

Developing a Sensory Health Screener for Community Mental Health

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Context & Funding: Sensory Health Lab



5 years of funding

1. Life after stroke
2. Sensory health of adults with SMI
3. Screener for adults with SMI
 - Sensory health room
 - ED project
4. Identifying sensory health biomarkers (EEG)



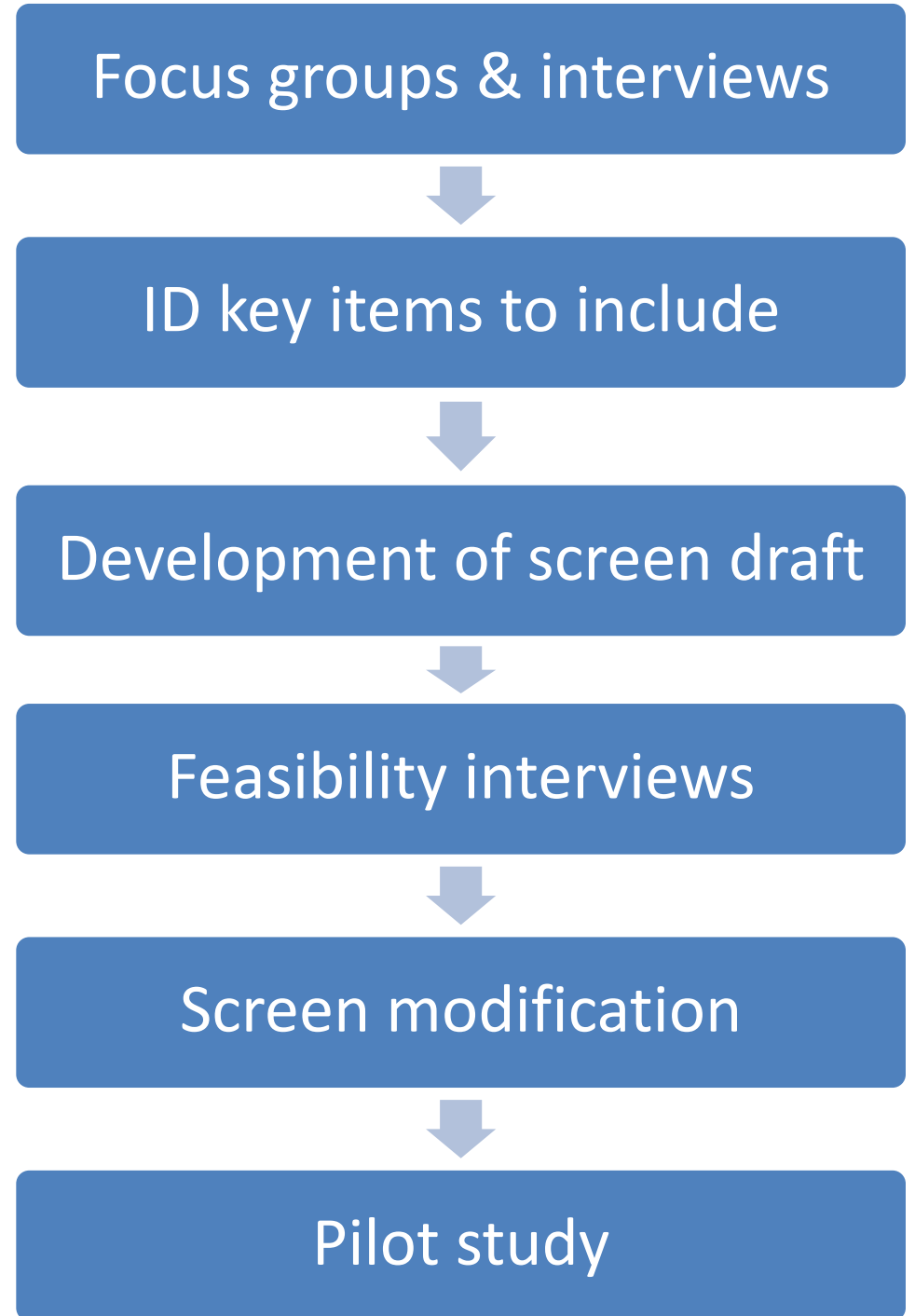
Background

- Neuroscience shows that adults with SMI experience statistically significant different sensory processing patterns (Bailliard & Whigham, 2017)
- These can be major barriers to occupation (Landon et al, 2016)
 - They can also be **superpowers!**
- Working with state governments
 - Community behavioral health teams in the US are typically not aware of their clients' sensory patterns (strengths or challenges)
- **Purpose of study:**
 - To explore sensory health of adults with SMI
 - Identify the most important items to include in a sensory health screen
 - Develop & refine the screen

