

Fibromyalgia: Rehearsal Counteracts the Detrimental Effects of Distraction on Memory Formation in Fibromyalgia

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ABSTRACT

PURPOSE: A source of distraction disproportionately hinders later recall of unrehearsed information in FMS. A natural question is whether a source of distraction impacts differently when the to-be-remembered information has been rehearsed.

METHODS: The effects of distraction on the amount of rehearsed information retained were investigated in 128 rheumatic disease patients with FMS and without FMS (non-FMS). All presented with memory loss. The 86 FMS patients had a mean age of 45.6 ± 9.3 years; mean level of education was 14.7 ± 2.2 years. The 42 Non-FMS patients had a mean age of 44.5 ± 11.1 years; mean level of education was 14.7 ± 2.3 years. The Rey Auditory Verbal Learning Test (RAVLT) was administered. It involves five verbal presentations of a 15-word list with immediate recall following each presentation. Next, subjects are read a 15 word distraction list and tested for immediate recall. On the post-distraction trial, memory for the rehearsed word list is retested.

RESULTS: Recall of the 15-word list of the RAVLT was significantly decreased in the first trial in both groups relative to normative expectations (Table 1). Learning trials 2-5 are low because of the low starting point on Trial 1. Specific trials did not distinguish between groups. Both groups recalled fewer words after the presentation of a distracter list, but the mean post distraction loss was equivalent between the two groups. The post-distraction information loss was about two words (FMS 1.9 ± 1.9 vs. 2.3 ± 1.9), on par with normative expectations (1.7 ± 2.0).

CONCLUSIONS: A source of distraction short-circuits rehearsal of new information, thereby hindering the formation of new memories for later recall. For reasons unclear, people with FMS are less efficient in coping with a source of distraction. The interference from distraction disproportionately affects the retention of information in FMS. However, rehearsal of information counteracts the detrimental effects of distraction on FMS memory. The conscious repetition of information boosts memory to normative levels even with a source of distraction.