

## SHORT COMMUNICATION

## COMPARISON OF SELF-MANAGEMENT METHODS FOR OSTEOARTHRITIS AND RHEUMATOID ARTHRITIS

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**Objective:** To determine and compare self-management methods used for osteoarthritis and rheumatoid arthritis and to determine which methods patients consider most effective.

**Methods:** Patients with osteoarthritis and rheumatoid arthritis were questioned about self-management methods and asked to indicate the most effective ones.

**Results:** Twenty-seven patients with osteoarthritis and 26 with rheumatoid arthritis were interviewed. Exercise, joint protection, assistive devices and heat were the methods most commonly used. More patients with osteoarthritis than with rheumatoid arthritis used assistive devices ( $p = 0.042$ ). Exercise, assistive devices and heat were considered the most effective self-management methods. More patients with osteoarthritis than with rheumatoid arthritis considered assistive devices to be the most effective method ( $p = 0.016$ ).

**Conclusion:** More patients with osteoarthritis than with rheumatoid arthritis used and indicated assistive devices as the most effective self-management method. Similar numbers of patients in both groups used other self-management methods.

**Key words:** exercise, assistive devices, joint protection.

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## INTRODUCTION

People with osteoarthritis (OA) and rheumatoid arthritis (RA) are recommended to use a wide variety of self-management methods to reduce pain and inflammation, the risk of deformities developing and to maintain or improve grip strength and hand function (1–5). Studies have shown that exercise is used by 13–65% of patients with OA, heat by 23–40% and joint protection by 2–25% (6, 7). The use of self-management methods also relies on the patient's belief in the benefit of the methods and on their compliance, which can be facilitated through the use of educational-behavioural strategies (1, 8–11).

Although there is a good deal of research into the frequency of self-management practice among people with arthritis, there is little information on the efficacy of many of these strategies (12, 13). This study was carried out to determine and compare self-management methods used by patients with OA and RA and to define which methods patients consider the most effective.

## METHODS

Fifty-three consecutive patients with OA or RA attended the Centre of Gerontology and Rehabilitation for a rehabilitation course in 2002–03. Twenty-seven patients with OA (24 women and 3 men) and 26 with RA (22 women and 4 men) were interviewed within the first 2 days of rehabilitation. The subjects included in the study fulfilled the following inclusion criteria: (i) OA of the hip or knee or RA according to the American Rheumatism Association criteria, functional class II or III (14–16); and (ii) age in the range 40–80 years. Exclusion criteria were: (i) other arthritic disorder in addition to OA or RA; (ii) presence of 1 or more arthroplasties of weight-bearing joints; (iii) patients after stroke, amputation and fracture of femur. The study was approved by the medical ethics committee.

The average age in the OA group was 72.3 years (SD 6.79 years) and in the RA group 66.3 years (SD 9.47 years). The average disease duration was 14.1 years (SD 9.04 years) and 13.9 years (SD 4.8 years), respectively. Mean pain score was 5.82 (SD 1.82) in the OA and 6.04 (SD 1.43) in the RA group. Fifteen (45.6%) patients with OA and 21 (80.8%) with RA had experienced rehabilitation before the study. The patients were asked questions about self-management methods that they had used regularly for the last month. Seven methods were identified from the literature review as commonly prescribed or recommended by health professionals to people with arthritis (8, 17). The selected self-management methods were: exercise (home exercise programmes recommended by a physiotherapist or learnt from an arthritis book or booklet), rest, hand joint protection (altering how the hands are moved during daily activities to reduce strain), heat, cold, assistive devices (cane, crutches or walker) and splints (hand, knee or ankle). Definitions of the self-management methods were presented along with yes/no questions about use of the methods. The respondents were also asked to indicate the most effective methods they had considered (from 1 to 3 methods). A pilot test was performed with 15 patients with OA and 15 with RA. No question was perceived to be difficult or unclear.

## Statistics

Statistical analysis was carried out with the Statistical Package for Social Sciences (SPSS). The results were expressed as average, SD or percentage. For all statistical tests, a probability level of 0.05 was taken as significant. The number of self-management methods used and their correlation with age, disease duration and pain were estimated using the Spearman rank correlation.

## RESULTS

Twenty-three (85.2%) subjects with OA and 21 (80.8%) with RA used  $\geq 1$  self-management methods simultaneously. The average number of methods used was 2.17 (SD 1.65) in the OA group and 1.89 (SD 1.36) in the RA group ( $p = 0.504$ ). Subjects with OA used at most 6 and at least 0 methods and subjects with RA used at most 4 and at least 0 methods. Four (14.8%) patients with OA and 5 (19.2%) with RA did not use any self-management methods ( $p = 0.614$ ). There was no significant correlation between the number of self-management methods used and age ( $r = 0.248$ ,  $p = 0.212$  in OA;  $r = 0.280$ ,  $p = 0.166$  in RA), disease duration ( $r = 0.224$ ,  $p = 0.356$  in OA;  $r = 0.261$ ,  $p = 0.741$  in RA) or pain ( $r = 0.224$ ,  $p = 0.272$  in OA;  $r = 0.261$ ,  $p = 0.179$  in RA) in both groups.

Exercise, joint protection, assistive devices and heat were the most commonly used methods in both groups. More subjects with OA than with RA used assistive devices ( $p = 0.042$ ). Less than half of participants in both groups used rest, cold and splints. Subjects with OA indicated exercise (55.7%) and assistive devices (29.6%) as the most effective self-management methods and subjects with RA indicated exercise (38.5%) and heat (34.6%). There is a significant difference between the number of assistive devices indicated as the most effective self-management method between both groups ( $p = 0.016$ ). The data for self-management methods used and the methods considered most effective are shown in Table I.

