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A Comparative Study of Three User Experience Frameworks for Enhancing Health Mobile Applications

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Apps for mobile health (mHealth) have proliferated and offer a variety of features to help users achieve better health outcomes. Thousands of mHealth apps are giving many great options for end users and they also introduce different options for different requirements. In this study the focus is specifically on the fitness mobile health apps. There are a variety of UX evaluation frameworks that are being used for the UX evaluation of those apps. However, not much research work is available in evaluating the UX frameworks relevant to mHealth mobile apps. The three frameworks evaluated in this study are the hook model, the mental model, and the double diamond model as those models have shown considerable success in this context. Five main user case studies are used in the user testing relevant to the UX of the selected mHealth app. At least three casual interviews together with three observation sessions are conducted per respondent to gather feedback on the usability, accessibility, and the effectiveness of the three frameworks. Thereby, the three frameworks are compared for their suitability and recommendations are tendered in suggesting a better suited framework for the UX evaluation purposes for mHealth apps. The Double Diamond Hook Mental (DDHM) hybrid model is proposed as the main outcome of this study to overcome the inherent drawbacks of each framework if used individually. After usability testing, it has proven that this proposed model enables to guide improved UX of mHealth apps.

Keywords: *user experience (UX), mHealth, UX evaluation frameworks, hook model, mental model, fogg behavior model, double diamond model, DDHM hybrid model*