Evaluation of a mobile health application for multiple sclerosis management, inclusive to users of all sexes and genders*

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Summary This research describes an evaluation of a mobile health app prototype for multiple sclerosis (MS) management that is inclusive to users of all sexes and genders.

1. Relevance

Despite MS being more prevalent in female adults, no mobile health app for MS management tailors content according to the users' sex and gender. Thus, the researchers designed an MS management mobile app prototype customizable by sex and gender.

2. Aims & Objectives

The primary objective of this research was to evaluate the first iteration of a mobile health application (app) prototype for the management of multiple sclerosis (MS) that is inclusive to users of all sexes and genders. Another objective was to demonstrate the benefits of using an evaluation framework early in the design phases of app development.

3. Methods

A framework developed by Canadian researchers, known as the Evidence-based Heuristics for Evaluating Demands on eHealth Literacy and Usability, was used to evaluate an app prototype for MS management. Specifically, the researches evaluated each screen available in the prototype against the 11 heuristics. Violations identified were rated as either minor, moderate, or severe. The researchers made recommendations for how to address the violations. Based on recommendations generated from these heuristic violations, the app prototype will be improved and another evaluation iteration will occur.

4. Results

Many eHealth literacy and usability strengths and weaknesses were identified. Strengths included offering tailored content according to the user's sex and gender. For example, the app provides information to users who are considering pregnancy and reminders for users with certain risk factors to talk to their physician about having bone density scanning. Meanwhile, minor and moderate violations included inconsistent navigation (e.g., inconsistent button sizes, the search bar is not always present), lack of user engagement methods, and lack of visuals to complement text. Severe heuristic violations included an unclear depiction of monitoring data and test results.

5. Conclusions

Overall, this research represents the value of conducting a usability and eHealth literacy evaluation of an app prototype for people of all sexes and genders living with MS to manage their chronic disease. It also offers an example of how sex and gender considerations can be incorporated into an eHealth solution. By evaluating a prototype, issues were identified early in the development process. Therefore, revisions to the app are less expensive than if the app had been in a more formative stage.

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