USAGE OF INTERNET FOR HEALTH INFORMATION SEEKING AMONG ELDERLY IN MALAYSIA

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ABSTRACT

***Introduction:** The Internet is rapidly growing and becoming an easier to access to technology. It functions as important part of almost everyone's daily life including elderly. **Objective:** The study was aimed to investigate the patterns of internet usage among elderly. **Methods:** A cross-sectional study was conducted in 23 Elderly Activity Centre throughout Malaysia from August 2017 to October 2017. This centre is a place for senior citizens to conduct routinely/daily activities in the community. It is an oriented service especially for senior citizens. **Results:** A total of 1400 individuals were sampled in this study, unfortunately the elderly turned up only 799 (57.1%) which aged 60 and above. A self-administered with minimal guidance and face to face interview by trained research assistants were used in this study. The study showed of the total 799 respondents, only 258 (33.0%) who use the internet. Those using the Internet are 89 (30.2%) male and 169 (69.8%) female, respectively. Most of them are government retirees (47.7%). The study found that the reasons of the elderly seeking health information through the internet because it was free (66.3%) as well as easy and fast (56.2%). The study also found that the type of health information sought is information on certain diseases such as cancer, diabetes, hypertension and others (20.9%). With regards to the places of internet access, about 86.8% of the respondents having the internet access at home, followed by internet service provider 42.6% and by Elderly Activity Centre, itself 14.7%. Only 3.5% and 5.8% of respondents access internet at Cyber Cafe and friend's house respectively. The highest showed that respondents access internet several times in a month 25.5% followed by everyday 22.5% and twice or thrice in a week 17.4%. Overall, 53.5% of elderly claimed internet can be a very helpful resource for finding health information. **Discussion:** Elderly in Malaysia are becoming more tech-savvy. This change is advantage as it can be used to address and manage health issues and geriatrics care for elderly through strategic dissemination of health information as well as to motivate positive health behaviour through use of technology.*
KEYWORDS: *Elderly, Internet Use, Health Information Seeking.*

INTRODUCTION

Elderly would be considered as a majority population of many countries. The growth of numbers of elderly is swiftly going higher than the whole number of the world population in every region around the world. The lowered of birth rate, the improvement of health care, better living condition also help lengthen people lives and simultaneously increasing numbers of Elderly (Loipha 2014). In Malaysia, numbers of elderly and the ratio have been increasing continuously. In 2017, 6.2% of Malaysians representing the elderly (> 65 years) from current population of 32.3 million and expected to hit 13.6% by 2030 (MHAS 2018).

Nowadays, the Internet is rapidly growing and becoming an easier to access to technology. It functions as important part of almost everyone's daily life including elderly. The Internet is used as an effective communication and it assists the boost of social collaborations, provides more channels of learning and interacting among people in the field of education, business and make things more possible to create new forms of activities (Hasim & Salman 2010).

According to 2018 statistic, the usage of the Internet is constantly increasing 55.1% of the world population (Internet World Stats 2018), for Malaysia itself, there are now 32.3 million people or 78.3% of its population using the internet (Internet World Stats 2018). It is believed that there are many benefits of surfing the Internet; to fulfil elderly lives, to strengthened a better relationship among family's members and to narrow down the age gap relationship (Omsaung 2000). In addition, the Internet shows the changes of their world societies, energizes people and makes them feel younger and be trendier, and it adds more new friends into our daily life circles (Boonoon n.d).

Although the internet is believed to create better living conditions and is necessary of life-long learning tool that able to upgrade the elderly quality of lives in today's modern world, but in actual studies have shown looking for health information has been one of the most popular online activities among adults, and even among adolescents. But the online health information seeking behaviour of elderly has not been studied as closely as that of other age groups. In Malaysia, there are limited studies on Internet use among elderly. In accordance to a survey conducted by Malaysian Communications and Multimedia Commission (MCMC 2016) revealed that the groups of pre-teen and teens (up to 19 years old) and adults (20-49 years old) gained the highest portion of Internet use (81.5%) as compared to those who were 50 years old or above with only 18.5% based on population. This huge gap between both generations is considered as "a digital divided problem"; therefore, to assist the elderly to be able to use the Internet as a part of their lives is becoming essential.

A study by the National Population and Family Development (2014) found that 10.4% of 4,059 senior citizens who participated in this study used Internet services with an average of two hours a day. Facilities of Internet service include social networks such as Facebook, WhatsApp, Twitter, and Instagram (68.2%), e-mail (52.2%), blogs and websites (45.6%), and online banking (15.4%).

