# Usability Testing of a Digital Therapeutic Music Platform

## Processes and Insights


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## Relevant Financial Relationships

Jennifer Rae Myers is an employee of Musical Health Technologies and receives a salary.

## Relevant Nonfinancial Relationships

None to disclose

# Learner Outcomes

Describe the scientific background and implementation of a novel digital therapeutic music platform

Examine user testing outcomes of a digital therapeutic music platform using AAAQ standards

Identify important person-centered considerations in the design and development of a digital therapeutic music platform

# Background & Significance

Digital Health Tools Are A Promising Response To Acquired Neurogenic Disorders

HOWEVER they must consider diverse cultural, social, and economic contexts. When context is not considered, challenges may arise and impede on an individual's right to health.

Using the United Nations' right to health AAAQ framework (**Availability, Accessibility, Acceptability and Quality**), we examined the results from our usability testing feedback for SingFit –a mHealth therapeutic music app for individuals with cognitive and related disorders.

# The AAAQ Framework

The AAAQ framework are four essential standards for healthcare based on the premise that everyone has the right to health (Campbell et al., 2014)

**Availability**

There are adequate health services and resources to address the medical needs of an individual.

**Accessibility**

The physical and financial accessibility of services without discrimination.

**Acceptability**

Services are culturally and ethically appropriate.

**Quality**

Services should be evidence-based with standard protocols and regulations in place to manage clients' interests, concerns, and risk.

# SingFit mHealth Platform

SingFit is a subscription mobile application designed by board-certified music therapists based on cognitive neuroscience and music intervention research

(Gómez-Gallego et al., 2021; Jacobsen et al., 2015; Lyu et al., 2018;  Särkämö, 2022).

# Usability Testing Overview

## Design

Testing included 3 phrases:

1. App testing (4 SingFit sessions and post-session journals)
2. Feature-specific tasks & App survey
3. Product review & Exit interview

## Participants

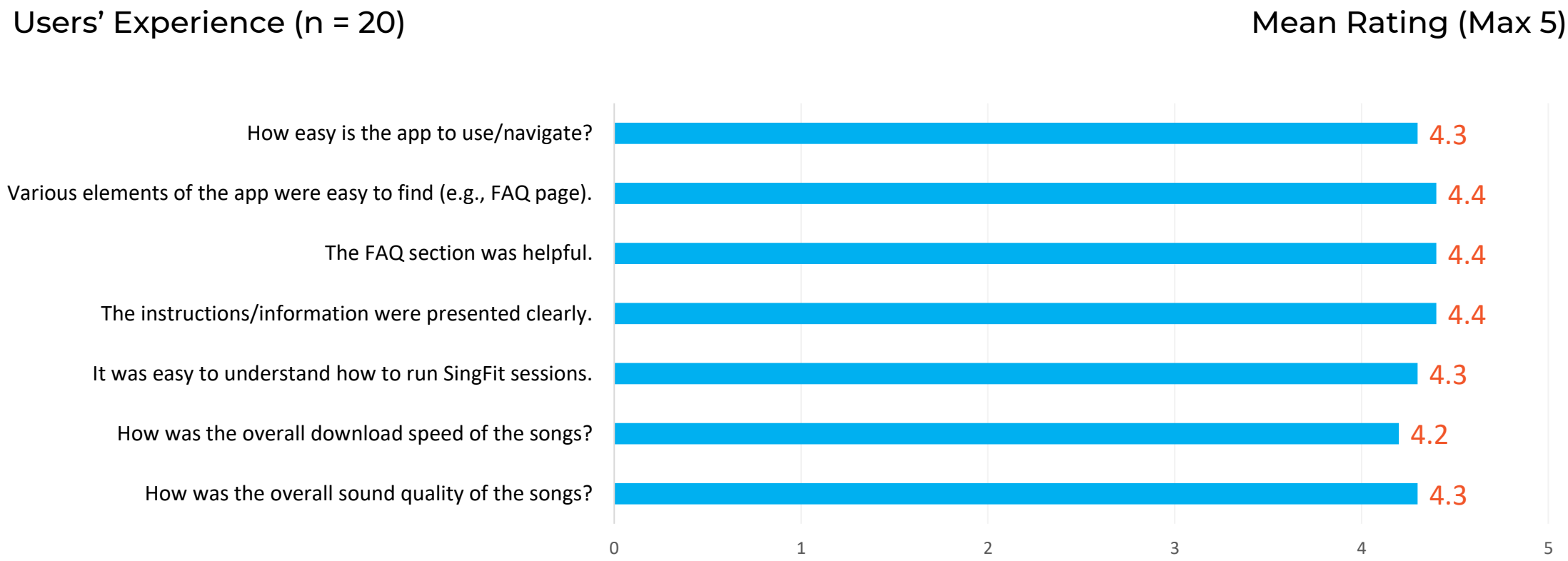
- User testers were recruited via social media and an online caregiver support platform.
- 32 individuals participated with 14 completing the entire protocol. User testers received up to $150 depending on phases completed.

