



WHAT IS SPACED RETRIEVAL TRAINING?

Spaced retrieval (SR) training utilizes high repetition over increasing intervals of time to teach individuals with memory loss new or previously known information.



1. Identify a functional goal
2. Ask a question to probe for target response
3. If incorrect, give or model the correct response and have them repeat
4. If correct, double the time interval and ask the question again

BACKGROUND & RATIONALE

Need

Growing number of dementia patients that could benefit from memory enhancement in inpatient, outpatient and acute care settings.

Background

Using SR training to relearn functional tasks lost or learn new techniques to adapt methods of completing tasks.

Purpose

To search, appraise, and synthesize evidence related to dementia patients' outcomes of using SR techniques to increase their learning.

PICO QUESTION

Are spaced retrieval training methods effective in facilitating increased memory for functional tasks in individuals with dementia?

EBP PROCESS

Quality Control Throughout the Research

PICO Question Created

Databases Searched

Relevant Articles Identified/ Appraised

Evidence Integrated & CAT Developed

SEARCH METHODOLOGY

Databases	Search Strategy	Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> PubMed CINAHL Scopus 	<ul style="list-style-type: none"> (Dementia OR Alzheimer's) AND ("spaced retrieval") 	<ul style="list-style-type: none"> Published in English Clinically diagnosed with or probable diagnosis of Alzheimer's disease 	<ul style="list-style-type: none"> Articles with dysphagia focused on swallowing
Initial Search = 117	Screened by title, abstract, & full text	Articles Included = 8	

MAIN FINDINGS

Level of Evidence	Study & Quality Score	Outcomes
I	Creighton et al., 2013 (90%)	<ul style="list-style-type: none"> ↑ Learning of new and relearning of previous information
	Lin et al., 2010 (84%)	<ul style="list-style-type: none"> ↑ Eating ability and behavior
II	Thiverge et al., 2014 (82%)	<ul style="list-style-type: none"> ↑ Relearning of IADLs
	Bourgeois et al., 2016 (78%)	<ul style="list-style-type: none"> ↑ Relearning of new information
	Bourgeois et al., 2003 (75%)	<ul style="list-style-type: none"> Maintain gains at 4 month follow up
III	Zmily et al., 2014 (86%)	<ul style="list-style-type: none"> ↑ Spontaneous recall and recall with cues
	Small et al., 2020 (43%)	<ul style="list-style-type: none"> ↓ Gains at follow up* ↑ Response, recall and recognition of information on mobile devices
IV	Creighton et al., 2015 (43%)	<ul style="list-style-type: none"> ↑ Independent use of walker* Varied gains at follow-up

Key: ↑ = Increase; ↓ = Decrease; * = Not statistically significant

LIMITATIONS

Level I	Single blinding, lack of diversity, testing inconsistency
Level II	Small sample size, restricted generalizability, tested on different tasks, drop in cognitive functioning, attrition
Level III	No blinding, limited generalizability
Level IV	Subjective observations, no report of staff training

CLINICAL BOTTOM LINES

Strong evidence showed SR having a positive impact on memory and function of the participants.

We recommend using SR to teach functional tasks or new techniques to accomplish tasks.

Research is needed to set specific guidelines for implementation that yields optimal results.

RECOMMENDATIONS FOR IMPLEMENTATION

Consider duration of 6-8 weeks, 3-4 sessions per week, 1-32 minute intervals between correct responses, & follow-up measures in 1-12 weeks.

The intervention should be occupation-based and related to the client's interests and desired tasks.

Pre and post FIM scores would be used to measure SR intervention effects. A simple chart could be used to record results.

Client: E.B.
SR Task or Question: Wheelchair safety

Maximum Time Interval with Accurate Response (min)	5/17	5/19	5/21	5/24	5/26
32					
16				✗	
8			✗		✗
4		✗			
2	✗				
1					

Date

HANDOUT

