

Visual Cues for Activities of Daily Living: Opinions of Dementia Caregivers

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Abstract

Due to the aging population, especially the generation of baby boomers, dementia should be a public health concern. There is a lack of research on visual cues, especially in regards to which type of visual cues (written, organizational, or environmental) caregivers find to be the most useful. The aim of this study was to identify the opinions of caregivers of persons with dementia on the usefulness of the different types of visual cues for completing activities of daily living (ADLs) in the home environment. A focus group of seven caregivers of persons with dementia was conducted. The following major themes were identified: organizational cues are more useful for caregivers than for care recipients, environmental cues are the most useful type of visual cue for care recipients, and written cues are less useful for more advanced stages of dementia. The following secondary themes were identified: care recipients maintaining a sense of independence, care recipients becoming lost in the home environment, language loss, and dressing challenges. The findings of this study, which included a limited amount of data, suggest that future research on caregivers' opinions of visual cues could be beneficial.

Keywords: dementia, visual cues, activities of daily living, aging in place

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Introduction

Due to the aging population, especially the generation of baby boomers, dementia should be a public health concern. More individuals with dementia are electing to age in place. Aging in place can be facilitated through the use of home modifications, such as visual cues (Wherton & Monk, 2008). Specifically, visual cues can be used to facilitate activities of daily living (ADLs) (Wherton & Monk, 2008). Examples of ADLs include dressing, remembering events, and being able to follow medicine regimens. There are three different types of visual cues: written cues, organizational cues, and environmental cues (Bourgeois, 2007).

Written Cues

Written cues include labels, notes, and lists. Arntzen, Holthe, and Jentoft (2014) identified that interviewed care recipients considered white boards to be helpful for carrying out ADLs. Similarly, Phineey, Chaudhury, and O'Connor (2007) and Preston, Marshall, and Bucks (2007) identified that interviewed care recipients found notes to be helpful for ADLs. Keller, Edward, & Cook (2007) found that notes and whiteboards were found to be helpful for reminding care recipients when the next meal occurred. Similarly, Boger, Quraishi, Turcotte, & Dunal, (2014) identified that care recipients found notes, whiteboards, and bulletin boards useful. An intervention that included the use of labels and lists was found to be useful (Judge, Yarry, & Orsulic-Jeras, 2009). Another intervention that included the use of ingredient labels and to do lists was found to improve the participants' proficiency in the kitchen (Nomura et al., 2009). Therefore, the results of the studies imply that written cues aid persons with dementia in carrying out ADLs in the home environment.

Organizational Cues

Organizational cues include planners, pill organizers, and calendars. In one study, the interviewees found calendars to be helpful (Arntzen et al., 2014). Another study identified that the use of medicine organizers to be helpful for remembering to take medications (Boger et al., 2014). Four interventions included the use of calendars for either scheduling or remembering to take medications (Cahill, Begley, Faulkner, & Hagen, 2007; Judge et al., 2009; Kurz et al., 2012; Topo et al., 2007). One intervention, which included the use of planners and notebooks, statistically improved ADLs and memory (Kurz, Pohl, Ramsenthaler, & Sorg, 2009). Another intervention included the successful implementation of a memory notebook (Schmitter-Edgecombe, Howard, Pavawalla, Howell, & Rueda, 2008). In sum, the results of the studies imply that organizational cues aid persons with dementia in carrying out ADLs in the home environment.

Environmental Cues

Environmental cues include color-coding and placement of items in view for task completion. In one study, the interviewed caregivers and care recipients valued the use of environmental cues in the home, such as the placement of medicine bottles in view for use and the placement of personal hygiene items in view for use (Wherton & Monk, 2008). In another study, interviewed caregivers shared that cues, such as placing a measuring cup or water glass in view, are useful for promoting cooking (Keller, Edward, & Cook, 2007). An intervention, which included placing kitchen utensils in view, was found to improve the participants' proficiency in the kitchen (Nomura et al., 2009). In another intervention, part of the intervention included placement of items in view for task completion, such as the task of making a salad (Gitlin et al.,

2008). To summarize, the results of the studies imply that environmental cues aid persons with dementia in carrying out ADLs in the home environment.

Therefore, the current literature, although limited, suggests that different types of visual cues can aid persons with dementia in carrying out ADLs in the home environment. There is a lack of research on visual cues, especially in regards to caregivers' opinions on which type of visual cues aids care recipients the most in completing ADLs.

Aims and Hypothesis

The primary aim of this study was identify the opinions of caregivers of persons with dementia on the usefulness of the different types of visual cues for completing activities of daily living (ADLs) in the home environment. The secondary aim was to identify which type of visual cues caregivers deem to be the most useful type of visual cue for completing ADLs. Based on the research team's experience of working with caregivers and care recipients, it was hypothesized that caregivers may indicate that environmental cues aid care recipients the most in completing ADLs.

