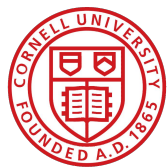


“I Try to Represent Myself as I Am”: Self-Presentation Preferences of People with Invisible Disabilities through Embodied Social VR Avatars



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Image credit: Snap Inc.



**Self-presentation is critical to
a user's experience.**

Self-Presentation of Disability in Social VR

- Prior work
 - **Visible disability representation** via VR avatars (Zhang et al. 2022)
 - **Disability representation in digital spaces** (Mack et al. 2023)



Image credit: Christopher Reardon and Giselle Mota

Research Gap

Understanding the preferences of
people with **invisible disabilities**
in **immersive environments**

Research Questions

RQ1: How do people with invisible disabilities represent disability in social virtual reality avatars today?

RQ2: How can social virtual reality avatars better represent the experiences and identities of people with invisible disabilities?

RQ3: When, why, and how do people want to share invisible disability identities and experiences using avatars in social virtual reality?

Methodology

- Semi-structured interviews (Zoom)
- Creative exercise (Google Jamboard)
 - Pasting images
 - Writing on sticky notes
 - Drawing figures

Methodology

- Recruitment
 - Channels: social media, disability-related organization mailing lists, university extra credit system
 - Eligibility: (1) 18+ (2) identify as invisibly disabled (3) social VR experience
- 15 participants representing 22 different invisible disabilities
 - e.g., ADHD, dyslexia, chronic conditions

Takeaway #1: Embodied Avatars are Dynamic, Contextual, and Multimodal

- **Authentic**
 - Non-embodied avatars (e.g., profile pictures, Bitmojis) were a snapshot of one's identity
- **Interactive**
 - Facial expressions, movements, and body language are conveyed in real time, which can help represent fluctuating energy levels or mobility

Takeaway #1: Embodied Avatars are Dynamic, Contextual, and Multimodal

“[Social VR is] an order of magnitude above anything you would see on Instagram... you can see all the details on the avatar... their facial expressions, movements, and body language, and it’s real time.”

Takeaway #1: Embodied Avatars are Dynamic, Contextual, and Multimodal

“Your avatar can have a really upbeat energy... [or] your avatar would be a little bit lower on the energy... [friends] can kind of match their energy to your mood without you having to be so vocal about it.”

— P2

Takeaway #2: Current and Desired Invisible Disability Representations

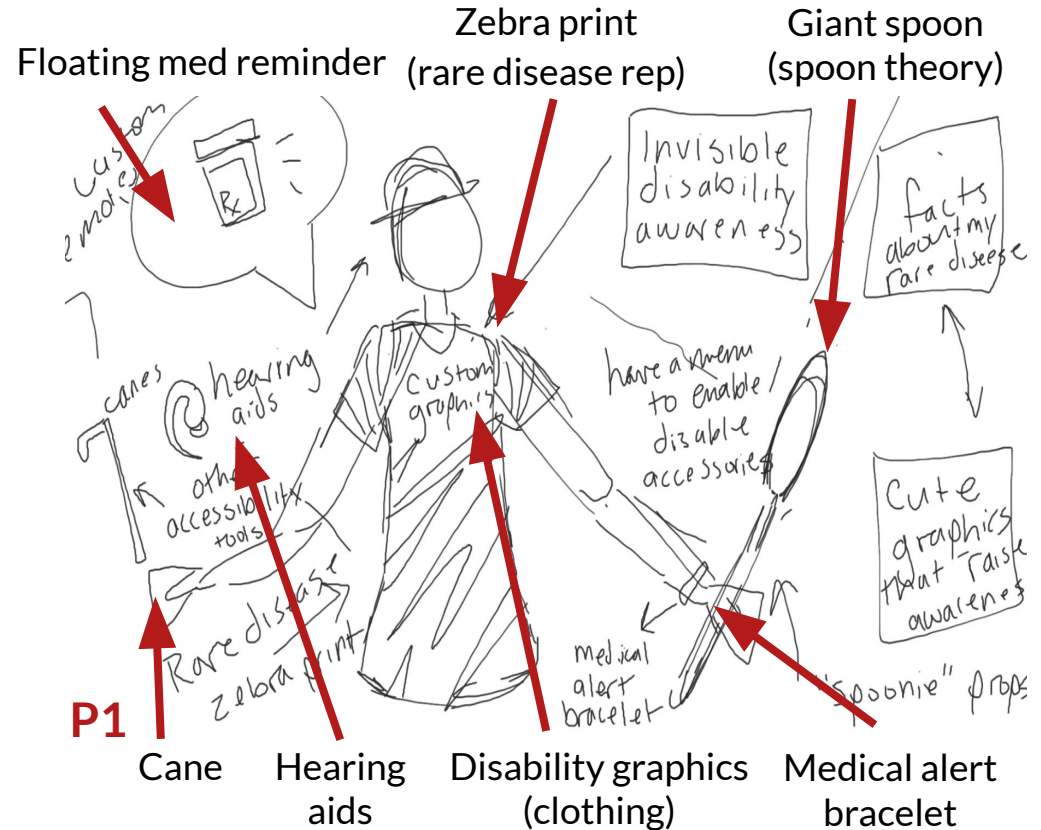
- **Current vs. Desired Representations**
 - **Current:** Hiding behind a tail, changing avatar color, etc.
 - **Desired:** Dynamic energy bar, disability logo on t-shirt, etc.

Takeaway #2: Current and Desired Invisible Disability Representations

- **Current vs. Desired Representations**
 - **Current:** Hiding behind a tail, changing avatar color, etc.
 - **Desired:** Dynamic energy bar, disability logo on t-shirt, etc.
- **Private vs. Public Representations**
 - **Private:** Implicit, personal significance
 - **Public:** Explicit, broadly recognizable

Takeaway #2:

Current and Desired Invisible Disability Representations



Takeaway #3: Invisible Disability Disclosure Practices Differ Based on Context

- **Three Types of Disclosers**
 - **Activists:** Will disclose in any context
 - **Situational Disclosers:** Will sometimes disclose depending on stigma perceptions and context
 - **Non-Disclosers:** Will not disclose in any context

Takeaway #3: Invisible Disability Disclosure Practices Differ Based on Context

“Anything that can start a conversation or encourage people to ask questions is really valuable to me, and I feel like having that option is just really important in terms of raising awareness.”

— P1 (Activist)

Takeaway #3: Invisible Disability Disclosure Practices Differ Based on Context

“We would mostly have to become friends outside of the virtual reality world for me to feel comfortable to disclose it.”

— P4 (Situational Discloser)

Recommendations

1. Create more options for **multimodal customization** and **interaction** (e.g., voice, sign, visual, movement, facial expressions)
2. Include **presets for both implicit and explicit options** for invisible disability representation on social VR customization platforms (e.g., pre-set logos)
3. Support **dynamic disclosure preferences** and **fluctuating disability experiences** (e.g., toggle, pop-up)
4. Make the avatar customization process more **accessible** and **flexible** (e.g., easy uploads, minimizing swiping)

Contributions

- Novel insights into the variety of **avatar customization preferences** of people with invisible disabilities
- Framework describing invisible disability disclosure strategies
 - **Public vs. Private**
 - **Activists, Non-Disclosers, and Situational Disclosers**
- **Detailed design recommendations** for invisible disability representation implementation



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Thank you!



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