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Health Information Seeking Behaviours during COVID-19 among Malay Patients with Hypertension in Selangor

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Abstract

Patients' access to healthcare settings has been restricted to contain the spread of COVID-19, such as altering their health information-seeking behaviours, but this has not been documented among hypertensive patients. This study explored how patients obtain health information about hypertension during COVID-19. Face-to-face and online interviews were employed, and a semi-structured questionnaire was used to guide the interview. Two major themes emerged about the information sources: interpersonal and online. Patients seek health information from family members, healthcare professionals, friends, and online platforms. This study demonstrates that patients continue to seek health information during Pandemic COVID-19 to ensure that their hypertension remains under control.

Keywords: Health Information; Hypertension; COVID-19; Malay

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1.0 Introduction

Soon after the World Health Organization (WHO) proclaimed COVID-19 a global pandemic in 2020, many governments worldwide issued recommendations to their people urging them to take precautions against the disease's spread, including Malaysia. The surge of COVID-19 cases caused the government to enact the Movement Control Order (MCO) from March to May 2020 and enforce the new Standard Operating Procedures (SOP) such social and physical distancing and limit the number of gathering attendees, posing the most significant challenge to Malaysia's healthcare system (Hashim et al., 2021; Muhamad Khair et al., 2021). As a result, healthcare utilization was reduced by almost one-third during the pandemic, with considerable heterogeneity and higher decreases observed among those with less severe illnesses (Moynihan et al., 2021).

Despite the abundance of health education, promotion and intervention initiatives, existing barriers such as limiting access to healthcare facilities results in a continuous increase in chronic disease cases, particularly during the COVID-19 pandemic. Nevertheless, patients with hypertension must continue seeking medical care to manage their blood pressure (BP) (Unger et al., 2020). Besides, there is also a relationship between hypertension comorbidities and COVID-19 infection. Thus, to actively manage their disease, patients may change their health Information Seeking Behavior (ISB) by consulting family members, friends, or online sources for health information in addition to their doctors. Wilson's Information-Seeking Behavior Model categorizes ISB into four categories: first passive attention (such

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as watching television), and others are passive, active, and ongoing search (Wilson, 1997). This model helps to understand the behavioural process that drives patients to seek and obtain health information.

At present, the widespread availability of health information has changed the patients' ISB by enabling them to gain access to a substantial amount of information and play an active role in health management and improve their self-management skills. Health ISB has long been recognized as a method for improving patients' self-management to control hypertension (Dean et al., 2017). Self-management of hypertension encompasses a variety of activities, including self-monitoring and lifestyle changes, and has proven to be a successful and cost-effective way to achieve better BP control (Li et al., 2020).

Health ISB research in Malaysia, particularly among hypertensive patients, is still infancy. Thus, hypertensive patients need to optimize their condition to lower the risk of getting severe effects of Covid 19 infection. Therefore, this study was employed to fill in the gap and explore the health ISB among patients with hypertension. An in-depth understanding of this study on how patients access health information, particularly during the COVID-19 pandemic, would enable the development of successful strategies for delivering vital information to patients. In addition, the findings would help them improve their self-management skills, particularly in improving their health literacy about hypertension self-management (Panting et al., 2021).

2.0 Literature Review

Hypertension is a chronic disease characterized by systolic and diastolic blood pressures exceeding 140mmHg and 90mmHg. The 2019 National Health and Morbidity Survey (NHMS) estimated that 6.4 million Malaysian adults were having hypertension (Institute for Public Health (IPH), 2019). Because hypertension is a 'silent disease' and could lead to other health problems such as stroke and heart disease, the International Society of Hypertension (ISH) emphasizes the importance for patients to ensure that their blood pressure is always well-controlled (Unger et al., 2020). Nevertheless, the report from NHMS showed that only 45% of hypertensive patients have their blood pressure controlled (Institute for Public Health (IPH), 2019). This condition has increased the need to engage patients in self-management activities to help manage their blood pressure (Panting et al., 2021). Self-management strategies include patient education, self-monitoring of clinical data and behaviour (e.g., diet, exercise, smoking, and alcohol consumption), self-titration of medical management, and support for medication adherence according to prescribed regimens (Li et al., 2020). Patients' health ISB is one of several strategies for enhancing self-management activities and reducing the effects of chronic disease.

