

# Aging Concerns, Challenges, and Everyday Solution Strategies (ACCESS)

## A Snapshot of Archival Analyses

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Technologies to Support Aging-in-Place for People with Long-Term Disabilities



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# Aging Concerns, Challenges, and Everyday Solution Strategies (ACCESS)

Large-scale, mixed-method study: taxonomy of everyday support needs

- What is the frequency, nature, and distribution of **problems in everyday activities**?
- What are the **response strategies** for these challenges (e.g., technologies, tools, assistance from others, own methods)?

**Older adults (ages 60-79) with long-term hearing, vision, and mobility disabilities**

## Phase 1 (N=180)

Low Vision/Blind (n=60)

Mobility (n=60)

Deaf/Hard of Hearing(n=60)

# ACCESS Overview

## Inclusion Criteria

- Be over the age of 60
- Self identify as one of the following:
  - Blind/low vision: having serious difficulty seeing even when wearing glasses
  - Deaf/hard of hearing: using American Sign Language (ASL) as primary language for communication
  - Mobility impaired: using a mobility aid (i.e., cane, crutches, wheelchair, walker, or scooter) and having serious difficulty walking or climbing stairs (or unable to walk or climb stairs)
- Have had the vision, hearing or mobility impairment prior to age 50
- Live in the US
- Be able to complete the interview in English or ASL

Phone  
Screening  
(15 min)

Interview  
(60-90 min)

\$30  
compensation

Questionnaires  
(45-60 min)

TechSage Minimum  
Battery

Supplemental  
Group  
Questionnaire

ACCESS  
Questionnaire

| Activities Outside the Home                   | Things You Do Around the Home  | Shopping & Finances              | Transportation                                  | Managing Health                   | Basic Daily Activities          |
|---|--------------------------------|----------------------------------|---|-----------------------------------|---------------------------------|
| Doing activities with a group or organization | Contacting others              | Applying for financial resources | Arranging for transportation (taxi, Uber, Lyft) | Accessing health information      | Bathing, showering, or grooming |
| Going to entertainment events or activities   | Doing hobbies at home          | Going shopping in person         | Driving   | Caring for others                 | Dressing                        |
| Religious services and activities             | Housekeeping                   | Managing finances                | Flying (airport, security, on plane)            | Exercising                        | Eating or feeding self          |
| Visiting family and friends                   | Noticing alerts                | Paying and signing for things    | Getting a ride from a friend or family          | Getting help in case of emergency | Moving Around Home              |
| Working, volunteering, etc.                   | Repairing and maintaining home | Shopping Online                  | Riding a train or subway                        | Going to healthcare appointments  | Toileting                       |
|   |                                |                                  | Taking a bus                                    | Diet and nutrition                | Transferring                    |
|   |                                |                                  | Walking   | Managing medications              |                                 |
|   |                                |                                  |   | Monitoring health                 |                                 |
|   |                                |                                  | Wayfinding                                      |                                   |                                 |

# In-depth Questions for 'Most Difficult' Activity

- Challenge:
  - What aspect or part of this creates the most challenges for you?
- Response to the Challenge:
  - How do you handle this challenge?
  - Do you use any sort of devices, tools, or technologies to help you with...?
  - Do you use any of your own methods or things you came up with to help you do ...?
  - Do you get help from anyone to do ...?

# Primary Analyses

## Journal Publications



*Everyday Activity Challenges for Individuals Aging with Vision Loss*

*Transportation Challenges for Persons Aging with Mobility Disability: Qualitative Insights and Policy Implications*

*Understanding Exercise Challenges and Response Strategies for Adults Aging with Long-Term Vision and Mobility Disabilities*

## Conference Presentations

*A Qualitative Approach to Understanding User Needs for Aging with Disability*

*Challenges with Managing Health & Basic Daily Living Activities among People Aging with Long-Term Mobility Disabilities*

*Understanding health management needs for individuals aging with mobility or sensory impairments*

## Technical Reports

*Developing the Aging Concerns, Challenges, and Everyday Solution Strategies (ACCESS) Study (TechSage-TR-1801).*

