

Background and Motivation

- Intelligent voice assistants (IVAs) such as Amazon Alexa or Google Home can potentially benefit to the daily life of older adult consumers by assisting with tasks or helping them to find information.
- However, fears concerning privacy and security of these devices can limit use among older adults.
- Therefore, the goal of this research is to understand older adults' experiences with IVAs related to privacy and data confidentiality concerns. We addressed the following research questions:

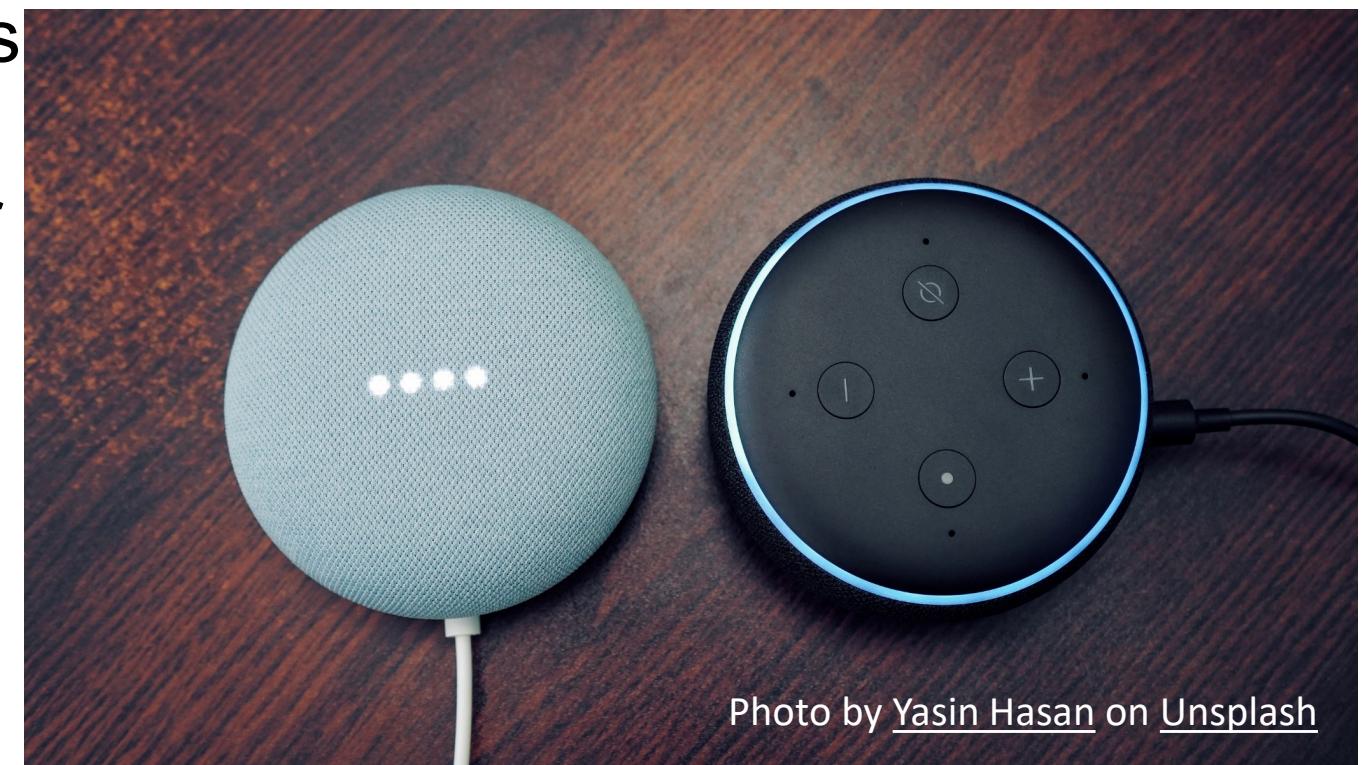


Figure 1. Images of Google Home mini and Echo Dot, two commercial voice-only IVAs.