Participatory & Collaborative Research Process

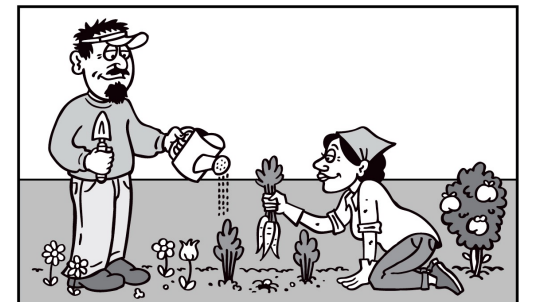
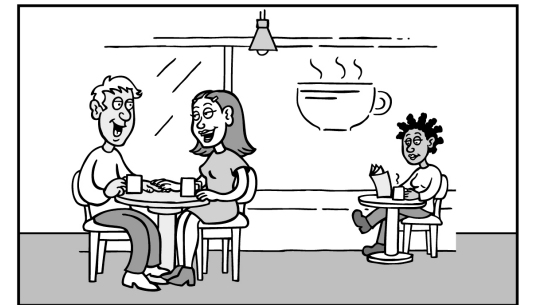
Research Team

- 10 members
- Lived experience with SMI



Methods

- Semi-structured interviews & focus groups
 - Interview scripts from literature review
 - In-person & virtual options
 - Elicitation techniques to promote dialogue
 - Life Interest and Values (LIV) Card sort
 - Activity Card Sort (ACS)
 - Picture Drawing



Participants

- Purposive recruitment (N=60)
 - 20 Adults with serious mental illness
 - 10 Caregivers of adults with serious mental illness
 - 10 Occupational therapists
 - 10 Community behavioral health providers
 - 10 Community behavioral health team leaders

Analysis

- Team calibration & training
- Multiple coding strategies
 - Open coding for lived sensory experiences
 - Focused coding on sensory health
 - Codebook defining sensory concepts from the literature
- Each transcript analyzed independently by 2 coders
 - Meet to come to consensus
 - Disagreements are brought back to the team for deliberation

Sound & feel of water: Discomfort & pain

*“Another thing is, like, I don't like to do the dishes, not because I don't want to do them, because I don't like the feel of water running on my hands. The **sound and the feel of water** feels it's a sensory issue, the **pounding on your hands feels weird**. So, it **feels like it's like hitting your hand**. Yeah, that's also something I struggled with the kid. But I didn't shower as much either, because I don't like the feel of a shower on your back. So, I take a lot of baths in the house because **I don't like the shower pounding on my skin**”*

*“I don't like the sound of **sink water**. **It's very loud too...** I don't like when you're on top of, like, over the stove and the heat is on your face.”*



Touch, smells, sounds, lights....

*“Physical touch is very big sensory issue for me... So that's a big thing with the **busses**. When they get really **packed**, you know, you kind of squish between people, and you're pretty much rubbing against them the whole ride until they get off”*

*“I feel like the grocery store is one of the biggest struggles. It's like, you get **so many smells** in there, if you go the wrong way, you're getting **hit in the face with fish**. You go smell spoiled dairy sometimes, like, there's so many different smells, and the **sounds and the lights in the grocery store are horrible”***



Overstimulation & insight

*“my sensory issues sometimes can make me go into like, a rage attack, if it gets too **overwhelming** for me and I can’t filter it, especially if there’s multiple sensory issues, I can go into over stimulation. And sometimes I need to, people need to, help me get out of overstimulation, because I can’t identify what it feels like, which can cause me a lot of stress, and **then I freak out, causing anxiety attacks, panic attacks**, just me getting really upset. Because **I wish I could explain it, but I can’t, you know, too.**”*



Negative symptoms or overstimulation?

