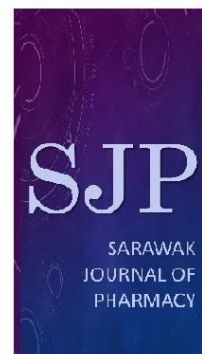


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## Use of Social Media on Health-Related Information among Staff and Patients in Miri Hospital

Hie Kee Ting <sup>1</sup>, Yee Sii Siaw <sup>1</sup>, Kamarudin Ahmad <sup>1,2</sup>

<sup>1</sup>Pharmacy Department, Miri Hospital, Sarawak

<sup>2</sup>Clinical Research Centre Miri

Corresponding author name and email: Hie Kee Ting ([tinghiekee@moh.gov.my](mailto:tinghiekee@moh.gov.my))

### ABSTRACT

**Introduction:** As people increasingly rely on self-help, social media are pervasive, rapidly evolving and increasingly influencing people's daily life and their health behaviour. The wide availability of the internet enables users, including the patients to freely search for health-related information. However, misleading information shared in social media could greatly impact their health outcomes. Therefore, it is important to identify the right social media platform in seeking true health-related information to avoid a negative impact on their health outcome.

**Objective:** The objective of the study is to identify the most common social media platforms used and to explore the health-related activities that often take place.

**Methods:** We conducted a cross-sectional study in Miri Hospital and applied convenience sampling in the hospital staff (Medical Officer, Dentist, and Pharmacist) and patients' recruitment. A data collection form containing ten questions was created and distributed to the hospital staff and patients. We performed descriptive statistics using SPSS Statistics Version 21 and described the categorical variables as frequencies and percentages.

**Results:** We recruited 100 hospital staff and patients in Miri Hospital in this study. The most common platform used is Google, which comprises of 32.95%. Google is the search engine

that is commonly used to explore various information in the form of images, videos, news, and articles. The two main purposes in using the internet for health-related information are sign and symptoms (26.82%) and medication and/or side effect (24.50%).

**Conclusion:** In summary, people use social media for various activities. There are many social platforms such as Facebook, Google, YouTube, Medscape, UpToDate, Lexicomp, WeChat and many more. However, health education in the digital era needs to be accurate, evidence-based and regulated. In this study, we identified that Google is the most commonly used platform to search for health-related information online. The main purpose noted in using the internet for health-related information is searching for sign and symptoms of a certain medical condition.

**Keywords:** Staff, patients, social media, health-related information

## INTRODUCTION

As people increasingly rely on self-help, social media are pervasive, rapidly changing and increasingly influencing people's daily life and their health behaviour (1). The widely available internet enables users, including the patients, to freely search for health-related information (2). In the early days, health information could be accessed and obtained from the web on a non-interactive and unidirectional platform. However, with the advent of social media, users can even create and share online content. Consequently, the use of social media has supported the transition from informed patient to the participative patient (3).

According to the U.S. National Library of Medicine, the health information is defined as information comprises of general health, drugs, and supplements, specific populations, genetics, environmental health and toxicology, clinical trials and biomedical literature. In addition, Kaplan and Haenlein defined social media as "a group of internet-based applications that build on the ideological and technological foundations of Web 2.0, allowing the creation and exchange of user-generated content" (4). Social media divided into content sharing platforms such as blogs, YouTube, Wikipedia and relationship building platforms such as Facebook, LinkedIn, and Instagram. The latter mainly formed of social networking sites, social media platforms in which users create a profile and set up connections with other users within it, creating a network.

Li and Bernoff had classified individual based on how they use social media which include creators, conversationalists, critics, collectors, joiners or spectators (5). Correspondingly, Hoffman and Novak have also identified the four goals for social media use, including to create, connect, consume and control the sharing of information (6). One of the very popular social media channel extensively used for health-information sharing purposes is Facebook. A wide array of health topics, pages, and groups are present. Popular health-related topics are discussed in these online communities, including disease symptoms, examination, and diagnosis, treatments, and management, complications and prognosis of the disease. Studies have shown beneficial outcomes interactions among the peer supports for those living with chronic illnesses such as diabetes, epilepsy, and cancer. Users on the platform can extend and receive social support, cultivate companionship, exert social influence and communicate with one another (2).