RQ1: What are older adults experiences with IVAs in their homes regarding privacy and data confidentiality?

RQ2: What resources, if any, do older adults use to better understand the privacy implications of IVA use? Are older adults aware of online privacy guidance?

RQ3: What are older adults' perceptions on online privacy guidance?

Methods

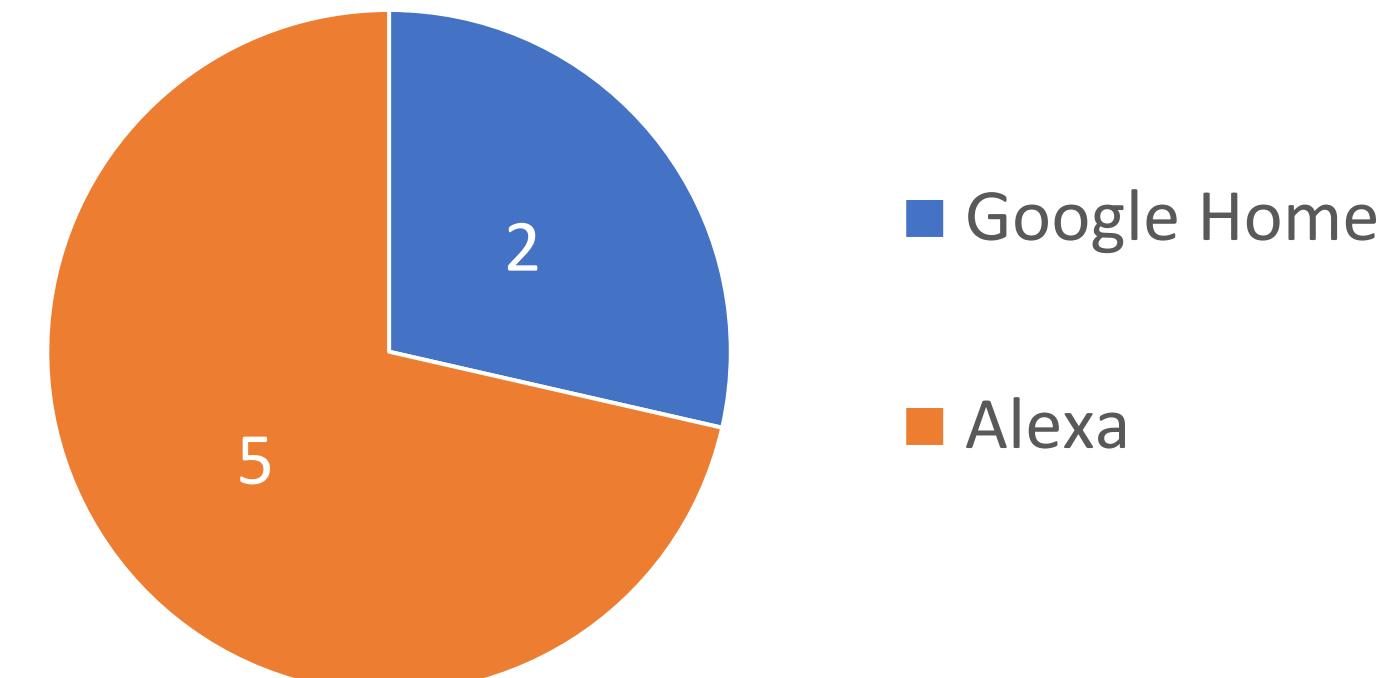


Figure 2. Types of IVAs owned by participants.

