

# Alzheimer's Disease and Decision Making about Aging-in-Place Support: Cognitive, Functional, and Social Predictors.

Amber Winder, MPH<sup>1</sup>; Allison Schierer, BS<sup>2</sup>  
Alaine Murawski, LSW, AM<sup>2</sup>; Lauren Opsasnik, MS<sup>1</sup>; Anna Liggett, MD<sup>2</sup>; Vanessa Ramirez-Zohfeld, MPH<sup>2</sup>; Charles Olvera, MA, MS<sup>2</sup>; Lee A. Lindquist, MD MPH MBA<sup>2</sup>

<sup>1</sup>Northwestern University Feinberg School of Medicine  
Division of General Internal Medicine, Chicago, IL  
<sup>2</sup>Northwestern University Feinberg School of Medicine  
Division of Geriatrics, Chicago, IL

## INTRODUCTION

Most older adults with Alzheimer's Disease (AD) will need additional support in their lifetime, but little is known about **how** the decision to accept help is made. We sought to better understand how older adult aging-in-place (AIP) decision-making is impacted by worsening cognition, social influences, and/or environmental factors. We also sought to understand how COVID-19 impacted their perceptions of utilizing long-term care facilities.

## METHODS

We are conducting a longitudinal study of older adults (LitCog). Participants receive PlanYourLifespan.org (PYL), which facilitates making decisions about AIP needs, specifically among older adults with AD and/or other cognitive loss. Subjects are surveyed by phone every 6 months thereafter. Surveys assess participant's cognitive, social, functional, health literacy, and environmental factors as well as decision-making.

- **Cognitive testing** is conducted through a detailed neuropsychological battery
- **Participants are grouped into 3 categories:** no impairment, mild cognitive impairment (MCI), moderate dementia.
- **Multivariate logistic regression models** conducted per timepoint.

## RESULTS

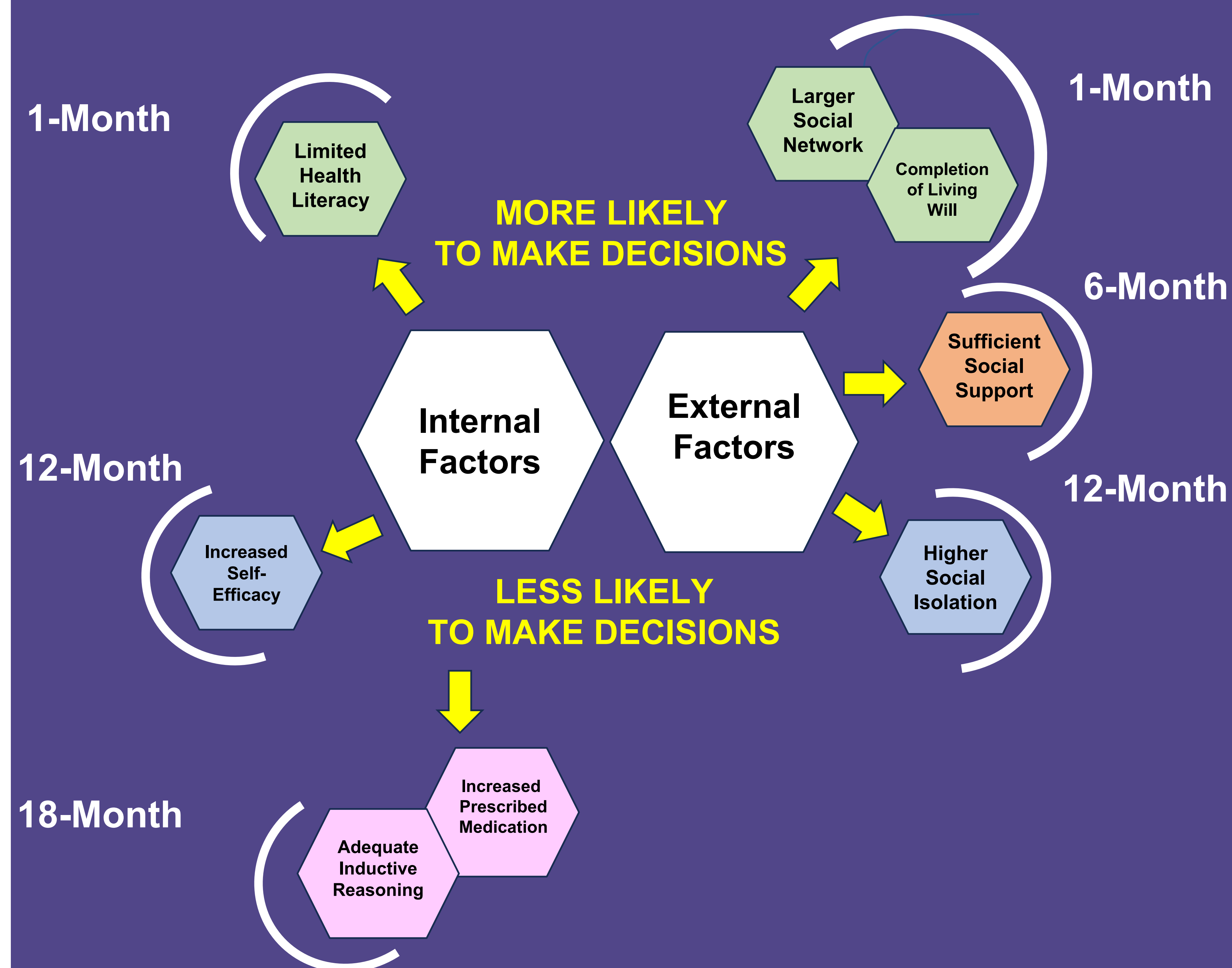
Of the 293 subjects, mean age was 73, 72.7% female, and 40.4% Non-White. 40.6% had limited health literacy. The majority of subjects had some college, completed college, or had graduate degrees.