*Coding scheme for the aging concerns, challenges, and everyday solution strategies (ACCESS) study: Adults aging with mobility or vision disabilities. (TechSage-TR-1902).*

# Archival Analysis Research Grant Program



- Maximize the impact of these data
- Engage researchers from different disciplines
- Accelerate the knowledge translation
- Proposal application process – must include a TechSAGE Investigator
- Maximum of \$500 available (e.g., conference travel, analysis software)
- 7 projects supported to date among interdisciplinary researchers

# Identifying caregiving challenges and technology needs of older care partners with long-term disabilities

(PI: Minakshi Raj, Ph.D.)

**Overview:** Conducted a thematic and narrative qualitative analysis of interviews with older adults with long-term mobility and visual disabilities who are care partners

Everyday tools

“I would give her a bell and tell her to ring it if she needed me”

Electronics

“I use my iPhone with the apps to try to read prescriptions.”

Solutions to Caregiving Challenges

“I might use the lifting or standing part of my power chair to help me grab my wife with one arm so I can help her get up”

Assistive technologies

Support from others

“I go to the phone and hit 911 and describe as much as I can what’s going on.”

“Organization is really key... For instance, my mother's room... everything has a place so that I can find it... her everyday outfits so that I can dress her.”

Personal Approaches

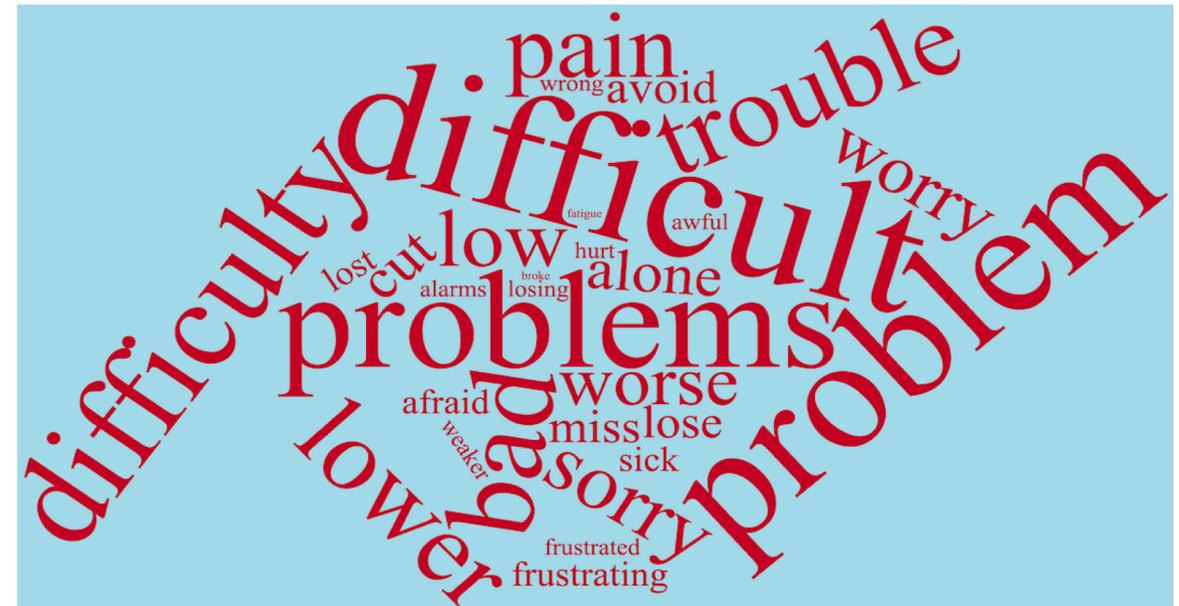
# Expression of Positive and Negative Affect When Discussing Everyday Challenges by Persons Aging with Mobility Disabilities (PI: Ahmad Rathor, B.S.)

