ASSESSMENT OF PERCEIVED BARRIERS ON ONLINE HEALTH INFORMATION SEEKING ACTIVITIES AMONG UNIVERSITY STUDENTS: CASE STUDY OF MALAYSIA

Mira Kartiwi[*], Fatima Hassan Munassar

[1]*Department of Information Systems, Kulliyyah of Information and Communication Technology, International Islamic University Malaysia*

*Corresponding author: mira@iium.edu.my

ABSTRACT: Due to the overgrowth of information over the internet, the concept of information needs and seeking behaviour of various groups of people has been raised and highlighted to be studied. Understanding user needs and behaviour can reduce half of the time needed to provide information-services. Information seeking behavior becomes one of the major issues today as highlighted by past researchers, especially among the students. Previous studies showed that being students at higher educational institutions do not guarantee that they have the proficiency in searching skills to retrieve proper and valid information. There are perceived barriers that are inherent on how information is searched online. Hence, the aim of this paper is to assess the potential dimensions that emerge from a number of observational items on the perceived barriers. Two important dimensions that emerged from this study of perceived barriers to e-Health information seeking activities are psychological and technical barriers.

KEY WORDS: Health, information seeking, students, university.

1. INTRODUCTION

Internet has enabled the open facility for billions of people to connect with each other and share information globally, plus accessing tremendous useful online applications and websites (Manyika & Roxburgh, 2011). Nowadays people are more curious about various things and eager to know more, particularly on health related information. In Malaysia, seeking information related to health condition has been observed to increase rapidly. An increasing number of citizens have become active health information seekers rather than passive ones who depend only on their doctors (Sharif et.al, 2018).

Seeking behavior for information has become the major issue highlighted in recent studies, especially the students' information seeking behaviour. Students are the backbone of every community and society, hence ensuring their ability to use and assess the quality of information obtained through the electronic channel is very critical.

Given the increasing interest on health information seeking domain, relatively little is known on the common barriers that hinder students from gaining benefits from the available online health information. Hence, it is the aim of this study to assess the potential dimensions of the perceived barriers to health-related information seeking activities.

2. E-HEALTH INFORMATION SEEKING

Internet has shown its remarkable impacts on the way that information has been distributed and shared in a globally context (Manyika & Roxburgh, 2011). Due to the power of the internet in the field of information sharing, it creates an explosion of information (Kadiri & Adetoro, 2012). It was stated that the rate of information growth over the internet is increasing drastically (Cline & Haynes, 2001) and the number of information seekers have increased remarkably (Hollis et al, 2015) which facilitates the issue of posting and sharing any information regardless of its accuracy and validity (Kadiri, Adetoro, 2012). Thus a concern has been raised regarding the quality of online health information retrieved.

The categories of individuals accessing information online are three: searching for health information, participating in support groups and interacting with health professionals (Cline & Haynes, 2001). According to Khan et al. (2011), it is stated that due to the overgrowth of the information over the internet, the concept of information needs and seeking behaviour of various groups of people has been highlighted to be studied. Understanding user needs and behaviour can wipe out half of the time needed in providing information-services.

Many past researches have highlighted the seeking effort for health-related information. It was reported by Stellefson et al.(2011) and Hollis et.al. (2015) that health information is one of the most investigated topics online. It was observed that the issue encourages paying efforts to provide e-health information resources that can have potential value to assist the public, where they can be more independent in maintaining their health status.

3. PERCEIVED BARRIERS TO E-HEALTH INFORMATION SEEKING BEHAVIOUR

Despite the increasing attention and interest on health-related information available online, there are perceived barriers that are inherent to such activities. Wathen and Harris (2006) reported that the perceived barriers to e-health information seeking was mainly influenced by a number of factors. These are, the volume, complexity, validity of health information and the skills needed to perform an effective search which often hinders the user to optimally use the internet to search for health-related information. In their study, they found that some users were overwhelmed by too much information retrieved from internet and suspicious on the validity and reliability of the information. While others think that they are not skillful enough to perform an effective good search using trivial keywords or simple search techniques. As a result, the information available on the internet can also trigger a high stress level due to its conflicting information.