It is well-known that social media plays an increasingly important role in health information seeking in user's online activities. However, misleading information shared in social media could greatly impact their health outcomes. It is important to identify the right social media platform in seeking true health-related information to avoid a negative impact

on their health outcome. Therefore, the objective of this study is to identify the most common social media platforms used and to explore the health-related activities that often take place.

## METHODS

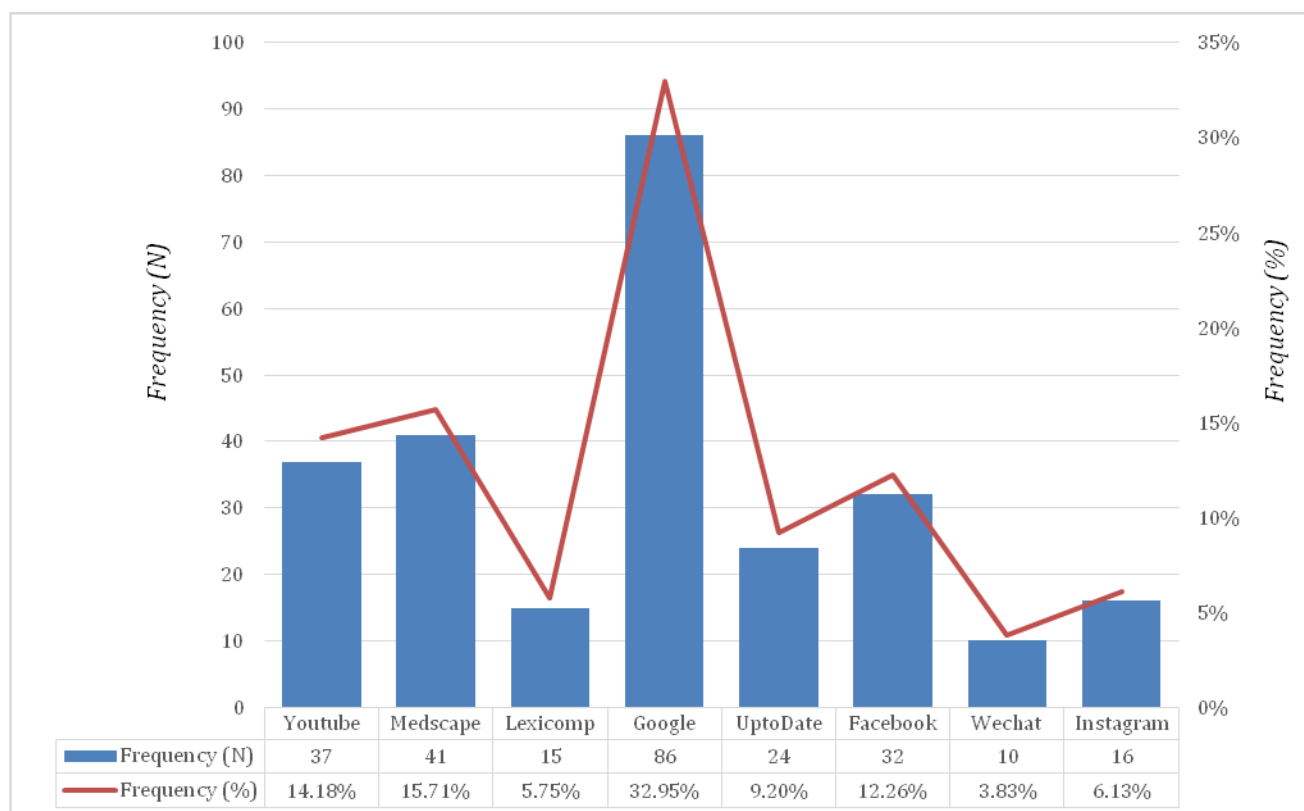
This is a cross-sectional study conducted in Miri Hospital. We applied convenience sampling in staff (Medical Officer, Dentist, and Pharmacist) and patients' recruitment. The sample size for this study is 100 subjects. Data collection form containing ten questions created and gave out to the hospital staff and patients. The data collection form contains two sections, namely (a) demographic details of the participants and (b) the use of social media on health-related information. We performed descriptive statistics using SPSS Statistics Version 21 and the categorical variables described as frequencies and percentages.