Baseline: Almost half (47.4%, n=139) reported experiencing cognitive decline, with 42.4% (n=59) experiencing memory loss weekly and 18% (n=25) reporting a monthly occurrence. 10.3% identified worsening memory loss from prior 6-month timepoint. 22.2% (n=65) of participants tested at levels of mild or moderate cognitive impairment.

## What impacts a person's decision making about aging-in-place if they were to develop Alzheimer's Disease?

Over 18 months follow-up, aging-in-place decisions were impacted by both internal, external and environmental factors

Figure 1. Internal and external factors associated with increased/decreased decision-making if participants were to develop Alzheimer's Disease.



Understanding the factors that influence decision making is important in targeting and helping older adults prepare for their future needs.

## RESULTS, cont.

At the various follow-up time-points, subjects were significantly more likely to have made AIP decisions if:

- **Limited health literacy** (OR 4.36 [p<0.01, 1.69-11.24]); **Larger social networks** (OR 1.08 [p<0.05, 1.01-1.15]); **Prior completion of a living will** (OR 2.43 [p<0.05, 1.11-5.33] @ 1-Month

- **Sufficient social support** (OR 3.39 [p<0.05, 1.19-9.70] @ 6-Months

- **Higher social isolation** (OR 1.05 [p<0.05, 1.01-1.08]); **Increased self-efficacy** (OR 1.07 [p<0.01, 1.04-1.11]) @ 12-Months

Subjects were significantly less likely to have made AIP decisions if:

- **Adequate Inductive Reasoning** (OR 0.91 [p<0.05, .84-.99]); **Increased total prescription medications** (OR 0.9 [p<0.05, .82-.98]) @ 18-Months

During the COVID pandemic, older adults shared their comfort level in utilizing LTC facilities.

### COVID Y2: March 2021- February 2022

- Uncomfortable (38.1%, n=81)
- Comfortable (31.6 %, n=67)
- Neutral (29.3%, n=62)

### COVID Y3: March 2022- February 2023

- Uncomfortable (39.0%, n=71)
- Comfortable (31.9%, n=58)
- Neutral (28.6%, n=52)

## DISCUSSION

Decision-making about additional support in the event of worsening cognition (often seen in AD), is associated with both external (e.g., social support) and internal (e.g., self-efficacy, health literacy) factors which change in significance over time. Catastrophic factors, especially those observed with COVID-19, also impact decisions. Factors impact AIP decisions at different time points and further longitudinal study is planned.

## FINANCIAL DISCLOSURE

This study is funded through National Institute of Health's National Institute on Aging, Grant Number R01A05877 (PI: Lindquist) . Dr. Lindquist is also supported, in part, by the R01AG068421 and Northwestern Pepper Center P30AG059988.

## CONTACT US

Amber.Winder@northwestern.edu - Winder  
LAL425@northwestern.edu - Lindquist  
Twitter: @LeeLindquistMD