Myrick et al. (2016) also lends it support of the earlier research and highlights how the internet overcomes the limitation of information sources by offering countless sources; hence the credibility of retrieved information becomes harder to

determine. Due to the nature of internet, information or opinion can be posted, shared, manipulated with no any primary checking for the accuracy of this information compared to traditional publication.

4. METHODOLOGY

The survey method has been selected for this study due to its advantages, such as its ability to reach a large number of respondents in short period of time where the collected data can be measured systematically. Questionnaire has been selected as a tool in this study to collect information from a sample of University students at selected public universities in Malaysia.

In this study, the survey instrument has been formulated in a way so that it would be easy to be understood and answered by the respondents. It is divided into several sections where each section has its own purpose to be measured such as e-health literacy, internet barriers and e-health benefits. Questions types fall into two categories which are ticked boxes and rating scales such as from 1 to 5. There are three independent variables namely literacy skills, e-health perceived barriers and perceived benefits. Literacy combines six measurements representing media, science, information, computer, traditional and health literacy.

5. RESULTS AND DISCUSSION

Principal Component Analysis of factor analysis was conducted on the perceived barriers to e-health information seeking activities to identify the possibility of dimension reductions. In order to apply the factor analysis technique, it is important to first examine the correlation between variables. Table 1 shows the correlation matrix among the observed items.

Table 1: Correlation Matrix of Perceived Barriers

		Br_1	Br_2	Br_3	Br_4	Br_5	Br_6	Br_7
Correlation	Br_1	1.000	.364	.377	.255	.237	.082	.091
	Br_2	.364	1.000	.486	.104	.242	-.120	.077
	Br_3	.377	.486	1.000	.359	.434	-.079	.262
	Br_4	.255	.104	.359	1.000	.304	.327	.309
	Br_5	.237	.242	.434	.304	1.000	.075	.288
	Br_6	.082	-.120	-.079	.327	.075	1.000	.326
	Br_7	.091	.077	.262	.309	.288	.326	1.000
Sig. (1-tailed)	Br_1		.000	.000	.006	.009	.209	.185
	Br_2	.000		.000	.153	.008	.118	.224
	Br_3	.000	.000		.000	.000	.218	.004
	Br_4	.006	.153	.000		.001	.000	.001
	Br_5	.009	.008	.000	.001		.231	.002
	Br_6	.209	.118	.218	.000	.231		.000
	Br_7	.185	.224	.004	.001	.002	.000	
a. Determinant = .265								

Table 2: Perceived Barriers KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.691
Bartlett's Test of Sphericity	Approx. Chi-Square	125.916
	df	21
	Sig.	.000

Table 2 shows the result of KMO and Bartlett's test. As can be seen, the table indicates that it is statistically significant with P = 0.00.

Table 3 shows the result for the Rotated Component Matrix of perceived barriers to information seeking behavior.

Table 3: Rotated Component Matrix of Perceived Barriers

Rotated Component Matrix			
		Component	
		1	2
I am not fully aware of internet usage towards health information	Br_1	.635	
I have been overwhelmed by the huge amount of information retrieved from internet	Br_2	.772	
I am having suspicion regarding the validity and reliability of the information	Br_3	.823	
I am not skillful enough to perform such good search using proper search techniques to retrieved intended health info	Br_4		.670
Internet can create stress due to its conflicting information	Br_5	.566	
I face network connection problem that interrupt the process of searching	Br_6		.788
I am comfortable with asking a friend or any individual who is close to me rather than paying effort to search through the internet	Br_7		.700

Extraction Method for barriers: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization

The results from Table 3 highlight the loading of the seven observed items of perceived barriers. As can be seen, the observed items are grouped into two components. First component includes four barriers, that is, lack of awareness on e-health, feeling of overwhelmed by the amount of information on internet, suspicion in the validity and reliability of the information and stress due to conflicting information. The assessment of the above items shows that this factor highlights psychological-related barriers in using internet as a medium to search for health related information.