Many studies were conducted to assess patients' health ISB. Research from 2017 onwards revealed that the Internet is the most patients' favourable source of information. For example, Tan and Goonawardene (2017) showed patients turning to the Internet as their first source of health information due to the proliferation of health information on the Internet. In addition, Jacobs et al. (2017) and Lee et al. (2020) also found that people living in the US use the Internet as the first choice to seek health information, compared to family, friends, health care professionals and traditional media. Also, another study in Kuwait found that the Internet was used as a primary source for obtaining health-related information (Alkhatlan et al., 2019). In contrast, Oedekoven et al. (2019) found that individuals from Germany believed general practitioners (GPs) were the most important source of information for the patients, followed by medical specialists, pharmacists, and the Internet. On the other hand, doctors were the preferred source of information, followed by pharmacists, while the online health sources were not prioritized by most participants (Alduraywish et al., 2020).

Investigating information sources may aid in the development of an effective method of delivering health-related information, assisting any relevant parties in providing concise content that the average person easily comprehends. Due to mixed findings from previous studies and various sources of information available in Malaysia, this study was employed to understand hypertensive patients' health ISB to obtain health information during the pandemic COVID-19.

3.0 Methodology

3.1 Study design

This research was an exploratory study that utilized a case-study qualitative approach. The design was chosen because it helped gain in-depth insight into health information-seeking behaviour. It was flexible and helped address all research questions such as the phenomenon's what, why, and how.

3.2 Study setting

The study was conducted at the UiTM Primary Care Specialist Clinic, located at Selayang, an area in Selangor state, Malaysia. The clinic was chosen because of the high number of hypertensive patients attending this clinic.

3.3 Study population and sampling

Patients with primary hypertension were studied and selected using a purposive sampling approach. Primary hypertension resulted from other than medical conditions. Only patients aged 18 to 49 years old, Malay, computer literate and receiving treatment during pandemic COVID-19 were included in this study. The focus on the Malay race was due to the high cases of hypertension among this group based on the National Health and Morbidity Report 2019. This study was conducted from September to December 2020. Participants were recruited until no new issues emerged from additional respondents. Data saturation was achieved after interviewing 14 participants.

3.4 Data collection and procedures

A total of 14 in-depth interviews were conducted, of which nine were by telephone, two were computer-based calls, and three were through face-to-face interviews. Each session took up to 45 minutes. Face-to-face interviews were conducted in the clinic following the Majlis Keselamatan Negara (MKN) and Universiti Teknologi MARA (UiTM) standard operating procedures (SOP). The phone and computer-based call interviews were conducted at the request of the respondents to make them feel comfortable and reduce the risk of COVID-19 infection. A face validated, semi-structured questionnaire was used to guide the interview. The researcher gave the participants questions and further probes to achieve the objective of the interview (Prolonged Engagement). The face-to-face interviews were audio-taped using Zoom H4N Pro 4-Channel handy recorder, and the Google Meet application was used for online-based interviews. Field notes were taken during every interview to ensure data validity and reliability (Methodological Triangulation). Ethics approval was obtained from Universiti Teknologi MARA Research Ethics Committee (reference: 600-IRMI (5/1/6)), and all participants had been provided informed consent before study commencement.

3.4 Data analysis

Content analysis descriptive approach was chosen to code and categorize the data systematically. Data were transcribed verbatim, and the researchers employed persistent Observation to identify the themes and categories. The data triangulation method was applied to ensure data saturation by comparing the final themes and categories with the original transcript. Two qualified peer researchers reviewed and validated the transcript's final categories, subthemes, and themes (Peer Debriefing). The Consolidated Criteria for Reporting Qualitative Research (COREQ) guideline was followed in reporting this study.

4.0 Findings

4.1 Participant characteristics

Table 1 presents the characteristics of participants. Most participants were male (64%). In addition, six (43%) of the participants were 31–40 years old, whereas eight participants (57%) were 40–49 years old. Thirteen participants (93%) were married, and all had tertiary education and working.

