

University of Central Arkansas

Interprofessional Therapeutic Activity Program

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Arkansas Alzheimer's and Dementia State Disease Plan Priority Issues

- Public Awareness
- Access and Quality of Care
- Support Family Caregiver
- Dementia Training and Workforce Development

Introduction

- The mission of the UCA Interprofessional Therapeutic Activity Program (I-TAP) is to meet the needs of older adults at risk for or diagnosed with Alzheimer's Disease and Related Dementias and their caregivers.
- The I-TAP aims to implement student-led interprofessional programs emphasizing wellness education, physical activity, cognitive engagement, risk assessment, and improved quality of life.

UCA College of Health and Behavioral Sciences





Impact of ADRD

Alzheimer's Disease and Related Dementias (ADRD) lead to progressive decline in cognitive and functional status impacting independence in mobility, Activities of Daily living (ADLs), and Instrumental Activities of Daily Living (IADLs).



This decline is associated with decreased quality of life, increased caregiver burden, and institutionalization of care receivers.

(Alzheimer's Association, 2019; Opara, 2012; Aphram et al., 2014; Razani et al., 2007)

Need to Maintain Community Life Space

Maintaining optimal functional and cognitive engagement of the person with ADRD in the community is a critical goal.



Community Needs

Evidence supports positive effects of:

Exercise

Cognitive stimulation

Social engagement on quality of life, functional, and cognitive outcomes of people with ADRD.

Evidence also supports caregiver support programs for caregivers of people with dementia.

Community Barriers

People with ADRD and their caregivers often do not access these services.

- Cost
- Availability

(Bahar-Fuchs, 2013; Horr et al., 2015; Horr et al., 2015; McLaren et al., 2013;)

(Brodsky et al., 2009; Gauger et al., 2005; Vecchio et al., 2016; Phillipson et al., 2014; Sun et al., 2007; Tosiland et al., 2002)

Student Needs

Experiential Learning

Establishes a genuinely strong practical relationship between theory and practice.

Interprofessional Experiences

“When two or more health professions learn about, from, and with each other to foster effective collaboration and improve outcomes and quality of care”
(p. 7).^{WHO 10}



Student Stigma

Students often feel uncomfortable and carry stigmas toward older adults and people with ADRD.

(Pedro-Jesus et al., 2019; World Health Organization, 2010; Heise et al., 2012)



**Community
Needs**

**Student
Needs**

**Interprofessional
Therapeutic Activity
Program**

Interprofessional
Dementia Caregiver
Coaching Course

Student Led Therapeutic
Activity Program (S-TAP)

Resilient Care:
Support Program



Student Led Therapeutic Activity Program (S-TAP)

What is S-TAP?

Frequency: One morning per week
Intensity: 3.5 hours per session
Duration: Twelve weeks per semester

Fall Semester

- Exercise science: Tailored group exercise sessions emphasizing full body strength and aerobic activity
- Communication Science: Individualized cognitive therapy
- Nursing: Individual and group and cognitive stimulation and socialization

Spring Semester

- Exercise science: Tailored group exercise session emphasizing full body, aerobic activity
- Physical Therapy: Individualized strength, balance, agility, and mobility sessions
- Occupational Therapy: Individual and group cognitive stimulation and socialization



Pilot Study

The purpose of our pilot study was to evaluate initial effect and feasibility of a student led interprofessional, multicomponent intervention for people in the early to moderate stages of dementia who live in the community and student participants.

Research Aims: Effects and Feasibility of S-TAP

- Aim 1:** Evaluate initial effect of a student led interprofessional intervention on cognitive status, quality of life, and functional status (IADLS) of people with mild to moderate ADRD.
- Aim 2:** Evaluate initial effect of a student led interprofessional intervention on student attitudes and self efficacy toward caring for people with mild to moderate ADRD.
- Aim 3:** Determine feasibility (ability to recruit and retain participants, and acceptability by participants and students), of a multicomponent, student led intervention for community dwelling people with ADRD and their caregivers.