Passivity or negative symptoms could be a form of **disassociation** due to trauma or overstimulation from **sensory overload**

Arguing = form of interoceptive sensory habit



Touch, smells, sounds, lights... (Providers & caregivers)

*"A significant proportion of people that we see **get migraines related to different smells, strong smells, and that can have an effect on where they're able to go**"*

*"The dishes can be a hard one, just because you're dealing with the **texture of water, dirty dishes, . . . the aspect of what is in the dirty dishes**"*

*"They were **trying to figure out how to clean without triggering those aversions...they were really interested in trying to learn how to use essential oils and create their own cleaning products.**"*



Accessing services (Provider)

*“People have also expressed specifically **discomfort around phone-related sounds**... a lot of people have to do a lot of paperwork for housing and maintaining benefits...and those things generally happen in small, crowded office spaces like social security and social services. For some people, it's kept them from getting housing, just not being able to be in that environment.”*

Socializing (Provider)

*“I know another person who has been trying to go to a place, find friends, and be a part of a social group. **But when they go to these classes that are in small, crowded places, they typically walk right out.** So, they've signed up for a lot and not been able to go.”*

Preliminary Findings

- Lack of **sensory vocabulary**
 - Participants wished they had more language to understand & communicate their experiences
- Actively concerned about how their **differences are perceived by others** → self-stigma
- Sense of **community and belonging**
 - When around people who shared their sensory experiences or understood their sensory differences (e.g., peers)
- **Lack of awareness** of sensory health, sensory challenges, & sensory strengths among community mental health providers
- **Clients and professionals need support** to develop the insight, language, and strategies to enhance sensory health

Preliminary conclusions

- **Sensory experiences are individualized** and affect occupation health and wellbeing
- **Clients and professionals need support** to develop the insight, language, and strategies to enhance sensory health
- **Screening the sensory health** of individuals with SMI could identify more targeted interventions and resources to support successful community living

SENSORY EXPERIENCES

Check all sensory inputs that are uncomfortable, overwhelming, difficult to perceive, or strongly preferred.

Sound

Examples: Loud or sudden noises, background noise, multiple people talking, appliances, alarms, chewing sounds, etc.

Light or vision

Examples: bright lights, fluorescent lighting, screens, fast movement, glare, etc.

Touch and texture

Examples: Clothing tags or seams, certain fabrics, light touch versus deep pressure, etc.

Movement and balance

Examples: spinning, elevators, stairs, uneven surfaces, feeling unsteady, seeking movement, avoiding movement, etc.

Body awareness and Internal Sensation

Examples: Hunger or thirst cues, temperature, bathroom signals, fatigue, heart rate, breathing, body position, etc.

Smell and taste

Examples: Perfumes, cleaning products, food odors, difficulty noticing smells or tastes

SENSORY EXPERIENCES IN DAILY LIFE

Check all situations for which sensory input interferes with or supports participation

Home and personal care

Examples: Bathing, dressing, cleaning, brushing teeth, cooking, eating, sleeping, exercise, etc.

School or work

Examples: focus, sitting tolerance, noise tolerance, lighting, transitions, etc.

Public spaces

Examples: stores, restaurants, crowds, waiting areas

Transportation

Examples: car rides, buses, trains, planes, motion, noise, crowds.

Social settings

Examples: group conversations, physical proximity, background noise

Office and service settings

Examples: waiting rooms, government offices, crowded or noisy offices, security screening, complex paperwork or forms, verbal instructions, time pressure.

IMPACT ON REGULATION AND PARTICIPATION

Check the box that best describes the impact of sensory experiences on your daily life

No Difficulties

No sensory related interference with regulation or participation, or difficulties are mild and situational.

Moderate to severe

MODERATE

Occasional sensory overload, reduced focus or endurance, avoidance of certain environments, benefits from breaks or environmental supports.

SIGNIFICANT

Frequent sensory related overloads, difficulty completing daily activities, consistent need for accommodations or support to participate.

SEVERE

Intense reactions such as shutdowns or meltdowns, inability to participate in many activities without substantial modification or assistance.

SENSORY AWARENESS, PREFERENCES, AND SUPPORTS

Check the boxes for skills you feel confident you have and write on the lines as needed

Ability to notice sensory needs

I notice when I am overwhelmed, overstimulated, or need things like quiet, movement, or rest.

Ability to describe sensory experiences

I am able to describe how sensory experiences affect me (with words, gestures, or examples).

Sensory input that feels calming or helpful

Things that help me feel calm or regulated can include: deep pressure, movement, music, quiet spaces, dim lighting, fidgeting, routines.

Strategies that I already use (if any)

Describe below

Anything else you would like to share about your sensory health:

Smartphone application



DukeHealth

Do certain sounds impact your ability to complete everyday activities to your satisfaction??

