

Connected and Digital Health

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[AP1-E2-1-01] Asthma Self-Management App for Indonesian Asthmatics: A Patient-Centered Design

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Keywords: Asmadroid, Asthma, Asthma Self-Management App, Patient Centered Design

Adequate education and skills assist asthmatic patients to improve their health outcomes, including increased frequency of symptom-free days, asthma awareness and self-efficacy unscheduled healthcare visits, and reduced absence from school. The study showed that many smartphone apps may improve asthma self-management, as well as have a positive impact on the health outcomes of asthmatic patients. The main aim of this study was to describe the systematic design, development, and implementation of an OS Google Android based-asthma self-management app, namely AsmaDroid, according to the User-Centered Design approach. The AsmaDroid has been systematically designed, developed and implemented with its end-users, including asthmatics and medical professionals (general practitioner, pharmacist, and nurse), according to the five steps of Patient-Centered Design approach. The study involved 30 participants that wanted an asthma self-management app with some useful features. According to the results, AsmaDroid was developed with 8 main features including, asthma education, a list of medications, daily journal, peak flow meter, control test, action plan, frequently asked questions, and a map of nearest local hospitals or community health centers. The study reported the average success rate as follows, “completed with ease” was 88.15%, “completed with difficulty” was 7.78%, and “failed” was 4.07%. The application of the user-centered design approach has been successfully completed for the AsmaDroid application, and additional research into the use of the app in the actual clinical world is required to demonstrate its effectiveness in increasing asthma control.

Asthma Self-Management App for Indonesian Asthmatics: A Patient-Centered Design

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Abstract

Adequate education and skills assist asthmatic patients to improve their health outcomes, including increased frequency of symptom-free days, asthma awareness and self-efficacy unscheduled healthcare visits, and reduced absence from school. The study showed that many smartphone apps may improve asthma self-management, as well as have a positive impact on the health outcomes of asthmatic patients. The main aim of this study was to describe the systematic design, development, and implementation of an OS Google Android based-asthma self-management app, namely AsmaDroid, according to the User-Centered Design approach. The AsmaDroid has been systematically designed, developed and implemented with its end-users, including asthmatics and medical professionals (general practitioner, pharmacist, and nurse), according to the five steps of Patient-Centered Design approach. The study involved 30 participants that wanted an asthma self-management app with some useful features. According to the results, AsmaDroid was developed with 8 main features including, asthma education, a list of medications, daily journal, peak flow meter, control test, action plan, frequently asked questions, and a map of nearest local hospitals or community health centers. The study reported the average success rate as follows, "completed with ease" was 88.15%, "completed with difficulty" was 7.78%, and "failed" was 4.07%. The application of the user-centered design approach has been successfully completed for the AsmaDroid application, and additional research into the use of the app in the actual clinical world is required to demonstrate its effectiveness in increasing asthma control.

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