Participant Outcomes Fall, 2021

Cognition

Arizona Battery of Cognitive-Communication Disorders-2nd Edition (ABCD-2)

Function (IADLS)

Texas Functional Living Scale (TFLS)

Quality of Life

Dem-QOL

Acceptability of Intervention

Post Evaluation Survey

Participant Outcomes Fall, 2022



30-Second Chair Rise
Functional Strength



Timed Up and Go
Balance, Fall Risk, & Mobility



10-Meter Walk Test
Gait Speed

Pilot Data Sample

Program Participants with ADRD

Fall, 2021

$N = 16$ community dwelling people with Mild to Moderate ADRD

$n = 12$ people completed the study

Fall, 2022

$N = 22$ community dwelling people with Mild to Moderate ADRD

$N = 18$ completed the study

Students (Fall, 2021)

$N = 112$ students:

$n = 104$ nursing students

$n = 6$ communication science students

$n = 2$ exercise science students.

Demographics Participants Fall,
2021 ($n = 12$)

Demographic	Results
Age	Mean = 67.09 Range: 51 - 89
<u>Gender</u>	
Male	45.5 %
Female	54.5 %
<u>Ethnicity</u>	
Caucasian	90.9 %
African American	9.1 %
<u>Married</u>	
Yes	63.6%
No	36.4%
Mean MMSE	M = 24.82 Range: 19 - 30

Demographics Participants Fall,
2022 ($N = 18$)

Demographic	Results
Age	Mean = 78.53 Range: 67 - 89
<u>Gender</u> Male Female	66.7% 33.3%
<u>Ethnicity</u> Caucasian	100 %
<u>Married</u> Yes No	44.4% 55.6. %
Mean MMSE	M = 20.67 Range: 9 - 29

Results Fall, 2021 Participants

Tool	N	Median Pre	Median Post	Statistic	Sig
TFLS*	N = 11			$t = 2.0$	$P = .046$
ABCD**	N = 12	130	144.5	$t = -.707$	$P = .480$
DemQOL**	N = 11			$t = .831$	$P = .406$

*Sign Test

**Wilcoxon Sign Rank Test

Results Fall, 2022 Participants

Tool	N	Statistic	Sig
30sec chair rise*	$N = 18$	$t = -.087$	$P = .932$
TUG*	$N = 18$	$t = .962$	$P = .35$
10 meter walk*	$N = 18$	$t = -1.932$	$P = .07$

*Paired sample t tests

Discussion: Aim 1

Evaluate initial effect of a student led interprofessional intervention on cognitive status, quality of life, and functional status (IADLS) of people with mild to moderate ADRD

- IADL performance showed significant improvement based on TFLS
- No significant change in cognitive status over 12 weeks (ABCD)
- No change in quality of life over 12 weeks (DemQOL)
- No change in functional status over 12 weeks (TUG, 10 meter walk,30 sec chair)

Student Outcomes

General Attitudes

Approaches to Dementia Questionnaire

Self-Efficacy

Caring for People with Dementia Self-Efficacy Tool

Acceptability of Intervention

Post Evaluation Survey

Demographics	Results
<u>Age</u>	
18 – 24	93.3%
25 – 34	4.8%
35 - 44	1.9%
<u>Gender</u>	
Female	80.8%
Male	18.3%
<u>Previous experience with dementia care</u>	
Yes	30.8%
No	68.3%
<u>Ethnicity</u>	
Caucasian	74%
African American	9.6%
Asian	6.7%
Hispanic	4.8%
Multiracial	3.8%
Not listed	1%

Results Students

Student attitude scores and effect size

Test	Mean Pre	Mean Post	<i>t</i>	<i>p</i>	<i>d</i>
Attitudes Scale	80.305	84.31	10.39	<.001	1.014
Self-Efficacy	36.33	42.7	14.425	<.001	1.414

Student Qualitative feedback

“I felt as if I gained a much greater understanding of older adults with dementia and learned how to connect with them better. My feelings toward them changed in the sense that I realized they are not completely helpless.”

“I found it (S-TAP) fulfilling for my ability to connect with them. I gained insight into the struggles they face on a daily basis regarding their disease. It made me understand that they are just as human as I am.”

