and reduced intake of sweets and sugar.
- Group discussions addressed problems related to activities of daily life. The topics discussed were behavioral goal setting, problem solving strategies, adjustment of activities of daily living, balance between activity and resting periods, as well as dietary changes.

The exercise part

- The patients practised progressive (30) and autogenic (31) relaxation techniques.
- Exercise was performed in order to experience alternative patterns of movement aimed at awareness and reduction of muscle tone during daily activities (body awareness exercise).
- Exercise was introduced to strengthen the back and the abdominal muscles, as well as to stretch the neck muscles.

Assessments

Adjustments of daily life

The patients answered a questionnaire concerning the content of the program, and the kind of adjustments of daily life they performed after ten weeks.

Fatigue and pain

Sleep problems, fatigue and pain intensities were recorded on 100 mm visual analogue scales (32). Zero mm was the best score, and 100 mm was the worst possible score. Pain was also recorded by the multidimensional McGill Pain Questionnaire (MPQ) (33) that has been validated in a Norwegian version (34). The method presupposes that there are two distinct aspects of pain: the sensory (somatic) - MPQ-PRIS, and the affective (emotional) - MPQ-PRIA, and that these aspects can be recorded by descriptive words numbered according to their intensity levels. In addition the evaluative pain intensity, MPQ-PRIE, and the number of pain words chosen, MPQ-NWCH, were recorded. The total pain intensity, MPQ-PRIT, corresponds to the sum of the sensory, affective and evaluative pain intensities.

Statistics

The distribution of the results are given as mean ± standard deviation (SD). After completing the program (week 10) and again six months later (week 34) the results were compared with the baseline values (week 0). Within group, differences were analyzed with Wilcoxon Matched Paired Sign Rank Test. Two-tailed tests were applied. Values equal to or less than 5% were considered as statistically significant.

RESULTS

All patients completed the program. Sixteen patients answered the questionnaires at week 0 and week 10. Thirteen patients answered the questionnaires after 34 weeks and met for a follow-up meeting. Three patients did not complete the questionnaires at this time. These patients showed improvements for all variables after ten weeks. However, according to the principle of the intention to treat, their baseline recordings were used in the calculation at 34 weeks.

Adjustments of daily life

Thirteen patients reported definite benefit from following the program, two reported partial benefit, and one did not respond. About 80% of the patients evaluated the different components of the program to be of benefit/great benefit. All patients had made specific adjustments in their daily life. Five patients reported one and seven patients two specific adjustments. Eight patients practised relaxation techniques, and seven patients had undertaken dietary changes (Table I).

Fatigue and pain symptoms

After ten weeks there were statistically significant reductions in pain intensity scores measured with VAS (p=0.02) and total pain score, MPQ-PRIT, (p=0.05), as