To participate, individuals had to be a caregiver or rehab therapist of an older adult with cognitive decline.

| Demographic | User Testers | Client/Participant |
|---|---|---|
| Mean Age (SD) | 37.52 (11.47) | 68 (12.63) |
| Nonwhites | 45% | 52% |
| Women | 45% | 55% |
| HS Diploma or Less | 10% | 24% |

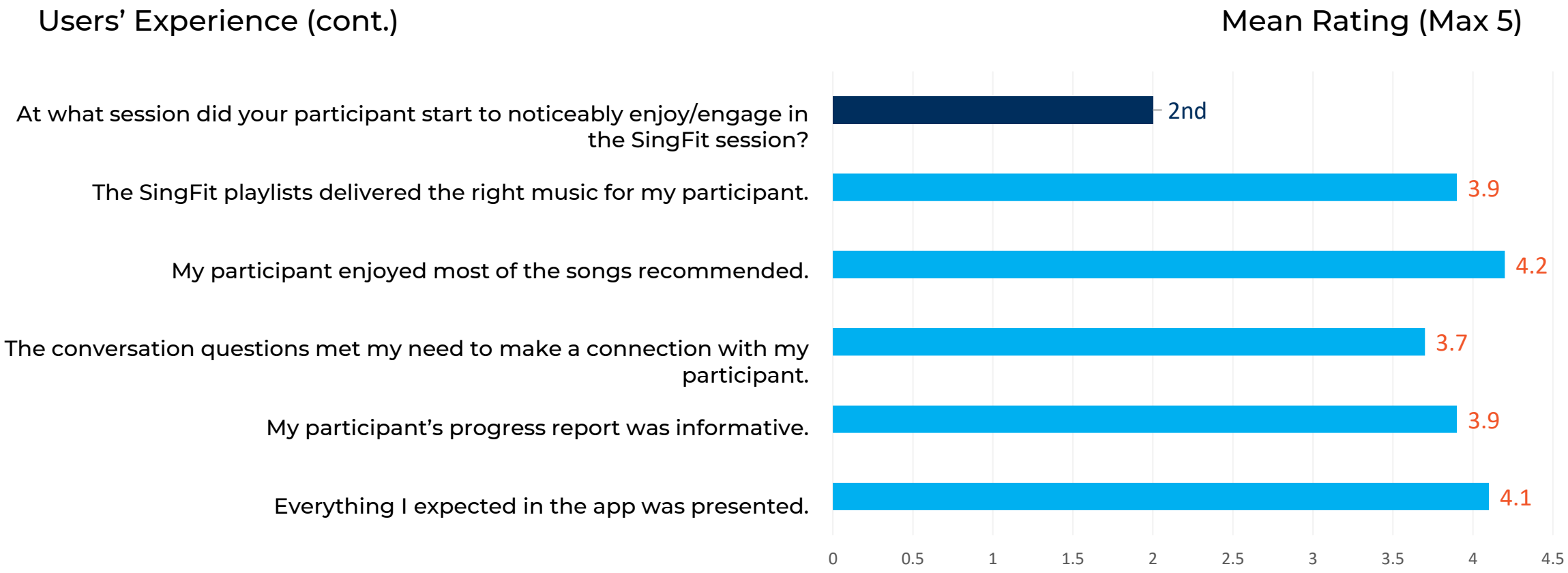
Data was collected between February and March 2023.

