

Optimizing Mental Health Care by Increasing Access Services through Evidence-based mHealth Applications



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Specific Aims

Mobile Health (mHealth) applications can: Bridge the gap of services, improve health outcomes, education, social support, self-managed care, and patient-provider communication (Iribarren et al., 2017)

Specific aims:

- Introduce additional mental health services
- Increase access/education: mental health services

Purpose:

- Optimize mental health care and access to services by leveraging use of mHealth applications

Goals

- Introduce mHealth application
- Educate: available resources, reportable anxiety symptoms
- Increase access to mental health care services
- Reduce reportable symptoms: stress, worry, anxiety

Expected outcomes:

- Understand impact of mHealth on mental health
- Improve participant mental health, knowledge of: resources and mental health concerns

Methods

Intervention

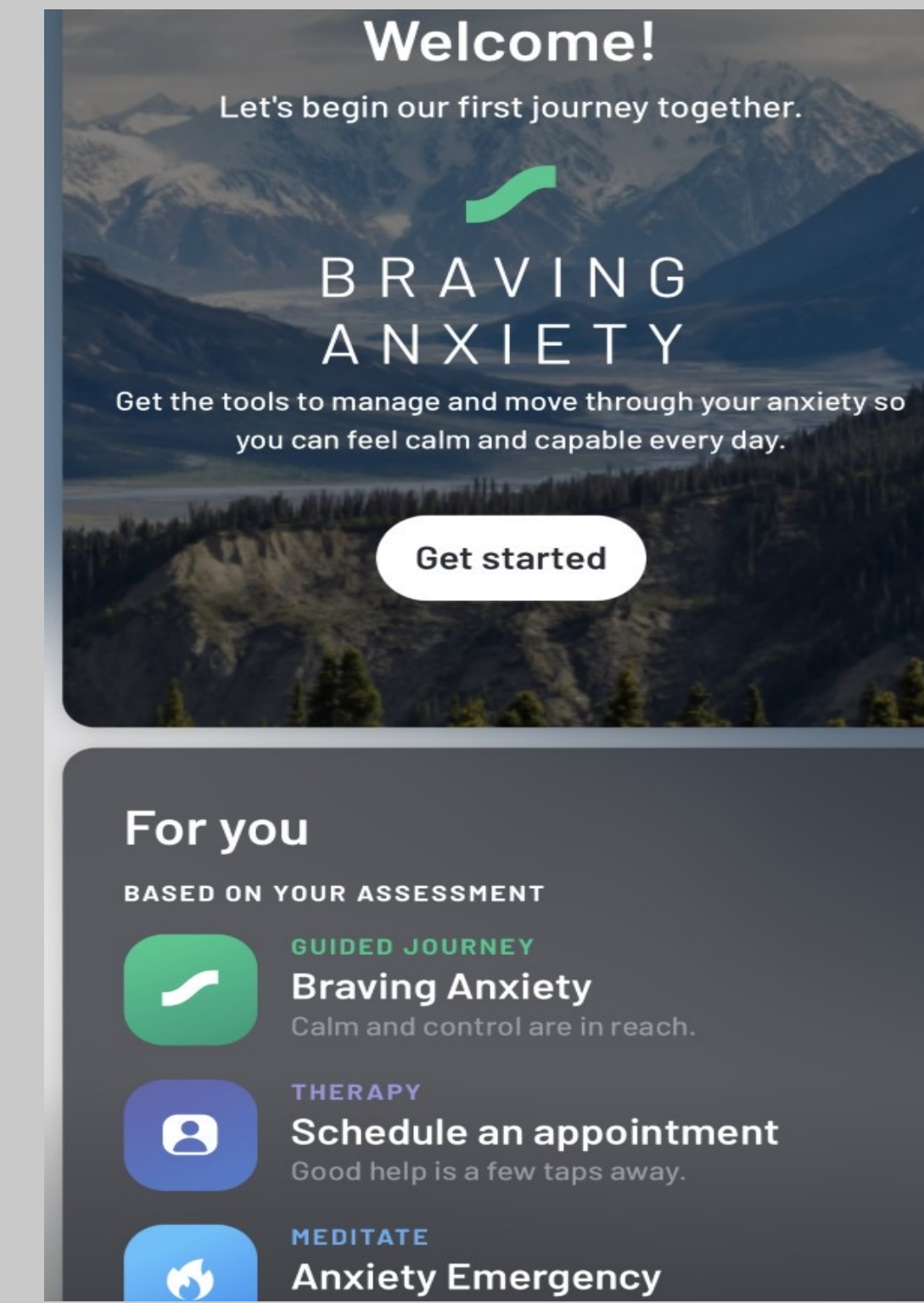
- Free version of application used
- Education: download, use of application, emergency resources
- Social media posts: education-anxiety, Sanvello@ application

