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

Carla M. Strickland-Hughes
University of the Pacific, cstricklandhughes@pacific.edu

Robin Lea West
University of Florida, Gainesville

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

Carla M. Strickland-Hughes, Ph.D. and Robin L. West, Ph.D.

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., 2008; Fisher, 2012; Gross et al., 2012; Verstuyf et al., 2000; West & Strickland-Hughes, 2017

Self-regulation in training

1. Memory self-efficacy
2. Strategy use

- 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, 1989; Payne et al., 2012; Valentijn et al., 2006; West et al., 2008; West & Hastings, 2011

No conflicts of interest to disclose.

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

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; Valentijn et al., 2006; West et al., 2008; West & Hastings, 2011

Methods
Participants \((N = 122)\)

- Recruited \((n = 174)\)
- Excluded \((n = 52)\): TICS below cut-off \((n = 21)\), Scheduling issues \((n = 10)\), Illness \((n = 8)\), Death in family \((n = 2)\), Unspecified \((n = 2)\), Unable to follow directions \((n = 8)\)
- Randomly assigned \((n = 122)\)
- SB \((n = 38)\): 1 no pretest, 2 no posttest
- CT \((n = 38)\)
- SO \((n = 46)\): 2 no posttest

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

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

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

Acknowledgements

Age and Memory Lab
University of Florida

Research Assistants
Edward Baber
Erika Boone
Eli Caraceni
Sara Charles
Robyn Clohey
Shane Cowar
Rachel Fisher
Jessica Green

Funding
APA/Division 20 Dissertation Fellowship
Charles Vincent & Heidi Cole McLaughlin Dissertation Fellowship
Gerber Developmental Research Award
Institute for Learning in Retirement and Robert A. Levitt Awards
Jacquelin Goldman Foundation
University of Florida Alumni Fellowship
University of Florida Office of Graduate Minority Programs Supplemental Retention Scholarship
Retirement Research Foundation