Chapter 3

A Systematic Review of eHealth Studies on the COVID–19 Pandemic

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ABSTRACT

In the current context of the COVID-19 pandemic, many healthcare institutions have resorted to eHealth to manage the disruption in healthcare brought by the pandemic. However, the extent to which eHealth has been used in the context of the COVID-19 pandemic has not been widely investigated. It is in this context that this study sought to systematically review research trends on the use of eHealth in the context of the COVID-19 pandemic era, the theoretical underpinnings of the studies on the use of eHealth in the context of the COVID-19 pandemic, and the contributions made by these studies. Findings revealed that most studies focused on the 'health in our hands' and 'interacting for health' components of eHealth while none of the studies focused on the 'data enabling health' component. In addition, none of the reviewed studies used a theoretical framework. Albeit with limitations, these studies shed light on the use of eHealth applications for patients' data management and the provision of telemedicine in the fight against COVID-19.

INTRODUCTION AND BACKGROUND

Electronic Health (eHealth) can be defined as "the use of technologies such as mobile phones or the Internet to provide or enhance health services (Kante & Ndayizigamiye, 2021, p.1). Rothman and Malster (2021, p.24) further elaborated on the eHealth definition and stated that eHealth can be defined as "the use of information and communication technologies for health and can include the use of email, text messaging, push notifications, websites, and mobile-based applications". Many studies have been conducted on the adoption or use of eHealth to provide public healthcare services (Ndayizigamiye & Maharaj, 2016a; Ndayizigamiye & Maharaj, 2016b; Ndayizigamiye, 2016; Ndayizigamiye & Maharaj, 2017; Ndayizigamiye, Hangulu & Akintola, 2017; Imaja, Ndayizigamiye & Maharaj, 2017; Ndayizigamiye & Maharaj, 2018; Matiyabu & Ndayizigamiye, 2019; Kante & Ndayizigamiye, 2021); promote healthy lifestyles (Ndayizigamiye, Kante & Shingwenyana, 2020); for self-healthcare monitoring (Ndayizigamiye, Soni, & Jere, 2018; Soni, Ndayizigamiye, & Kante, 2019), to name a few.

In the context of the current Coronavirus pandemic (Covid-19), many studies have been conducted on the use of eHealth in the fight against the pandemic (Scott et al., 2020). Scott et al. (2020) further highlighted that many of these studies have synthesized the literature to highlight the current trend on eHealth research and how eHealth could be used to address future emergencies. Similarly, Vokinger et al. (2020) reviewed the literature and argued that despite a high number of health applications being developed and implemented, there was a need to assess them as their usefulness remains somehow questionable. They then proposed a framework for assessing such applications in the fight against Covid-19. Another synthesis of the literature has been provided by Neubeck et al. (2020) on the remote provision of healthcare to cardiovascular patients during the Covid-19 pandemic era.

Despite these syntheses of the literature on the use of eHealth, the literature that portrays the nexus between eHealth and Covid-19 is still accumulating and hence there is a need to be acquainted with new developments in the fight against Covid-19. Furthermore, most of the literature reviews focused only on some areas of application of eHealth. For instance, the review of Neubeck et al. (2020) focused on cardiovascular patients whilst Scott et al. (2020) investigated the evaluation of eHealth applications. Therefore, there is need for a synthesis of eHealth research that provides a comprehensive understanding of eHealth research in the context of the Covid-19 pandemic. It is in this context that the following objectives of this study were formulated:

1.   To highlight the current research trend on eHealth components and Covid-19.

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