

## Analysis of Barriers to Health Information Seeking and Utilizing in Patients With Diabetes

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Received 28 November 2015; accepted 25 January 2016

Published online 26 February 2016

### ABSTRACT

As one of the three chronic diseases, diabetes's high prevalence and multiple complications bring a heavy burden to diabetes patients and the society. In order to better manage and control diabetes, it is essential for diabetes patients and their families to seek and utilize diabetes health information themselves, but there are many factors that affect diabetes patients to access and use health information. This article aims to explore the barrier factors that affect diabetes patients to seek and utilize diabetes health information, and to provide targeted measures to better manage and control diabetes.

**Key words:** Diabetes management; Health information; Seek; Utilize; Barriers

Wei, X. X., Du, Z. Y., & Zhang, S. Q. (2016). Analysis of Barriers to Health Information Seeking and Utilizing in Patients with Diabetes. *Cross-Cultural Communication*, 12(2), 48-51. Available from: <http://www.cscanada.net/index.php/ccc/article/view/8153>  
DOI: <http://dx.doi.org/10.3968/8153>

### INTRODUCTION

Diabetes is a serious chronic metabolic disease, and its prevalence is very high whether in China or in the world. In 2007, the epidemiological investigation data in China's 14 provinces and cities showed that the prevalence of diabetes of adults aged above 20 was 9.7 percent, and the total number of Chinese adults with

diabetes was 92.4 million (Yang et al., 2010). In 2015, survey data showed China's diabetes prevalence rate was 11.6 percent, and the total number has reached 114 million (China News Net, 2015). In worldwide, in the year of 2014, the International Diabetes Federation's (IDF) statistics showed that the number of diabetes patients around the world reached 387 million, and they forecasted the number would increase by 205 million to reach 592 million in 2035. In such large data, half of the diabetes patients (179 million) did not know they were suffering from it. What's more, there were 4.9 million people died from diabetes in 2014, one person died of diabetes every 7 seconds. And about 1/9 of medical expenses spent on the treatment of diabetes (International Diabetes Federation [IDF], 2014). The large number of diabetic patients and the heavy burden of diabetes made the prevention and control of diabetes without delay.

With the social and economic development and kinds of health promotion, consumers are more concerned about their health, more action to obtain the required health information. The ways they get health information include medical staff, newspapers, magazines, television, radio and network, but the quality and convenience of these channels are difficult to satisfy at the same time.

According to the definition of consumer health informatics (some scholars called it user health informatics), health information consumers (users) are persons who concerned to seek health information related to health promotion, the prevention and treatment of disease, the management of varieties of health conditions and chronic diseases to enhance the health (Lewis, 2005). Health information consumers (users) include not only patients and their families or friends, but also those who want to maintain or improve health status. They may be individuals, or groups and institutions (Peng, Yan, & Zhu, 2014).

## 1. THE STATUS QUO OF DOMESTIC AND FOREIGN RESEARCHES

### 1.1 The Status Quo of Foreign Researches

Foreign researches on health information seeking started early, mainly around the concept study of health information seeking, the model research of health information seeking, the empirical research of health information seeking behavior, the barriers factors analysis of health information seeking and evaluation on health information. Suka et al. (2015) and Nan et al. (2014) combined the model research, the empirical research of health information seeking behavior with the barriers factors analysis. They found out the barriers factors and established model, then they did empirical research on health information seeking behavior to verify the model. For example Suka et al. (2015) established a model to reflect the relationship between health literacy, health information access, health behavior, and health status, they found that health literacy affects the access to health information. Nan et al. (2014) established a model to reflect the relationship between information technology enablers, health motivators and health information seeking, they found that information technology enablers such as access to the internet, trust in online health information; health motivators such as the communication quality with doctors and perceived health status could affect the frequency, diversity, preference of health information search. In the aspect of evaluation on network health information, Sillence et al. (2007) and Chang et al. (2015) have done researches on the evaluation of health information.

### 1.2 The Status Quo of Domestic Researches

The research on health information seeking in China starts late, and is not systematic. The research is mainly about health information needs research, presentation of free online health resources and evaluation on the quality of network health information (Feng et al., 2014; Xu & Liu, 2014; Health Communication Research Group in Suqian, 2014; Gao, 2010; Song, Zhang, & Qi, 2014). Such as Feng et al. (2014) analyzes the personal health information service needs, Xu and Liu (2014) investigate and analyze the user needs of domestic health advice site, Communication Research Group in Suqian (2014) analyzes the needs of health information in the elder, as well as Gao (2010) evaluates on Chinese health information Web site, Song et al. (2014) analyze the quality problems of medical and health websites.

Domestic research on diabetes is more focused on treatment and care of diabetes, complications, diabetes health information needs, diabetes health education and diabetes management. The research on barriers to seek and utilize diabetic health information is very few.

