

Developing an Accessible Digital Caregiver Tool for Neuropsychiatric Symptoms of Dementia

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BACKGROUND: There are 6.5 million Americans living with dementia and almost all (98%) experience costly neuropsychiatric symptoms (NPS). Caregivers provide an estimated 16 billion hours of care to people with dementia (PWD), however NPS has been associated with greater caregiver burden and stress. Our goal is to increase accessibility to music interventions clinically shown to ameliorate NPS and enhance quality of life in PWD.

PURPOSE: To maximize feasibility and engagement of a digital caregiver music intervention (SingFit) we examined feedback from a series of focus groups regarding the app's UX/UI design.

METHODS:

- **Design:** Qualitative focus groups five 90-minute focus groups with caregivers & rehab therapists
- Participants (n=26): Mean age 32.7; 38.5% Female
- Data Analysis: Experiential Thematic Coding of qualitative data as outlined by Braun and Clarke (2006)
- **Digital Intervention**: SingFit, a novel therapeutic music apputilizes algorithms based on historical and real-time user data to match appropriate music to a PWD's cognitive status, preference and in-the-moment goals (e.g., improve agitation, depression, etc.).

RESULTS:

Feedback was elicited from participants, recorded and coded for themes: 3 main themes emerged with 6 subthemes.

Acceptability was dependent on personalization and trust

- Valued personalization of goals & music
- Privacy policy good but should be moved later

High usability

- App navigation is "easy" but music player tracks unclear
- Session goals are appropriate

Need for visual clarity and aesthetic appeal

- Accessibility: White text hard to read
- Aesthetic: Colors are boring

Results from the overall impression survey is shown in Figure 1.





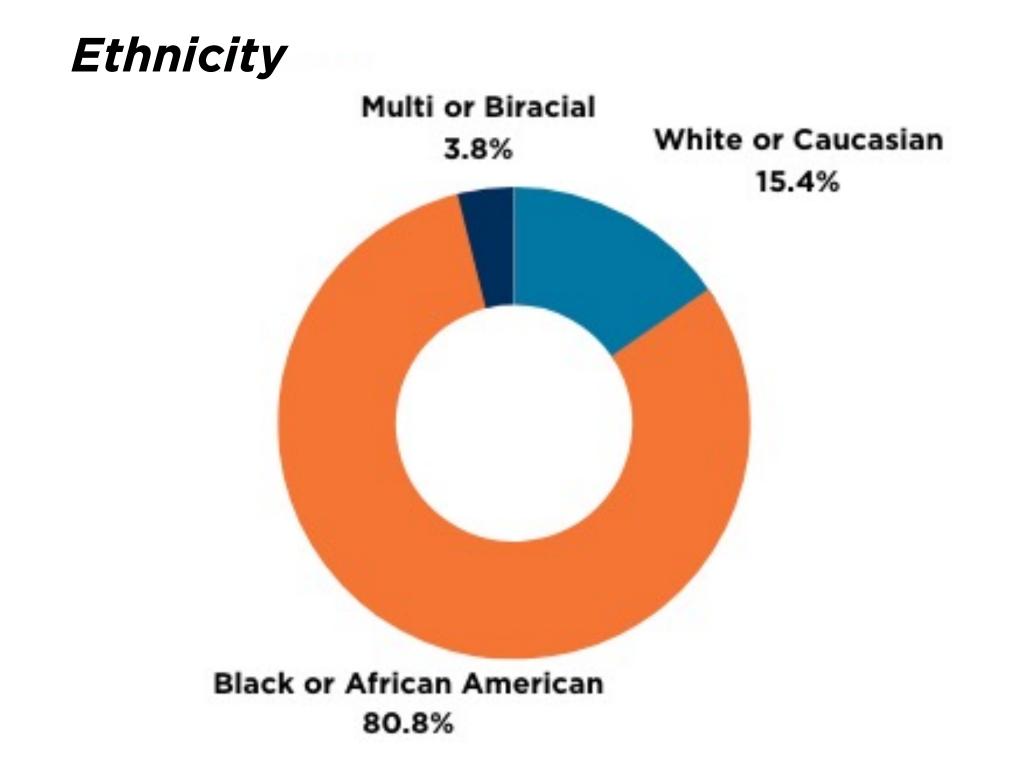
SingFit, a digital caregiver intervention, shows acceptability and usability with room to improve in visual appeal and visual accessibility.

