HEALTH WEBSITES: WHY IT IS DIFFICULT FOR SOME WEB USERS?

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\textbf{Abstract.} Every day, it is estimated that millions of health-related internet searches had been conducted. Although this figure suggested that the public is getting more health-conscious, the emergence of health website that is in dubious quality should be worried. Web users search health information from websites to fulfill their curiosity of health knowledge, health treatments and health guidance. However, how web users evaluate the information they get from millions of health websites is a daunting issue. Misunderstanding and misinterpretation of health information will jeopardize individuals’ health and may cause an increase of mortality and morbidity rate if it is applied wrongly. While previous literatures have largely focused on the benefits and needs of health websites, there has been little attention given to resolve the issues related to health information. This paper reviews factors regarding the limitations of health websites that led to web users misunderstanding and difficulties of assessing the information. Articles published in English from 2000 to March 2015 were searched using several relevant databases. A combination of terms “health websites”, “e-health”, “difficulties” and “limitations” was used as the keywords combination. Twenty five articles were selected based on their useful contribution to the paper. User background, use of terminology, trust issue and indexing by search engine are among a few factors that influence health websites understanding. Conclusively some recommendations are made on how the limitations could be overcome and thus improved the health websites for the benefits of web users. The result of this paper can be beneficial to those who involve in health website, e-health and other health related web development. This paper offers these key people knowledge on web users’ problems and difficulties. The result of this paper may motivate other researchers to studies on how each limitation can be overcome. Further studies are in need to improve the quality of health websites which its demand is increasing.

\textbf{Keywords:} health websites, online health information, health literacy

\textbf{INTRODUCTION}

The purpose of finding information from the internet is obvious. Users want to find information that is correct, meeting their purposes and written up to their
understanding level [1]. Health websites promises web users with lots of advantages and benefits. This is because health websites helps to support the public needs of health information [2]. Health related websites are among thousands of websites to have influences in improving a person health status and make them happier [3]. Studies show that online health search make users feel more confidence [4]. It is estimated that every day, there are about 6.75 millions of health-related searches on the Web [5]. This massive numbers of health websites shows a high demand towards health information.

Searching for health information online has been said to have many contribution and supports information searchers. According to Hassan et al. (2013), chronic disease patients are benefiting from effective online health information in terms of health and social. These patients are improving their health in several ways such as their health outcomes, self-confidence and their awareness. In social aspects, these patients are being more cost and time effectiveness due to easy access to health materials online [6]. In addition, results of a survey conducted by Pew International Center stated that health information on the internet had given significant impact to the users. Health information influences their decisions in treating a condition or illness and in maintaining their own health or for someone that they are taking care of. Other than that, online health information changed their way of thinking about diet, exercise and stress management [4]. Therefore, health information seekers are highly dependence on health websites in order to improve their health profile and lifestyle. However, health websites are still having many limitations that lead to web users misunderstanding of health information.

The scope of this paper is to discover the limitations of health websites, analyze and recommend appropriate improvements for the limitations. The main purpose of this study is to answer the question “what are the factors that leads to user misunderstanding of health information from health websites?” To answer that, this study includes the review of health websites classification and information seeking behavior by users to gain basic overview of health websites environment.

CLASSIFICATION OF HEALTH WEBSITES

Health websites is normally associated with online health information for web users. However, health websites have more usage than that. Health Improvement Institute, in their Health Website Ratings (HWR) project, classifies health websites based on their primary used. There are seven categories of health websites [7]. (a) Health communication websites is meant to disseminate health information not only to consumers but also to health experts and other parties. (b) Behavior modification websites are types of website for those who wanted to change their lifestyle to a better one such as quitting or reducing smoking habit. (c) Website that is based on selling health product to user and health experts is known as online product websites. (d) The fourth websites is health care organization websites. This website is intended for health care organization website to spread informati on about their organizations. (e) Public health websites publish information related to prevention and health program or event. (f) Research websites is to recruited or hiring people for research studies. (g) Other type of websites which are not in any of the category above is known as others. In other studies by Usher & Skinner (2010), health websites are categorized into three categories. The categories are E-Business, E-Knowledge and E-Professional. This categorization is needed so that user will be able to know the best websites that suites their needs and
requirements. [8]. Health websites are generally identified by their primary objectives and used. Each websites are design for their intended purpose. Therefore, it shows that the web user might have difficulties in choosing the best web that cater their needs.

**FACTORS CONTRIBUTE TO THE HEALTH WEBSITES LIMITATIONS**

This section will review factors regarding the limitations of health websites that led to web users misunderstanding and difficulties of assessing the information.

*User Low Level of Health Literacy*

Web users whom to have a good health knowledge and experience using health websites will not face any problem during their searching and understanding of information. This group of people are able to maximize the full used of health websites [2]. However, there are certain groups of people whom may face some difficulties. They are including elderly people, less educated people, patients with multiple health problems, immigrants and low-income group of people [2], [8]. They are facing difficulties in accessing, reading and understanding the health information. This is because most of the health websites display information that is beyond their level of literacy [8]. Usage of medical jargons or technical health terms in health websites resulted in confusion by the web users [9]. It is also stated that reading level of most English health websites is quite high, at least 10th grade level of reading. Consequently, higher reading levels are required in order to understand the messages [10]. This may cause difficulties for those low-educated health websites users. Furthermore, time consumption to search and understand health information will be increased even though websites provides an easy and fast accessed.

