Case
You are an occupational therapist working with a 55 year-old woman with multiple sclerosis (MS). She experiences fatigue easily and has difficulty completing her home chores and playing with her grandchildren. You have heard about occupational therapists educating clients on energy conservation techniques and are curious about their effectiveness in treatment.

Do energy conservation techniques decrease fatigue in adults with Multiple Sclerosis?

This CAT examined the effectiveness of energy conservation techniques on decreasing fatigue in adults with MS.

1 Ask: Research Question
In adults with MS, what is the effect of energy conservation techniques on fatigue compared to no treatment?

2a Acquire: Search Terms
Patient/Client group: Multiple Sclerosis OR Multiple Sclerosis, Chronic Progressive OR Multiple Sclerosis, Relapsing-Remitting Intervention: fatigue management OR energy conservation OR energy preservation OR energy management Comparison: No energy conservation training Outcome(s): fatigue OR muscle fatigue or mental fatigue OR fatigue syndrome, chronic

2b Acquire: Selected Articles
Mathiowetz et al. (2005): Randomized control trial (RCT) that examined the effects of an energy conservation course for persons with MS. Utilized a cross-over study design on 169 participants in a 6 week energy conservation course taught by OTs.
Mathiowetz et al. (2007): One year follow up on the RCT examining the effects of the energy conservation course for persons with MS.
Sauter et al. (2008): Cohort study using a crossover design to examine the effects of a six-week course for energy conservation on 26 people with MS compared to no course.
Vanage et al. (2003): Cohort study using crossover design to examine the effect of an energy conservation course on fatigue for individuals with moderate to severe MS.

3a Appraise: Study Quality
Mathiowetz et al. (2005): Suggestive: Large n-size, cross over study demonstrating both groups improving after intervention.
Mathiowetz et al. (2007): Suggestive: Large n-size, substantial follow up period, few participants lost during follow up, cross over study.
Sauter et al. (2008): Suggestive: Fair n-size, included multiple self-report measures for comprehensive aspects of MS. Did not include information about blinding.
Vanage et al. (2003): Suggestive: Due to small sample size, data collected may not be generalizable and reduces the power of the study.

3b Appraise: Study Results
The studies demonstrated significant improvement in levels of fatigue (utilizing the Fatigue Impact Scale) in patients with MS. All of the studies included utilized a particular fatigue management course designed by Packer et al. for 6-8 weeks in a variety of settings (community-based program, outpatient MS clinic) that are relevant to this population. Findings from the studies indicate statistically significant improvements in fatigue levels at the end of the fatigue management course and at a 7 month to 1 year follow-up. Studies can be strengthened with more objective measures of fatigue and accounting more clearly for participant dropout.

4 Apply: Conclusions for Practice
These studies indicate that the fatigue management/energy conservation training would effectively decrease fatigue levels in the client with MS. These courses are good to implement in practice as they are easily replicated, affordable and effective. In practice they have long term results, a strong point considering the degenerative nature of the MS.

References

Reviewers:
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✓ Yes: Energy conservation techniques are effective for decreasing fatigue in adults with MS.