

# Digital Mental Health Interventions for Adolescents in Low- and Middle-Income Countries: Insights from South Sudan

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## Introduction

- ❑ Globally, 14% of adolescents (10-19 years) experience mental health difficulties<sup>[1]</sup>, which are amplified by adversities such as human rights violations, exclusion, and stigma, further intensified by the compounding effects of COVID-19 and ongoing crises.
- ❑ Digital mental health interventions (DMHIs) could improve adolescents' mental health and well-being in low and middle-income countries (LMICs).<sup>[2,3]</sup> Defined as a *discrete functionality of digital technology applied to achieve a mental health objective*, DMHIs are delivered through individual or population levels e.g., via mobile applications, wearables, and smart devices.
- ❑ South Sudan has a population of 11.1 million, 27% of whom are adolescents<sup>[4]</sup>. The prevalence of post-traumatic stress disorder, depression, and anxiety is notably high across the population<sup>[5]</sup>. The country only has nine psychologists<sup>[5]</sup> and three psychiatrists, with over 20 NGOs working on psychosocial interventions.
- ❑ This research underscores the significance of DMHIs for post-conflict adolescents in South Sudan. This work can guide strategies for similar initiatives in conflict-affected regions, which is critical for supporting adolescent mental health amidst ongoing conflict and humanitarian crises.

## Methods

- ❑ 18 professionals in South Sudan were interviewed, covering topics on digital transformation, data protection laws, DMHI feasibility and facilitators/barriers. Interviews were audio-recorded, transcribed, and data analysis was guided by Braun and Clarke's<sup>[6]</sup> reflexive thematic analysis.

## Findings

- ❑ Only one mental health unit, based at Juba Teaching Hospital (Juba, capital of South Sudan)



- ❑ **Tailored DMHIs are perceived as feasible** for mental health and psychosocial support improvement and reducing digital disparity among South Sudanese adolescents, focusing on mobile tech.
- ❑ **The South Sudanese government has shown will and support:** The Ministry of Health is releasing the first national mental health strategy in 2023, recognising adolescent mental health as a unique public health concern.
- ❑ **Design-related challenges:** ■ Language is a significant barrier (multilingual country, with over 60 indigenous languages spoken) ■ Poor education, literacy and digital skills among adolescents ■ Affordability of digital devices ■ Access and connectivity ■ Cultural sensitivity ■ Stigma ■ Privacy and security ■ Monitoring and evaluation ■ Shortage of mental health professionals ■ Funding gaps ■ Post-conflict setting.



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“The youth here want to be told there is light at the end of the tunnel. They need to be given hope. I've seen some talent and innovation in the youth in South Sudan. So, they are very much willing to learn. They are out there waiting for someone to identify their skill, to identify their potential and then lock it. And they will make a change in their communities, eventually in the country at large.”

Participant 6, (L523-538) South Sudan

## Next Steps: Year 3 PhD Overview (2024)

- ❑ **Phase 3, Co-Design In-Country Project:** Using design thinking and user-centred design principles to co-design a digital mental health intervention with adolescents in South Sudan. The solution will be responsive to the technological and health systems infrastructure in South Sudan.
- ❑ This work contributes towards the following Sustainable Development Goal.<sup>[7]</sup>



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