# SingFit's Accessibility



# SingFit's Accessibility

## Users' Experience (cont.)



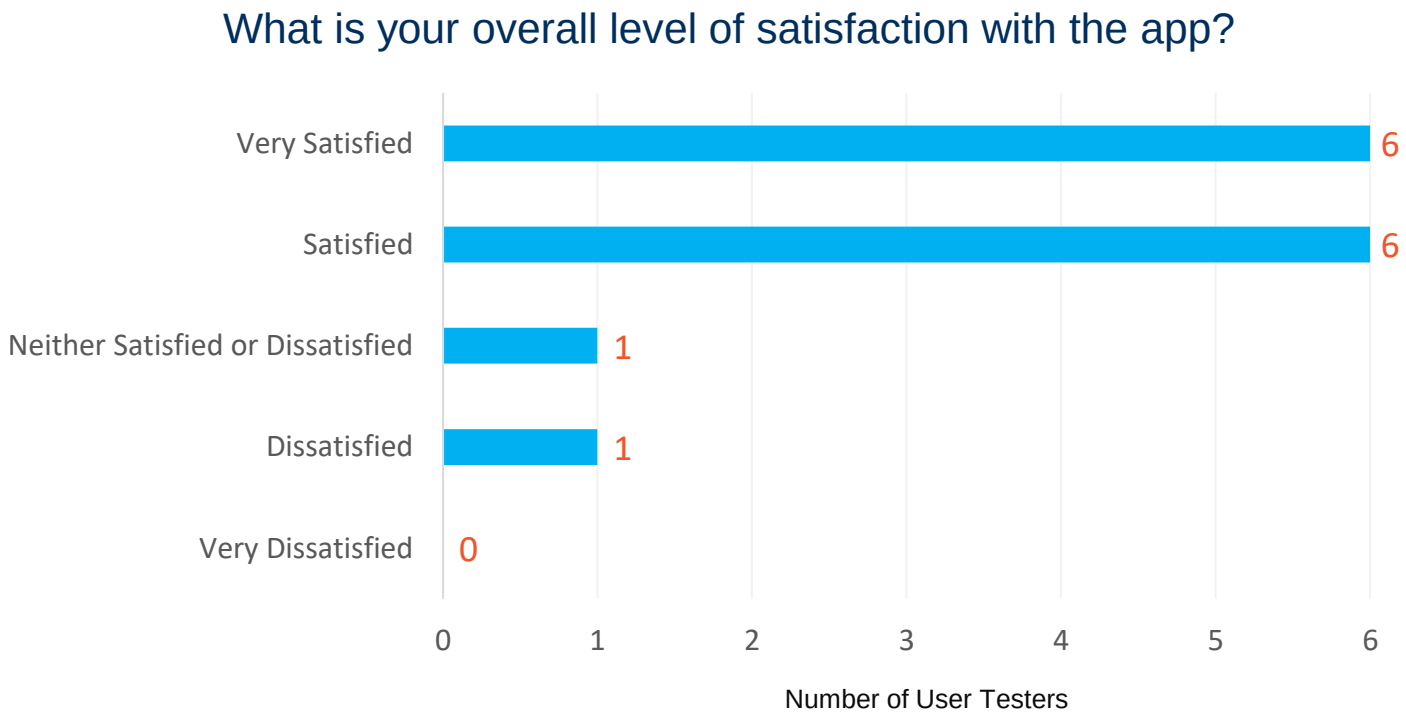
# SingFit's Acceptability

92% of the words used to described the platform were positive (n =19)

