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Mobile health applications: awareness, attitudes, and practices among medical students in Malaysia

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Abstract

Background: The popularity of mobile health (mHealth) applications (or apps) in the field of health and medical education is rapidly increasing, especially since the COVID-19 pandemic. We aimed to assess awareness, attitudes, practices, and factors associated with the mHealth app usage among medical students.

Methods: We conducted a cross-sectional study involving medical students at a government university in Sarawak, Malaysia, from February to April 2021. Validated questionnaires were administered to all consenting students. These questionnaires included questions on basic demographic information as well as awareness, attitude toward, and practices with mHealth apps concerned with medical education, health and fitness, and COVID-19 management.

Results: Respondents had favorable attitudes toward mHealth apps (medical education [61.8%], health and fitness [76.3%], and COVID-19 management [82.7%]). Respondents' mean attitude scores were four out of five for all three app categories. However, respondents used COVID-19 management apps more frequently (73.5%) than those for medical education (35.7%) and fitness (39.0%). Usage of all three app categories was significantly associated with the respondent's awareness and attitude. Respondents in the top 20% in term of household income and study duration were more likely to use medical education apps. The number of respondents who used COVID-19 apps was higher in the top 20% household income group than in the other income groups. The most common barrier to the use of apps was uncertainty regarding the most suitable apps to choose.

Conclusion: Our study highlighted a discrepancy between awareness of mHealth apps and positive attitudes toward them and their use. Recognition of barriers to using mHealth apps by relevant authorities may be necessary to increase the usage of these apps.

Keywords: Applications, COVID-19, Health and fitness, Medical education, Mobile health

Background

The World Health Organization's Global Observatory defines mobile health (mHealth) as a public health practice supported by mobile devices such as mobile phones,

patient monitoring devices, personal digital assistants, and other wireless devices [1]. Generally, mHealth is used to provide healthcare information to the public, collect health data, monitor patients remotely, access health records, make medical diagnoses, and assist in disease prevention and management [2, 3]. They are generally classified as medical education and teaching apps, health and fitness apps for patients and the public, telemedicine and telehealth apps, and others [4].

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