

Self-regulation in memory strategy training for middle-aged and older adults

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No conflicts of interest to disclose.



Memory training

- ★ Strategy use for episodic memory
- ★ Effective for older persons
 - ◆ Gains in trained abilities
 - ◆ Immediately after training

Berry et al., 2010; Bottiroli et al., 2006; Fisher, 2012; Gross et al., 2012; Hertzog, et al., 2006; West & Strickland-Hughes, 2017

Self-regulation in training

- | | | |
|--|---|---|
| <ol style="list-style-type: none"> 1. Memory self-efficacy 2. Strategy use | } | <ul style="list-style-type: none"> ★ Positive correlates of memory performance ★ Old < young ★ Relationship with performance increases with age |
|--|---|---|

Agrigoroaei et al., 2013; Beaudoin & Desrichard, 2010; Cavallini et al., 2010; Crumley et al., 2014; Gross & Rebok, 2011; Jaeggi et al., 2014; Miller & Lachman, 1999; Payne et al., 2012; Valentin et al., 2006; West et al., 2008; West & Hastings, 2011

Self-regulation in training

Two considerations

- ★ Enhanced from training
- ★ Value-added to training



Bailey et al., 2010; Beaudoin & Desrichard, 2010; Cavallini et al., 2010; Crumley et al., 2014; Gross & Rebok, 2011; Gross & Rebok, 2014; Jaeggi et al., 2014; Payne et al., 2012; Valentin et al., 2006; West et al., 2008; West & Hastings, 2011

Purpose of the present study

Key issue 1: Evaluate abbreviated version of tested effective program

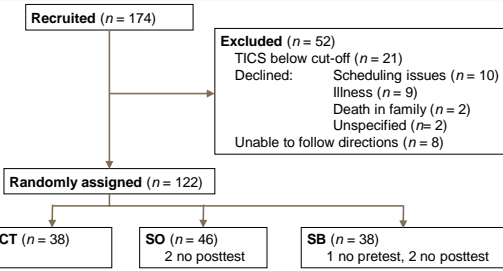
- ★ Targeted memory task
- ★ Near transfer

Key issue 2: Self-regulatory factors and training

- ★ Training-related gains
- ★ Mediate other training-related gains

Methods

Participants (N = 122)



Training elements to enhance self-regulation

- Enactive mastery**
 - ★ Repeated practice
- Vicarious experience**
 - ★ Trainer models technique and whole group practices together
- Verbal persuasion**
 - ★ Group provides social support
- Physiologic and affective states**
 - ★ At home materials allowed for self-paced practice

Bandura, 1997; Smith & West, 2006; West et al., 2008

Pre-post assessments

Target outcome

- ★ Name recall

Self-regulatory factors

- ★ Strategies checklist
- ★ Memory self-efficacy

Transfer outcomes

- ★ Object-location visual association
- ★ Occupation-name verbal association



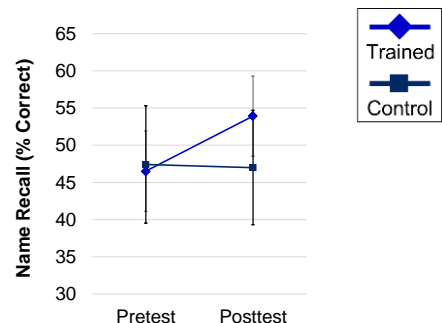
Blind
Timed memory assessments and self-paced surveys
Duration: 2 hours

Results

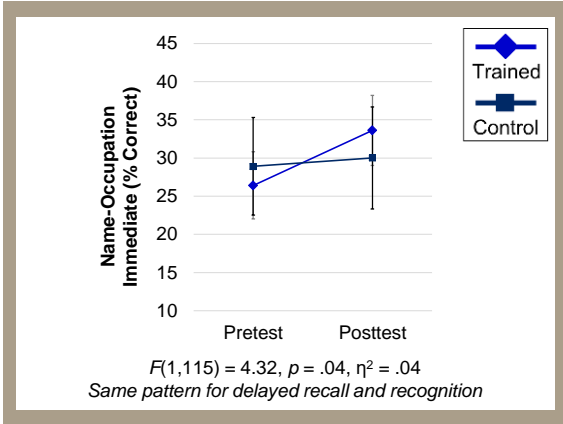
Effectiveness of brief training

Yes, abbreviated name recall training effective:

- ★ Enhanced name recall performance
- ★ Pre-post gains evidence near transfer



$F(1,115) = 4.32, p = .04, \eta^2 = .04$

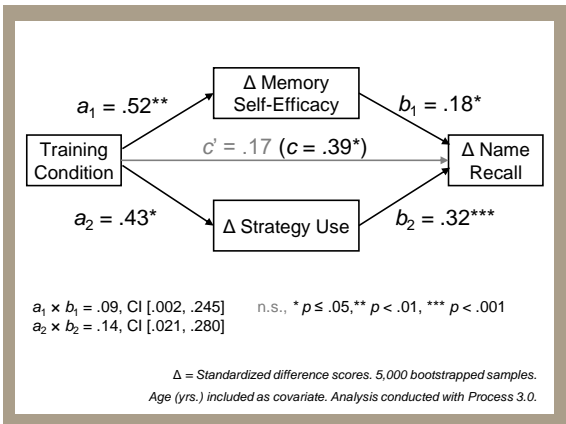
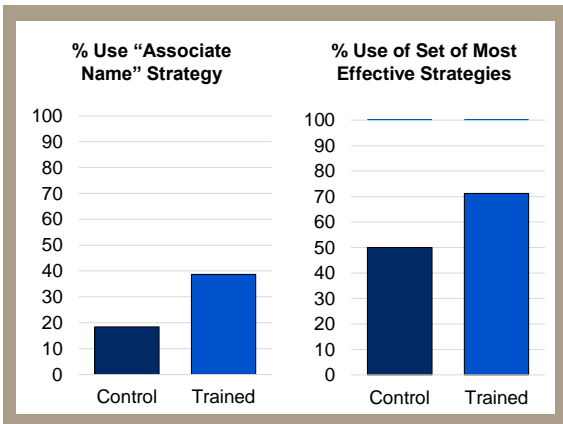
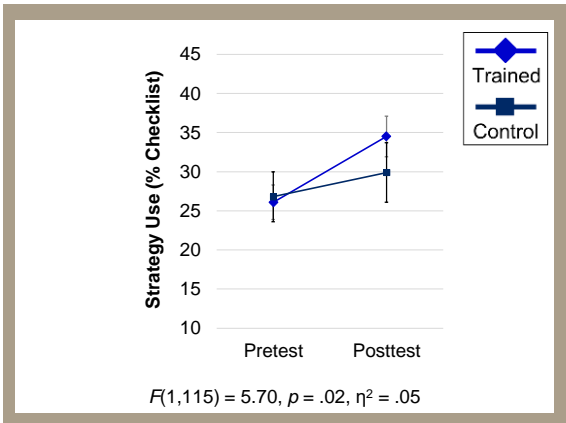
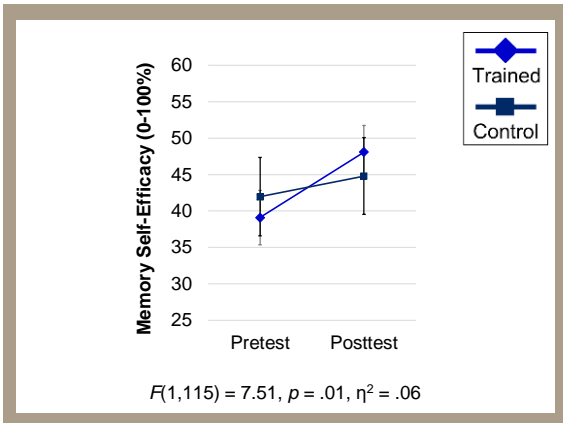


Self-regulatory factors and training

Training improved self-regulatory factors

- ★ Pre-post gains in self-regulatory factors
 - ◆ Memory self-efficacy
 - ◆ Effective strategy use

Change in self-regulatory factors fully mediated effect of training



Discussion

High value of brief training with focus on self-regulatory factors

- ★ “Bang for buck” and possible broad dissemination
- ★ Contradicts “generalist assumption”
- ★ Enhanced self-regulation key to maximizing impact of training

Limitations

- ★ Sample selectivity and Matthew Effect
 - ◆ Majority female, well-educated, healthy
- ★ Recruitment and compensation procedures
 - ◆ Possible subjective memory complaints
 - ◆ Possible high intrinsic motivation
- ★ No active control tested

Conclusion

Brief training effective beyond target task:

1. Near transfer effects
 2. Enhanced self-regulatory factors
- ★ Key to maximizing training impact
 - ★ Ease of broad dissemination
 - ★ Possible translation of benefits from laboratory to everyday life

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