Figure 1: Average ratings of participants' overall impression of SingFit's UX/UI (5-point Likert scale)

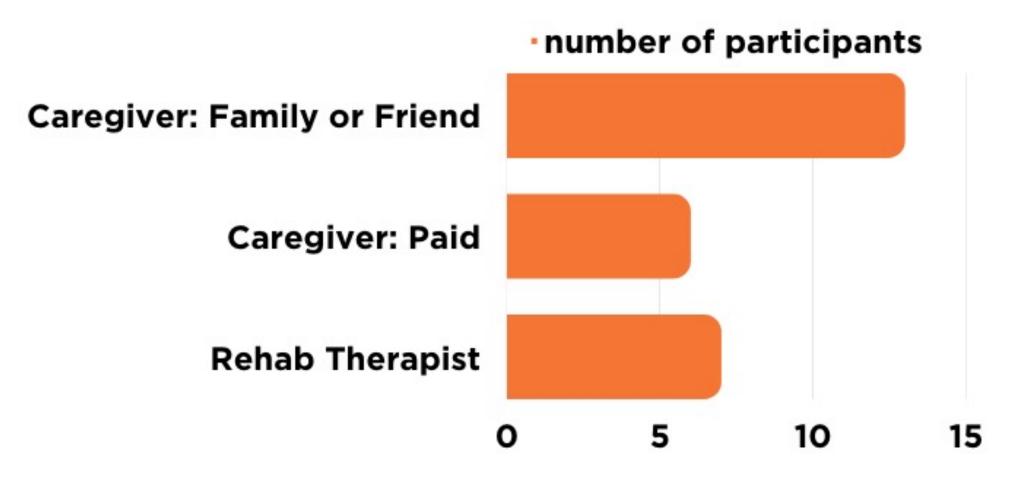


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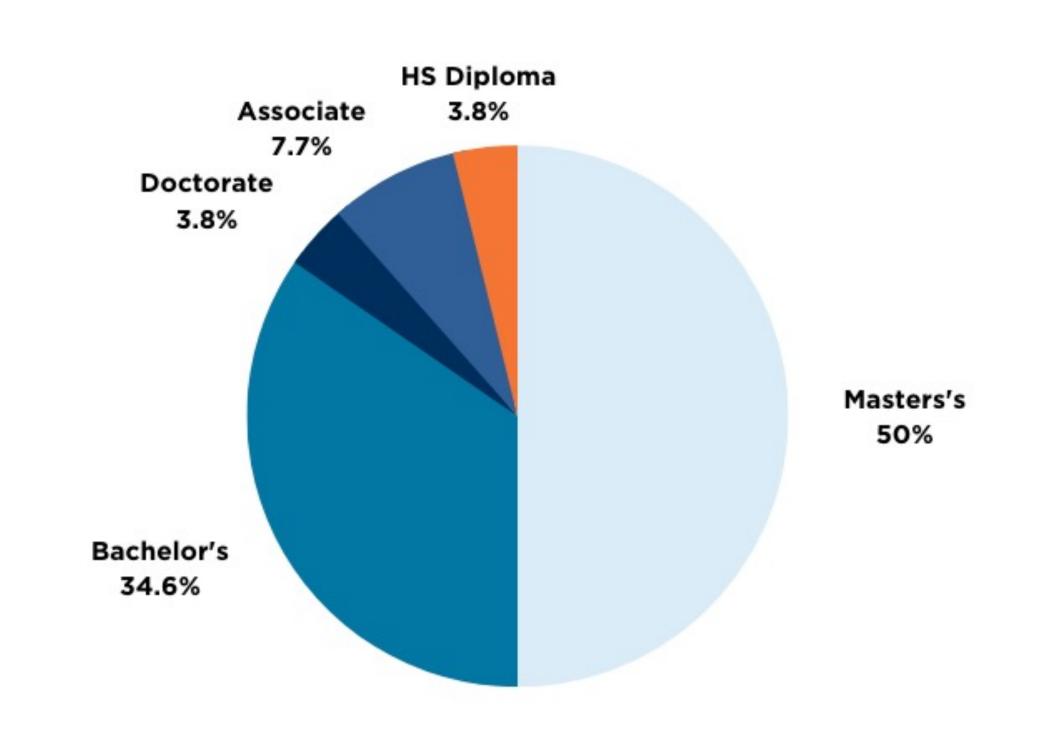
FOCUS GROUP DEMOGRAPHICS:



Role



Education Level



DISCUSSION:

- Focus groups and subsequent user testing revealed that SingFit is feasible and enjoyable for caregivers and PWD.
- Our next step is to conduct a pilot study on clinical outcomes (neuropsychiatric & cognitive).

