

Evaluation of Mobile Phone Healthcare Applications During the Covid-19 Pandemic

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Abstract. Our aim in the present study was to evaluate the HealthBuddy+ smartphone app, designed and implemented by the World Health Organization for the European region. For this purpose, we have used Heuristic evaluation method. The tools utilized in this study included 10 heuristics and measure System Usability Scale (SUS), as well as Nielsen's five-point Severity Ranking Scale.

Keywords. Evaluation, Healthcare, App, Covid-19.

1. Introduction

During the coronavirus pandemic, most governments and health organizations in the world, using mobile health technologies in the areas of self-care, contact tracing, reliable education, etc. to fight the coronavirus. Meanwhile, the World Health Organization (WHO) tried to meet users' support public access to evidence-based information on COVID-19 by a HealthBuddy+ mobile application (app) [1]. The HealthBuddy+ mobile app developed by UNICEF ECARO and WHO/Europe, was designed on 18-05-2020 for communities in Europe and central Asia on COVID-19 [2].

2. Methods

This applied and descriptive research was conducted in two main stages using Heuristic evaluation method. In the first stage, experts were asked to respond to Jacob Nilsson's 10 general principles for interactive design [3] by Nielsen's five-point Severity

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Ranking Scale [3]. In the second stage, experts respond to the 10 questions of System Usability Scale (SUS) [4] by re-analyzing the app. The System Usability Scale contains 10 questions where experts are given 1–5 scale to fill (1 = strongly disagree, 5 = strongly agree).

3. Results

According to the results of exploratory analysis of the app, two principles: Error prevention and Flexibility and efficiency of have earned point 2 to 4.

According to the findings obtained from the second stage of evaluation by specialists, Bodyhealth+ app was ranked 68-80.3 with a score of 77.5, which means a B-grade app and a Good ranking trait.

4. Discussion

The error prevention case scored 2 to 4 points, which means the app is vulnerable in the field. User errors are generally categorized in errors Slips and errors Mistakes [5]. One of the problems related to flexibility is the possibility of customizing different parts of the app (color change, font, size, etc.), which was also not defined in the app for users. In some parts, there was a need to zoom in on the information, which was not included in the app. Visibility of system status, match between system and the real world, consistency and standards, and evidence-based content received high score for the app.

5. Conclusion

This study showed that heuristic evaluation can be done to obtain the app level and the bad and good features of the interfaces without the complexity of user testing. The developers of the mobile health app in the context of the coronavirus pandemic can use this method to evaluate their apps within a few hours with few resources needed.

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