## RESULT

**Table 1:** Demographic characteristic of participants (n=100)

Characteristic	n (%)
<b>Gender</b>	
Male	30 (30)
Female	70 (70)
<b>Age (years)</b>	
10 to 20	4 (4)
21 to 30	65 (65)
31 to 40	20 (20)
41 to 50	6 (6)
51 to 60	4 (4)
61 to 70	1 (1)
<b>Ethnicity</b>	
Malay	24 (24)
Chinese	49 (49)
Indian	10 (10)
Others	17 (17)
<b>Educational level</b>	
Bachelor	64 (64)
Master	0 (0)
PhD	0 (0)
Others	36 (36)

A total of 100 hospital staff and patients in Miri Hospital took part in this study. This includes 50 patients and 50 hospital staff, including doctors, dentists, and pharmacists in Miri Hospital. Most of the participants in this study are female (70%). 65% of the participants are between 21 to 30 years old. Majority of the participants are Chinese (49%), followed by Malay (24%), others (17%) and Indian (10%). Most of them are bachelor holders (64%).



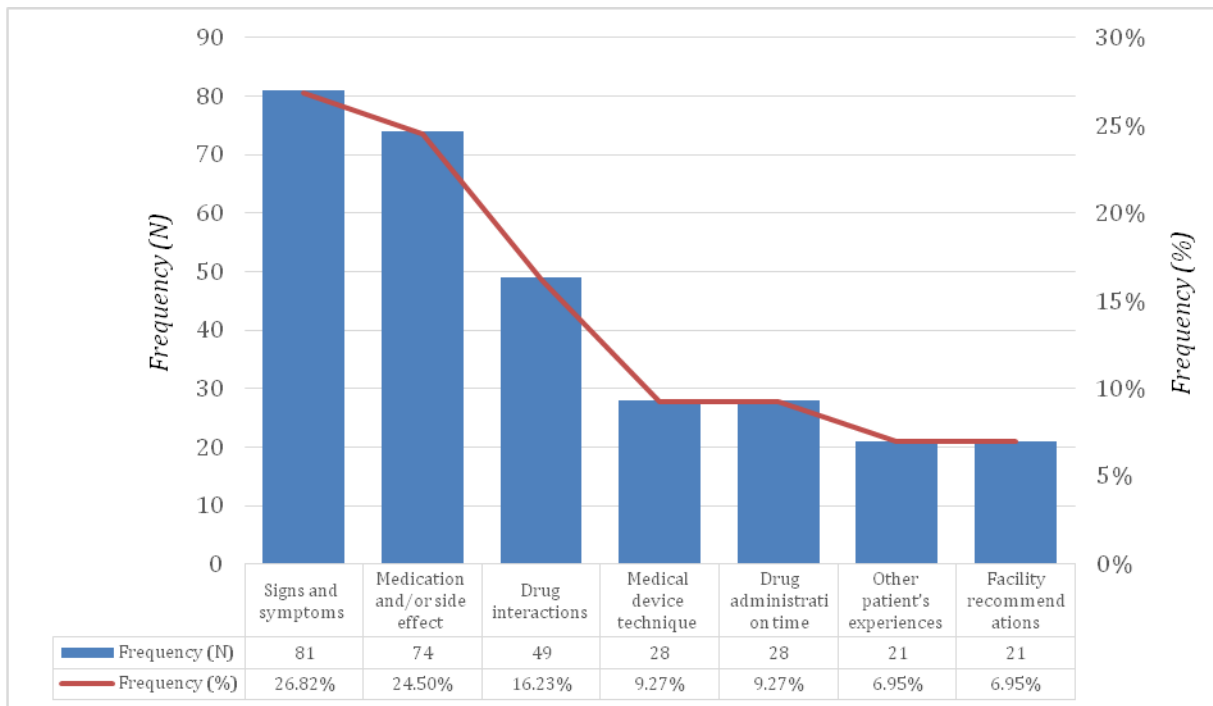
**Figure 1:** Usage of various platforms for seeking health-related information

Results revealed that the use of Google for seeking health-related information is twice higher than the others, which comprise of 32.95% of apps usage. The other more common platforms used are Medscape (15.71%), YouTube (14.18%) and Facebook (12.26%), while the less commonly used apps are Instagram (6.13%), Lexicomp (5.75%), and WeChat (3.83%).

