



TITLE:

Factors influencing healthcare-seeking behaviour among Muslims from Southeast Asian countries (Indonesia and Malaysia) living in Japan: an exploratory qualitative study

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BMJ Open Factors influencing healthcare-seeking behaviour among Muslims from Southeast Asian countries (Indonesia and Malaysia) living in Japan: an exploratory qualitative study

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ABSTRACT

Objectives To identify factors influencing healthcare-seeking behaviours and to explore issues with healthcare experiences of Muslims from Southeast Asian countries (Indonesia and Malaysia) living in Japan.

Design Qualitative study.

Setting Kansai area of Japan (Kyoto, Osaka, Hyogo and Nara prefectures).

Participants Forty-five Muslims in Japan from Southeast Asian countries (Indonesia and Malaysia).

Methods Semistructured interviews were conducted by trained interviewers who are Muslims living in Japan. Interviews were conducted in Indonesian and Malaysian languages and transcribed and translated into English. The data were thematically analysed.

Results Four themes were identified: (1) trying to comply with the recommendations of Islam, (2) confusion about healthcare system, (3) improvising an informal support system and (4) language barrier problems.

Conclusion Muslims in Japan have some issues when obtaining healthcare services mainly because of communication issues besides the conflicts to meet their religious obligations. Education and awareness building for the Muslim patients in Japan as well as Japanese healthcare providers are needed to allow smooth communication between Japanese healthcare providers and Muslim patients in Japan.

INTRODUCTION

Migrant health is an important but understudied area in Japan, as it accepts an increasing number of migrants from foreign countries with diverse cultural and religious backgrounds. To maintain a sustainable Japanese healthcare system, it is vital to take into consideration the healthcare needs of not only Japanese but also foreign residents living in Japan. Foreign residents can broadly be categorised into immigrants who moved across the border to a host country intending to settle there permanently, and temporary residents who stay in the host

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ This is the first qualitative study to look into the healthcare-seeking behaviour of foreign Muslims living in Japan.
- ⇒ This study used the theory of planned behaviour as a conceptual framework to provide a complex and comprehensive understanding of Muslim healthcare-seeking behaviour.
- ⇒ Semistructured interviews were conducted with foreign Muslims in Japan from Southeast Asia (Indonesia and Malaysia).
- ⇒ Data analysis was performed using thematic analysis.
- ⇒ This study included only Muslim participants from Indonesia and Malaysia who were living in Japan at the time of the study, which limits the generalisability of the reported findings.

country for some time to return to their home country later. Japan has a conservative immigration policy so that the percentage of foreign residents is at about 2% of the Japanese population or 2.8 million people. Among them, slightly more than half or approximately 1.3 million are temporary residents, who are temporary workers, students and their families. The others are immigrants who are classified as permanent residents, who make up about 1 million as of 2021.¹ Among the permanent residents in Japan, about 140 000 are spouses or children of Japanese citizens. Some 500 000 permanent residents hold a unique status called special permanent residents. Their ancestors are mainly from China, Taiwan and the Korean peninsula and settled in Japan before World War II. As they had assimilated in Japan and continued to live in Japan for three or four generations, it is not appropriate to classify them in the same manner

as newly moved first-generation immigrants. As such, the migrant population in Japan has a unique migrant composition, unlike other developed countries such as North America and Europe.

The experiences and healthcare utilisation pattern of migrants in developing countries with high volume of immigrants such as USA, Canada and Europe are addressed in previous studies. In the USA, a study found that immigrants who recently arrived in the USA are less likely to have contacted physicians in the previous year, compared with native-born or immigrants who lived longer terms.² In Canada, where immigrants make up more than 20% of the population, it was reported that the healthcare service utilisation patterns of the immigrants are different from those of Canadian-born patients.³ Immigrants in Canada tend to have a language barrier which makes it difficult for them to access healthcare. Moreover, inability to integrate into the settled community, lack of employment or education and poverty were identified as causing them to have difficulty accessing healthcare. Therefore, the need to improve the health responsiveness of primary care in Canada was highlighted to meet the need of the immigrants. In Europe, where the migrant population makes up almost 9% of the total European population, it was reported that migrants are more susceptible to the risk of diabetes, communicable diseases, maternal and child health problems, occupational health hazards, injuries and poor mental health, compared with non-migrants.⁴