*Untrustworthy information*

Trust is about believing. Individuals believe the information they get because they have a positive thought of what they read and neglect the risk. Trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another under conditions of risk and interdependence [11]. Web users search for health information online because they trust the internet resources. However, not all information from internet resources is trustworthy. Web user may share health information and advice that is incorrect, incomplete and out-of-date. This false information may cause newsworthy incidents and harm to those believers [12]. This situation also raises concerns among doctors and health experts. Therefore, patients are being encouraged to refer to health websites as an additional references [13]. Compare to young generation, elder group of web users are more concerned with the issue of trusts. This group of users will reject information from the internet which they found it as untrustworthy [14]. As a result, individual who are known to have multiple health problems will not benefit from the health websites and the internet due to untrustworthy information.
**Search Engines**

A search engine is a web tool that can assist web users in searching for information. However, there are many search engines existed and none of them could possibly indexed all the websites on the internet. Furthermore, different search engines will produce different search results [15]. These different search engines may also provide overlapping results [16]. Web users who use only one search engine may miss out some relevant pages. On the other hand, web users who use different search engines will have to take some times to appraise the search result. While searching for health information, some web users might use general terminology in their queries. This could result in that user may not find the information intended for them [17]. Search engine may also suggest web users with websites that have product-oriented links, cultural biases or even unexpected connections. Curious users may select the unexpected links and distract from their intended purposes or might choose the unimportance materials to consider [18]. Search engines are clearly do not produce results that are trustworthy [19]. Consequently, what user will find during their web search is unpredictable and the process information searching itself is a challenge.

**Web Users Information Needs**

Each web users would have specific information and communication needs due to different disease and health background when searching for health information [20]. However, the massive health websites from the internet does not promise that these health information seekers will get the correct information. Most users had difficulties to identify the health conditions based on several symptoms given to them despite the large amount of health information from the Web [21]. There are also findings that sometimes users do not know what they wanted to know and what they are searching for [22] which may lead to frustration and confusion [4]. Looking at the health websites role to the society, it is important that the information provided could support the decision making of the patients and their care-givers [23].

**Navigational Problems**

A website looks and displays may influence the process of information seeking and understanding of information. This had been stated in by Chen et al. (2014) that elderly group of web users were unable to obtain the correct understanding of information due to videos and graphics display problems, web icon that is too small which may complicate the handling of web cursor, and the text display that is hard to understand. Other than that, among the general problems that are faced by web users is printing materials that are not user-friendly. The printer setup was not right and the margin was not set appropriately. This resulted in printing output that is not nicely in order [25]. This shows that inappropriate used of graphics, videos, and web settings will create dissatisfaction feelings and resulted in misunderstanding of information. Users may stop visiting and browsing the websites ever again.
Commercial Health Websites

Selecting the right websites to be evaluated is difficult since there are many categories of health websites. Health websites which can be categorized to different categories may have their intended purpose [7]. Commercial and profit-based websites are among the less trusted websites [26]. This may due to suspicious and irrelevant content [19], overloads of advertisements [27] and succinct text [28]. Web users are exposed to risk of getting inaccurate and commercially biased information [29]. As a result, the process of searching for the right information may be effortful and time-consuming.

DISCUSSION AND RECOMMENDATIONS

As a whole, even though health websites had help information seekers to fulfill their health information curiosity and needs, there are still some difficulties faced by the users. As a result, this paper recommends some suggestions that are potentially to improve the web users understanding of health information while browsing health websites:

i) Less difficult for users to use a websites, less time are needed for them to finally get the answers to their questions. Simple navigation and clear content may help low-level of health literacy or less-educated people to find, understand and apply correctly the health guidance. Arrangement of the content with the uses of bulleted list or easy step-by-step flow of information may improve their health information seeking practice [30].

ii) Web content should be made readable to all grades of web users [10] and free from jargons and complex words [31]. For some commercial websites, it is worrying that intention to sells a health product might end up in hiding the real facts from the users to know. In order to increase trust on the health information among web users, reliable information should be presented. This means that web content should avoid commercial elements and advertising as well as being transparent [27] on any negative or positive side-effects.

iii) In order for search engines to return more relevant search results, web users should use more combination of query terms or metasearch. Search engines that are specialized in health area can be used to index more comprehensive health websites compared to general search engines [32]. However, web users might need to be exposed and educate about the categories of search engine. This is because some of them may not know the specific search engines to use. Most of them may relying on the general and most talk-about search engines which may not suitable for their search criteria.

iv) Each individual are different in terms of health background and level of fitness. Their knowledge needs and level of curiosity may also vary. Therefore, providing health facts or guidance related to their profile is needed. Health information that matches the characteristics and needs of web users will improve the process of searching and understanding by web users. Web content which are tailored to each user needs will have a positive impacts to web users [33] and increases the level of web-relevancy to the web community [34].
CONCLUSION

In order to understand health knowledge and experience using health website, a few factors need to be considered. These factors may give many benefits and act as guidelines in developing the health website. This article reviews the previous literatures about health web users and limitation factors in developing and using health website. Preliminary studies will be conducted to identify web users’ difficulties in understanding health information from health websites. Therefore, hopefully this research can benefit those who involved in health web development which can improve the quality of health websites and contribute to the knowledge in Health IT field.

REFERENCES


