



The development and use of adolescent mobile mental health (m-mhealth) interventions in Low-Middle-Income Countries: a scoping review

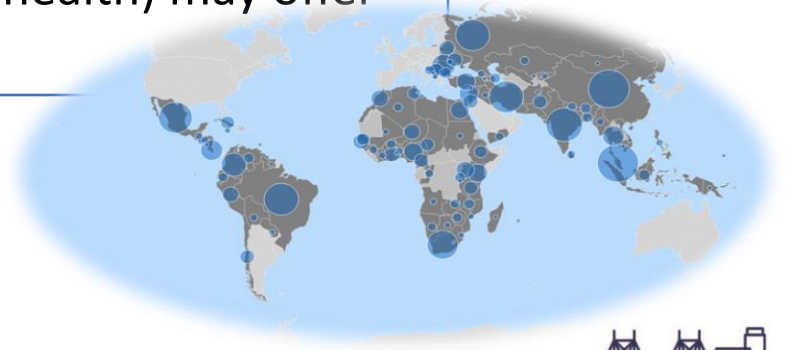
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Why focus on Adolescent mobile mental health?

- Half of all mental health conditions develop by age 14. If untreated, they extend into adult life, affecting education, employment, relationships and even parenting.

- With increasing levels of poor adolescent mental health and insufficient healthcare resources in low-middle-income countries (LMICS), mobile mental health (MMH or m-mhealth) may offer expanded service access.



Overview

Rationale

- Mental health disorders in adulthood stem from undiagnosed mental illness during childhood,
- Yet adolescent mental disorders in LMICs remain untreated.
- Over the last two decades, there has been a rapid advancement in digital technologies such as smartphones, mobile applications, and social media.
- More recently, the adoption of mobile health for mental health has grown exponentially.

Aims

- To review the literature on MMH interventions, development and use for LMIC adolescents.
- To summarise existing work in adolescent MMH in LMICs and to provide steps for future developments of MMH interventions for adolescents.



Methods

- We searched APA PsycInfo, Web of Science, Psychiatry online, and Ebscohost databases using keywords and phrases. **6953** articles were retrieved
- Titles, abstracts and full-text articles were screened for relevance against the inclusion criteria.
- Articles were excluded if they focused on adults or the general population. There was no restriction on publication dates. Grey literature, e.g., dissertations and conference proceedings, were excluded
- Screening of the **6953** retrieved articles generated six articles that met the inclusion criteria.

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Results

The six studies were published between 2014 and 2022, with the majority (five) published since 2019.

There were 3 qualitative studies, 1 quantitative study, 1 mixed-method study, and 1 study that followed an iterative approach.

The sample sizes of the studies ranged from 17-124 adolescent participants

Two out of the six studies included only female participants.

The studies were conducted in Nigeria, Jamaica, China, Kenya and two in India.



Domain 1: Adolescents perceive MMH approaches as useful

- All six studies reported high satisfaction from adolescents with MMH interventions.
- All the studies reviewed reported the benefits of using MMH identified by adolescents such as cost-effectiveness, and confidentiality.
- For example, one study highlighted that SMS texting is a low-cost method for adolescents, as it does not require mobile data or access to a smartphone device.



Domain 2: Access to mobile devices and other barriers impacting the use of MMH

- One study conducted in India reported a low level of individual phone ownership, with many adolescents sharing their phones with their families.
- In contrast, a study conducted in Jamaica reported that all but one participant had access to a mobile phone.
- Concerns raised by adolescents regarding their use of MMH include lack of confidentiality, for two primary reasons:
 1. Sharing their devices with parents
 2. Parents having access to their mobile devices
- Barriers to using MMH identified across all studies were data costs and/or access to the internet.



Domain 3: MMH content preferred

- In an SMS text messaging intervention, most participants preferred helpline messages rather than positive mood-lifting messages.
- The opportunity to text back or call someone was strongly preferred because it gave adolescents a sense of support and care.
- Some participants expressed that online group sessions may help provide a sense of togetherness among users.



Discussion

- Scarcity of published research on this topic.
- Adolescents in LMICs perceive MMH approaches as useful and a viable alternative to accessing mental health care.
- However, barriers such as not owning or sharing a mobile phone, or access to phones by parents, and mobile data and internet access may hinder adolescents from using MMH approaches.



Next steps

- Implementing MMH interventions is not a 'one size fits all'
- The design and development of MMH intervention should involve the end-user, paying attention to their preferences.
- There is a need for organically developed platforms tailored explicitly for adolescents and specific to their socioeconomic and cultural contexts



Conclusion

- Mobile technologies for adolescents are a promising tool in LMICs.
- Future research needs to broaden the scope to include preferred content highlighted by adolescents.

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Questions



THANK
YOU! 😊

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