

Abstract

Background and objectives: Image as a form of evidence that can convey a significant amount of information is especially important in the medical field. The use of medical imaging technologies has dramatically grown in the diagnosis and treatment of diseases. Proper use of these technologies can help diagnose and treat diseases. Databases and search engines that provide such search and retrieval services should be able to respond to users' needs. Therefore, it is essential to identify databases that provide images related to the needs of physicians and medical professionals. Since the retrieved documents are judged by relevance, the relevance criterion is particularly important in image retrieval. The purpose of this study was to determine the tools used by residents for image search, and relevance criteria in medical image retrieval from their perspective.

Methods: This descriptive-analytical study was performed during 1397-98 and its population consisted of 438 resident students at Kerman University of Medical Sciences. Data were collected by researcher made questionnaire based on previous researches. One-sample t-test and Anova were used for data analysis.

Results: The results of this study showed that the most important criteria for technical relevance are specificity and accuracy (88.8%), and the most important content relevance criterion is topic of image (89.7%). Technical relevance and content relevance criteria were not significantly correlated with resident's expertise, internet search experience, type of images searched on the internet, and purpose of searching images. Correlation just was found between technical and content relevance criteria with the type of images searched on the Internet (non-medical images) at P-value level (0.02, 0.03). The most important reasons for participants to retrieve medical images were educational use and treatment. From the participants' point of view, the most important factors affecting the lack of searching for medical images on the internet were lack of familiarity with medical image search tools on the Internet, lack of time, low speed of internet, filtering of sites and lack of motivation.

Conclusion: Using images in medical education and clinical decisions is so important. Considering specific and relevance criteria, image quality, image segmentation, ability to perceive, match, and image retrieval can lead to more relevant image retrieval in image retrieval systems and helps health sector employees in the diagnosis and treatment process. Holding training workshops on image databases and methods of using them can lead to identifying the possibilities of these sites.

Keywords: usage behavior, medical images, relevance judgment, image retrieval, relevance criteria