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Research Article

Design and deployment of digital health interventions to reduce the risk of the digital divide and to inform development of the living with COVID recovery: a systematic scoping review

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Plain language summary

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Plain language summary

This review examines how digital health interventions can be designed to reduce health inequalities, particularly among people who face barriers to accessing digital health tools, such as older adults, people from minority ethnic backgrounds and those with lower incomes or education levels.

Background

Digital health interventions, such as websites and apps, can improve healthcare access, especially for people in remote areas or those with language barriers. However, they can also increase inequalities if not designed to address issues such as lack of access to technology or low digital skills.

The review was conducted during the COVID-19 pandemic to help design living with COVID recovery digital health intervention, a post-COVID rehabilitation tool used by over 7600 patients in 33 NHS clinics. The aim was to create a digital health intervention that was usable and engaging for people with different backgrounds to avoid worsening health inequalities.

Methods

We searched online databases of research studies. We identified and analysed 22 studies with digital health interventions that aimed to improve access and engagement for underserved populations.

Key findings and recommendations

Design features: codeveloping digital health interventions with users, then testing and improving them over several cycles, helped improve access and develop digital skills. Animations, pictures and simple language were used to make content easier to understand for people with low literacy. Virtual assistants were also helpful in guiding users and collecting information.

Deployment strategies: to support access, some studies provided free devices and data, or helped people find low-cost options. Offering human support, for example to log in and use a digital health intervention, troubleshooting as well as providing digital skills training, helped users get started with the technology. Peer and family support also played a role in helping people use digital health interventions.

Conclusion

The review's findings highlight important steps that can help overcome the digital divide, including designing digital health interventions with users in mind, helping them to use the technology and supporting them skills they need. The results are intended to inform future digital health intervention development and evaluation and to lead to more equitable access to health care.