A collaborative study between MCMC and Institute for Health Behavioural Research (IHBR), Ministry of Health Malaysia was conducted in 2017, regarding a study on seeking health information among Malaysians. The findings showed that 77.2% respondents searched for health information online. The most common health-related information that users were seeking were on 'symptoms and diseases' (91.4%), followed by 'healthcare tips' (89.8%), and 'treatment method' (83.5%). Over half of them were looking for 'medications/drugs information' (73.3%), as well as 'place to get treatment'. Furthermore, it was found that 82.7% trusted the health-related information found online regardless of the source. Only 5.7% felt otherwise, while the remaining 11.7% were neutral.

The internet is an important resource for health information (Dumitru et al. 2007). However, this does not tell us whether the Internet is used frequently or infrequently, why and how the Internet was used for gathering health information. It also does not address how the use of the Internet is compared to other sources of health information and whether the elderly would prefer to obtain health information from some other sources. This study was to identify health information seeking behaviour through Internet use among elderly. If we know about why and how elderly seek health information, we can more efficiently and effectively empower elderly by using the right information resource at the right time.

METHODS

A cross-sectional study was conducted in 23 Elderly Activity Centre throughout Malaysia from August 2017 to October 2017. Elderly activity centre is a place for seniors to conduct routinely/daily activities in the community. It is an oriented service especially for senior citizens. The development of the service involved collaboration between the Department of the Ministry of Women, Family and Community Development and other government agency and non-governmental organizations (NGOs).

Two-stage cluster sampling was used for this study. A total of 1400 individuals were sampled in this study; aged 60 years and above. Data were gathered using self-administered questionnaires as well as face to face interview. The questionnaires

were adapted from previous studies (Maab 2011; Allen 2013; Loipha 2014). These questionnaires have been translated, pre-tested and validated accordingly to suit into the local settings and a pilot study has been embarked prior to the actual study. The questionnaire consists of two part, namely socio-demographics and questions to measure the use of internet in seeking health information among the elderly. The software program Statistical Package for the Social Sciences (SPSS) version 21.0 was used to perform statistical analysis. A descriptive analysis was used to illustrate the participation among elderly who use the internet.

RESULTS
1. Demographic Characteristics of Respondents
Table 1 presents the demographic data gathered from respondents. A total of 799 respondents from 23 PAWE localities were involved in this study with 69.8% females and 30.2% male. Majority of the respondents were Malays 45.0% and followed by Chinese 31.4%. According to age groups, 36.5% were aged 60-64 years old while 31.2% were aged 65-69 years old. Furthermore, 46.0% have secondary education and 34.3% of them have primary education. In term of monthly income, 37.9% of the respondents had income less than RM1000. When viewed by occupational status, about 47.7% were retirees and 46.8% were unemployed. In term of marital status, most of the respondents were married (64.7%) followed by divorced/widow/widower (29.0%) and 5.6% were never married. A total of 65.3% of the 792 respondents reported that within the previous six months, their health has been good while another 34.7% felt that their health has been moderate.

Table 1 Demographic of respondents (N=799)

Characteristics		Frequency, n (%)
Age groups (in years)		
	60-64	292(36.5)
	65-69	249(31.2)
	70-74	134(16.8)
	75-79	81(10.1)
	80-84	33(4.1)
	85-89	2(0.3)
Gender		
	Male	241(30.2)
	Female	558(69.8)
Ethnicity		
	Malay	360(45.0)
	Chinese	251(31.4)
	Indian	32(4.0)
	Bumiputra Sabah	52(6.5)
	Bumiputra Sarawak	102(20.3)
	Others	3(0.4)
Educational level		
	No formal education	87(10.9)
	Primary education	274(34.3)
	Secondary education	367(46.0)
	Tertiary education	69(8.6)
Monthly Income		
	No income	258(32.3)
	Less than RM1000	303(37.9)
	RM1001-RM3000	185(23.1)
	RM3001-RM5000	34(4.3)
	RM5001 and above	8(1.0)
Occupational Status		
	Unemployed	374(46.8)
	Retired	381(47.7)
	Employed	33(4.1)
Marital Status		
	Never married	45(5.6)
	Married	517(64.7)

	Divorcee/Widow/Widower	231(29.0)
Health Status (n=792)		
	Good	517(65.3)
	Moderate	275(34.7)
	Poor	0

2. The Elderly Internet Usage behaviour

As shown in Table 2, out of 799 respondents, only 258 (32.3%) reported that they had used the internet. In relation to internet usage, it was found that most of the respondents have been using the Internet for more than 3 years (67.1%), 18.6% have 1-3 years of experience and 10.6% have used it less than a year. Respondents were also asked tools for surfing, 86.4% indicated that they used smartphone to surf the internet.