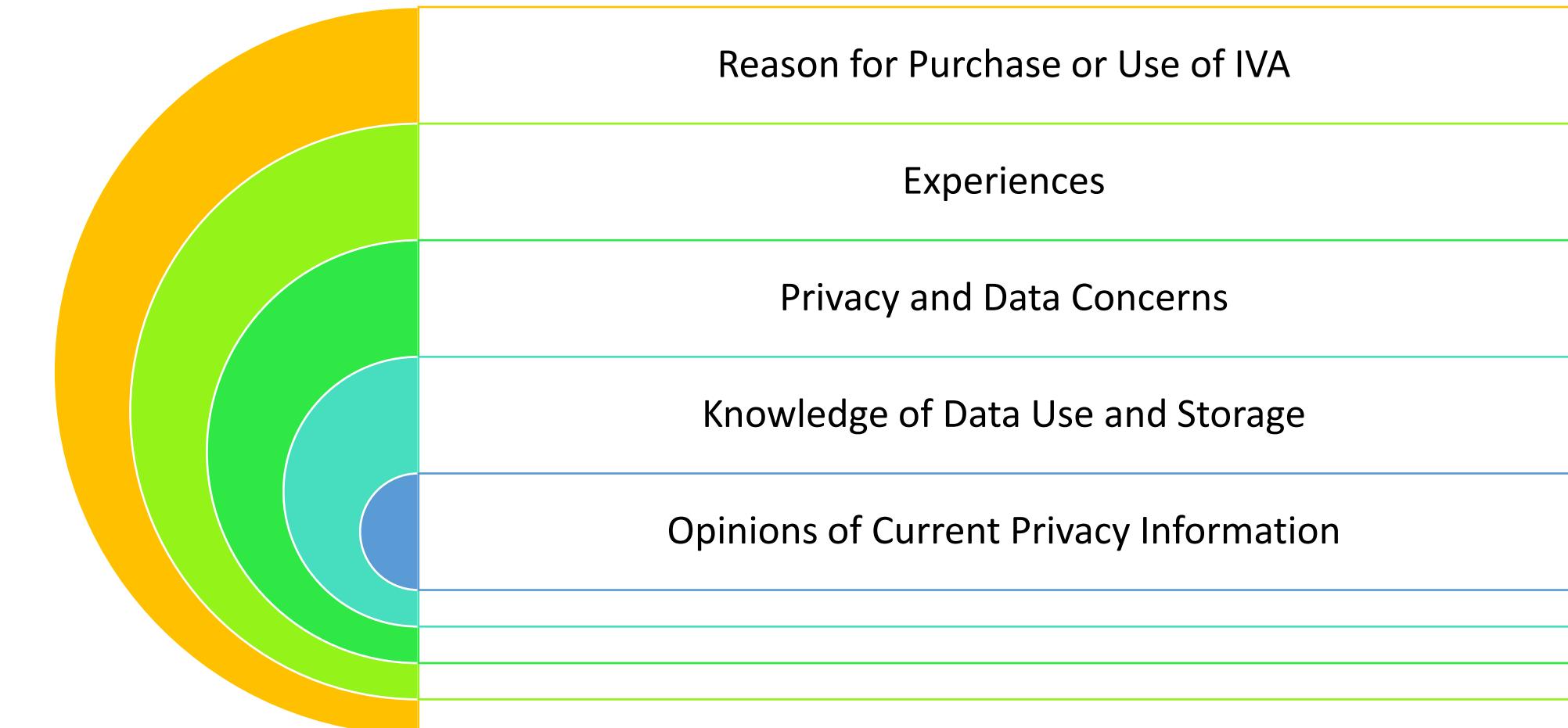


Figure 3. Interview Topics.

- We conducted semi-structured interviews with **seven** participants 60 years of age or older.
- All used an IVA within the last year (See Figure 2).
- We asked participants questions about their experiences with IVAs, concerns, and opinions about current privacy information available online (See Figure 3).
- Interviews were **transcribed** and **analyzed** using Atlas.ti to identify emerging themes.

Preliminary Findings

- Older adults were interested in their IVAs but were **unaware** of how their data was being used.
- Participants had privacy concerns based on **questionable interactions with device, rumors, and lack of awareness** of how the device worked.
- Participants were **unaware** of where to find information about data privacy/use and felt that current online privacy guides **needed improvement**.

