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Developing and evaluating the usability of a web-based Diabetic Retinopathy Health Education Program for patients with type 2 diabetes mellitus

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#### Abstract

Objectives: To describe the development of a webpage based on the Intervention Mapping (IM) protocol and usability testing of the Diabetic Retinopathy Health Education Profram (DRHEP). Methods: The mixed methods pilot feasibility study was carried out between April and September 2021, involving 16 patients with type 2 diabetes mellitus and 5 experts. The usability score was rated according to the System Usability Scale (SUS). Results: The average SUS score by the experts was 88. The patients gave a higher score of 85 for SUS, with 58 as the lowest. The average SUS score was 72. The findings indicate that the webpage is acceptable, good, and highly usable for users. Conclusion: The outcomes of this study signify the relationship between effective health applications and how their design might hamper their effectiveness in changing patients' behavior. © 2023 Saudi Arabian Armed Forces Hospital. All rights reserved.

#### **Author Keywords**

diabetic retinopathy; type 2 diabetes mellitus; usability testing; web-based intervention

#### Index Keywords

Article, clinical article, diabetic retinopathy, feasibility study, health education, human, Likert scale, non insulin dependent diabetes mellitus, pilot study, questionnaire, semi structured interview, usability testing, complication, health education, health promotion, Internet; Diabetes Mellitus, Type 2, Diabetic Retinopathy, Health Education, Health Promotion, Humans, Internet

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