Internet access was broadly defined to include use at home, elderly activity centre, workplace or any other location. Most elderly had accessed the internet (86.8%) at their home. The frequency of the internet using time period: Most elderly access internet several times in a month (25.5%), followed by everyday (22.5%) and 2-3 times in a week (17.4%).

Table 2 The Elderly Usage Behaviour (n=258)

The Elderly Usage Behaviour	Frequency, n (%)
Internet Usage	
Yes	258(32.3)
No	541(67.7)
Duration of Internet Usage	
Less than a year	27(10.6)
1 – 3 years	48(18.6)
More than 3 years	173(67.1)
Tools for surfing	
Smartphone	223(86.4)
Tablet	31(12.0)
Computer Laptop	83(32.2)
Computer Desktop	61(23.6)
Others	1(0.39)
Internet Access	
Home	224(86.8)
Elderly Activity Centre	38(14.7)
Restaurant/Food court	31(12.0)
Cyber Cafe	9(3.5)
Internet Service Provider	110(42.6)
Workplace	14(5.4)
Friends' House	15(5.8)
Other	14(5.4)
Frequency of Internet Usage	
Everyday	58 (22.5)
2-3 times a week	45(17.4)
Once a week	31(12.0)
Once a month	28(10.9)
Several times in a month	66 (25.5)

3. Experiences of using the Internet as a resource among Elderly
3.1 Reasons for Using the Internet

The main reason that most elderly liked about the Internet was that they could get an update on the current news (88.4%) and seek for health information on the internet (86.4%). Data also illustrated that 45.7% of respondents browsing the internet were mailing activities, followed by 41.1% respondents reported seek information about movies, music and television shows. Findings are described below and displayed in Table 3.

3.2 Internet Health Seeking Purposes

In regards to internet health seeking purposes, the study identified the top three reasons were personal health problem 67.8%, followed by free information 66.3% and fast/convenient 56.2%. Other common purpose of internet health seeking behaviour were because of various sources 47.7%, others health problem 46.1%, complete and accurate 43.0%, privacy 24.4% and the least was 0.7% for other purposes.
(Table 3).

3.3 Action Taken After Getting Health Information in the Internet

Additional outcomes from the information found online were also sought. It was noted that 43.0% of respondents always preferred to discuss with their families, while 41.9% of respondents always seek treatment from a doctor. On the other hand, 36.4% of respondents always triggered by their curiosity to find out on the causes and treatments of health information problem (Table 3).

Table 3 Experiences of using the Internet as a resource among Elderly

Experiences	Frequency, n (%)
Reasons for using the Internet	
Health Information	223(86.4)
Current News	228(88.4)
Mailing	118(45.7)
Sale & Purchase Transaction.	66(25.6)
Sport News	74(28.7)
Film/Music/TV Shows	106(41.1)
Stock Exchange Info	24(9.3)
Online Games	35(13.6)
Song Downloads	42(16.6)
Internet Health Seeking Purposes	
Free Information	171(66.3)
Personal Health Problem	175(67.8)
Others Health Problem	119(46.1)
Fast/Convenient	145(56.2)
Complete & Accurate	111(43.0)
Privacy	63(24.4)
Various Sources	123(47.7)
Other purposes	2(0.7)

Action Taken After Getting Health Information in The Internet	Frequency, n (%)
Discuss with friends	81(31.4)
Discuss with family	111(43.0)
Discuss with doctor	54(20.9)
Curiosity	94(36.4)
Comply with appointment	95(36.8)
No treatment needed	19(7.4)
Get doctor treatment	108(41.9)
Get traditional treatment	22(8.5)

4. Type of Health Information Seeking

As shown in Table 4, 39.9% of the respondents seeking for violence information compared to others when seeking health information in the internet. Meanwhile, the respondents less search for sexual harassment 4.3% (Table 4).

