



Positive audience perceptions of enhancements to accessibility from wearing haptic vests during Deaf Rave DJ performances at music festivals.

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Presentation Overview

- Discuss accessibility for people who are d/Deaf, disabled or neurodiverse to music festivals
- Introduce haptic ICT
- Consider the LAAA2F Project
- Share on-going research directions

Disability in the UK

"An individual can be classified as disabled if they have a physical or mental impairment that has a 'substantial' and 'long-term' negative effect on [their] ability to do normal daily activities." (Equality Act, 2010)

In 2020/21, **24 percent of the UK population** (16 million people) had a "physical or mental health condition or illness that has lasted or is expected to last 12 months or more."

"More than a quarter of UK residents will be aged 65 years or over within the next 50 years."

(Office for National Statistics, 2018)

(House of Commons Library 2023:1)

Some music context...

Music festivals can be conceived of as "social field configuring events" ...capable of advancing the global accessibility movement.

(Duignan 2023:3)

The music industry is exclusive, it discriminates against pretty much all the protected characteristics of the Equality Act and poverty

"73% of disabled respondents felt they had to compromise their health or wellbeing to do their job (vs 52%)"

UK Music Diversity report

(2024)

Accessibility refers to "measures put in place to address participation by those with impairments" Finkel, Sharp & Sweeney

(2019:2)

Accessible digital futures

Existing ICT augmentations can increase access

Hearing loops
which deliver
a wireless
signal for
hearing aids
(Hearing Link Services,
2023)

Time synchronised text in the form of closed captioning (Mahoney 2023)

Sign language interpretation on a big video screen

and...Haptic technologies?



- Identified by Robertson et al (2015) as a likely element of future audience experiences at music festivals
- Touch is one of the "big five" senses (Sensory Trust 2020:3)
- "Deep-seated corelations" between the senses of hearing and touch (Jack et al 2015)
- Haptic ICT deploys tactile sensations to "stimulate the sense of touch in a user experience" (Mass Challenge 2021)
- Dance floors, benches, gloves, sneakers, ...and vests...

Initial Work with DEAF RAVE

- Live Audience Accessibility & Augmentation ('LAAA') Project
- 5 Live public performances
- 2 Deaf Rave DJ Workshops
- Student research assistants
- 255 attendees
- 17 businesses and 2 schools supple
- 1 Royal Visit



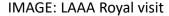




IMAGE: LAAA 80 Raves Poster

LAAA Project Images



Image: Attendees at LAAA Project using BEAT BLOCK haptic floor CREDIT Matt Jessop



IMAGE: Attendees at LAAA Project DEAF RAVE DJ Workshops CREDIT: Matt Jessop

Live Audience Accessibility & — Augmentation Festivals 2 Project

- AEME SIG Research Fund
- Initially just Adrian, then Mandy & Adam
- Field tests of Woojer vests at DEAF RAVE performances
- Boomtown Fair 2023
- Deaf Rave Festival 2023



Image: Attendees at Boomtown Fair 2023 Deaf Rave takeover – credit Adrian Bossey

LAAA2F Methodology

- Multi-stage experimental protocol
- Checking/fitting/experiencing vests
- Questionnaires
- Closed questions re. age, gender, hearing level, disability, etc
- Likert scale re. experience of interactive haptic technology
- 2nd Likert Scale used liveness scale



Image: Audience at Deaf Rave Festival 2023

– credit Adrian Bossey

Challenges of working on-site

- Research environment was noisy and at times chaotic
- Ear protection was provided
- Mobile data signals varied
- Paper forms were harder to read / understand
- BSL, gestures and information sheet used to explain research
- Some confused responses



Image: 'Battle of the QR codes' at Boomtown Fair 2023 Deaf Rave takeover – credit Mandy Curtis

Findings

- Writing-up journal article
- Overwhelmingly positive feedback to using the vests
- No significant difference in responses re age / gender
- Most noticeable variance from neurodivergent respondents
- More research required on different haptic formats

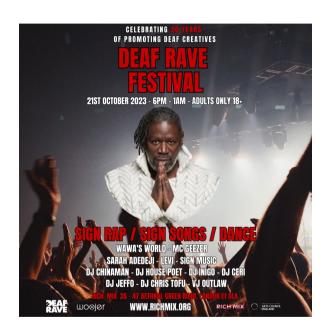


Image: Poster for Deaf Rave Festival – credit DEAF RAVE

On-going research

- Live Audience Accessibility & Augmentation Beat Blocks ('LAAA2BB') Project
- Working with the BEAT BLOCKS haptic floor
- Hopefully we have time to watch this short film



Image: Collecting questionnaire responses at Boomtown Fair 2023 during Deaf Rave takeover – credit Mandy Curtis

Thank You

Do you have any questions?

Special thanks to Helen
Worthington and all our
lovely Falmouth University
student research assistants



Image: 'Backstage' at Boomtown Fair during Deaf Rave takeover – credit Adrian Bossey

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