

# Increasing Aging Services Technologies Awareness through a Video-based Intervention for Caregivers

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## Introduction

- Research shows that Aging Services Technologies (ASTs) can reduce caregiver burden.
- ASTs are defined as technologies that can “influence the aging experience for seniors, including their quality of life, health outcomes, satisfaction and/ or the quality of care they receive” (Center for Aging Services Technologies, 2007).
- Data suggest that ASTs are being underutilized due to a lack of awareness.
- A video-based intervention was developed to raise AST awareness among caregivers of older adults.
- We hypothesized that a video-based intervention delivered to caregivers will increase AST knowledge and perceived usefulness and decrease AST stigma.

## Methods

### ❖ Participant

- 38 Caregivers (29 group, 9 online).
- All participants self-identified as caregivers.
- Most participants live in the Inland Northwest (WA and neighboring ID cities)
- Recruited through word of mouth, health fairs, hospitals, senior centers, senior living facilities, & caregiver support groups, etc.
- All participants spoke English.

### ❖ Materials & Procedures

- Upon signing consent, participants were asked to fill out a pre-intervention questionnaire and take a tool identification test, view three pseudo-randomized videos, and then again fill out a post-intervention questionnaire and take a tool identification test
- The three videos shown to participants included ASTs on Daily Living, Medication Management, and Memory.
- Participants answered AST-related questions on the questionnaire using a 5 point Likert scale from 1=strongly disagree to 5=strongly agree
- The AST questionnaire contained 3 subscales:
  - *AST Knowledge*: e.g. I know about ATs that may help me and/or my care-receiver.
  - *AST Attitude*: e.g. I feel that ATs make it easier to do things.
  - *AST Stigma*: e.g. I think that people who use ATs must feel isolated
- *Tool Task Identification*
  - Participants were presented with 12 AST tools and required to choose the correct name of the tool from a list of four possible names.

- At the end of the intervention, participants were provided with written material included booklets with information and pictures regarding ASTs.
- Participants were also provided information about the project website, tech4aging.wsu.edu where the complete set of eight AST videos were available or provided with the same information on a DVD.

Example of tool identification task:



- A. House Alarm  
B. Pill Reminder  
C. Voice Calendar  
D. Medication Dispenser

## Results

- The majority of caregivers were female and homemakers, and the largest group of caregivers had received a Bachelor’s degree (See Table 1).

Table 1. Demographics among the caregivers.

Participants	
<b>Gender (N=32)</b>	Female: N=27 Male: N=5
<b>Education (N=30)</b>	High School Diploma: N=7 Associates Degree: N=4 Bachelor’s Degree: N=14 Graduate Degree: N=5
<b>Employment (N=35)</b>	Employed for wages: N=7 Homemaker: N=19 Retired: N=5 Volunteer: N=4 Unable to work due to cognitive or physical problems: N=1

- The majority of caregivers were very familiar with the care-receiver’s daily routine and lived with their care-receiver who had a medical condition (see Table 2).

Table 2. The relationship between caregiver and care-receiver.

Participants	
<b>How often they saw their care-receiver</b>	Live with them: N=15 Daily: N=2 3-5 times a week: N=5, 1-2 times per week N=3, Less than 1 time per week N=4
<b>How familiar they were with the routines of their care-receiver</b>	Very Well N=24 Pretty well N=4 Fairly well N=2 Not so well N=1
<b>Care-receiver had a medical condition (N=37)</b>	N=31 Yes N=4 No N= 2 N/A

- Table 3 shows the caregivers indicated their care-receivers had the most difficulties with remembering and managing medications, mobility difficulties, and high fall risk.

Table 3. Median scores of the ranked difficulties for care-receivers perceived by caregivers.

Participant (Mdn)	
<b>Difficulties remembering and managing medications</b>	3
<b>Difficulties with everyday activities</b>	2
<b>Communication problems</b>	2
<b>Poor memory</b>	2.5
<b>Mobility Difficulties</b>	3
<b>Hearing Difficulties</b>	2
<b>High Fall Risk</b>	3

Scale Used: 1=not at all, 2=somewhat, 3=quite a bit, 4=very much

- Wilcoxon Signed Ranks Tests revealed significant increases in AST related knowledge, decreases in AST stigma, and increases in accuracy of identifying ASTs (See Table 4).
- There was no pre-post difference in AST attitudes.

Table 4. The comparison of domains between pre and post video viewing using Wilcoxon Signed Ranked Test.

	AST Knowledge	AST Attitude	AST Stigma	Tool Task Identification
<b>Pre-video</b>	3.2	4.83	3.2	6
<b>Post-video</b>	4.4	4.83	4.4	10
<b>Z</b>	-4.31**	-.24	-2.05*	-4.81**
<b>N</b>	37	31	31	31

\* $p < .05$ , \*\* $p \leq .001$

- Caregivers unanimously indicated that the program was helpful (See Table 5).

Table 5. Participants’ responses to program evaluation questions.

Participants	
<b>Did you learn additional information about ASTs from the video? (N=31)</b>	100% Yes
<b>Did you find the video information helpful? (N=31)</b>	100% Yes
<b>Did you feel more positive about AST use and its benefits after viewing the videos? (N=30)</b>	100% Yes

## Conclusions

- The preliminary findings from this study suggested that the video-based intervention was beneficial to caregivers.
- This study showed that caregivers were significantly more accurate post-intervention at identifying AST tools. Caregivers also self-reported a higher level of perceived AST-related knowledge post intervention.
- Caregivers endorsed a lower level of AST-related stigma post intervention.
- Although there was no change in the attitude scores post intervention, the highly positive and near ceiling scores likely reflect that the caregivers already held positive AST related attitudes.
- Findings from this study may have clinical and educational implications to further expand and help caregivers and their care-receivers.

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