**Overview:** Used Linguistic Inquiry and Word Count (LIWC) program to code positive and negative emotion words and calculated the # of transcripts in which each (positive/negative) word was present

Most Frequent Positive Words (Top 30)



Most Frequent Negative Words (Top 30)



**Key Findings:** More positive than negative emotions were expressed (statistically significant); the context of how the emotion words were used allows us to acknowledge the holistic experience of aging with a disability

# Sparks of Innovation: Transforming Challenges into Opportunities

(PIs: Raghavendra Gudar, Ph.D, & Deana McDonagh, Ph.D.)

**Overview:** Used ACCESS data on activity challenges, specifically focusing on transportation, to identify gaps from a design research perspective and possible ways to convert these gaps into opportunities for innovation

Step 1: Identifying & analyzing problems among individuals



Step 2: Putting the problem in a broader context to see if the problem is a sub-set of a larger issue

Framework for identifying opportunities for innovation



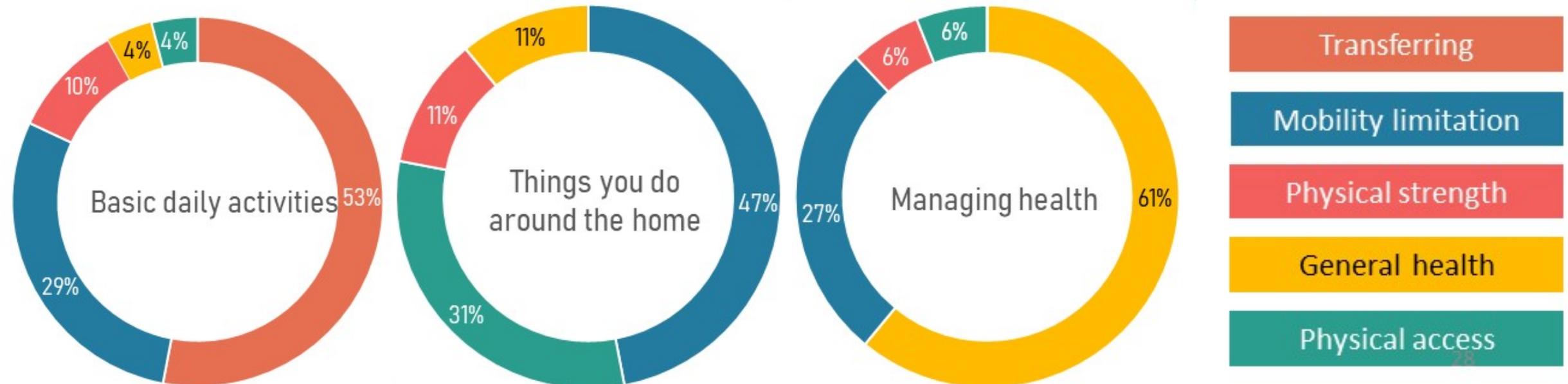
|                 | Micro                           | Macro   |
|-----------------|---------------------------------|---|
| Scale           | One person                      | Potential to effect larger population                   |
| Systemic impact | Unable to find accessible taxi  | Transportation is inaccessible, limited or non-existent |
| Significance    | Unable to attend a family event | Risk of social isolation                                |

# Aging in place at home: Understanding personal and environmental activity challenges and responses of older adults with long-term mobility disability

(PI: Widya A Ramadhani, M. Arch.)

**Overview:** Guided by the ecological theory of adaptation and aging (Nahemow & Lawton, 1973), researchers identified person- and built environment-related challenges and behavioral response strategies of older adults aging with long-term mobility disability when doing everyday activities at home.

## Challenges across categories



# Recap & Next Steps

- ACCESS Data has proven to be a rich source of information about the characteristics, experiences, and everyday challenges of people aging with long-term vision, hearing, & mobility disabilities
- Opportunities for a variety of creative analyses
- ACCESS next steps:
  - Continuing analyses of core team + archival analysis program
  - Phase 2 data collection underway

## Phase 2 (N=180)

Macular Degeneration & Glaucoma

Multiple Sclerosis

Late-Deafened