In this study, we focused on Muslim migrants in Japan, who may face difficulties and problems when visiting local medical institutions, due to differences in healthcare culture and values. It was estimated that there were about 200 000 Muslims in Japan in 2018, of which most of them were foreign temporary residents and their families.⁵ When these Muslims in Japan visit hospitals, they prefer to maintain their religious values as Muslims and receive medical services that are halal (permissible by Islam). However, there are only a few hospitals in Japan which publicly claim to provide halal food for hospitalised patients. There is no guideline for Japanese healthcare providers concerning how to communicate with Muslim foreign patients. Furthermore, in case of acute symptoms such as heart attack, immediate rescue measures such as the operation of Cardio-Pulmonary Resuscitation (CPR) are needed, but in the case of Muslim women, it is forbidden for men to touch Muslim women, and the cover must be used to apply CPR devices on the chest, which may cause a delay in providing care. Therefore, the Muslim patients in Japan are a medically vulnerable group with limited information and opportunity to satisfy their healthcare needs in harmony with their religious beliefs. To the best of our knowledge, there is no previous study that focuses on the healthcare experience of Muslims in Japan. Therefore, it is important to investigate the factors influencing healthcare-seeking behaviour among Muslim residents in Japan and describe the concerns and problems that they face.

Study objectives

The primary objective of this study is to identify factors influencing the healthcare-seeking behaviour of Muslims in Japan. A secondary objective is to explore issues among Muslims in Japan concerning their healthcare experience in Japanese medical institutions.

METHODS

Study design

This is a qualitative study that was conducted by conducting interviews with Muslims in Japan from two Southeast Asian countries (Indonesia and Malaysia).

Conceptual framework

This study used the theory of planned behaviour (TPB) as a conceptual framework.⁶ In TPB, three factors; attitude, subjective norms and perceived behavioural control are considered as the basis for a person's intention to develop ideas about his or her healthcare-seeking behaviours. We elaborated the main characteristics of Muslim healthcare-seeking behaviour in Japan, according to these three factors in TPB.

Participants and recruitment

The recruitment was conducted by an opportunistic sampling method.⁷ The participants were contacted by one of the three research assistants who are also Muslims in Japan from Southeast Asian countries (Indonesia and Malaysia). They contacted the candidate participants who met the inclusion criteria of this study, which are: those who are nationals of either Brunei, Indonesia or Malaysia. These countries were selected as these are the countries in Southeast Asia in which the majority of the population is Muslim. We did not include Singapore, as the Muslim population in the country is a minority. Furthermore, those who are foreign Muslims and legally permitted to reside in Japan; and those who are between 18 and 80 years old at the time of the study were included in this study. The potential participants were contacted via email or Social Networking Service (SNS) such as WhatsApp and LINE by sending a brief message to the SNS accounts of several Muslim students and religious groups in the Kansai area of Japan. We informed the potential participants about the research, including the aims and inclusion criteria, and those who were interested in participating replied. The group members ranged from about fifty to several hundred people.

Data collection

Data were collected by conducting interviews with the participants. Interviewers were guided by a semi-structured interview guide, which is available as online supplemental document 1. The interviews were conducted via face to face and via online means using a face-to-face interactional platform (ZOOM). The interviews were recorded with permission from the participants. In case of face-to-face interviews, the audiorecorder was used. In the case of

online interviews, the record function of the Zoom platform was used.

Data analysis

The data were transcribed verbatim in their respective Malay local languages of Indonesia or Malaysia and translated to English by research assistants who are native in their local language and highly fluent in English. The research assistants received training on how to transcribe by the primary researcher before the start of the transcribing work. All transcribed and translated documents were checked by the primary researcher and corrected for grammatical and type errors. For data storage and management, NVivo V.11 (QSR International) was used.

For data analysis, a thematic analysis method was used.⁸ The initial codes, subthemes and themes were created by the primary researcher (AK) by searching for the salient aspects using a combination of inductive and deductive reasoning, which are in alignment with the research questions of this study. Five researchers (MD, DK, ID, HR and TN) reviewed the initial codes, subthemes and themes and all researchers discussed to finalise the themes, which is available as online supplemental document 2. After finalising the themes, the researchers discussed the applicability of these themes to the conceptual framework.

Rigor

The trustworthiness of the data was assured by investigator triangulation.⁹ Six researchers discussed the results and discrepancies were resolved through a series of discussions. This was adopted as the quality control of the results of this study, to confirm the data among multiple researchers to improve the credibility of the analysis.¹⁰ This study follows the items in the checklist of Standards for Reporting Qualitative Research.¹¹

Patient and public involvement

In this study, we did not have active involvement of the patients and the public in terms of the design and

implementation of the research. Some of the participants were involved in the recruitment of other participants by informing this research to peer Muslim community members who lived in the Kansai area of Japan. The questions in the interview guide were prepared by hearing the voices of the Muslims in Japan via informal conversation with them, and by having several consultations with three research assistants who were foreign Muslims living in Japan. In addition, we studied academic research targeted at the healthcare of foreign Muslims living in other countries.