**Table 2:** Behaviours of participants on health-related information on media

Characteristic	n (%)
<b>Internet utilization for health-related information</b>	
Yes	100 (100)
No	0 (0)
<b>Attention paid for health-related topic on media</b>	
A lot	28 (28)
Some	47 (47)
A little	20 (20)
None at all	5 (5)
<b>Seeking health-related information online</b>	
Once a week	21 (21)
Once a month	32 (32)
Every few months	15 (15)
Once or twice a year or less	32 (32)
Never	0 (0)
<b>Online research prior to the visit</b>	
Yes	63 (63)
No	37 (37)

All participants utilised the internet for health-related information. It is revealed that 47% of the total participants paid some attention to the health-related topic on the media outlet such as radio/television/newspapers/magazines. The majority of the participants seek health-related information online once a month or once or twice a year or less which constitutes 32% each. More than half of our participants (63%) did online research prior to the visit.



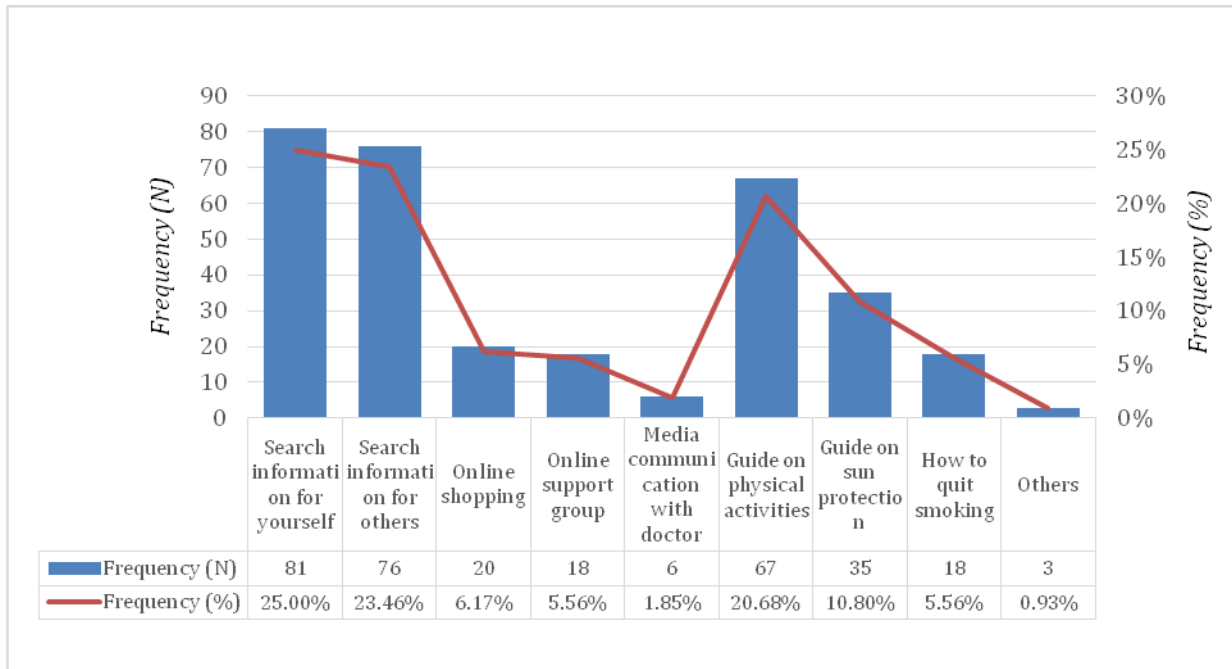
**Figure 2:** Type of information searched

The two main purposes observed in using the internet for health-related information are sign and symptoms (26.82%) and medication and/or side effect (24.50%).



**Figure 3:** Reasons for seeking health-related information

Figure 3 displays the information that the participants would seek online. Among all the reasons, “experiencing new symptoms or a change in your health” and “something in the news that you wanted to learn more about” are the most compelling reasons for our participants to seek online sources in regard to their condition(s).



**Figure 4:** Online activities in the past 12 months

**Table 3:** Support from healthcare providers

Characteristic	n (%)
<b>Discussion with healthcare providers</b>	
Yes	51 (51)
No	39 (39)
Not sure	10 (10)
<b>Level of interest from healthcare providers</b>	
Very interested	20 (20)
Somewhat interested	30 (30)
A little interested	21 (21)
Not at all interested	10 (10)
Don't remember	20 (20)

Generally, most of our participants utilised social media to search for information for themselves (25%), search information for others (23.46%), search for information about

physical activities (20.66%) (Figure 4). 0.93% of the online activities fall under the category “others” which includes searching of the name for diseases and their information, pathophysiology and human anatomy.