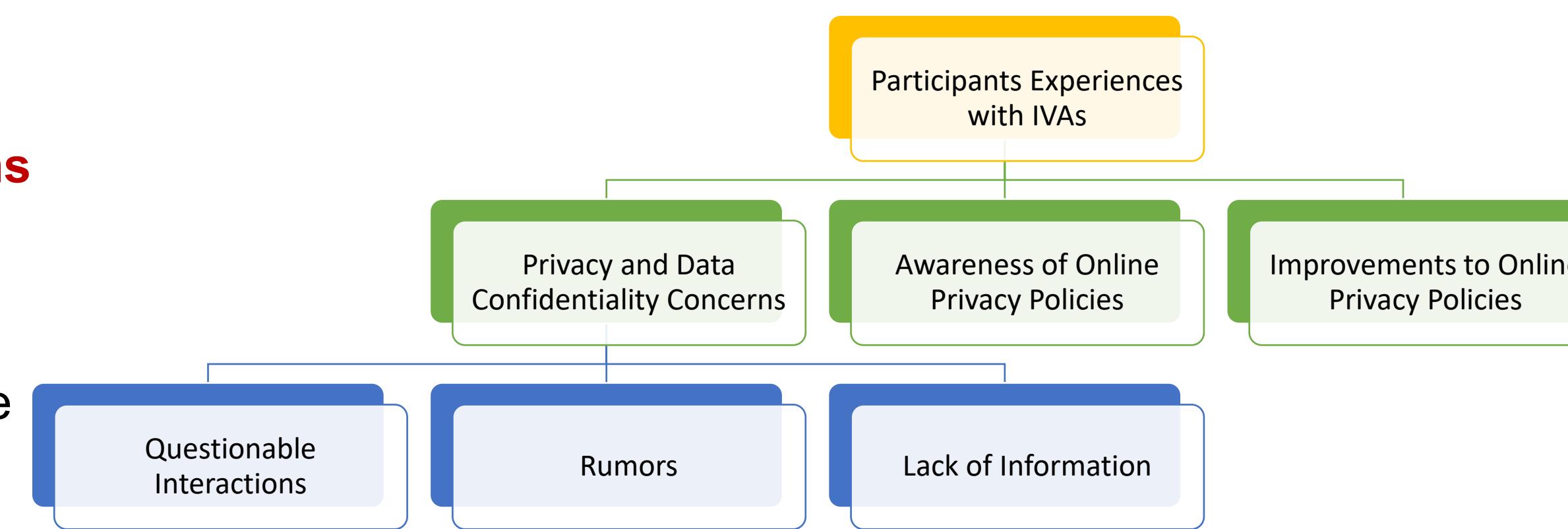


Figure 4. Themes that emerged from interview data.

- Some participants had experiences where their IVA would respond without being invoked and others heard rumors that the device may be listening which caused them to question privacy. Overall, participants wished they had better information about how the device worked.

"And there were four or five of us there [in the room] and she [Alexa] says, 'What was that question?' Because somebody asked somebody a question... 'Would you repeat that?' It [the situation] was just too freaky to me. Freaky.", P2

- Participants were also unaware of where to find information to learn about their device.

"Probably all the function(s). Like, instead of having a vague idea, I wish I had a better understanding of the whole thing [the IVA].", P3

- Participants felt that online privacy guidelines provided by companies needed improvement to help older adults including - better explanation upfront about privacy controls, less use of technical jargon, and better links between policy explanations and actional steps.

"I think if on a website it would also have troubleshooting or how do I do this type of thing, I think that would be real helpful, because like I said, setting it up is a major part of it.", P1

Conclusions and Future Work

- Older IVA users are concerned about privacy and how IVAs use and store their data but are **unaware** of how to find this information and current information that exist can be **challenging to navigate**.
- We believe our findings can help inform strategies for improving the presentation and usability of privacy information and controls among older adults but also users more generally.
- In future phases of this project, we will compare the experiences of other users such as younger adults.