

Critical Review:

Effects of errorless learning on object naming and face-name associations in early-stage Alzheimer's disease

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This critical review examines the evidence regarding the effects of errorless learning on improving object naming and face-

Clinical Controlled Trial (non-randomized)

Bier et al. (2008) compared the effects of five methods on learning face-name associations in 15 participants with early AD and 15 matched controls in a clinical controlled trial. Learning methods included: (1) spaced retrieval, (2) errorless learning, (3) vanishing cues, (4) trial-and-error (EF) with explicit memory task instruction

and doing so improved her ability to provide relevant information about them. This study concluded that EL has the potential to improve naming abilities in patients with AD. Level 4 evidence is provided.

Limitations of this study include incomplete methodology and incomplete results from the patient's neuropsychological assessment. Statistical analysis was not completed, so significance of results cannot be concluded. Lastly, there was a lack of follow-up, which makes it difficult to analyze treatment effects long-term. The authors also indicated the need for direct comparison with EF. This study lacks conclusive evidence due to its poor methodology and lack of statistical analysis, thus offers equivocal evidence.

Systematic Reviews

Li and Liu (2012) investigated the impact of EL on memory function in individuals with early-stage AD through the critical evaluation of four research papers. The evidence is tabulated in an efficient way for direct comparison between articles. The review concludes that the use of EL in memory rehabilitation for patients with AD is supported, but the more specific the learned information is, the greater the retention. In addition, using EL in a manner that capitalizes on implicit rather than explicit memory leads to greater learning. Lastly, EL shows more improvements in learning in patients with more awareness of their memory deficit. This review provides Level 4 evidence.

A limitation of this review includes no mention of multiple independent reviewers rating the studies while blinded to other ratings; however, the results are reported on and complete (i.e. aims, methods, results, and discussion). Therefore, this review provides a suggestive level of evidence for the efficacy of EL as a cognitive rehabilitation strategy in early-stage AD.

Mimura and Komatsu (2007) document the literature pertaining to the impact of cognitive rehabilitation methods on learning in patients with mild dementia (including AD). The review concludes that EL is a 'guiding principle' that may be beneficial for some people with early AD and that generalized cognitive training is effective against functional deterioration in these patients. Level 4 evidence is provided.

The primary limitation of this review is that a methodology section was not included, making it difficult to analyze the efficacy of the results. This review demonstrates equivocal evidence and a

Winter, J. & Hunkin, N.M. (1999). Relearning in
Alzheimer's disease. *International Journal of*

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