More than half of the participants revealed to have discussed any kind of information they get online with their healthcare providers. There is 30% of the participants thought the healthcare providers interested in the information shared with them (Table 3).

## **DISCUSSION**

As a result of the increasing popularity and easy accessibility through mobile technology (7), social media use is becoming a more attainable platform to obtain and generate various types of information. Generally, individuals use social media to communicate with family and/or friends, develop new relationships, follow up the latest news, share similar interests with others, and read comments of public figures (8). However, in the domain of health information exchange, users are gradually expanding the functionality of social media by accessing this platform to consume and/or share health information (9, 10).

### **To identify the most common social media platforms used**

As people’s attention is no longer on traditional media and largely focused on social media instead, this study was carried out to figure out the most commonly used social media apps. We identified the participants had used a range of platforms for health-related purposes including Facebook, Google, YouTube, Medscape, UpToDate, Lexicomp, WeChat, and Instagram. Based on the study result, the most common platform used was Google, the search engine used to explore various information that collected images, videos, news, and articles. Previous study on Consumer Health-related Activities on Social Media supported the finding. It stated that the most popular method was to use a general search engine such as Google (2). It also mentioned that most of the respondents were active on Facebook, and only a few did not have a Facebook profile. Some were members of disease-specific Facebook groups, such as an arthritis group, as their approach to using Facebook for health-related information. Some of these disease-specific groups had an international membership. The use of Facebook for health-related purposes was regarded to be very convenient (2). However, in this study, Facebook users only occupied 12.26% among all apps, which are the fourth most common social media used.

Another study found that Facebook and YouTube dominated the social media landscape (11). Facebook remained as the most widely used social media platform by a

relatively healthy margin: some 68% of U.S. adults were Facebook users. Other than the video-sharing platform YouTube, none of the platforms included in this survey was used by more than 40% of Americans. Furthermore, the centre asked about the use of five of the platforms (Facebook, Twitter, Instagram, LinkedIn, and Pinterest) in several surveys of technology use. And for the most part, the share of Americans who used each of these services was similar to what the centre found in its previous survey of social media use conducted in April 2016. The most notable exception was Instagram: 35% of U.S. adults claimed that they used the platform in 2018, as compared to 28% in 2016 (11). However, in the current study, Instagram was the third least social media platform used. Another study showed that WhatsApp, Snapchat and YouTube were the main social media applications used among their respondents 83.8%, 65.3%, and 58.7%, respectively (12). Nevertheless, the top three platforms in our study were Google, Medscape, and YouTube.

### **To explore the health-related activities that frequently takes place**

“Social media offers advantages over traditional data sources, including real-time availability, ease of access, and reduced cost. Social media allows us to ask, and answer, questions we never thought possible,” as written by professors Michael Paul and Mark Dredze in their book, *Social Monitoring for Public Health*. Social media could be used to connect health care professionals in third-world countries, to specialists in the more medically advanced locations. Many social media tools were available for health care professionals, including social networking platforms, blogs, microblogs, wikis, media-sharing sites, and virtual reality and gaming environments. Media-sharing sites, such as YouTube, offered a large selection of social media tools that are optimized for viewing, sharing, and embedding digital media content on the web (13).

In a study, those working in offices, social media was constantly present on their computer screens (2). Facebook and WhatsApp, for examples, was accessed multiple times a day by the group working in front of a computer, not limited to health-related activities (2, 14). However, some participants preferred to regularly access social media for health-related activities in the evenings at home, with one participant recognising that it would be wise to allocate time to conduct online health-related activities (2). We discovered that 25% and 23.46% participants searched for health information for themselves and others respectively. The use of social media as a communication tool with the doctor was unpopular among the participants (1.85%). This was supported by a study on Reason for Social Media Engagement

(2). Several reasons mentioned by participants for engaging in social media platforms for health-related reasons. Information including accessing user-friendly health information, especially other people's experiences and treatment information and social support such as relating to people with the same problem and providing and gaining encouragement were the main motives for accessing social media for health-related purposes.

Moreover, a study revealed most users (93.6%) agreed to use social networking site for health education and to disseminate useful health information (15). Similarly, 93.5% of users supported the use of social networking site to raise awareness about harmful habits. Social networking site was used for communication with people during an emergency and to share personal health experience by 79.7% and 72.2% of users, respectively. More than half of the users (54.6%) agreed to use the site to search for treatment, and 59.1% of them agreed to use social networking site to communicate with medical specialists for diagnosis of their medical condition (16).

