POSTER #

Promoting active aging: Assessing the feasibility and acceptability of the NATURE Intervention

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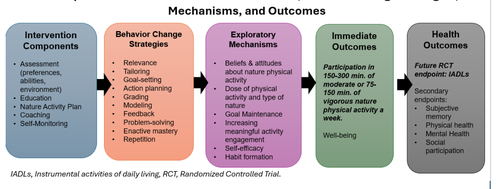
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Early findings indicate that NATURE is both ***feasible to implement and highly acceptable*** to older adults with memory challenges and their care partners from underrepresented groups with some adjustments to inclusion criteria.

- Increasing physical activity is an important strategy to decrease risk for cognitive and functional decline in daily life.

Nurturing **A**ging **T**hrough **U**plifting-activity in **R**estorative **E**nvironments (NATURE) was co-designed with 57 participants, including Hispanic or Latino individuals to promote physical activity in contact with nature and sustain function in daily life.

Conceptual Framework of NATURE Intervention, Behavior Change Strategies, Mechanisms, and Outcomes



IADLs, Instrumental activities of daily living, RCT, Randomized Controlled Trial.

Objective: Assess the feasibility and acceptability of the NATURE intervention.

experimental feasibility study

Recruitment: ≥ 45 years old with subjective cognitive decline.

- Study partners were ≥ 18 years or older and selected by the participant as a person to join them in the study.

Setting: Community aging organizations and two geriatrics clinics in the Northeast and Central Indiana

Intervention

- 12-weeks
- 4 in-person or virtual sessions
- 2 phone check-ins
- Occupational Therapist
- Assessment, coaching, & self-monitoring phases

Nature Activity Selection & Matching: Examples to Sustain Behavior Change

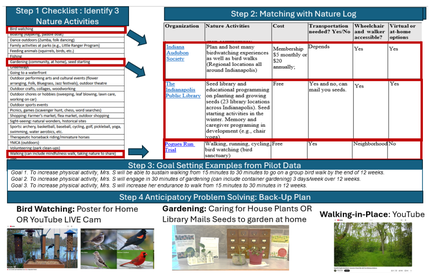


Table 2 NATURE Session Content

Session	Assessments/Activities	Education
Assessment Phase		
1	Clinical assessment of abilities, daily habits and routines, Functional Activities Questionnaire, Clinical Frailty Scale, Fall Risk Assessment Tool, Executive Function Screen, Comportment Scale, nature interest check-list.	Benefits of physical activity in nature, Depression.
2	Goal-Attainment Scaling, Try/Observe 1 nature activity. Create personalized nature activity plan. Match top 3 interests from nature checklist to local nature activities with the person's lifestyle using local nature activity log.	Accessibility Goal-setting, behavioral activation techniques. Instruments Measuring Fitness and Recreation Environments (AIM-FREE). How to set weekly goals on Apple Watch SE for physical activity.
Coaching Phase		
3	Try/Observe nature activity 1. Practice alternatives for difficult days and bad weather. Conduct modified Flow Short Scale to assess enjoyment/meaningfulness. Update plan as needed. Increase weekly standing goal on Apple Watch SE.	Activity modifications, environmental adaptations. Anticipatory problem solving, behavioral activation, decreasing fall risk.
4	Try/Observe nature activity 2. Practice alternatives for difficult days and bad weather. Conduct modified Flow Short Scale. Update plan as needed. Increase weekly physical activity goal on the Apple Watch SE	Anticipatory Problem Solving, behavioral activation, decrease fall risk.
5	Try/Observe nature activity 3. Practice alternatives for difficult days and bad weather. Conduct modified Flow Short Scale. Coach participant to gradually increase their daily and weekly physical activity goal with Apple Watch SE.	Problem solve any challenges and offer additional modifications.
6	Tailored based on needs for each nature activity. Increase daily and weekly physical activity goal on Apple Watch SE.	Tailored based on needs.
Guided Self-Monitoring		
7-8	Check-in on Nature Activity Plan, progress towards weekly standing time and other goals. Problem solve any new challenges. Update plan as needed.	

Data Collection

Demographic Data: age, living situation, level of education, Area Deprivation Index Scores, T-MoCA,

Main endpoints:

Feasibility: ≥75% in completion, attendance, retention, and fidelity collected throughout the intervention

Acceptability:

(1) Participants with memory challenges: >75% "yes" responses to two questions from the Intervention Acceptability Scale (IAS)

(2) Study Partners: Scores 16-20 on the Acceptability of an Intervention Measure(AIM) for study partners (collected post-intervention)

Are you still doing your nature activities?

Do you plan to do them in the future?

Have you added any new activities?

Data Analysis: Descriptive Statistics

Demographic Characteristics

Table 2. All Participants Enrolled (n=34 total)

People Living with Memory Challenges (n=30)	
Age (years, SD)	68 years (12)
Gender	
Female	21 (70%)
Male	9 (30%)
Language	
Bilingual (English/Spanish)	3 (10%)
English	26 (87%)
Spanish	1 (3%)
Education	
High School or less	4 (13%)
Some College/Associates	13 (44%)
Bachelors	1 (3%)
Masters	5 (17%)
Doctorate	1 (3%)
Missing Data	6 (20%)
Hispanic	9 (30%)
Non-Hispanic	18 (60%)
Missing data	3 (10%)
Race	
Black	13 (43%)
White	6 (20%)
Other/Not specified	11 (37%)
T-MoCA (Total Score, SD)	17 (2.9)
Area Deprivation Index	M (SD)
National Percentile (Total)	58 (27.9)
State Decile Scores	5 (3.1)
Study Partner (n=4)	
Role	
Spouse	2 (50%)
Daughter	2 (50%)

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memory challenges, 4 study partners)

- 12 withdrew: loss due to staff turnover (n=3), time constraints (n=3), ineligibility (n=4), life events (n=1), no response to follow-up (n=1).
- After protocol adjustments → only n = 2 drop-outs
- n=17 participants completed the program thus far (15 with memory challenges, 2 care partners).

n=3 participants are in progress.

- Fall Risk: n=8 low, n=7 moderate, n=1 high
- Frailty (Clinical Frailty Scale): mean: 3-managing well, ranging from "very fit" to "severely frail."

Primary Endpoints

Feasibility

Before inclusion criteria adjustments **Retention: 65%**

After Adjustments **Retention: 91%**

Attendance: 100% at scheduled sessions and phone check-ins

Intervention Completion: 93% of participants who started the program completed it.

Fidelity: In progress

Acceptability

People Living with Memory Challenges

IAT:
-**Easy to use:** 100%
-**Liked NATURE:** 100%

Study Partners Found the program acceptable

AIM: 16

Exploratory Outcomes

Sustained Behavior Change

77% Continued their nature activities

93% Intended to continue

47% Added new Activities

Positive trends in meeting Physical Activity Guidelines

Trends sustaining & improving IADLs (Functional Activity Questionnaire)

-53% improved (3.7 point change)
- 33% sustained
-13% decreased (2.5 point change)

86% achieved ≥2/3 personalized goals developed with the occupational therapist

- Continued study implementation Early findings indicate NATURE is feasible and acceptable with refinements to inclusion criteria to individuals with memory challenges who have varying levels of fall risk and frailty.
- Findings will inform strategies to optimize delivery and retention that can inform recruitment strategies for Hispanic and Latino populations and other underrepresented populations included in the study.





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