Methods

Participants

Inclusion criteria included that all of the participants must be between the ages of 18 and 89 and serve as a caregiver of a person with dementia who lives at home. The participants were recruited from a clinic that offers day care services to persons with dementia. Researchers distributed flyers (Appendix A) at a caregiver support group meeting. Also, flyers were left at the facility. Interested participants contacted the primary investigator via telephone (Appendix B). Seven participants were included in the study. Six of the participants were females, while one participant was a male. Six of the participants were the primary caregivers, while one was a co-

caregiver. One participant was a caregiver of a care recipient with mild dementia. Two participants were caregivers of a care recipient with moderate dementia. The other four participants were caregivers of care recipients with more advanced dementia.

Data Collection

A focus group was held. On the day of the focus group, all of the participants first completed an informed consent form. During the focus group, the participants filled out a demographics information form, before discussing five questions concerning the different types of visual cues (Appendix C). Detailed notes were taken during the focus group and were later de-identified by referring to each participant by a participant number. The group discussion was recorded using a portable digital audio recorder.

Data Analysis

The audio recording of the focus group was transcribed by one member of the research team. The transcript was checked by the other members of the research team, and corrections were made. Then, the audio recording was destroyed. The demographic data was analyzed using descriptive analysis. Based on the focus group transcript, a thematic coding approach was implemented, in order to code the data and to identify any possible themes. The analysis was first performed by two members of the research team, who independently used the transcript to code the data and to identify any possible themes. The research team members read over each other's codes and themes and discussed any differences. Then, they agreed upon a finalized version of the codes and themes. The finalized version was presented to the research mentor for review and feedback. The finalized themes were later presented to a qualitative research group for additional feedback. Based on the feedback, two of the proposed major themes were combined into one major theme.

Results

Major Themes

Three major themes, as illustrated by Figure 1, were identified:

1. *Organizational Cues More Useful for Caregivers than for Persons with Dementia*

Four of the caregivers discussed that organizational cues are more useful for caregivers than for care recipients. For instance, according to Participant One, “The pill container is really for me... Calendars, no forget it, that’s for me”

2. *Environmental Cues Overall Most Useful for Persons with Dementia*

This theme concurs with the hypothesis that caregivers may deem environmental cues to be the most useful type of visual cue for completing ADLs. Six of the participants had already implemented the use of environmental visual cues in the home environment. And, towards the end of the focus group, when asked, five of the participants indicated that they felt that environmental were overall the most important type of visual cue.

Unexpectedly, the participants mentioned placing items out of view, in addition to the placement of items in view. For instance, according to Participant Six, “I made sure there was nothing toxic on the counter because she would go in and just you know mix all kinds of weird stuff that was inedible.”

3. *Written Cues Less Useful for More Advanced Stages*

Four of the participants discussed written cues being less useful for more advanced stages, due to language loss associated with dementia. For instance, according to Participant Four:

“She’s really at the point to where I really don’t know if she’s understanding any letter or words that she’s reading... In recent times, we’ve had the names of her

cats,... and family members as well... on the dry erase board... But, she's not really reading those anymore."

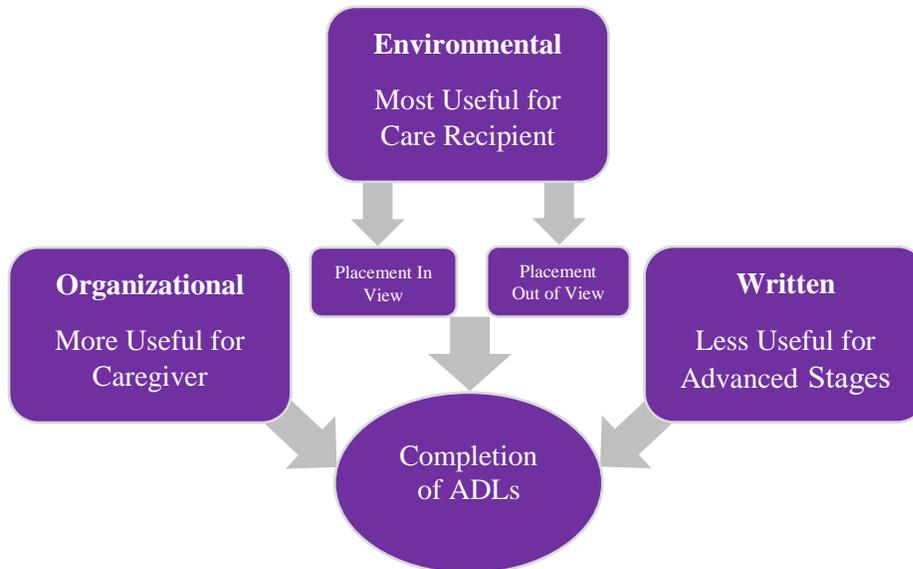


Figure 1. Major themes. This figure illustrates the major themes.

Secondary Themes

Four secondary themes were identified:

1. *Maintaining Sense of Independence*

Three of the participants discussed how their care recipients value maintaining a sense of independence. For example, according to Participant Five, "She knows where the bathroom is, but I don't think she wants me to tell her, you know what I'm saying. I think that still, independence is still in there."