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SingFit STUDIO



Set Session Goal

B Well

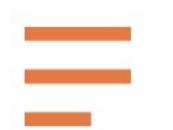
What is today's goal?*

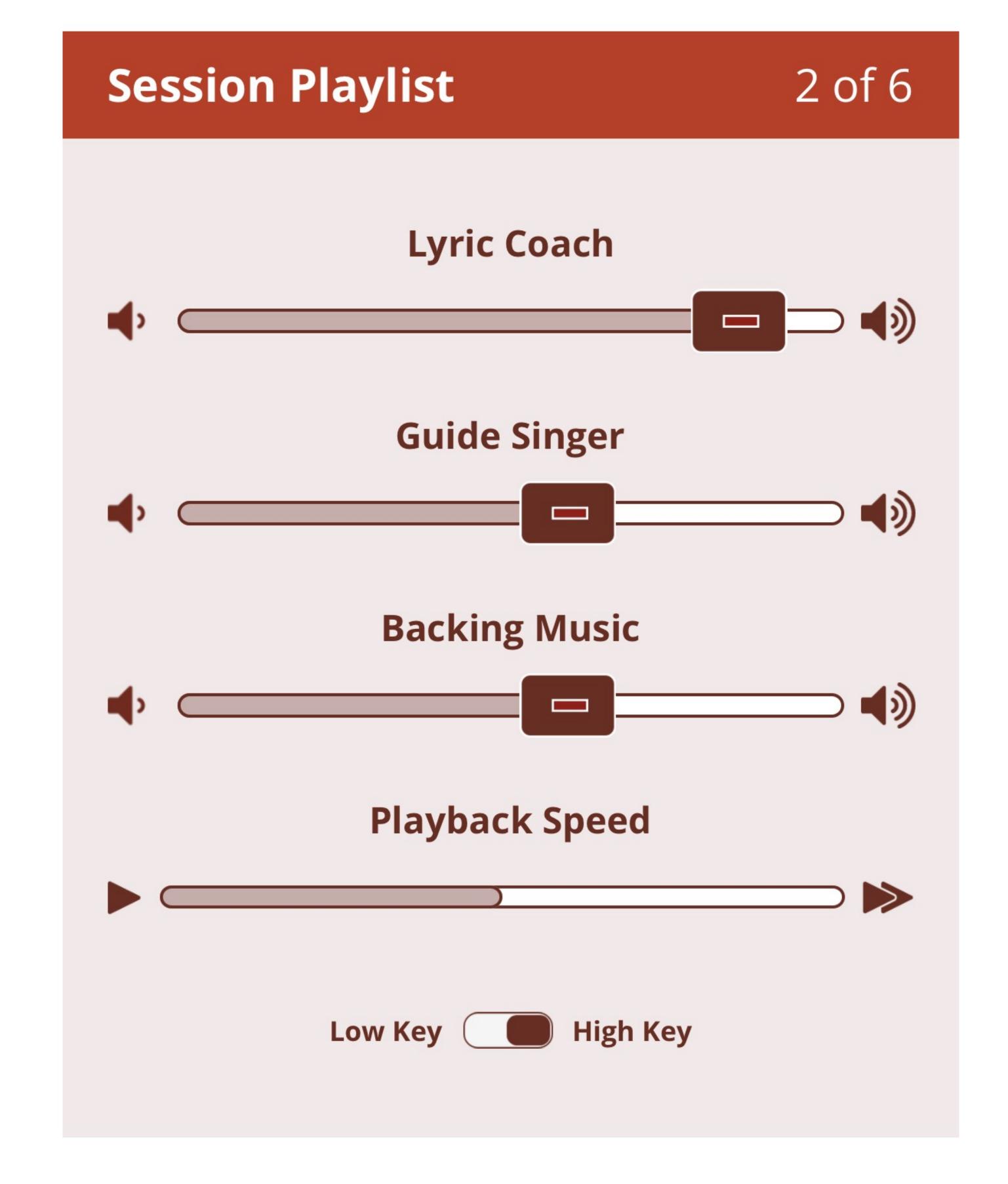
- Reduce Anxiety
- Reduce Depression
- Reduce Agitation
- Reduce Apathy
- Increase Energy
- Promote Relaxation
- Improve Cognitive Engagement
- Improve Social Engagement
- Improve Language Skills











Someday We'll Be Together

Style: Diana Ross & The Supremes













-03:57





Check-in



AFFIRMATION: Tell

We're really getting into the swing now.

CONVERSATION: Ask

Do you enjoy music concerts?

Tell me about the most memorable concert that you have been to.

CONTINUE

End Session