“I tend to be intimidated by the word dementia. It conjures up thoughts like sad, lonely, frustrating, gloomy, and lots and lots of awkwardness. One thing I learned through this experience is that dementia is a continuum and people can be at any point along it at any given time. Many of the individuals I interacted with seemed mostly normal.”

Discussion: Aim 2

Evaluate initial effect of a student led interprofessional intervention on student attitudes and self efficacy toward caring for people with mild to moderate ADRD.

- Experiential learning is best way to change students attitudes toward older adults and people with dementia.
- This program demonstrates that the S-TAP had a large impact on students feelings about people with dementia in the short term.
- There needs to be a study that looks at the long term impact of the program.

Feasibility Measures

- Ability to recruit 12 participants in 3 month time frame.
- 60% retention of participants over course of the program.

Results Feasibility: Participants

- Recruitment and Completion Rates
 - Fall 2021: 16 recruited, 12 completed
 - Spring 2022: 23 recruited, 16 completed
 - Fall 2022: 22 recruited, 18 completed
 - Spring 2023: 21 recruited, 18 completed
- Retention rate average: 78%
- Participant evaluations of the program were very positive both quantitatively and qualitatively.
 - Social interaction was most important to those who commented.

Discussion: Aim 3

Determine feasibility (ability to recruit and retain participants, and acceptability by participants and students), of a multicomponent, student led intervention for community dwelling people with ADRD and their caregivers.

- We exceeded all feasibility goals in regard to recruitment and retention.
- Participant evaluations were extremely favorable.

Pilot Study Limitations

- Outcomes associated with ADRD
 - Small sample size for participants with ADRD
 - Used self-report measure for Dem QOL

- Outcomes associated with students
 - Only measured nursing student responses
 - Evaluated immediate response, need studies looking at long-term response

- Caregiver outcomes have yet to be assessed

Costs of Program Spring/2022

N = 20

Item	Total Costs
Weekly Snacks Participants	\$165.54
Supplies for Activities	\$594.32
Office	\$216.00
Assistant	\$1350.00
Director	0
Faculty	0
Total	\$2325.86

Key Numbers

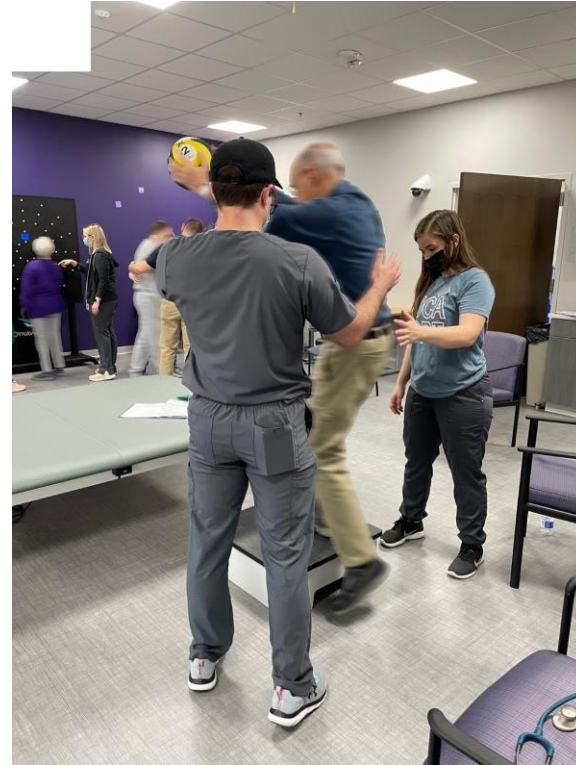
\$116.25/participant

\$2.42/hour

Cost S-TAP per participant

\$9.25/hour

Average cost of Adult Daycare



Next Steps

- Continue to conduct and expand S-TAP at UCA.
- Continue to collect data (participants, caregivers, students).
- Develop a tool kit for duplication at other universities in the state.
- Disseminate findings.
- Duplicate programming at other universities in Arkansas.
- Seek out and apply for sustainable funding.