

Translating health psychology into practice: A summary of the 'Tackling the Digital Divide: Forming recommendations for health psychologists' roundtable at EHPS 2023

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This article summarises a roundtable discussion at the 37th annual conference of the European Health Psychology Society (EHPS) titled: *Tackling the Digital Divide: Forming recommendations for health psychologists*. Chaired by Dr Eline Smit and Dr Heidi Busse, this session built upon a successful roundtable on the digital health divide at the 2022 EHPS conference. The aim was to move the conversation on from trying to understand the why,

what and how of the digital divide, to how researchers can contribute to narrowing the divide.

The digital divide

The term 'digital divide' is typically used to describe unequal access to digital technologies between different social groups (van Dijk, 2020). However, it is increasingly understood that inequalities extend beyond access, and also arise in the use, engagement and effectiveness of digital

interventions, including those for health promotion (Szinay et al., 2023; Western et al., 2021). Researchers can contribute to narrowing the digital divide by focussing on inclusive design, evaluation and implementation of their digital health interventions. In the opening presentation of the roundtable, Dr Jahnel argued that ecological models such as the Digital Health Rainbow, can help identify how digital determinants add to and compound the existing social determinants of health inequality (Jahnel et al., 2022). For example, whilst social media-based interventions are generally free and provide easy access to health information for people with limited financial resources, to critically assess that information, she argued, people require digital and health literacy which are unequally distributed. Next, Dr Busse reported on the preliminary findings of a systematic review into the digital divide in weight-related behaviours (König et al., in progress). The review – sponsored by an EHPS networking grant – found evidence of several digital divides, but also showed that inequalities such as those associated with migration status, geography, chronic conditions and disability were rarely explored. That disadvantaged groups are often excluded from the research process was reinforced in Dr de Looper's presentation which touched on how migrants and refugees are frequently excluded from the development of new interventions, leaving their efficacy in those populations untested. One of the projects Dr de Looper works on, MHealth4All,

aimed to combat this by following the Spiral Technology Action Research (STAR; Skinner, 2006) model to ensure migrants and refugees were involved in all research phases of an online intervention, including interviews to explore barriers and needs, and in the co-creation of materials. Finally, Lee Mercer reported on a study which found that beliefs and attitudes toward digital interventions did not differ significantly between different socioeconomic groups, supporting the idea that it is the wider contextual and structural factors which play more of a role in reinforcing the digital divide than individual dispositions.

Following the presentations, delegates were divided into breakout groups with each group asked to discuss how inequalities impact on one of three stages of digital intervention development: design, evaluation, and implementation. This paper summarises those discussions drawing on aspects of the literature where relevant.

Design

The first group discussed intervention design. Before pen is put to paper, the design group argued, researchers should make explicit their own assumptions and biases about what makes an intervention effective, especially in disadvantaged groups. A failure to undertake such reflection may risk introducing researcher bias into intervention design (e.g. Toscos, 2019). One way to tackle this is by having a clear theory and/or evidence-based rationale for why a digital health intervention is needed. Yet, too often digital is seen as the default solution without proper consideration of what is likely to be most effective, especially for disadvantaged groups (Schou et al., 2019). To tackle this, the group felt that the target audience must be clearly identified through formative research, including a comprehensive needs assessment. Where digital solutions are adopted,

language and accessibility options - including quality of access, such as guaranteed anonymity - should be considered but designers should also address cultural preferences and specific population needs such as social and community support. For example, a lack of consideration about the usability and likability of digital solutions has been argued to contribute to drop out rates as users abandon applications that are not easy to use or tailored to their needs (Sharpe et al., 2017). The design group also argued that understanding who will deliver and fund an intervention is important, otherwise effective digital interventions may fail through a lack of financial support and ownership. As such, the workshop concluded, collaboration with industry and the private and charitable sectors should be a primary consideration at the design stage. Finally, the group felt that to effectively address some of the shortcomings of a one-size-fits-all approach to digital health, interventions should always be co-designed and co-produced with target users.

Design recommendations

1. Recognise and make explicit your own notions, attitudes, stereotypes and blind spots.
2. Start early, conduct proper formative research (including needs assessment), and collaborate with stakeholders from the outset.
3. Co-design digital interventions with the target audience.