Table 1 Characteristics of the participants (n=14)

Participant	Age	Sex	Marital Status	Level of Education	Status of Employment
01	39	Male	Married	Tertiary	Employed
02	38	Female	Married	Tertiary	Employed
03	39	Male	Single	Tertiary	Employed
04	38	Female	Married	Tertiary	Employed
05	39	Male	Married	Tertiary	Employed
06	43	Male	Married	Tertiary	Employed
07	43	Female	Married	Tertiary	Employed
08	45	Male	Married	Tertiary	Employed
09	46	Male	Married	Tertiary	Employed
10	46	Male	Married	Tertiary	Employed
11	47	Male	Married	Tertiary	Employed
12	48	Male	Married	Tertiary	Employed
13	48	Female	Married	Tertiary	Employed
14	37	Female	Married	Tertiary	Employed

4.2 Health information-seeking behaviour among participants during COVID-19 pandemic

This study explored the health information seeking behaviour during the COVID-19 pandemic. Two themes emerged from the data analysis. Participants sought health information by using two primary sources: interpersonal and online sources (Figure 1). Table 2

presents the themes and sub-themes of the results. Three sub-themes were identified for the interpersonal and online health information sources.

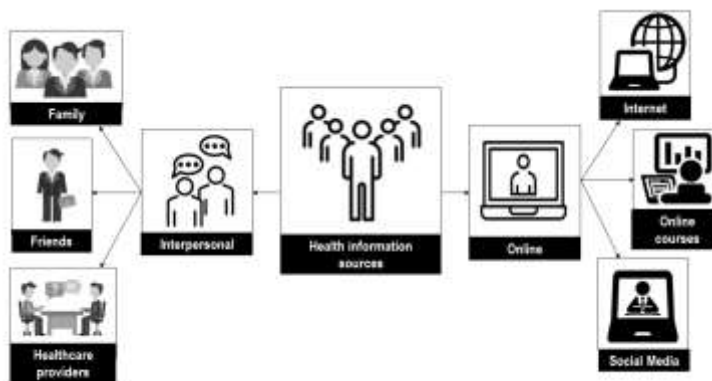


Figure 1 Sources of health information

Table 2 Themes on the health information seeking behavior during COVID-19 pandemic

Themes	Sub-themes	Category
Interpersonal Sources	Family members	Information obtained from family members who are healthcare professionals.
	Healthcare providers	Information obtained from healthcare professionals during medical check-up or follow-up.
	Friends	Information obtained from friends who are working as healthcare professionals
Online sources	Online courses	Information obtained from attending online courses
	Internet	Information obtained from web-browser searching engine
		Information obtained from online videos
	Social media	Messaging application (WhatsApp)
Social Networking Sites (SNS) / (Instagram and Twitter)		

4.2.1 Interpersonal sources

In terms of interpersonal sources, eight participants (57%) used them to acquire health-related information during the COVID-19 pandemic, which can be categorized into i) family members, ii) healthcare professionals, and iii) friends.

Participant referred their family members who are working as healthcare professionals. For instance, participant 10 said, *“I always seek advice or health-related information from my cousins who are pharmacists and my nephews who are doctors. They are still my go-to source for health issues like hypertension. My son is a medical student too. Hence, I have many family members to ask for health information”*.

Another male participant (01) stated that he receives health information regularly from his wife, a medical practitioner.

In addition to seeking health-related information from family, several participants mentioned that they would seek or ask healthcare providers for health-related information. Participant 05 stated that he would seek advice or health information from the physician at the clinic, as quoted: *“Whenever I have a concern or need health advice, I will go to the General Practitioner (GP) clinic. A clinic panel for UiTM employees. It is usually a private clinic.”* [Participant 05]

Another male respondent, Participant 12, highlighted that he usually gains information during clinic appointments with healthcare providers as quoted: *“During my clinic visit with a physician for a health check-up, the doctor would explain everything to me in detail about my health. Other than reading, that is usually how I get more information.”*