Table 4 Type of health of information seeking

Type of Health Information	Frequency, n (%)
Dementia	19(7.4)
HIV/AIDS (STD)	21(8.1)
Pregnancy/Birth	10(3.9)
Drug/ Alcohol	10(3.0)
Smoking	13(5.0)
Depression/Mental Illness Eating Problem	23(8.9)
Skin Care	80(31.0)
Health Clinic	45(17.4)
Weight Problem	37(14.3)
Disease Information	54(20.9)
Violence	103(39.9)
Sexual Harassment	11(4.3)
Eyesight Problem	15(5.8)
Hearing Problem	53(20.5)
Others	38(14.7)

5. Barriers of Using Internet

Outcomes from the study illustrated barriers of using Internet: Most elderly claimed that too much information difficulty for them to find information that they want (39.1%). They also claimed that using internet can caused a risk of getting wrong advice 36.0%, and unnecessary information and elusive information (both aspects were equal 25.9%) (Table 5).

Table 5 Barriers of using Internet

Barriers of Using Internet	Frequency, n (%)
Information not relevance	41(15.9)
IT illiteracy	69(26.7)
Too much information	101(39.1)
Risk of getting wrong advice	93(36.0)
Information leak	46(17.8)
Risk of discussion	38(14.7)
Unnecessary information	67(25.9)
Refuse to see a doctor	34(13.2)
Elusive Information	67(25.9)
Internet bills burden	54(20.9)
Others	5(1.9)

6. Health Portal Ever Surfed

The most top three health portal been surfed by respondent were MOH Portal 34.5%, Nutrition Division Portal 27.5% and MyHEALTH Portal 19.4% (Table 6).

Table 6 Health portal ever surfed

Health Portal Ever Surfed	Frequency, n (%)
Ministry of Health Portal	89(34.5)
Pharmacy Portal	39(15.1)
Health Education Division Website	46(17.8)
MyHEALTH Portal	50(19.4)
'Tak Nak Merokok' Portal	14(5.4)
Pharmacy Services Portal	24(9.3)
Nutrition Division Portal	71(27.5)
Traditional & Complimentary Medicine Portal	32(12.4)
Others	22(8.5)

*7. **The Usefulness Internet Health Information***
Specifically, 53.5% respondents who reported using the internet stated that the health information that they found online was very useful, only 3.5% answered it as less useful and 0.8% as not useful at all (Table 7).

Table 7 The Usefulness Internet Health Information

The usefulness Internet health information	Frequency, n (%)
Very Useful	138(53.5)
Useful	96(37.2)
Less Useful	9(3.5)
Not at all useful	2(0.8)

DISCUSSION
Internet use is no longer limited to younger people. Over the past years, elderly people have started using the Internet as older persons represent a large group of users that has steadily grown since 2000 (Pierce, 2009). In this study, it is revealed that nine out of ten of the elderly use the Internet to get an update on the current news as compared to seeking for health information online. The reason is because people are inclined to want to know the current issues occurring worldwide; however, health becomes a priority when it is needed.

The study also enquired about the factors that the elderly takes into consideration when looking health information online. A majority of the elderly look for disease information and eating problems as compared to others when seeking health information in the Internet. Given that most of the elderly suffer from a variety of illnesses, that is why finding information related to the disease is a priority and this is followed by nutrition.

The top three reasons why the elderly use online health information is to gain personal health problems, free information, and fast/convenient. This finding is consistent with previous studies whereby the Internet offers suitable, various, and cheap information as noted by Horgan and Sweeney (2010). While online health information has been influential for some elderly people, many others said they found it very useful to them.

The Internet can offer vast information; unfortunately, there are barriers to access the Internet such as too much information to choose from, risk of getting wrong advice, and unsure on how to find the information, thus making them trust and rely on the health staff to obtain health information. These may be the reasons why they do not turn to the Internet more often. This shows that the health staff members play a vital role in disseminating health information.

This study concludes that the Internet is assuming a more important role in the lives of the elderly and that its use is not only limited to current news and leisure purposes, but also used for life-supporting and sustaining purposes including searching for health information.

CONCLUSION
Increase of internet-based dependency, use and literacy can be concluded for elderly in Malaysia as they are becoming more tech-savvy. This change is an advantage as it can be used to address and manage health issues and geriatric care for elderly through strategic dissemination of health information as well as to motivate positive health behaviour through use of technology. Although the findings of this survey should be considered preliminary, elderly who seek health information seem likely to use the Internet. Internet can be useful platform for ageing population as it caters health information. Future research should investigate how to reach seniors who prefer not to use the Internet for health information.

Conflict of interest
None

Ethics of Study
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