

Design, Produce and Evaluation of an application for ophthalmology based on problem solving for medical students

Abstract

Background: The Covid-19 pandemic has caused a lot of disruption in the process of medical education. Despite the important role of technology in teaching clinical skills, how to take a patient's medical history, physical examination, and the art of diagnosis can only be learned by engaging with clinical cases. One of the suggested methods effective in improving medical education is using virtual education. Considering the vitality of the eye organ and the importance of diagnosing ophthalmic emergencies and referring and treating ophthalmic patients in the shortest possible time, also considering the consequences of misdiagnosing the mentioned diseases, including low vision or complete blindness of one or both eyes, Educational application based on common and priority clinical cases of ophthalmology visited in clinics and teaching hospitals is very important.

Aim: To produce application-based educational content based on problem solving, considering the common clinical complaints of ophthalmology that a medical student deals with in general doctorate and finally after graduation as a general practitioner.

Materials and methods: This content in the form of an educational application includes fourteen ophthalmic clinical complaints and nearly one hundred educational pictures.

A questionnaire was designed and presented to the students in order to evaluate the level of satisfaction and knowledge of a number of medical students about the application. This study was conducted on the 60 medical students. The resulting data were analyzed with the help of spss 26 software and its strengths and weaknesses were analyzed.

Results: The minimum score obtained from the satisfaction questionnaire is 27, which is equivalent to 54% of the score, and the maximum score is 50. The average score is 40.15, which is equivalent to 80% of the evaluation score, which is a good score. Also, the minimum score obtained from the

awareness questionnaire is 6, which is equivalent to 60% of the score, and the maximum score is 10. The average score is 8.03, which is equivalent to 80% of the score and is a good score.

Conclusion: With the implementation of this project, we have taken steps to achieve goals such as producing ophthalmology educational content based on problem solving and building an educational application in order to improve the education of ophthalmology.

Keywords: ophthalmology, problem solving method, application