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Brain Fitness Program for Aging Individuals: Prevention Focused Program for Alzheimer's Disease and Related Dementias

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Brain Fitness Program for Aging Individuals: Prevention Focused Program for Alzheimer's Disease and Related Dementias

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Introduction

- Alzheimer's Disease and Related Dementia (ADRD) begins developing 20 years before the onset of symptoms (Alzheimer's Association, 2021)
- Many individuals do not experience symptoms or receive a diagnosis until around the age of 75 years old (Livingston et al., 2020; Livingston et al., 2017).
- New research indicates there are modifiable lifestyle factors that can delay or prevent the onset of ADRD symptoms. (Livingston et al., 2020; Livingston et al., 2017).

Site Description

Health Promotion Partners	<ul style="list-style-type: none"> Outpatient Occupational Therapy clinic located in Colorado Springs
Target population	<ul style="list-style-type: none"> Young adults with learning or developmental disabilities Individuals returning to drive after a medical event Older adults Individuals with dementia or Alzheimer's and their caregivers
Mission Statement	<p>"Empowering people to access the everyday occupations that support their well-being."</p>
Services offered	<ul style="list-style-type: none"> Senior driving evaluations Adaptive driving education Readiness to drive education for young adults Aging in Place education for older adults Communication education for caregivers

Literature Review Summary

- More than one third of dementia related cases could theoretically have been preventable through implementing modifiable lifestyle habits (Livingston, 2017)
- Interventions such as education, cognitive exercises, stress management, social engagement, physical exercise, and improving one's quality of life can prevent or delay onset of ADRD (Livingston, 2017).
- Cations et al. (2018) found that in a twenty-six-article systematic review, half stated that dementia is a normal part of aging, and it is non-preventable.

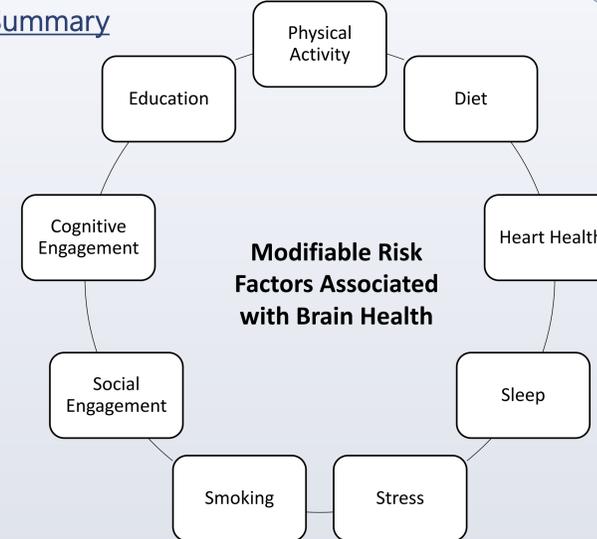
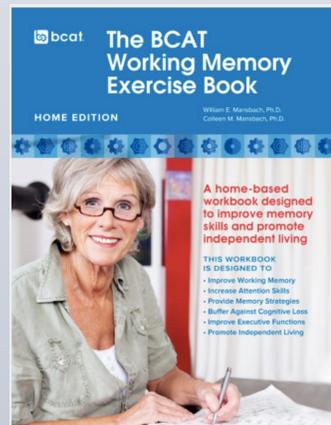


Figure 1: Chart displaying the relationship of modifiable risk factors play on brain health

Capstone Project Description

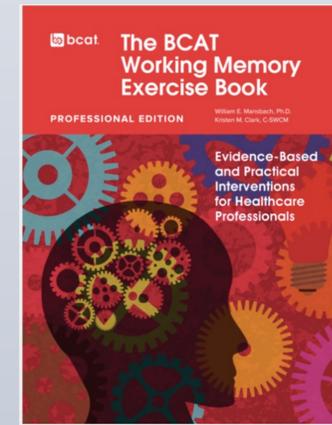
- 8-week group program that meets for one hour once a week.
- Cost: \$275 for 8 weeks and including BCAT Working Memory Exercises Book
- Licensing: Brief Cognitive Assessment Tool (BCAT)
 - Evidence based tool for predicting cognitive status and ADL/IADL functioning.
 - BCAT Brain Rehabilitation Modules



{Photograph of the covers of The BCAT Working Memory Exercise Book: Home Edition}. (n.d). <https://enrichvisits.com/healthcare-professionals-bookstore>

Weekly Session Outline
a. Discuss Weekly Topics
b. Supplemental Resources
i. Week specific BCAT Supplemental Education Handouts
c. BCAT Working memory exercises
i. Activities as per clinician recommendation and client's cognitive level
d. Brain Rehab supplemental Activities - Computer Based
i. Activities as per clinician recommendation and client's cognitive level
e. Assign home exercises
i. Activities as per clinician recommendation and client's cognitive level

Figure 2: Structured course outline for each for each week



{Photograph of the covers of The BCAT Working Memory Exercise Book: Professional edition}. (n.d). <https://enrichvisits.com/healthcare-professionals-bookstore>

Topics Covered

- What does normal aging vs. atypical aging look like?
- What is Mild Cognitive Impairment, Dementia, and Alzheimer's disease?
- How to live a brain healthy lifestyle
- Cognitive engagement activities

Program Goals

- Clients will understand what normal aging vs. atypical aging looks like.
- Provide clients with strategies to promote positive cognitive functioning through engagement in cognitive activities.
- Empower clients to take their health into their own hand and improve their quality of life.

Learning Objectives

- Research evidence based and peer reviewed articles that addressed brain health and wellness and caregiver burn out.
- Create a presentation that highlights brain health and wellness to market the benefits of the Brain Fitness course at community events.
- Familiarize myself with community resources available for the aging population and their caregivers.

Summary of Needs Assessment

- The number of individuals with ADRD is estimated to increase from 6 million to 14 million within the next thirty years (Marcum, 2019)
- There is an estimated 76,000 in CO over the age of 65 with ADRD (CO Alzheimer's Association, 2021)
- 158,00 family caregivers in Colorado who spend 184 hours caring for their loved ones, which totals \$3,657,000,000 of unpaid care (CO Alzheimer's Association, 2021).
- Globally \$818 billion is spent on dementia care each year (Marcum, 2019)

Implications for OT

Brain Rehabilitation Modules

- Target attention, memory and executive functioning (BCAT Interventions, 2019).

Positive Cognitive Functioning

- The course promotes positive cognitive functions to increase self-esteem and self efficacy.

Working Memory

- BCAT workbooks are designed to target working memory.
- Working memory plays a significant role in IADL/ADLs
- Deficits with working memory inhibit formation of new memories, which impedes performance with daily tasks (BCAT Interventions, 2019).

REFERENCES & ACKNOWLEDGMENTS

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References Available Upon Request