

# Chapter 12

## mHealth as Tools for Development in Mental Health

**Gloria Ejehiohen Iyawa**

*Namibia University of Science and Technology, Namibia*

**Julie Langan-Martin**

*University of Glasgow, UK*

**Stephen Sevalie**

*University of Sierra Leone, Sierra Leone*

**Wanano Masikara**

 <https://orcid.org/0000-0002-4328-0570>

*Nanosoft Designs, Botswana*

### ABSTRACT

*This chapter provides an assessment of studies on mobile health (mHealth) tools for development in addressing diseases relating to mental health, informs the current publications trends, identifies research gaps in the existing literature, and suggests a future research agenda that can help address these gaps. We, therefore, assessed empirical studies using a Systematic Mapping Study approach. We searched five academic databases as well as Google Search Engine and Google Scholar. Based on the inclusion and exclusion criteria, 54 full-text papers were included in this chapter. The findings suggest a growing trend in the use of various mHealth tools for mental health, such as mobile apps and text messaging. The findings also suggest that the responsibility of health monitoring and management can be shared between the medical practitioner and the patient in mental healthcare. Research gaps were identified and areas for future research are proposed.*

DOI: 10.4018/978-1-7998-8544-3.ch012

## **INTRODUCTION AND BACKGROUND**

### **Mental Health**

The World Health Organization (WHO) (2014) defines mental health as a “state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community.” However, several conditions can greatly impact on the mental health of a person, including mental illnesses such as depression (Hellman, 2018), post-traumatic stress disorder (PTSD) (Bisson et al., 2015), schizophrenia (Rasool et al., 2018) and psychosis (Chan, 2017). Mental health is a serious health issue; however, countries have paid little attention to the burden of mental health (Tomlinson & Lund, 2012). Russell and Patrick (2018) emphasize the importance of addressing mental health issues as these cause a financial strain on health systems.

One of the United Nations’ Sustainable Development Goals (SDGs) is to ensure that populations of the world live a healthy life as stated in the SDG 3, to maintain “good health and well-being” (United Nations Development Programme, 2016). To achieve these goals, countries have taken innovative approaches. Some efforts include the use of technologies in diagnosing, managing and aiding the treatment of diseases (Hoffmann & Svenaeus, 2018). Iyawa, Herselman and Botha (2017a) propose Digital Health Innovation Ecosystems as a practical approach for meeting these goals. Digital Health Innovation Ecosystems emphasize the use of digital health technologies in the delivery of healthcare services where both patients and key healthcare stakeholders interact in a digital platform with evidence of the “principles of innovation” (Iyawa et al., 2016a; 2017d, p. 433).

Iyawa et al. (2016a, p.249) define Digital Health Innovation Ecosystems as a “a network of digital health communities consisting of interconnected, interrelated and interdependent digital health species, including healthcare stakeholders, healthcare institutions and digital healthcare devices situated in a digital health environment, who adopt the best-demonstrated practices that have been proven to be successful, and implementation of those practices through the use of information and communication technologies to monitor and improve the wellbeing and health of patients, to empower patients in the management of their health and that of their families.” This definition suggests that all healthcare stakeholders are involved in the healthcare process which includes both medical practitioners and patients. Involving patients in healthcare delivery processes have shown to improve health outcomes (Vahdat et al., 2014). While Herselman et al. (2016) advocate for a Digital Health Innovation Ecosystem for South Africa, Iyawa et al. (2017b) validate the components of a Digital Health Innovation Ecosystem in Namibia and present a framework for implementing such an ecosystem in the Namibian context (Iyawa, 2017c). Other studies on Digital Health Innovation Ecosystems highlight the benefits of implementing such an ecosystem. Some of the benefits include the sharing of information between healthcare stakeholders such as patients and doctors and improved healthcare services (Iyawa et al., 2017b; Iyawa et al., 2019).

Digital Health Innovation Ecosystems are important in ensuring that patients are involved in the healthcare process through digital health technologies with innovative approaches. Iyawa et al. (2016b) present the components of a digital health innovation ecosystem which includes digital health, innovation and digital ecosystems as shown in Figure 1. An example of digital health technologies is the use of mobile technologies for healthcare purposes (mHealth) as shown in Figure 1 (Iyawa et al., 2016b). The focus of this chapter is on applying a component of Digital Health Innovation Ecosystems, mHealth, for mental healthcare and explore how different healthcare stakeholders such as patients and medical practitioners make use of mHealth as tools for development in mental health.

21 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/mhealth-as-tools-for-development-in-mental-health/276021](http://www.igi-global.com/chapter/mhealth-as-tools-for-development-in-mental-health/276021)

## Related Content

---

### Mental Health Access Issues by People of Refugee Backgrounds in Australia

Ndungu wa Mungai, Jeanette Ninnis and Ruth (Isobel) Bailey (2019). *Mental Health Policy, Practice, and Service Accessibility in Contemporary Society* (pp. 74-92).

[www.irma-international.org/chapter/mental-health-access-issues-by-people-of-refugee-backgrounds-in-australia/213560](http://www.irma-international.org/chapter/mental-health-access-issues-by-people-of-refugee-backgrounds-in-australia/213560)

### "Personal Training": Can Genes Guide Us?

Anthoula Tsolaki (2015). *Handbook of Research on Innovations in the Diagnosis and Treatment of Dementia* (pp. 18-36).

[www.irma-international.org/chapter/personal-training/129266](http://www.irma-international.org/chapter/personal-training/129266)

### Mindfulness-Based Interventions for Externalizing Disorders of Childhood and Adolescence: A Narrative Review

B. R. Sahithya and Rithvik S. Kashyap (2024). *Handbook of Research on Child and Adolescent Psychology Practices and Interventions* (pp. 268-286).

[www.irma-international.org/chapter/mindfulness-based-interventions-for-externalizing-disorders-of-childhood-and-adolescence/334071](http://www.irma-international.org/chapter/mindfulness-based-interventions-for-externalizing-disorders-of-childhood-and-adolescence/334071)

### Dementia and Language Bilingualism Helps Ward Off Alzheimer's Disease

Yiyang Yu, Sihan Lu, Yan Wu, Qiong Wu and Jinglong Wu (2017). *Improving the Quality of Life for Dementia Patients through Progressive Detection, Treatment, and Care* (pp. 107-122).

[www.irma-international.org/chapter/dementia-and-language-bilingualism-helps-ward-off-alzheimers-disease/168928](http://www.irma-international.org/chapter/dementia-and-language-bilingualism-helps-ward-off-alzheimers-disease/168928)

### Consulting the British Public in the Digital Age: Technological Innovation and Internet Addiction in the Web 2.0 Era

Shefali Virkar (2015). *Psychological and Social Implications Surrounding Internet and Gaming Addiction* (pp. 199-225).

[www.irma-international.org/chapter/consulting-the-british-public-in-the-digital-age/134512](http://www.irma-international.org/chapter/consulting-the-british-public-in-the-digital-age/134512)