## 2. BARRIERS TO SEEK AND UTILIZE DIABETES HEALTH INFORMATION

### 2.1 Patient Factors

#### 2.1.1 Low Health Literacy, Not Aware of Relevant Health Information Needs

Consumer health literacy promotion is the fundamental way to prevent and control diabetes, only patients and their families were aware of the importance of healthy and took the initiative to participate in their health management, were they possible to really take the initiative to seek and use health information, and then integrated health information to the daily health behavior management.

However, the patients' health literacy is not high, according to the survey statistic of International Diabetes Federation (IDF) in 2014, the number of diabetic patients in the world reached 387 million, among which half of the patients (179 million) did not know they were suffering from diabetes (International Diabetes Federation [IDF], 2014). These patients did not know their condition, how would they realize their needs of diabetes related information? Not to mention utilizing diabetes health information.

#### 2.1.2 Poor Information Retrieval Skills

There are so many channels that diabetes patients can obtain health information, for example from communications with medical staff, newspapers, magazines, television, radio, network and new media channels, but facing so many channels and amounts of information, how consumers retrieve their required information is clearly a problem. For example, consumer's literacy and cultural level obviously affect the result of information seeking when they turn to paper-based channels. Consumers' access to internet, information technology and mastery of information retrieval skills, can also affect the frequency, diversity and preferences of health information seeking (Nan et al, 2014) when they turn to internet.

#### 2.1.3 Little Social Support Available

It has been reported, there is a relationship between parents' education level and the health information search behavior of children (Zhao, 2009). Parental high education level, on the one hand can enhance their children's attention on health, on the other hand, parental high education level can answer some health questions for their children, and their children can obtain health information directly from their parents and use of information. Similarly, if consumers get enough information from social support, they can increase direct access to and use of health information.

According to reports, the United States National Medical Library set providing health information services and assistance to the general public as a long-

term objective, and launched a series of outspread health services for healthy users (Peng, Yan, & Zhu, 2014). It is worth learning to our government, organizations.

## 2.2 Health Information Itself Factors

### 2.2.1 Health Information Quality Problems

The poor quality of health information and low reliability is one of the barriers that patients seek health information (Zhou & Cai, 2014). The amount of health information on the internet shows explosive growth, but the quality is difficult to guarantee. Many commercial websites have too many advertisements and lack of support from the authorities. The publishers of much health information wrote it from experience, the quality is difficult to evaluate and guarantee, which will undoubtedly bring inconvenience to patients who need to seek and utilize health information.

### 2.2.2 The Content of Health Information Is Difficult to Meet the Demand

(a) The knowledge of prevention is little: The current diabetes health information on the internet is mainly about fundamental causes, complications and treatment knowledge, as for prevention, they just simple mention by more exercising, low-fat diet, control weight etc., quantitative data is lacked, such as weight, blood lipids or blood sugar indexes, to what extent in these indexes, people required prevent diabetes urgently?

(b) Psychological and emotional guidance is little: Health information needs generally include cognitive needs, such as how to prevent and treat diseases; and emotional needs generally include how to deal with diseases emotionally and psychologically (Nan et al., 2014). However, the current psychological and emotional diabetes health information on the internet is still very little, emotional and psychological problems for diabetes patients and their families need further attention.

### 2.2.3 The Organization of Health Information

There are two problems in the organization of health information. One is the form and the other is the language. Formally, due to too much information on the internet and its level is not clear. It is difficult for diabetes patients to find the required information quickly; for the language, the health information is too specialized for the general public consumers to understand, which is not conducive to the further use of health information.

## 2.3 Health Information Channel Factors

### 2.3.1 Medical Personnel and Community's Health Information Dissemination Work Is Not in Place

Medical staff channel to disseminate health information is traditional and easy to be accepted by vast number of patients. However, medical personnel often have large workload; they have little time with detailed health information communication. The community should manage chronic disease too, but the overall quality and

capacity of community health service providers still need to improve (Dai, Qian, & Li, 2009), health information dissemination in the community is not good. The health-related activities forms in some community are very simple. Health information that should be obtained in the community cannot be obtained, which is one of barriers to access and use health information in diabetic patients.

### 2.3.2 Convenience and Reliability Cannot Reach at the Same Time

Seeking health information is convenient, but the reliability is difficult to guarantee, and the information is too much to choose; seeking health information from the medical staff is relatively reliable, but it is not convenient. How to obtain the reliability and convenience of the health information channels needs to further exploration.

## 2.4 Social and Economic Development Are Not Balanced

Society and economy develop rapidly, but the spiritual civilization and health civilization are relatively backward. Life rhythm's speeding up makes lots of people too busy to care about health problems. They work for economic benefits and ignore health; finally it is difficult to use the economic benefits to exchange health, which is a common problem to many patients and the whole society. Everyone should realize the importance of health and make great efforts for their health and the whole society's health.

