Case
Mrs. Peacock is a 65-year old woman with rheumatoid arthritis. She was diagnosed 5 years ago, but has recently been referred to your private hand therapy clinic due to an increase in symptoms impacting her engagement in occupation. She enjoys cooking and knitting, but is experiencing pain and stiffness that is preventing her from using her hands. You know there are many different strategies for addressing the symptoms of rheumatoid arthritis, but you want to provide her the best occupation-based intervention available for improving functioning. You have heard that joint protection techniques often help, but you want to make sure there is enough research to support this intervention.

What is the effect of education in joint protection techniques for adults with rheumatoid arthritis?

This CAT examines the impact of joint protection education delivered by an occupational therapist and emphasizing behavioral methods and individualization on improving function of adults with rheumatoid arthritis.

1 Ask: Research Question
In adults with rheumatoid arthritis (RA), what is the effect of occupational therapists teaching joint protection (JP) techniques on functional improvement compared with no occupational therapy?

2a Acquire: Search Terms
Patient/Client Group: Rheumatoid Arthritis
Intervention: Joint Protection AND Occupational Therapy
Comparison: No comparison
Outcome: Function

2b Acquire: Selected Articles
Hammond & Freeman (2001): A randomized controlled trial (RCT) investigating the effect of an educational-behavioral JP program for people with RA on pain, adherence to joint protection principles, early morning stiffness, disease flare-ups, joint alignment, and activities of daily living as compared to a standard JP program.

Hammond & Freeman (2004): A long-term follow-up study on their 2001 RCT.

Niedermann et al. (2011): An RCT investigating the effect of individual resource-oriented JP education using the PRISM model in people with RA as compared to conventional JP education.

Steultjens et al. (2004): A systematic review investigating the effect of various occupational therapy interventions, including JP techniques, on pain, functional ability, and knowledge in patients with RA.

3a Appraise: Study Quality

Hammond & Freeman (2004): Preponderant. Large sample size. 84.25% participation in follow-up.

Niedermann et al. (2011): Preponderant. Strong design, but limited generalizability due to size and diversity of sample.

Steultjens et al. (2004): Preponderant. Selection and review process was rigorous; however, heterogeneity of outcome measures among studies precludes this report from being “conclusive”.

3b Appraise: Study Results
Occupational therapist delivered education in JP principles emphasizing individualization, repetitive practice in a variety of situations and tasks, and empowerment to locate resources was found to facilitate significant gains in patients with RA. These interventions, utilizing behavioral and social learning strategies, yielded significant improvements in JP principle adherence and hand pain (Hammond & Freeman, 2001; 2004; Niedermann et al., 2011) and well as decreased stiffness (Hammond & Freeman, 2001, 2004), incidence of flare ups, and visits to the doctor (Hammond & Freeman, 2001).

Intervention was also found to improve self-efficacy (Niedermann et al., 2011). In the long-term, patients were found to have significantly fewer hand deformities (Hammond & Freeman, 2004). Patients have demonstrated gains in functional performance as well (Hammond & Freeman, 2001, 2004); however, these were only found to be significant in the systematic review (Steultjens et al., 2004). More research is needed to support functional outcomes of JP education; however, currently small effect size in individual studies may be related to limitations in sensitivity of the Arthritis Impact Measurement Scale (AIMS 2) when used for recently diagnosed patients (Hammond & Freeman, 2001). Greater consistency in outcome measures will improve the quality of the evidence (Steultjens et al., 2004).

4 Apply: Conclusions for Practice
Current research provides preponderant support for the use of JP education in occupational therapy for improving adherence to JP principles, decreasing pain, decreasing stiffness, and increasing self-efficacy; however, further research is needed into the direct impact on function. For Mrs. Peacock, instruction in JP strategies using behavioral and/or social learning methods is likely to at least indirectly impact her occupational engagement as her initial limitations were largely related to pain and symptom flare-ups. Instruction in JP principles should be included as standard care for occupational therapy interventions for clients with RA.

References


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✓ Yes: Joint protection education is effective for improving function in adults with rheumatoid arthritis.