Study of intervention/Measures

- Pre-Intervention: Demographics, the Generalized Anxiety Disorder 7 (GAD-7)
- Post-Intervention: Demographics, GAD-7, Technology Acceptance Model (TAM)

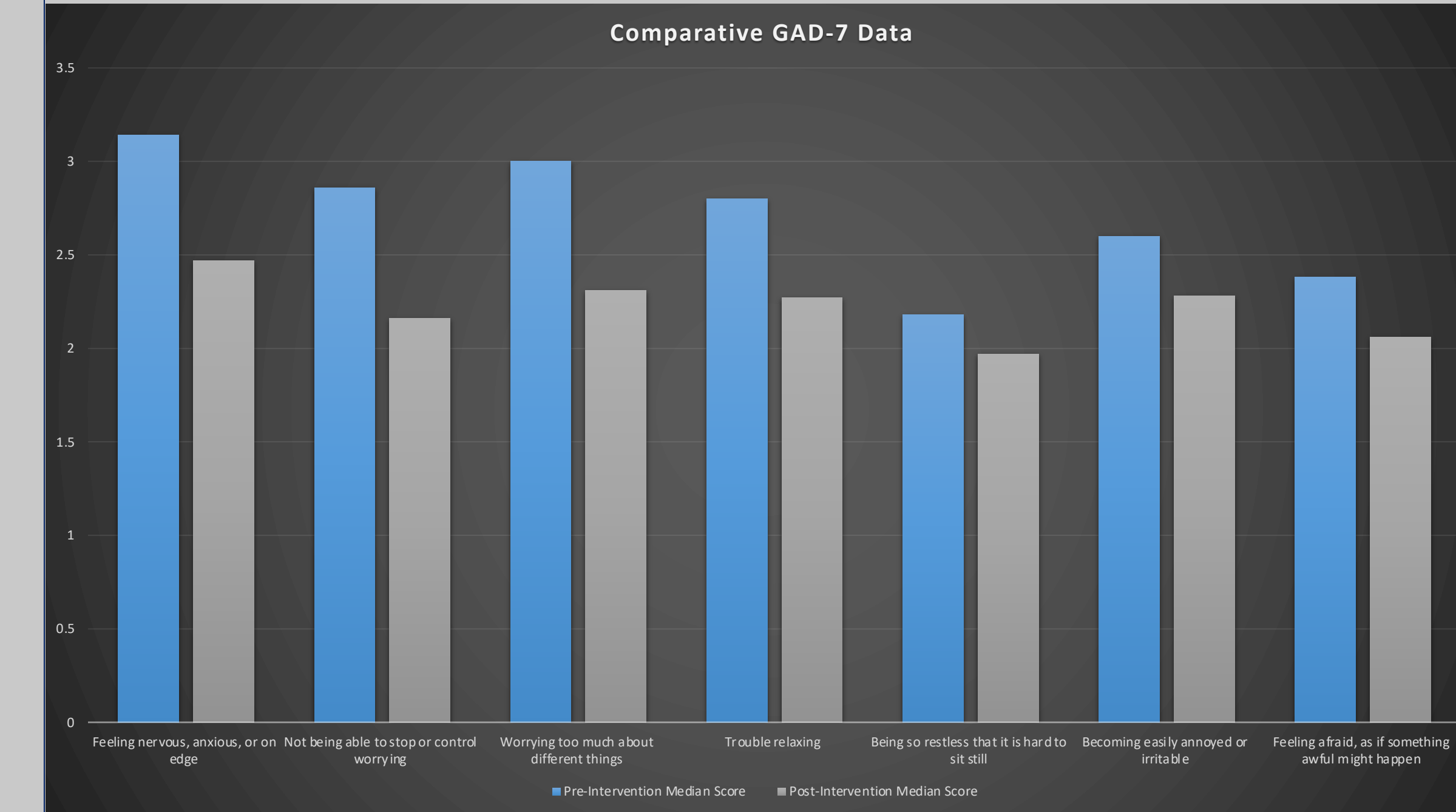
Analysis

- Aggregate data was reviewed to perform qualitative and quantitative analysis to determine the effectiveness of the mHealth application



mHealth application: Sanvello@

Results-GAD 7



Comparative GAD-7 Scores: Pre and Post intervention

Demographics

NH 2-year community college over 4,600 students, 100 faculty and staff

Adults 18 years and older self-enroll in the project providing consent

Over Fifty percent

- Age 18-30 years old, female, student

Pre-Intervention

- GAD-7 Aggregate score-Severe GAD-7 Scoring
 - 0-4 Low risk
 - 5-9 Mild
 - 10-14 Moderate
 - 15+ Severe

Demographic Data	Total Sample (N=32) n (%)
Age	
18-20	9 (28.13)
21-30	8 (25)
31-40	4 (12.50)
41-50	7 (21.88)
51-60	4 (12.50)
61 and over	0
Gender	
Male	8 (25)
Female	24 (75)
Non-binary/third gender	0
Prefer not to say	0
Role in the Community	
Student	28 (87.50)
Faculty	0
Staff	4 (12.50)
Prefer not to say	0

Discussion

GAD-7 Score

- Pre-Intervention 18.96
- Post-Intervention 15.52

8 participants: adjunct to therapy

Counseling visits

- 163 Fall 2020
- 225 Fall 2021

Frequency of Use

- Less than 1 a week 57.14%
- 1-2 times a week 17%
- 3-4 times a week 14.29%
- 5-6 times a week 3.57%
- Daily 7.14%