## **LIMITATIONS**

Considering the study population was hospital staff and patients in Miri Hospital, the results in this study may not be the representative of the overall population in Malaysia. A nationwide study could be conducted in the future to provide a wider view on this topic. Besides, this study did not include other social media platforms such as WhatsApp, Twitter, Blogs, LinkedIn, and Wikipedia.

## **CONCLUSION**

In summary, people use social media for various kind of activities. There are many social platforms such as Facebook, Google, YouTube, Medscape, UpToDate, Lexicomp, WeChat and many more. However, health education in the digital era needs to be accurate, evidence-based, and regulated. We aim for reliable sources and appropriate activities to be carried out by using these social media platforms. As technologies continue to evolve, we must be equipped to face the challenges it brings with it.

## **ACKNOWLEDGEMENTS**

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## APPENDIX 1

### INFORMED CONSENT FORM

1. Title of Study: *Use of Social Media on Health-Related Information among Hospital Staff and Patients in Miri General Hospital*

By signing below I confirm the following:

- I have been given oral and written information for the above study and have read and understood the information given.
- I have had sufficient time to consider participation in the study and have had the opportunity to ask questions and all my questions have been answered satisfactorily.
- I understand that my participation is voluntary and I can at any time free withdraw from the study without giving a reason and this will in no way affect my future treatment. I am not taking part in any other research study at this time. I understand the risks and benefits, and I freely give my informed consent to participate under the conditions stated. I understand that I must follow the study doctor's (investigator's) instructions related to my participation in the study.
- I understand that study staff, qualified monitors and auditors, the sponsor or its affiliates, and governmental or regulatory authorities, have direct access to my medical record in order to make sure that the study is conducted correctly and the data are recorded correctly. All personal details will be treated as STRICTLY CONFIDENTIAL
- I will receive a copy of this subject information/informed consent form signed and dated to bring home.
- I agree/disagree\* for my family doctor to be informed of my participation in this study.

#### **Subject:**

Signature:

I/C number:

Name:

Date:

## Section A: Socio-demographic details

*Please circle the appropriate answer*

Gender : Male Female  
Age (Years) : \_\_\_\_\_  
Ethnicity : Malay Chinese Indian Others  
Educational level : Bachelor Master PhD Others

## Section B: Use of Social Media on Health-Related Information

- 1) Which app(s) do you use to search or share health-related information?
  - a. Youtube
  - b. Medscape
  - c. Lexicomp
  - d. Google
  - e. UptoDate
  - f. Facebook
  - g. WeChat
  - h. Instagram
  
- 2) Have you ever utilized the Internet to look for advice or information related to your health?  
Yes/No
  
- 3) What health-related information do you seek for in the internet? (*You may select more than one option*)
  - a. Signs and symptoms of medical condition(s)
  - b. Medication and/or their side effect
  - c. Drug interactions (Drug/Food/Disease)
  - d. Medical device technique
  - e. Drug administration time
  - f. Other patient's experiences
  - g. Recommendation of medical facility

- 4) In general, how much attention do you pay for health or medical-related topics on media outlets? (Eg. Radio/television/newspapers/magazines)
- A lot
  - Some
  - A little
  - None at all
- 5) In regards to your own well-being, how often do you seek health-related information online? Please mark only one.
- Once a week
  - Once a month
  - Every few months
  - Once or twice a year or less
  - Never
- 6) Do you search online before visiting physician?  
Yes/No
- 7) For which of the following reason(s) would you seek for health-related information?
- |  |        |
|--|--------|
| a. Experiencing new symptoms or a change in your health  | Yes/No |
| b. Being diagnosed with a new health problem   | Yes/No |
| c. Something in the news that you wanted to learn more about   | Yes/No |
| d. Wanting to learn more about the effects of treatment for the cancer or similar illness (es) you had when you were younger | Yes/No |
| e. Dealing with an ongoing medical condition (eg. Diabetes or high blood pressure)   | Yes/No |
| f. Deciding to change your diet or exercise habits   | Yes/No |
| g. Prescribing of new medication, test, or course of treatment   | Yes/No |
| h. Having unanswered questions after a visit to the doctor or clinic   | Yes/No |
| i. Not having time to visit your doctor  | Yes/No |
| j. Being unable to get a referral or an appointment for a health-related problem   | Yes/No |