Apart from asking family members who work in healthcare, several participants indicated that they also consult with friends who work in healthcare. Participant 03 stated, *“If I had the option, I would contact the doctor in charge of my care. I know many individuals because I also work at UiTM. If I have a problem, I usually text them and ask. However, I do not believe this applied to everyone.”* Participant 05 indicated that he always contacts a friend who works as a physician in a hospital’s emergency department. He stated, *“There were times when I expressed concern about my blood pressure to my friends. I occasionally experience headaches, although my blood pressure is normal. Then he shared some pertinent information with me while also offering some advice.”*

4.2.2 Online sources

This study identified that majority of participants (71%, 10/14) relied on online health information during the COVID-19 pandemic: i) online courses, ii) Internet, and iii) social media.

One of the female participants, who is a healthcare professional, shared that she usually obtains health information via online courses as quoted: *"During the pandemic, I enrolled in some online courses that are required for doctors. The courses cover various topics, including hypertension, diabetes, and many more. As a result, I gained additional knowledge about health through those courses."* [Participant 02]

Ten respondents revealed that they commonly acquire health-related information through web-browser search engines. For example, participant 01 mentioned, *"When I am seeking for health information, I typically type it into Google. Then I will read from any website that appears in the search results. Frequently, I would search using a search engine like Google or YouTube."* Moreover, he frequently searches online videos for recommended exercises suitable for him. Likewise, Participants 05, 10, and 13 prefer to use online searches using the Google search engine. For example, participant 10 said, *"I always perform a random Google search. It is quite beneficial. It is possible to find out about any disease condition. Insert a keyword, and the relevant results will be shown for you to read."* Furthermore, participants 03 and 04 indicated that they always check the Internet first when seeking clarification on a topic. Additionally, Participant 03 claimed that there are always reliable sites on the Internet that are trustworthy enough to read. Similarly, Participant 11 indicated that he primarily uses the Internet to obtain information and then discusses it with his healthcare-related acquaintances.

In addition, Participant 02, who is also a physician, mentioned that she always obtains information online, as quoted: *"We often refer to the government's health website. In addition, the government's patient education website is excellent. Therefore, reading to learn additional information is beneficial and advisable."* She added that nowadays, even though we sit at home, most people have a phone and an internet connection. Hence, it is often simpler to access a website.

4.2.3 Social Media

Several respondents noted that sometimes they acquire health-related information through social media such WhatsApp, Facebook, Twitter, and Instagram. For example, according to Participant 01, sometimes he received health-related information through WhatsApp, a messaging app that allows users to send text messages and voice messages, make voice and video calls, and share images, documents, and other contents. He stated, *"Usually, I will search for information about health at search engine or YouTube. Also, sometimes people share information videos via WhatsApp."* [Participant 01]

Besides that, three out of fourteen participants indicated that they preferred to obtain information through SNS such as Facebook. For example, a female participant (04) explained, *"Since the pandemic began, I have always read postings from the Malaysia Ministry of Health official page."* Also, she shared health information on her Facebook when she came across a post related to hypertension. Moreover, a male participant (05) highlighted that he always looks for health-related information on Facebook. Because of that, more advertisements connected to the same topics appeared on Facebook. Therefore, he will click the advertisement link to obtain additional information.

Additionally, Participant 02 mentioned that in addition to Facebook, she enjoyed reading health information on other social media platforms such as Twitter and Instagram. She explained, *"Our Ministry of Health is active in promoting health and sharing health-related information on these social media platforms including Facebook, Instagram and Twitter."* She mentioned that she preferred to use social media because of its high exposure rate and easy access to everyone.

