

ABSTRACT

Background: Symptom checkers in mHealth apps have risen to the forefront of one of the COVID-19-related apps as a self-screening tool to collect information regarding patients' condition concerned with COVID-19 symptoms. Unfortunately, there is still a lack of quality control in those mHealth apps development and implementation. The number of mHealth apps is rapidly growing; however, the quality of the apps related to COVID-19 in Indonesia is still unknown.

Objective: To evaluate the quality of the android mHealth apps for COVID-19 symptoms checkers using MARS and identify the signs and symptoms information of COVID-19. It also assessed the association between the MARS domains scores and the ratings, downloaders, and numbers of review.

Methods: The apps used in this study were selected from “Medical” category in Google Play Store and equipped with COVID-19 symptom checkers. The apps were reviewed and evaluated by two authors independently with MARS tools. The correlation between MARS components scores and ratings, downloaders, and reviewers were analyzed using the Spearman rank correlation method. This study used four simulation cases classified by the severity of COVID-19 illness and vaccination status to identify symptom checking programs descriptively.

Results: Seven apps selected from at least 200 top free apps categorized in “Medical” section in Google Play App store were installed and evaluated. Among the apps, Halodoc got the highest MARS score (4.27), followed by SehatQ (4.04), Good Doctor (4.01), MySiloam (4.00), Alodokter (3.81), KlikDokter (3.80), and PIKOBAR Jawa Barat (2.81). The apps' rating, downloaders, and reviewers were positively correlated with the quantity of information. All apps provided teleconsultation with doctors with six out seven apps enabled AI-chatbot for self-symptom checker for COVID-19.

Conclusions: The quality of apps with COVID-19 symptom checkers in Indonesia was acceptable to very good ratings. Most of the chatbot-based symptom checkers provided more questions that had consistently led to the COVID-19 conditions and followed the government guidelines. mHealth apps and teleconsultation could be used for information dissemination, preassessment tools, home monitoring and isolation, and health services access with a low risk of contracting COVID-19.

Keywords: chatbot, COVID-19, coronavirus, mobile health application, mHealth, Mobile App Rating Scale (MARS), self-screening, symptoms checking, telemedicine