Evaluation

Next, the evaluation group considered how inequalities might be introduced or minimised at three stages of evaluation: evaluation design, measurement and reporting. (1) The *what, when*

and *who* of evaluation should already been considered at the design stage. Here, the group was keen to emphasise the importance of conducting a needs assessment among the target population because without a clear understanding of the aim of an intervention, it will not be possible to evaluate how effectively it is. (2) At the measurement stage, the group argued, careful consideration should be given to the means of measurement: are they feasible and do they represent a good proxy for effectiveness? To fully understand the impact of an intervention in its target users, the group felt that outcome measures should include both quantitative and qualitative data. Further, alongside outcome measures, process measures should assess the fidelity of intervention delivery. Without robust measures of intervention fidelity, especially in disadvantaged populations, the extent to which changes in behaviour flow from the intervention, as opposed to unrelated extrinsic factors, cannot be assessed. However, researchers should also be cognisant of the constraints in which the intervention will be delivered and plan an evaluation process that is pragmatic and not too onerous for users or practitioners. (3) The group considered that in terms of reporting, a minimum dataset should be collected which includes demographic data such as age and gender, but also a standardised set of possible indicators of inequality to assess its effectiveness across different populations. As a final point, the group suggested it may be beneficial to bring together existing intervention development guidelines (which touch on evaluation) such as the STAR and the Medical Research Council (MRC; Skivington, 2021) framework on complex interventions into a single overview document.

Evaluation recommendations

1. Measure intervention effectiveness according to how well population needs have been met.
2. Ensure measures of efficacy are realistic and include both quantitative and qualitative data.
3. Adopt minimum reporting datasets that include indicators of inequality.

Implementation

The final group argued consider implementation. They argued that implementation strategies must be evidence-based and include the delivery methods that are likely to be effective for the target population, avoiding a 'one-size-fits-all' approach. Further, it should not be assumed that what works for one target behaviour such as diet will necessarily work for other behaviours such as those related to physical activity. It was also noted that even well-conceived interventions may not be delivered effectively or as intended without the 'buy in' of those delivering the interventions, reinforcing the importance of shared ownership and co-production. However, the group felt it was important to safeguard or exploit the benefits of digital approaches to health interventions, even if hybrid or in-person approaches might be necessary for those who struggle to, or prefer not to, engage with digital interventions. Here, they felt more research was needed to establish the benefits of guided approaches, such as digital literacy support in libraries and community centres. Further, the technical challenges of implementation were acknowledged such as disparities in access to digital infrastructure (e.g., 5G networks, broadband), which may give rise to digital exclusion in rural communities. These were critical considerations for the developers of interventions, and further spoke to the need to consult widely

with industry and the public sector on how interventions will be delivered. The group also argued that how users make sense of digital interventions is important and users should be supported to understand the why of the intervention, and how it meets their interest in, and needs and desire for digital health, on ongoing basis during the implementation period. Finally, the group recognised that trust may initially be low amongst potential users and stakeholders responsible for delivering interventions, especially if they were not involved in the development phase. However, trust may also evolve during the implementation period with appropriate support, for example by engaging those with lived experience to become intervention champions and to advocate for the benefits of change.

Implementation recommendations

1. Make guided support available to facilitate engagement with digital interventions.
2. Tailor digital interventions to the target population needs and wishes.
3. Involve trusted advocates of the intervention from stakeholder communities.

Conclusion

The causes of the digital health divide are complex and unlikely to be resolved through one-size-fits-all, or digital-by-default solutions. The digital divide roundtable at EHPS 2023 heard that inequalities can be introduced – but also minimised – at all stages of intervention development. To tackle this, researchers should ensure inclusivity is integral to their design, implementation and evaluation practices by being aware of inequalities that might arise, and actively including groups who might otherwise be excluded to understand their needs and preferences, and the barriers to their engagement. Researchers must go beyond mere

considerations of access or skills to instead address how interventions can be tailored to specific populations. Do people want a digital intervention? Will it be effective for them? How can they be involved in its co-production? Can it be tailored towards their wants and needs? What ongoing support would make the intervention more effective? This article has made several recommendations, with the aim of supporting researchers and practitioners to answer these questions, and to design, evaluate and implement digital health interventions which will help to tackle, or at least not worsen, the digital health divide.

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