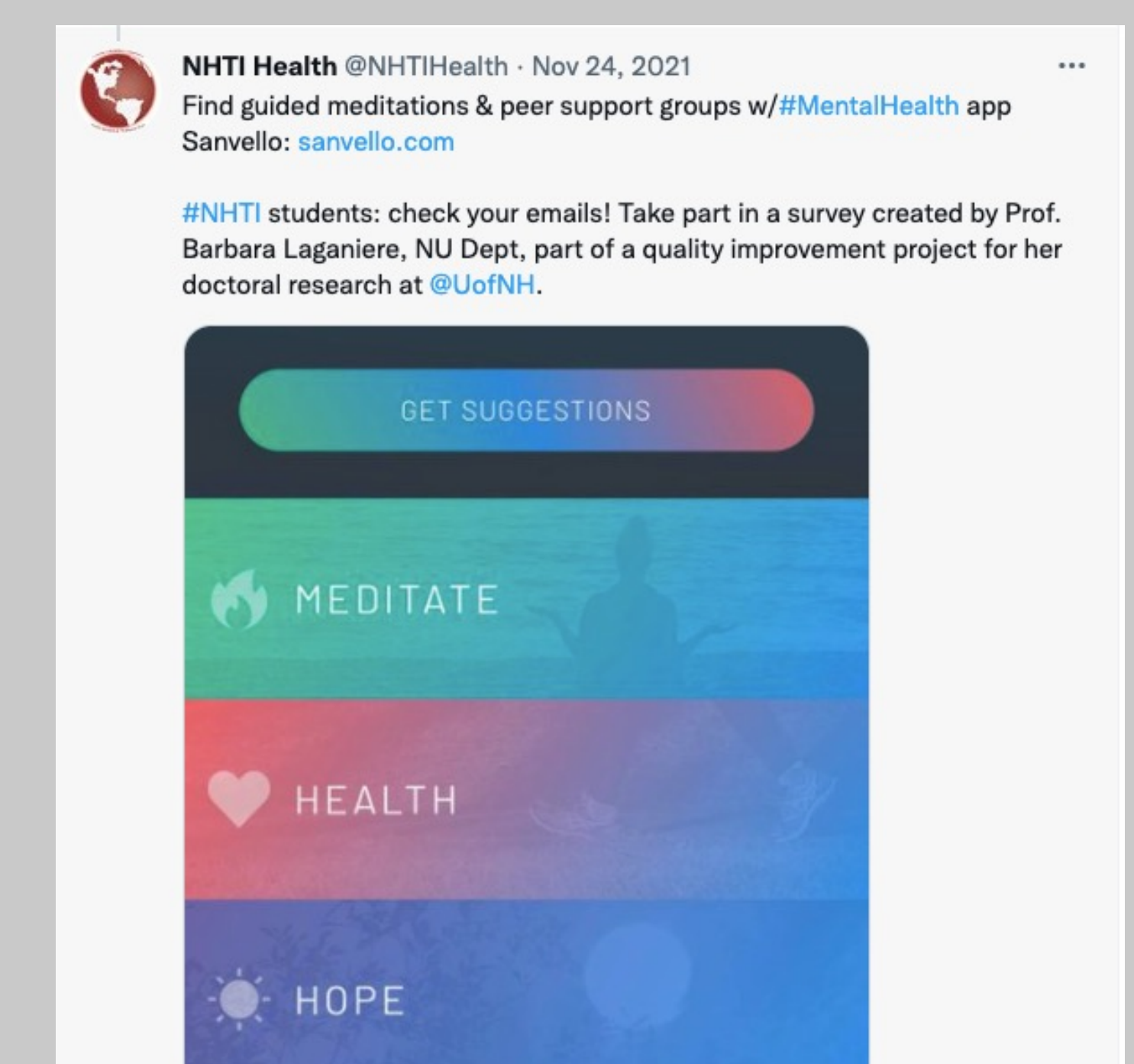
Feedback

- Negative
 - Time commitment too much
 - Difficult to navigate
 - Insurance not accepted for counseling
 - Availability of counseling in NH
- Positive
 - Journaling
 - Helpful

Technology Acceptance Model (TAM)

- Application clear and understandable
- Interaction clear and understandable
- Easy to become skillful
- Easy to use

Methods-Education



mHealth Social Media educational post

Background

Introduction

- mHealth tools for mental health:
 - Thought and mood tracking, medication reminders, psychoeducation, cognitive behavioral therapy, coping skills education, and guided meditations (Bakker & Rickard, 2019)
- 1 in 5 smartphone users have a health-related application

Problem Description

- COVID pandemic disrupted mental health services
- Nearly 50% adults in United States report worry and stress and feelings of anxiety
- Mental health workforce shortage
 - Only one-third receive treatment (Patel et al., 2020)