# SingFit's Acceptability

**86%**

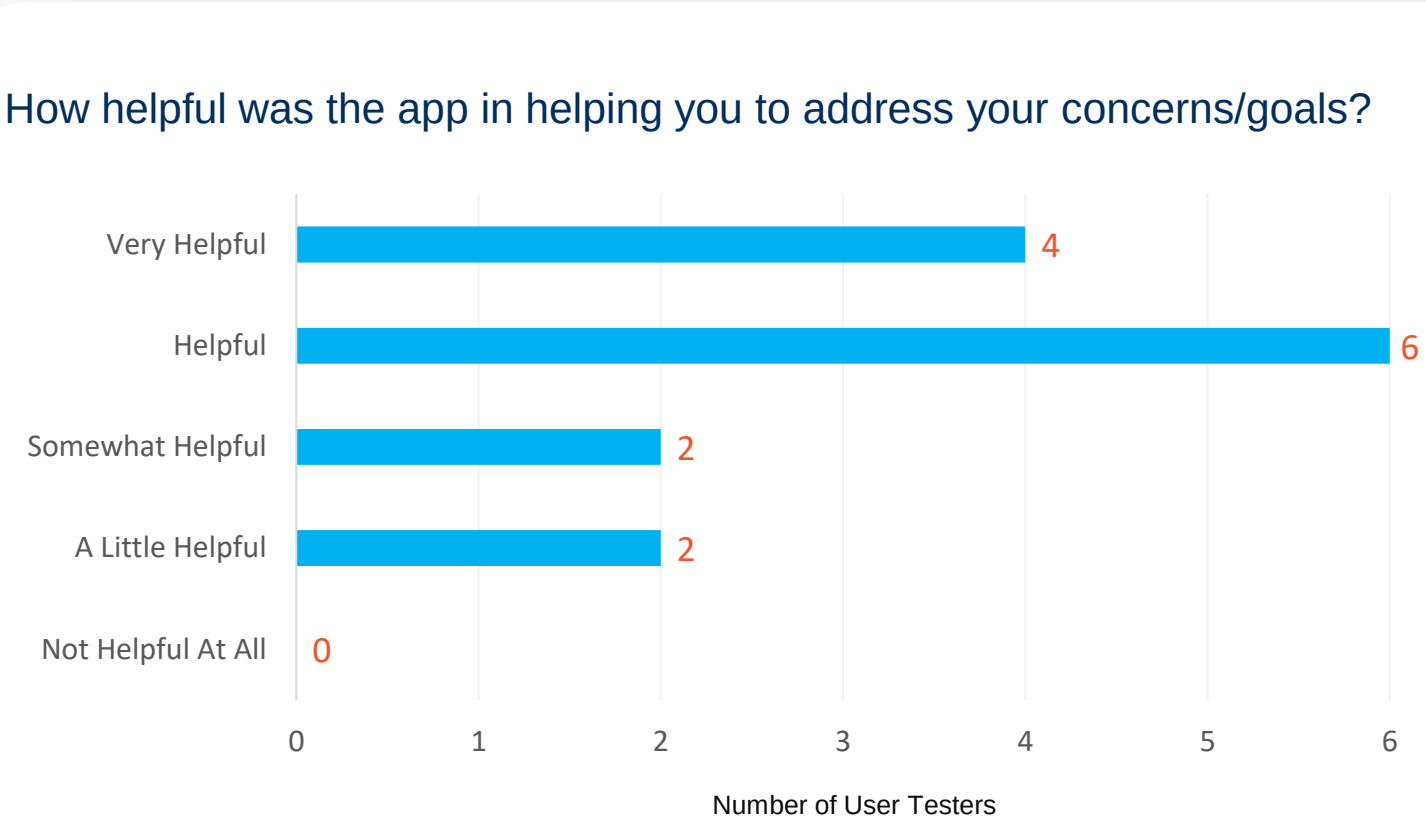
of user testers were satisfied with the app (n=14)



