Critical Review:
Is errorless learning more effective than errorful learning in the treatment of anomia for individuals with aphasia?

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This critical review examined the effectiveness of errorless learning when compared to errorful learning in treating anomia for individuals with aphasia. Five studies with case-series designs were investigated. Overall, research found errorless learning to be as effective as errorful learning but not significantly advantageous. Clinical implications are discussed.

Introduction

Anomia refers to a difficulty thinking of the word one wants to say and is a common problem among individuals with aphasia. Traditional anomia therapy has centered on a trial-and-error based approach where subjects are encouraged to independently produce the word at the risk of making errors (Fillingham et al., 2006). For instance, a client may be shown a picture and will be encouraged to guess its name before being supplied with the correct label. This is based on the belief that learning will be better if one is allowed to make mistakes and learn from them.

In contrast to errorful learning, errorless learning is a form of remediation based on the belief that learning will be more effective if the learner is prevented from reinforcing his or her own errors (Fillingham et al., 2003). Therefore, a client will be shown a picture followed immediately by its name, verbally and/or in written form. This belief follows the principle of Hebbian-based learning that states that if two neurons fire together the strength of their synaptic connection will be increased. If an error is made, there will be an increased likelihood of that pattern of neural synapses repeating itself in subsequent occasions. Thus errorless learning would be more advantageous as a rehabilitation approach, as it would prevent reinforcement of incorrect neural pathways (Fillingham et al., 2006).

Errorless learning has already been found to be more

provides replication of results within the same study.

McNemar tests used on an individual level revealed a significant improvement from baseline to immediate

it is a passive process and can be tedious for some to administer (Fillingham et al. 2005). However, with current technology errorless learning could be made into a computer-based intervention that could be administered at home (McKossick & Ward, 2007), in turn effectively reducing the work-load of the clinician while increasing the independence of the client. Although the options are many, it is important to

consideration when choosing the therapy approach to gain maximum treatment benefit.

References

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