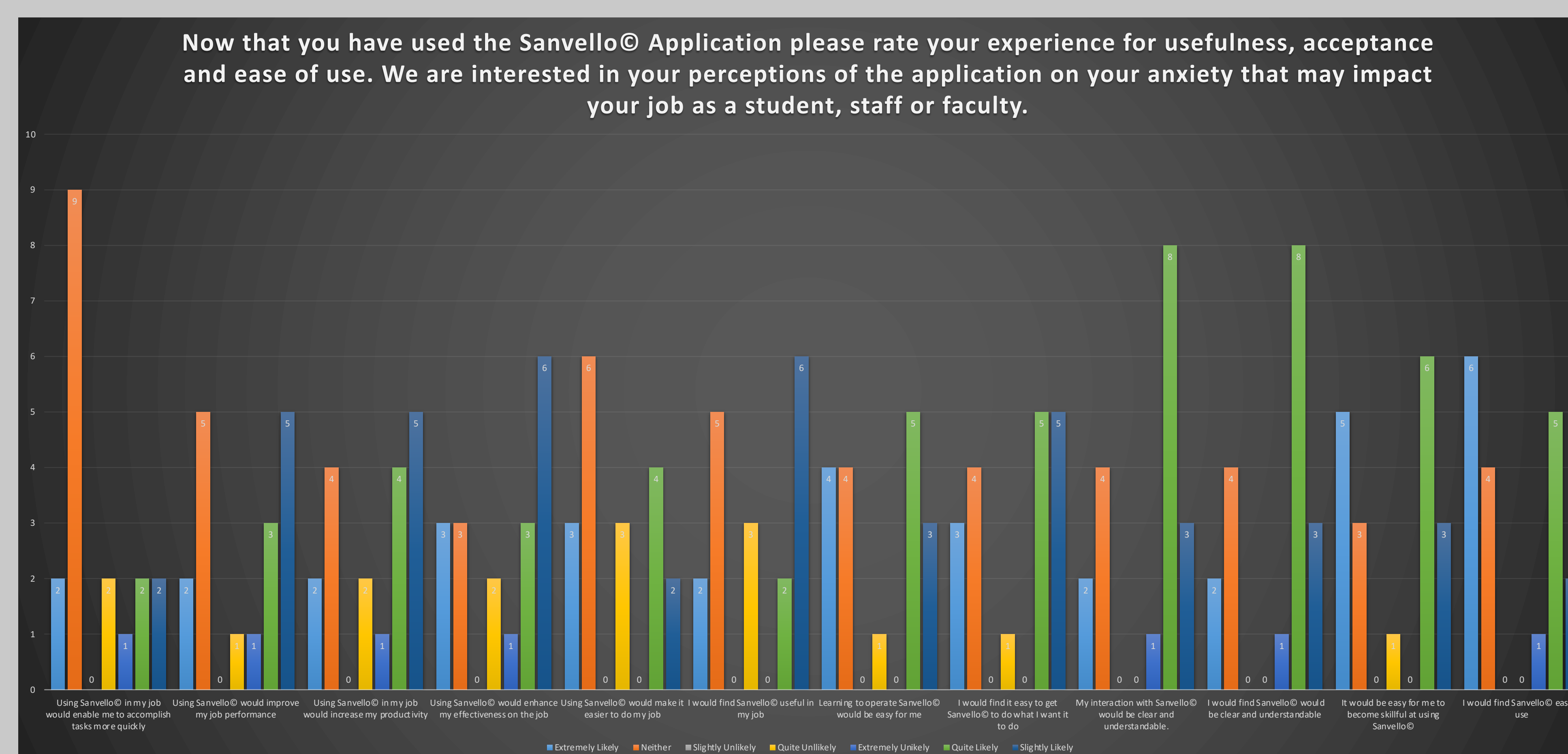
Available Knowledge

- Adults 3 times more likely to screen for anxiety disorder (Brewer, 2021)
- Randomized control study mHealth application reduction GAD-7 score 39.2% (Moberg et al., 2019)

Rationale

- TAM: investigating factors affecting users' acceptance of technology (Davis, 1989)

Results-TAM



Post-Intervention Technology Acceptance Model (TAM) data

Conclusions

Increased use of mHealth applications

- Low routine use, low engagement and completion rates (Lattie et al., 2019)

Counseling services increased 61%

GAD-7 reduction by 3.44 points

Increased mental health awareness

- Self-management of anxiety symptoms can be achieved
- Typically, 8 weeks for results (Brewer, 2021)

Limitations

- Stakeholder organization changes
- Time constraints
 - Finals
 - End of Semester

Bias

- Convenience sample
 - Self-enrolled
 - Self-report/Response Bias

Future implications

- Increase educational programs
- Increase use of mHealth tools