



## Validity of web-based information as a challenge to health system

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**Letter to Editor**

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### Dear Chief in Editor

Health is one of the most obvious and important issues preoccupied the human mind, as a concern which still is in force. Maintaining health requires health-related information which is found in the informative resources of the relevant area. Web space is considered as a multi-functional and multi-directional sources of information in which the quantity of presented information is increasing day by day, so that it seems it would be a challenge to accuracy of information in relation to health system since people can publish the content freely without any supervision in weblogs and social networks and cite to outdated articles and commercial, advertising sites which may not be scientifically validated. The number of people around the world using the internet was more than 2.5 billion in 2013 which is expected to reach 4 billion currently. Using health information in this way, even before visiting a doctor, is dramatically increasing, as it has been reported that about 70% of the adults in Europe and 90% in America seek help from health information on the web [1-2].

On the other hand, everyone may have not enough knowledge to search the relevant and valid content or all existing websites in this space not scientifically qualified, while such resources of information are shaping like mushrooms. This is because the quality monitoring is difficult over them as a result of free and unique nature of unbridled web space as a non-supervised environment in the production, dissemination, and retrieval of information. Therefore, it is normal that

we are faced with a range of different materials in quality every day. Gholamhosseini and colleagues surveyed 56 databases, 47 websites, and 9 weblogs as information resources on the web. The results showed that 30 databases were on nutrition, 14 about health sector, and the rest of them contained information on news, public information, and cooking; Silberg average score for websites was less than 2.5 (out of 9) and the highest score was 8 (for 1 database) and 13 databases scored zero (0). 94% of databases had not introduced any person responsible for any inaccuracies in information. The results of this study indicated low quality of information related to nutrition in Persian web pages in terms of reliability and health topics [1].

Then, it seems that lack of control over information due to the lack of qualitative content management,

editing, and arbitration processes for publishing on the internet has led to loading reliable and accurate information besides invaluable information and thus, make a great challenge to evaluate information on the web environment, so that it can be said that selection of relevant information from irrelevant information is not simply possible by most internet users who are not specialized. In this regard, Jannatian and colleagues [2] surveyed 14 selected sites related to information on depression and showed that most of them did not acquire acceptable scores on parameters of Medical Quality (MEDQual) web measurement tool in providing information on depression (the highest score of 41.5 for Iran Psychological Association's Web site) and hence, they were poor in quality. A same description was presented for medical, health, and

viral infectious websites in Persian. In the area of addiction, the mental health websites only contained 13 related articles on mental health out of 31 articles; the quality of information showed a big gap with the standards; and less than 50% of people trusted health information on the web [2]. Another survey showed that 23.9% of people had high levels of confidence in the websites information, and about 76% had the confidence in moderate to low level or did not trust this kind of information at all [3].

Citing to the retrieved content without evaluation may bring the researchers to danger of being misled. The huge amount of data has caused web browsers to meet enormous challenges in the assessment of resources and ensuring the quality of incoming data. The quality of information on the web is evaluated based on a number of criteria such as sufficiency and completeness of information, the way of accessing information, lack of complexity of retrieved information in relation to need or gap of existing information, relevance to information aim, providing specific and unique information, accuracy and reliability of information, empty of errors and incorrect information, update information, completeness level of information and coverage provided by a source of information, being relevant and usefulness of information, simplicity and accessibility to information, presenting information systematically and continually, being based on the facts, understandability of information, etc. [4].

Considering the development of web-based resources and growing web searching for scientific and academic researches, it seems necessary specially in medical sciences, which is in direct contact with human health, to make more efforts to obtain efficient, accurate, and update data, because the volume of information in medical fields is changing day by day. Since the topics and new techniques are appearing in diagnosis and treatment of diseases, it is so significant for doctors and medical professionals to be aware of important topics and new scientific subjects. Sometimes being or not-being provided by such information plays an important role in life or death of human being. In a study on 61 websites associated with bowel inflammatory diseases, only 8 websites gained a high score in information quality; out of 22 websites in acute backache, only 3 were recognized by relevant and understandable content;

out of 97 evaluated websites in cervical spine surgery, only 3% gained the acceptable score; out of 5249 websites reviewed in 2014, 3807 websites had not any scientific and authoritative reference and were without any approval [1]. The findings also showed that about 92% of the students approved the credibility of web information at the moderate to low level while they paid little attention to other data quality standards [4,5].

Being familiar with information quality criteria for assessing information obtained from the web environment is an essential issue, so that ignoring the reliability and quality of gained information some items could be harmful for the consumers of such information. Therefore, retrieval resources on the web should be assessed before using and citing in order to distinguish valid from invalid information. Accordingly, providing related trainings and increasing literacy of internet users, when they use the web for acquiring information especially about health system topics, seems necessary.

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