5.0 Discussion

The result indicated that most patients used online health information compared to the interpersonal approach, although Cutilli (2010) stated that healthcare professionals are the most common and trusted source of information. Participants were more likely to use social media (WhatsApp/ Facebook/ Twitter/ Instagram) to acquire health information and seek recommendations. The result was incongruent with previous studies in which online sources are the most favourable choice among participants (Alkhatlan et al., 2019; Jacobs et al., 2017; Lee et al., 2020; Tan & Goonawardene, 2017). This behaviour could be due to the emergence of digital technology that spurs the use of the Internet (Lee, 2020). Online information is reliable, trustworthy, and easily accessible, as reported by the participants. Also, the COVID-19 pandemic temporarily disrupted the routine and non-emergency medical care access and delivery, affecting patients' access to health information. For instance, some clinic appointments were postponed among non-critical patients with chronic diseases, including hypertensive (Czeisler et al., 2020; Khor et al., 2020). In addition, the participants in this study were employed and possessed a tertiary education which influenced their preferences for health information-seeking behaviour. In contrast, other studies from Germany and Arab found that people preferred to get health information from health practitioners than online sources because they are highly trusted and reliable (Alduraywish et al., 2020; Oedekoven et al., 2019). Patients with low socioeconomic status may struggle to own a smartphone or laptop and access the Internet subscription, which is required to get online health information.

Although patients nowadays prefer online health information and have proven effective in controlling blood pressure (Li et al., 2020), the quality of information should be considered (Ab Hamid et al., 2020). The information obtained by the patients has been identified as a critical component that determines a person's self-management of the disease and influences patients' willingness to engage in a healthy lifestyle or preventative behaviour (Panting et al., 2021). The increasing demands of health-related websites, SNS, and messaging applications contribute to more information related to the disease. However, some information is inaccurate and misleading (Giustini et al., 2018), biased, and obsolete. More importantly, some people may take advantage of promoting their products and falsely claim they can

effectively cure the disease. Ab Hamid and Baderol Allam (2020) reported that some online information is easily understood but less practical. Also, some websites' quality on hypertension was found to be fair (Ab Hamid et al., 2020).

Nonetheless, while most patients make extensive use of online health platforms, face-to-face consultations with healthcare practitioners remain important. Medical advice should be adapted to the person on a case-by-case basis (Unger et al., 2020). Besides, certain health information is only available or must be validated in a healthcare setting, such as blood pressure readings, medication prescriptions, and blood test results. Medical information cannot be generalized to all patients due to the risk of worsening their medical problems. Each patient has unique medical issues that require examination by medically qualified healthcare practitioners. Having a reliable source of health information is critical for establishing a solid foundation of knowledge, especially in light of the current internet and social media revolution (Alduraywish et al., 2020) but should not be considered as a substitute for personalized medical advice from healthcare practitioners (Jacobs et al., 2017).

Given the current situation, in which people are advised not to visit hospitals unless necessary, the management of patients with chronic diseases, including those with hypertension, may be impacted (Murugesan, 2021). Therefore, it is undeniable that using health information online could play a significant role in effectively increasing people's self-management skills. The combination use of interpersonal and online health information could be beneficial to the patients to maintain their blood pressure under control. Therefore, it is undeniable that using health information online could play a significant role in effectively increasing self-management skills. The combination use of interpersonal and online health information could be beneficial to the patients to maintain their blood pressure under control. The growing usage of the Internet for health information indicates the need for health care professionals to understand how to utilize it best to improve health outcomes, especially during this pandemic situation.

6.0 Conclusion and Recommendations

In conclusion, this study found that patients with hypertension sought health information through interpersonal and online platforms. Given the COVID-19 pandemic and the ease of accessing the Internet, most patients opted to rely on online resources. However, this study has several limitations. First, it exclusively includes Malay patients, which may not represent other races in Malaysia. Second, depending on the changes in the healthcare environment, the outcome may be applicable now but not in the future. Third, this study did not examine the patients' socioeconomic status, which is a significant predictor of health ISB. Therefore, future research should focus on post-pandemic COVID-19 and new standards on people's decisions to seek medical care to treat their diseases. Besides, resources to be in the Malay language will benefit more as most health information is in English, especially if there is an issue of language among the Malays. Additionally, a framework for online health information should be explored for development to maintain the accuracy of online health information.

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Paper Contribution to Related Field of Study

It should be noted that, in addition to getting information in-person, the usage of online search engines is becoming increasingly common. Thus, understanding health information-seeking behaviour enables healthcare professionals to devise effective techniques for delivering critical health information to patients, specifically on the management of hypertension.

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