



Evidence that Energy Conservation Education is an Effective Strategy for Managing Fatigue of Persons with Multiple Sclerosis

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The Multiple Sclerosis (MS) Council for Clinical Practice Guidelines (1998) reported fatigue as the most common symptom experienced by people with MS. One approach used by occupational therapists for clients with fatigue is energy conservation education. However in 1998, the MS Council in reviewing the literature for their Clinical Practice Guidelines “did not find any scientifically-based evidence to establish the efficacy” of such education.

Since that time, several studies evaluated the effects of a specific energy conservation course, *Managing Fatigue: A Six-Week Course for Energy Conservation* (Packer, Brink, & Sauriol, 1995). The course consisted of six sessions of highly structured, two-hour classes taught to groups in community settings. Most of the groups had 7-10 participants. This energy conservation course was based on the theory of psychoeducational group development and used a variety of teaching methods including lectures, discussions, long-term and short-term goal setting, practice activities, and homework activities to assist participants’ integration of energy conservation principles into their performance of everyday tasks. The six sessions addressed the importance of rest throughout the day, positive and effective communication, proper body mechanics, ergonomic principles, modification of the environment, changing standards, setting priorities, activity analysis and modification, and living a balanced lifestyle.

Mathiowetz, Matuska, and Murphy (2001) reported evidence that this energy conservation course



(Packer et al., 1995) was effective in reducing the impact of fatigue and some aspects of quality of life in persons with mild to moderate symptoms of MS (N=54). Likewise, Vanage, Gilbertson, and Mathiowetz (2003) reported a significant decrease in fatigue impact for persons with moderate to severe MS (N=37). Participants in both of these studies were taught by occupational therapy practitioners, certified assistants, and students using the six session course, or a modified version of the course. In both studies, participants' scores on the Fatigue Impact Scale (Fisk et al., 1994) decreased significantly from pre to post-course assessments and beneficial effects were maintained six to eight weeks after completion of the course. These relatively small studies provided beginning evidence to support energy conservation education as a strategy for managing fatigue for persons with MS.

In 2005, Mathiowetz, Finlayson, Matuska, Chen, & Luo conducted a much larger study funded by the National Multiple Sclerosis Society. This randomized clinical trial was conducted at two sites: Minnesota (Twin cities area) and Illinois (Chicago area). One-hundred sixty-nine persons with MS were randomly assigned to either immediate or delayed treatment groups. One-hundred thirty-one of these participants completed the course and the follow-up assessments. Results of this study support the efficacy and effectiveness of the energy conservation course to decrease the impact of fatigue, increase self-efficacy and improve some aspects of quality of life. In addition, greater than 70% of participants implemented 8 out of 14 energy conservation strategies taught in the course and effectiveness of the strategies were rated highly (7 to 8.2 on a 10-point scale)(Matuska, Mathiowetz, & Finlayson,2007). Participants' descriptive evaluation of the course was also very positive (Mathiowetz & Busch, 2006). At one-year follow-up to the course, the beneficial effects were maintained when compared with immediate post-course (Mathiowetz,



Matuska, Finlayson, Luo, & Chen, 2007). In addition, there were significant improvements in all three subscales of the Fatigue Impact Scale (cognitive, physical, and social) and in four subscales of the SF-36 Health Survey (quality of life measure) one-year post-course compared with pre-course scores. Together, these results provide strong evidence that the beneficial effects of the energy conservation course taught by occupational therapists were maintained up to one year post-course.

The research team working on the grant developed many additional tools for use with the course including Self-Efficacy for Performing Energy Conservation Strategies Assessment (Leopold & Mathiowetz, 2005), Energy Conservation Strategies Survey (Mallik, Finlayson, Mathiowetz, & Fogg, 2005) (measures behavioral change due to the course), biweekly quizzes on course content, and treatment fidelity measures designed to ensure similar administration of the course across instructors. In addition, self-study modules of each session (Lamb, Finlayson, Mathiowetz, & Chen, 2005) were developed for people who missed a session and a teleconference version of the course (Finlayson, 2005) was also developed to allow for distance learning. Professionals serving persons with MS are encouraged to read the referenced articles for further details regarding the studies, as well as to watch for future related publications and resources to serve as support in educating consumers on matters of energy conservation.

Unfortunately, the Packer et al. (1995) manual is currently out of print. The author is exploring the possibility of reprinting with another publisher. Until it is republished, contact the author, Tanya Packer, (email: T.Packer@exchange.curtin.edu.au) for the latest information on how to obtain a copy of the manual.



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