Memory and Cognitive Prevention Training for Typically Aging Seniors in a University Clinic Setting: A Feasibility Study

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Received date: September 07, 2017; **Accepted date:** September 20, 2017; **Published date:** September 27, 2017

Abstract

Purpose: While diagnosis and treatment are the major focus for SLPs, professional roles are expanding to include preventative related services with the elderly. Evidence exists as to the effects of preventative cognitive training (CT), yet few studies have examined viable models for SLP implementation. The purpose of this feasibility study was to compare group and individual CT programs delivered in a university based speech and hearing clinic.

Method: Forty-eight adults, between the ages of 68-92 years-old were assigned to individual or group based conditions in which they received sixteen hours of CT, implemented by an SLP and graduate student clinicians. Cognitive, memory, language, visuospatial and other skills were trained. Formal and informal, pre-post and 12-week follow-up measures were administered. Function and Satisfaction surveys were administered to determine participant perceptions of functional outcomes.

Results: Participants in both CT conditions demonstrated pre-post training gains, although individually trained seniors made more significant improvements than group trained seniors on specific formal measures. The amount of pre to post gain on all assessment measures was similar between groups. Improvements in test scores were maintained at 12-week follow-up testing intervals by both groups. Survey results indicated high satisfaction with CT, although differences were found in perceptual outcomes between groups.

Conclusions: Whereas individual participants yielded more significant effects, the Group condition also represents an effective and efficient model for prevention related services with elderly populations, as demonstrated by pre-post training effects and participant satisfaction responses. Clinical training applications for CT implementation in a university training setting are discussed.

Keywords:

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Results

Individual versus group CT comparisons

Within-group pre-post-PP outcomes

	Range	1.0-14	0-17	2.0-19	4.0-15.0	3.0-19.0	2.0-22.0
TSP	Mean (SD)	11.86 (5.96)	13.36 (5.26)	12.43 (5.33)	14.42 (2.80)	14.86 (2.34)	15.46 (2.64)
	Range	0-18	0-19	0-18	9.0-20.0	11.0-20	11.0-20.0
FaR	Mean (SD)	16.32 (6.71)	17.77 (6.68)	19.67 (6.91)	15.50 (5.64)	19.42 (7.73)	19.04 (6.64)
	Range	0-29	12420	1.0-31	2.0-25.0	8.0-39.0	9.0-35.0

Note: CLQT: Cognitive Linguistic Quick Test; Att: Attention; Mem: Memory; ExF: Executive Function; Lan: Language; VS: Visuospatial Skills; StR: Story Retell; GN: Generative Naming; SR: Severity Rating; DS: Digit Span; Maz: Maze Time; SymM: Symbol Matching Time; StCo: Story Comprehension; TSP: Time-Related Story Math Problem; FaR: Facial Recognition

DS1	0.53	0.52	ns
DS	0.45	0.59	ns
DS3	0.27	0.4	ns
DS4	0.09	0.47	0.4
StCo	0.29	0.43	ns
FaR	0.59	0.58	Ns
Note: CLQT: Cognitive Linguistic Quick Test; Att: Attention; Mem: Memory; Lan: Language; VS: Visuospatial Skills; StR: Story Retell; SR: Severity Rating; DS: Digit Span; Maz: Maze Time; StCo: Story Comprehension; TSP: Time-Related Story Math Problem; FaR: Facial Recognition; ns: not signficiant			

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GN	Mean (SD)	0.182 (1.097)	0.231 (1.275)
	Range	0.182 (1.097)	0.231 (1.275)
SR	Mean (SD)	0.15 (0.24)	0.06 (0.37)
	Range	0.0-0.8	-0.4-1.6
Informal Measures			
DS1	Mean (SD)	10.86 (11.44)	6.04 (8.94)
	Range	-8.0-32.0	-13.0-20.0
*DS2	Mean (SD)	11.77 (10.41)	4.46 (9.68)
	Range	4.46 (9.68)	-11.0-25.0
*DS3	Mean (SD)	4.46 (9.68)	-11.0-25.0
	Range	-18.0-36.0	-33.0-26.0
DS4	Mean (SD)	1.00 (3.34)	0.192 (2.19)
	Range	-9.0-9.0	-4.0-5.0
Maz	Mean (SD)	-18.45 (30.66)	-4.31 (30.41)
	Range	-87.0-30.0	-71.0-100.0
StCo	Mean (SD)	1.77 (3.56)	1.12 (2.35)
	Range	-5.0-7.0	-4.0-6.0
TSP	Mean (SD)	1.50 (2.39)	0.46 (2.35)
	Range	-3.0-6.0	-3.0-5.0
FaR	Mean (SD)	1.46 (4.56)	3.92 (8.66)
	Range	-6.0-13	-4.0-37.0

Note: CLQT: Cognitive Linguistic Quick Test; Att: Attention; Mem: Memory; ExF: Executive Function; Lan: Language; VS: Visuospatial Skills; StR: Story Retell; GN: Generative Naming; SR: Severity Rating; DS: Digit Span; Maz: Maze Time; StCo: Story Comprehension; TSP: Time-Related Story Math Problem; FaR: Facial Recognition; [*]Significant CT group difference at p<0.05.

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