2. *Becoming Lost in Home Environment*

Four of the participants discussed their care recipients becoming lost in the home environment. For example, according to Participant Six, "Sometimes, she can find the bathroom. Other times, she can't."

3. *Language Loss*

Five of the participants discussed loss of language. For example, according to Participant Six, “My mother has lost a lot of her language. I mean some of her words, a lot of her words don’t make sense... But she’ll do these, you know, things, you know hand motions.”

4. *Dressing Challenges*

Four of the participants discussed dressing challenges. For example, according to Participant Three, “She has like a uniform like she wants to wear... I pull out a blue shirt and a pair of jeans, but always the same clothes because she doesn’t want to wear anything else.”

In sum, three major themes and four secondary themes were identified.

Discussion

This study was the first study to the research team’s knowledge to seek the opinions of caregivers of persons with dementia on the usefulness of the three types of visual cues for completing ADLs in the home environment. Specifically, what set this study apart is that one of the questions in the interview guide sought to identify which type of visual cues caregivers believe aid care recipients the most in completing ADLs. Three major themes and four secondary themes were identified. One of the themes concurred with the hypothesis that caregivers may deem environmental cues to be the most useful type of visual cue for completing ADLs.

The study was limited in that it only included one focus group of seven participants. Yet, the results of the study are useful as there was consensus among the participants on the usefulness of the different types of visual cues. For instance, five of the seven participants agreed

that in regards to completing ADLs in the home environmental, environmental cues are the most useful type of visual cue for care recipients.

The findings of the study suggest that future research on caregivers' opinions on the use of visual cues in the home environment could be beneficial. In this study, the caregivers expressed that written cues are less useful for care recipients with more advanced stages of dementia. Therefore, future research could focus on identifying whether the usefulness of each type of visual cue is dependent upon the stage of dementia.

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Appendix A

Flyer



You are invited to participate in a focus group on Visual Cues in the home!

We are looking for caregivers of persons with dementia who would be willing to share their opinion on the use of visual cues in the home for completing activities of daily living (i.e. household tasks and activities) for our research study. The focus group will last no more than 1 hour.

We will discuss the three types of visual cues:

- **Written Visual Cues:** lists, labels, and notes
- **Organizational Visual Cues:** calendars, schedules, and pill organizers
- **Environmental Visual Cues:** objects or placement of items in view for task completion

If you are interested in participating, please contact the study supervisor, [REDACTED]



Appendix B

Phone Script

Hello, this is [REDACTED]. Would you like to hear more about our focus group? We are interested in caregivers' views on the use of visual cues in the home for carrying out activities of daily living, such as completing household tasks. We will be holding a focus group that should last no more than one hour on [date and time] at [location]. On the day of the focus group, after consenting to participate, you will be given a packet that will include a short demographics information form that we will request you to fill out. The packet will also include examples of the visual cues that we will be discussing; thus, no outside knowledge of visual cues will be required. Participation in this study is entirely voluntary, and you may leave the focus group at any time. Additionally, please note that the focus group will be recorded using an audio recorder and notes will be taken. All data collected will be deidentified. But, all data and study records will be kept on a secure computer and in a locked office and locked drawer. Would you like to participate in our study? Thank you for your time.

Appendix C
Caregiver Handout



WELCOME!



Background Information

What are Activities of Daily Living?

Examples include the following:

- Completing household tasks, such as cooking
- Following medicine regimens
- Remembering important dates and events

What are Visual Cues?

Visual cues are prompts or clues in the home.

There are three types:

- **Written Visual Cues:** lists, labels, and notes
- **Organizational Visual Cues:** calendars, schedules, and pill organizers
- **Environmental Visual Cues:** objects or placement of items in view for task completion (e.g. setting out ingredients for making a sandwich)



Demographics Information

What is your relationship to the family member that you care for?

- Spouse
- Daughter/Son
- Daughter-in-law/Son-in-law
- Sibling
- Other: _____

How many years have you been a caregiver for your family member?

What type of dementia does your family member have?

- Alzheimer's disease
- Vascular dementia
- Dementia with Lewy Bodies (DLB)
- Mixed dementia
- Frontotemporal dementia
- Mild Cognitive Impairment
- Other: _____
- I don't know.

Which stage of dementia does your family member have?

- Mild
- Moderate
- Severe
- I don't know.

Participant Number: _____

We will discuss the following questions:

1. Have you ever used a written visual cue to help your family member perform activities of daily living? If so, what kind?
2. Have you ever used an organizational visual cue to help your family member perform activities of daily living? If so, what kind?
3. Have you ever used an environmental visual cue to help your family member perform activities of daily living? If so, what kind?
4. Of the three types (written, visual, and environmental), which type or types do you find to be the most helpful for activities of daily living? Why?
5. Are there any visual cues that we discussed today that you would use in the future?