## DISCUSSION

Assistive devices were used more often by patients with OA than by those with RA ( $p < 0.05$ ). The large difference between groups occurs because we did not include assistive devices for the upper extremities (e.g. reacher, tin opener and others) in our study because these assistive devices are not often used with patients with RA in Lithuania (unlike their use in Sweden) (18).

Exercise and joint protection were the next most commonly used methods in both groups, with a similar number of patients citing these methods. According to Hammond's research (8), patients with RA prefer assistive devices and rest to other self-management methods. The research has also highlighted dis-

crepancies between differences in the methods used and the ones indicated by patients to be most effective. One of the reasons for this may be that some self-management methods did not live up to the patients' hopes of achieving a rapid and significant decrease in disease symptoms. In addition, joint protection and exercise require greater skills in order to be carried out correctly (8). It is also possible that some of the patients indicated some self-management methods as the most effective, but in fact did not use them.

Similar numbers of patients in both groups stated that they did not use any self-management methods at home. Keefe et al. (4) found that about 44% of patients with OA and RA are in a pre-contemplative stage in which they are not yet thinking of adopting a self-management approach to their disease and view medical treatment as the only effective way of managing their disease. Such patients appear to lack motivation to use self-management methods.

Our results have shown that assistive devices were used more, and were indicated as the most effective self-management method more, by patients with OA than with RA, although both diseases damage weight-bearing joints. Despite the fact that more disability is caused by RA than OA, a similar number of patients in both groups used other self-management methods.

## REFERENCES

1. Alderson M, Starr L, Goq S, Moreland J. The program for rheumatic independent self-management: a pilot evaluation. *Clin Rheumatol* 1999; 18: 283–292.
2. Hammond A, Freeman K. One-year outcomes of a randomized controlled trial of an educational-behavioural joint protection programme for people with rheumatoid arthritis. *Rheumatology* 2001; 40: 1044–1051.
3. Stamm TA, Machold KP, Smolen JS, Fischer S, Redlich K, Graninger W, et al. Joint protection and home hand exercises improve hand function in patients with hand osteoarthritis: a randomized controlled trial. *Arthritis Rheum* 2002; 47: 44–49.
4. Keefe FJ, Lefebvre JC, Kerns RD, Rosenberg R, Beaupre P, Prochaska J, et al. Understanding the adoption of arthritis self-management: stages of change profiles among arthritis patients. *Pain* 2000; 87: 303–313.
5. American College of Rheumatology Ad Hoc Committee on Clinical guidelines. Guidelines for the management of rheumatoid arthritis. *Arthritis Rheum* 1996; 39: 713–722.
6. Conn VS. Joint self-care by older adults. *Rehab Nursing* 1990; 15: 182–186.
7. Hampson SF, Glasgow RG, Zeiss AM, Birskech SF, Foster I, Lines A. Self-management of osteoarthritis. *Arthritis Care Res* 1993; 6: 17–22.
8. Hammond A. The use of self-management strategies by people with rheumatoid arthritis. *Clin Rehabil* 1998; 12: 81–87.
9. Hammond A, Lincoln N, Sutcliffe L. A crossover trial evaluating an educational-behavioural joint protection programme for people with rheumatoid arthritis. *Patient Educ Couns* 1999; 37: 19–32.
10. Sluijs EM, Knibbe JJ. Patient compliance with exercises: different theoretical approaches to short-term compliance. *Patient Educ Couns* 1991; 17: 191–204.
11. Owen SG, Friesen WT, Roberts MS, Flux W. Determinants of compliance in rheumatoid arthritis patients assessed in their home environment. *Br J Rheumatol* 1985; 24: 313–320.
12. Keysor JJ, Currey SS, Callahan LF. Behavioural aspects of arthritis

Table I. Comparison of self-management methods used and indicated as the most effective in patients with osteoarthritis (OA) and rheumatoid arthritis (RA)

Self-management methods	Methods used by patients			Methods indicated as the most effective		
	OA	RA	<i>p</i>	OA	RA	<i>p</i>
Assistive devices	16	8	0.0422	8	1	0.0161
Exercise	12	10	0.665	15	10	0.341
Joint protection	11	14	0.340	1	1	0.977
Heat	9	13	0.135	7	9	0.493
Rest	3	2	0.674	1	2	0.532
Splints	3	1	0.318	1	2	0.978
Cold	2	1	0.585	0	0	–

- and rheumatic disease self-management. *Dis Manage Health Outcomes* 2001; 9: 89–98.
13. Newman S, Mulligan K, Steed L. What is meant by self-management and how can its efficacy be established? *Rheumatology* 2001; 40: 1–6.
  14. Arnett FC, Edworthy SM, Block DA, McShane DJ, Fries JF, Cooper NS, et al. The American Rheumatism Association 1987 revised criteria for the classification of rheumatoid arthritis. *Arthritis Rheum* 1988; 31: 315–323.
  15. Altman R, Alarcon G, Appelrouth D, Bloch D, Borenstein D, Brandt K, et al. The American College of Rheumatology criteria for the classification and reporting of osteoarthritis of the hip. *Arthritis Rheum* 1991; 34: 505–514.
  16. Altman R, Asch E, Bloch D, Bole G, Borenstein D, Brandt K, et al. Development of criteria for the classification and reporting of osteoarthritis: classification of osteoarthritis of the knee. *Arthritis Rheum* 1986; 29: 1039–1149.
  17. O’Sullivan SB, Schmitz TJ. Arthritis. In: O’Sullivan SB, Schmitz TJ, eds. *Physical rehabilitation: assessment and treatment*. Fourth edition. F.A. Davis Company, Philadelphia; 2001, p. 679–715.
  18. Nordenskiold U. Evaluation of assistive devices after a course in joint protection. *Int J Technol Assess Health Care* 1994; 10: 293–304.