# SingFit's Quality

**100%**

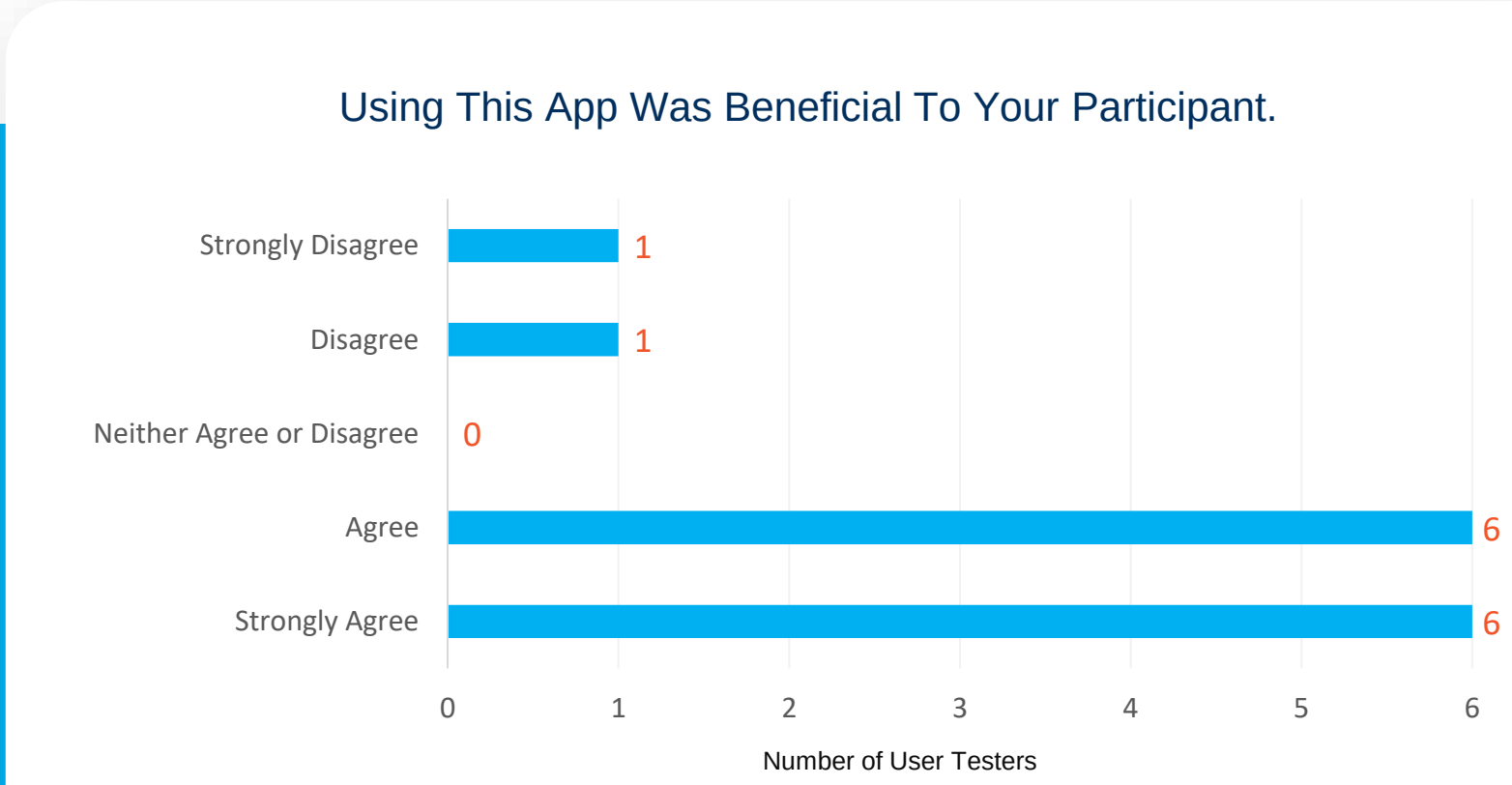
of user testers found the platform helpful to their role (n = 14)



# SingFit's Quality

**86%**

of user testers found the platform beneficial to their participant (n=14)



# Usability Testing & AAAQ

## Availability

SingFit is currently available for Android and iOS devices.

