

Abstract

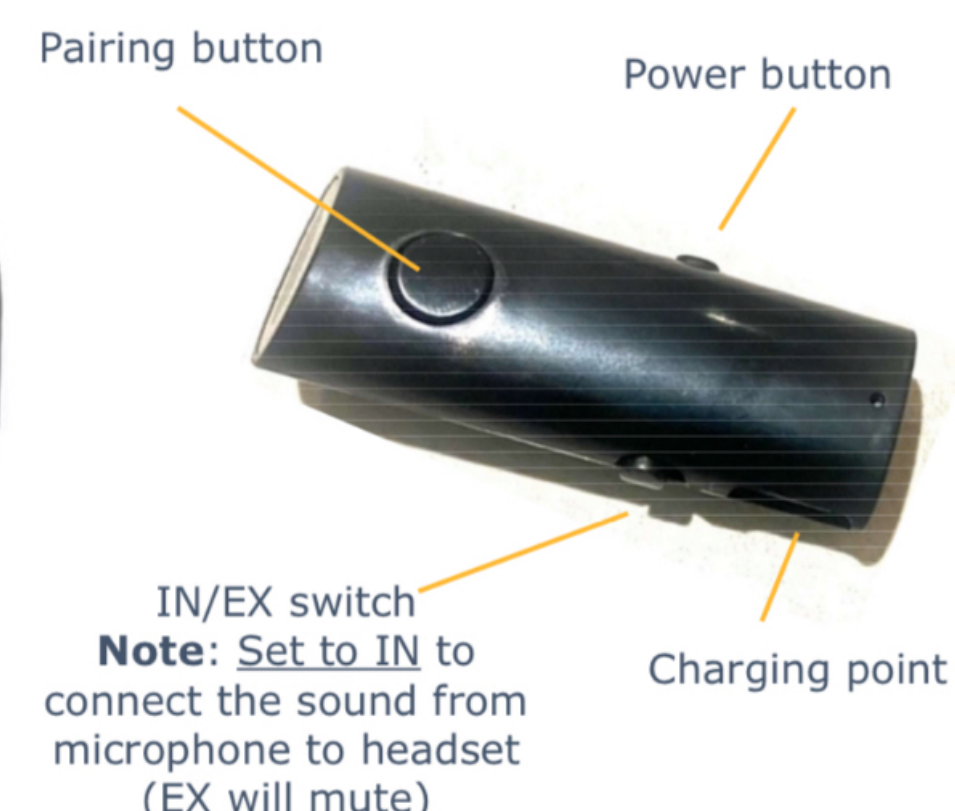
As prioritised by the World Health Organisation (WHO), assistive hearing technologies are paramount for improving education, health, and wellbeing globally [1]. The disparity in access, with only 3% coverage in low-income countries compared to approximately 90% in high-income nations, highlights the need for equitable distribution [1].

Figure 1 shows the technology presented to the participants.

Bone Conduction Headset



Bluetooth Microphone



Results

Patients in Malawi who were introduced to the bone conduction headset and microphone kit in Malawi spoke about the need for assistive technologies, not just to access education or employment but also to feel “safe”, feel “positive” about the future, and give them “confidence” to communicate. The chance for “a great change” to access further life-opportunities and empowerment to self manage their condition so that they can be involved in “important things” even when there were barriers to accessing health care services. The findings indicate the need to improve access to affordable, assistive hearing technologies such as the bone conduction headset and microphone kit.



Figure 2: Child wearing the bone conduction headset (consent and assent obtained)

With the global adoption of safe, affordable and effective hearing technologies coupled with their capacity to provide autonomous care, without the need for continuous oversight by (expensive) health care professionals, this paper explores both the patient experience regarding access to assistive technologies for hearing loss, as well as patient perceptions regarding one novel, cost-effective bone conduction headset and microphone which has undergone prior research in the UK and trialled in Malawi [2,3,4,5,6]

Semi-structured interviews revealed themes such as limited access to assistive technologies, reliance on traditional remedies, societal acceptance of technology, and the impact of hearing differences on education, work, and social isolation. Participants expressed a willingness to embrace new assistive technologies, including interest in smartphone integration and solar-powered charging.

Methods and Materials

This study explored perspectives regarding an assistive technology for conductive hearing loss among participants purposively selected from Queen Elizabeth Hospital in Blantyre, Malawi. Participants included secondary school students, young adults seeking employment, an unemployed individual, and adults with stable employment, all experiencing varying degrees of conductive or mixed hearing differences. They were receiving audiological care and communicated in English or Chichewa, with or without Malawian sign language support. Exclusion criteria comprised individuals with solely sensorineural hearing loss and those lacking recent audiogram confirmation of their hearing status. Semi-structured interviews, lasting approximately one hour, provided a platform for participants to share their experiences and opinions regarding assistive technologies, including a novel bone conduction headset paired with a lapel microphone. This device, previously validated in studies conducted in Cambridge and Malawi [2,3,4,5,6]

References

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