

Engaging Older Adults with Memory Challenges in Nature-based Activities: Early Feasibility Findings of the NATURE program

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BACKGROUND

- Physical inactivity and sedentary behavior increase the risk of cognitive decline in older adults with memory challenges.
- Nature-based physical activities may enhance cognitive functioning and emotional wellbeing, yet few comprehensive evidence-based nature prescribing programs exist for this population.
- Nurturing Aging Through Uplifting-activity in Restorative Environments (NATURE)** was co-developed with people living with memory challenges to foster engagement in nature-based activities and mitigate dementia risk.
- An innovative biodesign framework provides a systematic approach for mapping the development of NATURE to address the needs of older adults with memory challenges

OBJECTIVE

To evaluate the feasibility and acceptability of the NATURE program

METHODS

Study Design: quasi-experimental study design

Recruitment: Participants were > 45 years old with subjective cognitive decline and their study partners

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



DATA COLLECTION

- Demographic Data (i.e., T-MoCA, age, education, etc.)

Main Outcomes:

Feasibility: ≥75% in completion, attendance, retention, and fidelity that were collected throughout the program

Acceptability: (1) >75% “yes” responses to two questions from the Intervention Acceptability Scale and (2) scores 16-20 on the Acceptability of an Intervention Measure (collected post-intervention)

Sustained Behavior Change: Measured with 3 questions 4-weeks after the end of the intervention:

Are you still doing your green activities?

Do you plan to do them in the future?

Have you added any new activities?

Data Analysis: demographic data, feasibility, and acceptability data were analyzed utilizing descriptive statistics

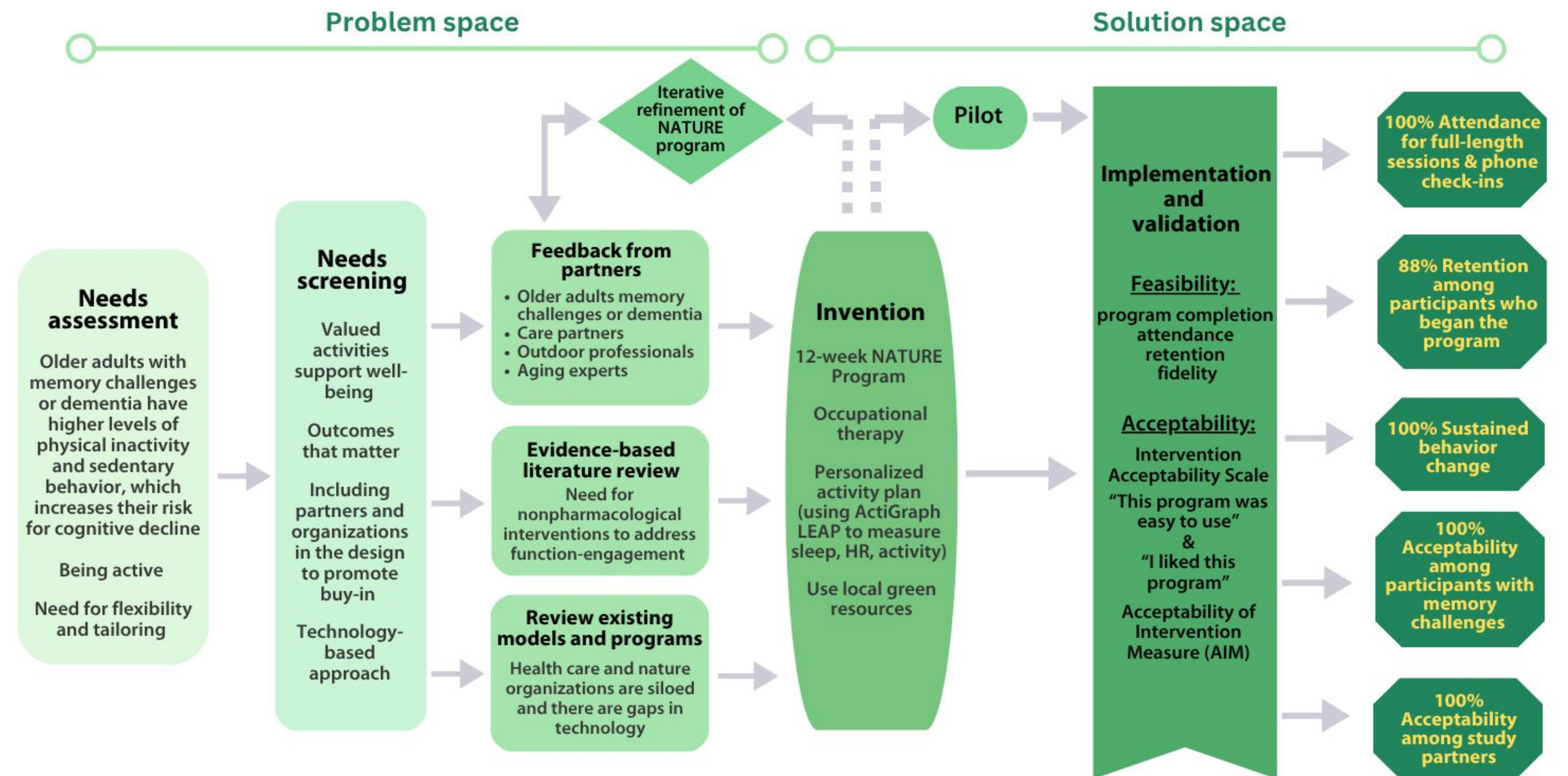
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ClinicalTrials.gov

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IMPLEMENTATION FRAMEWORK



RESULTS

DEMOGRAPHIC CHARACTERISTICS

People Living with Memory Challenges (n=27)	
Age (years, SD)	69 years (11.7)
Gender	
Female	19 (72%)
Male	8 (38%)
Language	
Bilingual (English/Spanish)	2 (8%)
English	24 (88%)
Spanish	1 (4%)
Education	
Some High School	1 (4%)
High School	3 (11%)
Some College/Associates	11 (41%)
Bachelors	1 (4%)
Masters	5 (18%)
Missing Data	6 (22%)
Hispanic	6 (22%)
Non-Hispanic	15 (56%)
Missing data	6 (22%)
Race	
Black	12 (44%)
White	5 (19%)
Other/Not specified	10 (37%)
T-MoCA (Total Score, SD)	17 (2.8)
Area Deprivation Index National Percentile	56 (27.3)
Study Partner (n=4)	
Role	
Spouse	2 (50%)
Daughter	2 (50%)

CONCLUSION & FUTURE DIRECTIONS

- Early findings indicate that NATURE is both **feasible to implement and highly acceptable** to older adults with memory challenges and their care partners
- High participant engagement, goal attainment, and sustained behavior change suggest that nature-based activity interventions may represent a promising approach for promoting wellbeing and reducing dementia risk in this population.
- Ongoing recruitment will further inform strategies to optimize program delivery and reduce early dropout. Next steps include piloting a geographic ecological momentary assessment app to measure nature physical activity prior to efficacy testing.

Feasibility

100%
attendance at
scheduled sessions
and phone check-ins

93%
completed the full
12-week
intervention

Acceptability

100%
of participants with
memory challenges
rated the intervention
easy to use and
satisfactory

AIM score:16
Study partner
endorsed the program
as acceptable

Sustained Behavior Change

77%
reported continued
engagement in
nature-based activities
at 4-week follow-up

100%
intended to continue
their nature activities

46%
added new activities