## Accessibility

Easy to use and understand Disconnect with informational elements (e.g, convo cards, progress reports).

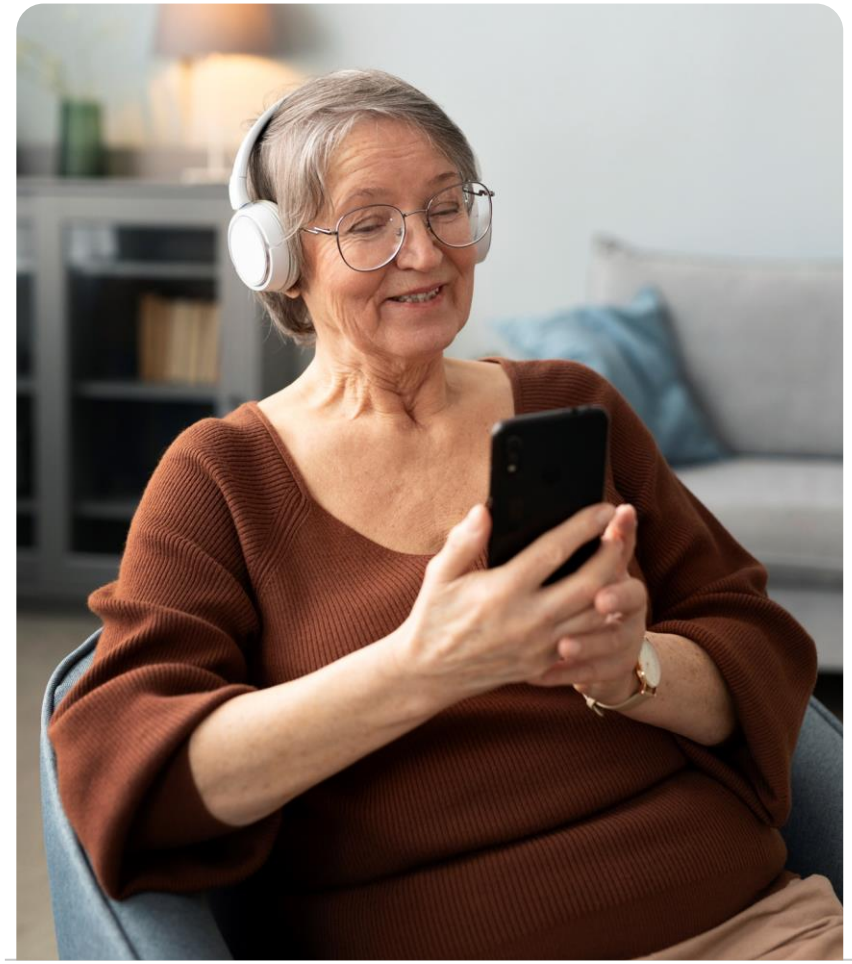

## Acceptability

Most users felt the app met their expectations and were satisfied. Song flexibility in playlists is needed to make sessions more enjoyable.

## Quality

All users found SingFit helpful and beneficial to their participant.

# Summary



- Feedback of the SingFit mHealth platform was generally positive and aligned with the AAAQ framework for the “right to health.”
- Participants found the app “innovative,” “helpful,” and “reliable.”
- Reported areas of improvement for informational elements (e.g., progress reports) as well as more flexibility in song selection.
- Given the limited sample, usability testing is ongoing with modifications made as appropriate to ensure the platform continues to meet the needs of users.

## Thank You!

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