## 2.5 Little Interpersonal Communication of Health Information Between Patients

Many patients may take into account factors such as privacy and refuse to share health information with friends and family, which also makes health information not well spread. On the one hand, refusing to share information to other people, other people will lose one access to health information; on the other hand, they lose an opportunity to get social support themselves too.

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## 3. SUGGESTIONS

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### 3.1 Strengthen the Cultivation of Consumer Health Literacy

Consumers' health literacy, especially consumer's health information literacy training, should be supported by the relevant government departments. Only consumers realize the importance of health, they will take the initiative to participate in their health management.

### 3.2 Internet + Library + Diabetes Health Management

As the Internet has many advantages such as convenience, it is an important channel to seek health information. So at the atmosphere of "Internet +" era, we should take

advantage of the internet, integrate diabetes-related health information with internet and strive to build a public and e-library for the public to provide free health information, making diabetic patients can obtain required information at any time and any place.

### 3.3 Strengthen Health Website's Construction and Establish Information Evaluation Platform

The current health websites are mainly commercial websites, commercial advertising are too much and health information is not credible. So strengthening the construction of reliable health sites is particularly important, especially the construction of government websites and the hospital site. In addition, health information on the internet is showing explosive growth, but the quality is difficult to be guaranteed; therefore, authoritative evaluation platform of health information should be established.

### 3.4 Develop Community "Opinion Leaders" and Community Health Information Dissemination

In the management of diabetes in community, those whose blood sugar get good control, maintain a high quality of life and are willing to share with peers, in fact, in the community health spread, they become the credible "opinion leader", more convincing than community doctors' simple preaching (Dai, Qian, & Li, 2009). Developing such "opinion leaders" has an important role in better promoting the dissemination of diabetes health information and management of diabetes.

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## REFERENCES

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- Chang, M. Y., Kim, J.-W., & Rhee, C.-S. (2015). The quality of health information on allergic rhinitis, rhinitis, and sinusitis available on the internet. *Allergy Asthma Immunol Res*, 7(2), 141-7
- China News Net. (2015). *China association for the elderly health care professional committee of diabetes was established in Beijing*. Retrieved from <http://www.chinanews.com/jk/2015/06-28/7370305.shtml>
- Dai, X. C., Qian, H. H., & Li, F. (2009). A quantitative and qualitative study on needs of health communication pattern among community patients with diabetes in Shanghai. *Chinese Primary Health Care*, 23(06), 50-52.
- Feng, S., Shao, S., & Yuan, Y. T., et al. (2014). Investigation on personal health information services markets demand. *Information and Communications*, (05), 265-266.
- Gao, Q. (2010). Evaluation on Chinese health information Website. *Chinese Journal of Medical Library and Information Science*, 19(02), 40-44.
- Health Communication Research Group in Suqian. (2014). The elder's health information needs and dissemination in Suqian. *Economic Research Guide*, (20), 266-268.
- International Diabetes Federation (IDF). (2014). *Key findings 2014*. Retrieved from <http://www.IDF.ORG / DIABETESATLAS/UPDATE-2014>
- Lewis, D. (2005). *Consumer health informatics: Informing consumers and improving health care*. USA: Springer Science.
- Nan, X., Sharman, R., & Rao, H. R., et al. (2014). Factors influencing online health information search: An empirical analysis of a national cancer-related survey. *Decision Support Systems*, (57), 417-427
- Peng, Y., Yan, L., & Zhu, H. (2014). The value of consumer health informatics in big data era. *Journal of Medical Informatics*, 35(01), 2-6.
- Sillence, E., Briggs, P., & Harris, P. R. (2007). How do patients evaluate and make use of online health information. *Social Science & Medicine*, (64), 1853-1862.
- Song, L. R., Zhang, Q., & Qi, N. (2014). Problems in information quality on medical websites in China. *Chinese Journal of Medical Library and Information Science*, 23(09), 1-6.
- Suka, M., et al. (2015). *Relationship between health literacy, health information access, health behavior, and health status in Japanese people*. Patient Educ Couns. Retrieved from <http://dx.doi.org/10.1016/j.pec.2015.02.013>
- Xu, L. L., & Liu, J. M. (2014). Investigation and analysis on user's information demand for health consultation website in China. *Journal of Medical Information*, 35(07), 50-53.
- Yang, W. Y., Lu, J. M., & Weng, J. P., et al. (2010). Prevalence of diabetes among men and women in China. *The New England Journal of Medicine*, 362(12), 1090-1101.
- Zhao, S. Y. (2009). Parental education and children's online health information seeking: Beyond the digital divide debate. *Social Science & Medicine*, (69), 1501-1505.
- Zhou, X. Y., & Cai, W. J. (2014). Universities students online health information seeking behavior patterns and influencing factors. *Information and Documentation*, (04), 50-55.