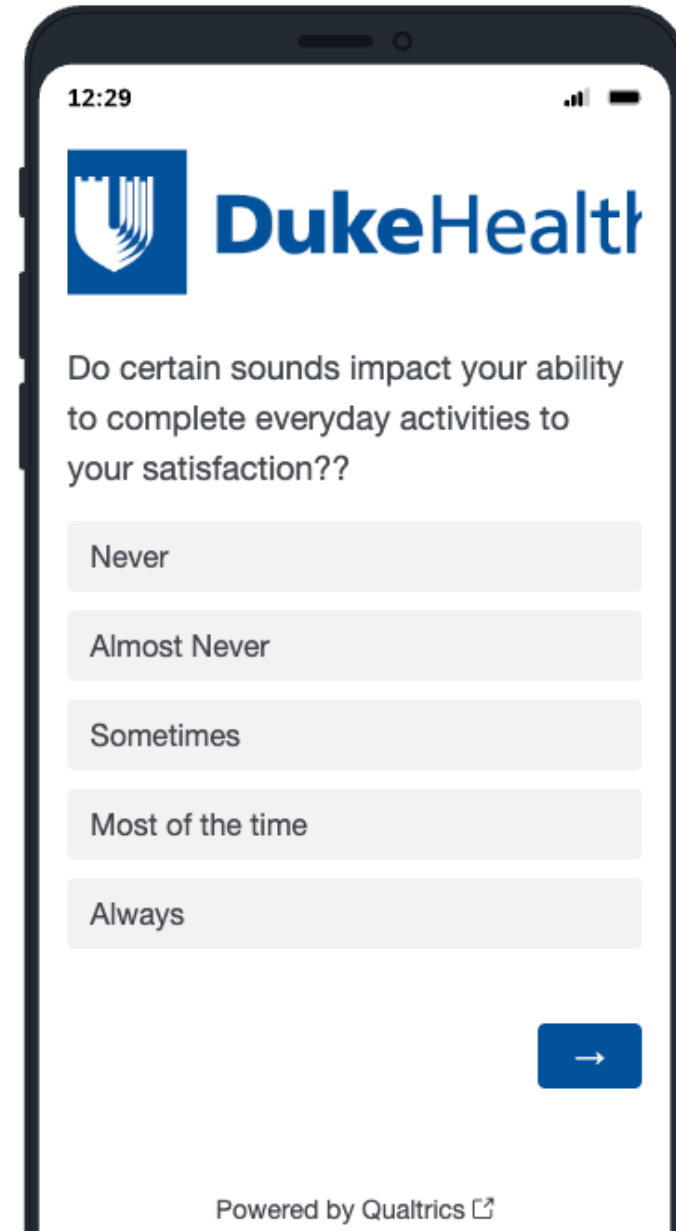
Never

Almost Never

Sometimes

Most of the time

Always



12:29



DukeHealth

Do certain sounds impact your ability to complete everyday activities to your satisfaction??

Never

Almost Never

Sometimes

Most of the time

Always



Powered by Qualtrics 

Smartphone application



DukeHealth

Does this impact your ability to complete everyday activities to your satisfaction? If so, how much?

