ABSTRACT

Introduction: The World Health Organization's (WHO's) Basic Emergency Care (BEC) course was developed to address training gaps in low- and middle-income countries (LMICs). Simultaneously, LMICs have experienced an unprecedented increase in the number of cell phone and internet users. We developed a mobile application adjunct to the BEC course (BEC app) and sought to assess the reach of the BEC app. Methods: Forty-six BEC course participants, made up of doctors and nurses from three hospital sites in Tanzania, were given access to the BEC app with download instructions. Moderators tracked mobile access characteristics and barriers. This is a descriptive study outlining the implementation of the BEC app and associated findings from the process. Results: Fewer than 10% of participants were able to independently download and use the application. The download process revealed three key barrier areas: accessibility (no smartphone, smartphone without charge, no access to data/WiFi to download app, increased cost of data), technical (outdated operating system, inconsistent access to data/WiFi to run the app, insufficient phone storage), and participant-related characteristics (variability in smartphone literary, language discordance, smartphone turnover). Of the 46 participants, 29 (63%) were able to download and use the BEC app successfully with moderator support. Conclusions: There is potential utility of mobile health in LMICs. However, barriers still exist to reaching the largest possible audience for these initiatives. The importance of app compatibility with a broad range of operating systems and limitation of the amount of data needed to download and use the app was underscored by our study. Moreover, creative solutions are needed to facilitate large-scale roll-outs of mobile health interventions, such as a distribution model that relies on super user and peer support rather than an individual moderator. Additional local perspectives on the download process and the utilisation and acceptance of the application post-implementation are needed.

Keywords: Emergency care; Implementation lessons; Mobile technology; Tanzania.