In addition, the second factor loading shows that lack of skill to search for e-health information, challenges to access stable internet connection and preference to search information through personal contact than internet have large positive

loadings on factor 2. From the assessment of the items, it clearly shows that this factor describes technical barriers to e-health.

As can be seen in Table 4, the first factor shows how the issues related to lack of awareness, the amount of information, lack of validity and reliability and inconsistency of information have hindered people from seeking health-related information online. The second factor, on the other hand, closely related to the technical issues in searching for specific health information. Observed items that highlight concerns related to one's skills to use search technique, network issue and preference towards manual reaching to obtain information were loaded to the technical factor.

Table 4: Perceived Barriers to E-Health Information Seeking

Psychological factor		Technical factor	
I am not fully aware of internet usage towards health information	.635	I am not skillful enough to perform such good search using proper search techniques to retrieved intended health info	.670
I have been overwhelmed by the huge amount of information retrieved from internet	.772	I face network connection problem that interrupt the process of searching	.788
I am having suspicion regarding the validity and reliability of the information	.823	I am comfortable with asking a friend or any individual who is close to me rather than paying effort to search through the internet	.700
Internet can create stress due to its conflicting information	.566		

6. CONCLUSIONS

The available information online provides an opportunity for citizens to enrich their knowledge and to improve their quality of life. Unfortunately, there are barriers that hinders users, to use and learn from these variety of information. In this study, we assess the perceived of barriers of e-health information seeking activities among university students. The study identified two major category of perceived barriers that inhibit students, namely, the issue of psychological and technical factors. Many students often experienced psychological barriers to search for health information online due to the apprehension in obtaining conflicting health-related information and the lack of knowledge about the quality of online health information. On the other hand, the lack of search skills and preference enquire through personal contact, triggered the perception that seeking for health information online is rather deemed as inefficient.

Further research is needed to assess a wider public perceptions on the perceived barriers to identify the necessary intervention and actions that both government and education sector may contribute in promoting an effective and productive heath information seeking activities among citizens.

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REFERENCES

Cline, R. J., & Haynes, K. M. (2001). Consumer health information seeking on the Internet: the state of the art. Health education research, 16(6), 671-692.

Hollis, C., Morriss, R., Martin, J., Amani, S., Cotton, R., Denis, M., & Lewis, S. (2015). Technological innovations in mental healthcare: harnessing the digital revolution. The British Journal of Psychiatry, 206(4), 263-265.

Kadiri, J. A., & Adetoro, N. A. (2012). Information Explosion and the Challenges of Information and Communication Technology Utilization in Nigerian Libraries and Information Centres. Ozean Journal of Social Sciences, 5(1), 21-30.

Khan, M., Hussain, M., & Saber, H. M. (2016). Information sharing in a sustainable supply chain. International Journal of Production Economics, 181, 208-214.

Manyika, J., & Roxburgh, C. (2011). The great transformer: The impact of the Internet on economic growth and prosperity. McKinsey Global Institute, 1.

Myrick, J. G., Willoughby, J. F., & Verghese, R. S. (2016). How and why young adults do and do not search for health information: Cognitive and affective factors. Health education journal, 75(2), 208-219.

Sharif, Saeed Pahlevan; Ahadzadeh, Ashraf Sadat; Wei, Khong Kok. (2018) A Moderated Mediation Model of Internet Use for Health Information. Journal of Social Sciences (COES&RJ-JSS), [S.l.], v. 4, p. 611-625. ISSN 2305-9249.

Stellefson, M., Hanik, B., Chaney, B., Chaney, D., Tennant, B., & Chavarria, E. A. (2011). eHealth literacy among college students: a systematic review with implications for eHealth education. Journal of medical Internet research, 13(4), e102. doi:10.2196/jmir.1703

Wathen, C. N., & Harris, R. M. (2006). An Examination of the Health Information Seeking Experiences of Women in Rural Ontario, Canada. Information Research: An International Electronic Journal, 11(4), n4.