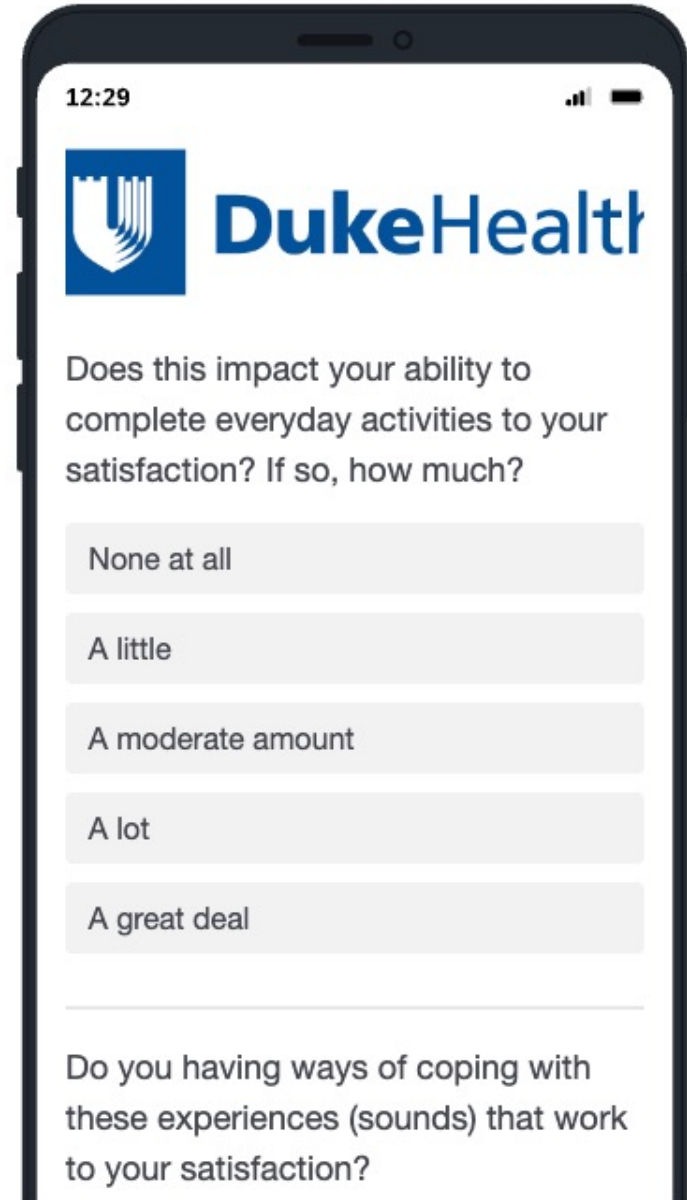
None at all

A little

A moderate amount

A lot

A great deal



Smartphone application

Do you having ways of coping with these experiences (sounds) that work to your satisfaction?

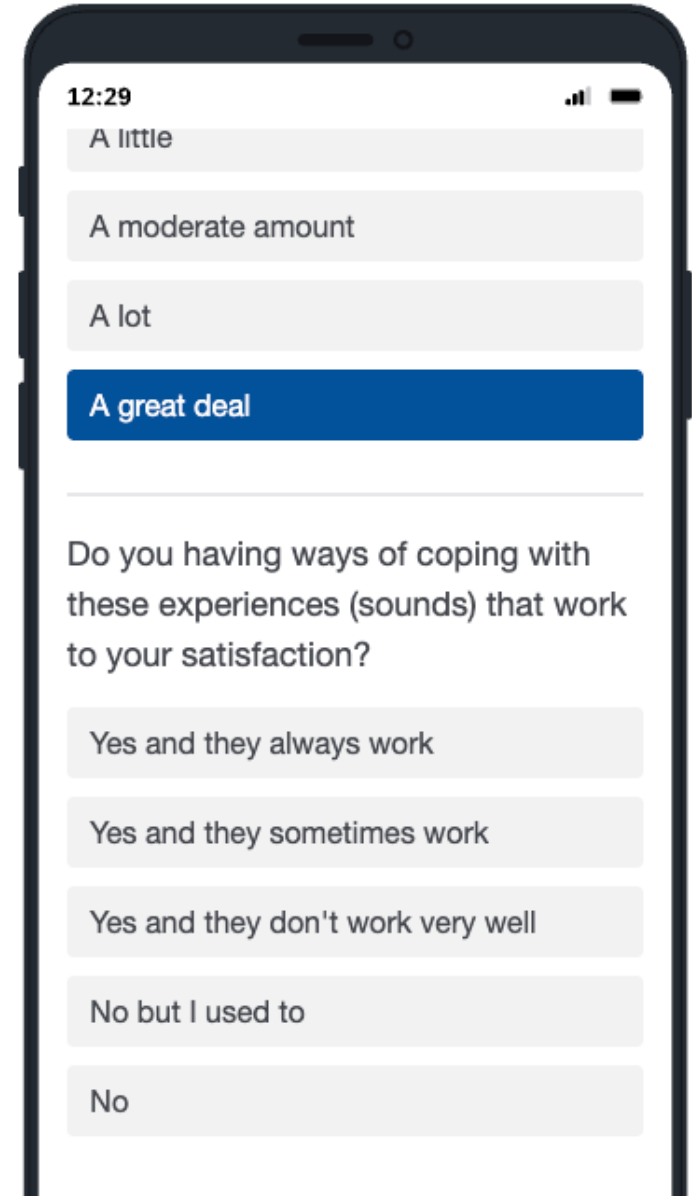
Yes and they always work

Yes and they sometimes work

Yes and they don't work very well

No but I used to

No



Questions?
Thank you!



References

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