Researcher characteristics and reflexivity

The primary researcher is a female Japanese researcher who had lived in Malaysia for 1 year and had previous exposure to Islamic culture by studying various public health issues in Malaysia but not Muslim. Coresearchers are one male Muslim from Brunei, one female Muslim from Malaysia, one female Muslim from Indonesia one male Singaporean and one male Japanese.

RESULTS

Thematic analysis identified four salient themes: (1) trying to comply with the recommendations of Islam, (2) confusion about healthcare system, (3) improvising an informal support system and (4) language barrier problems. The relationship of each of these themes is presented by referring to the TPB as a conceptual framework. Figure 1 shows the schematic diagram of each theme in alignment with the TPB.

Participants' characteristics

In this study, a total of 45 foreign Muslims who live in the Kansai area of Japan participated. The data were collected during the 8 months from August 2020 to March 2021.

Initially, we tried to have diversity in our sample by maximising the variation of the occupation of the participants,

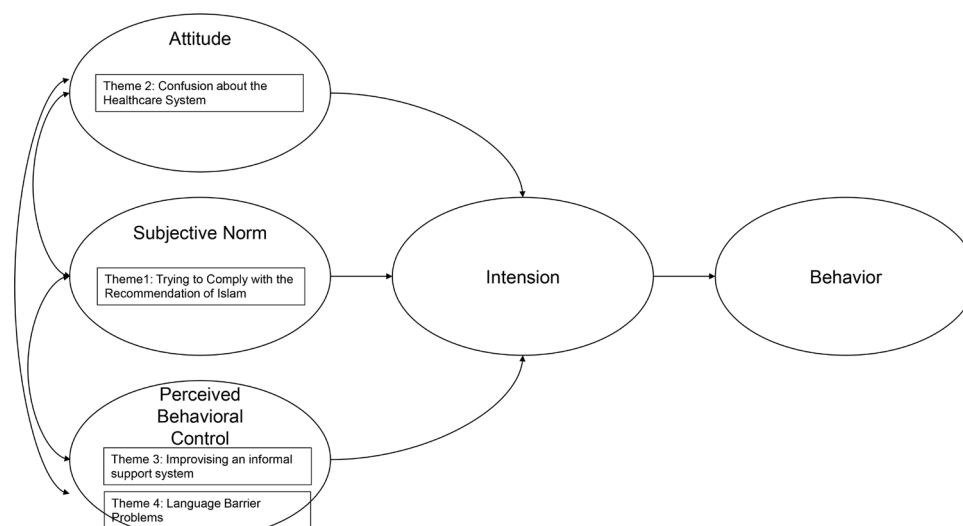


Figure 1 Schematic diagram of themes in relation to the theory of planned behaviour (TPB).

Table 1 Participants' characteristics (n=45)

Characteristics	Numbers
Age in years	Range: 19–57 (mean: 32.2)
Female	29 (64%)
Occupation	
Students	17 (37%)
Housewives and dependents	13 (29%)
Full-time employees	9 (20%)
Part-time employees	4 (9%)
Postdoctoral researcher	1 (2%)
Business owner	1 (2%)
Nationality	
Indonesians	31 (69%)
Malaysians	14 (31%)

but as we were recruiting, many students voluntarily agreed to participate in this study. It may be because, in the Kansai area, there are many universities, and many of the Muslims living in this area are students and their family members. In addition, those who work full time are busy and we assume that they decided not to take time to partake in the research, although the invitations were sent to all members in the group.

Table 1 presents the sociodemographic characteristics of the participants. The information was obtained by conducting an online survey either before or at the time of the interview. Participants completed the online survey by filling in information such as their nationality, legal status in Japan, occupation, age and gender. All of them were legally permitted to live in Japan.

Healthcare-seeking behaviour of Muslim patients in Japan

In this study, four themes were identified concerning the healthcare seeking behaviour of Muslim patients in Japan.

Theme 1: trying to comply with the recommendations of Islam

Most of the participants were trying to comply with the recommendations of Islam when receiving medical care at the clinics and hospitals in Japan. Especially for Muslim women, their primary concern was to be treated by same-sex doctors and nurses, as it is mandated by their religion. To make sure, some of them called the clinics and hospitals beforehand and made reservations with a female doctor. Generally speaking, although having a preference for female doctors is not a unique phenomenon only to female Muslim patients, for female Muslims, this is considered as a salient religious issue to fulfil their religious obligations when trying to receive healthcare in Japan.

I called the clinic first, asking if there is a female doctor before making an appointment. (No. 15, Indonesian, female, Part-time employee.)

They were worried about keeping their Aurat, which is a concept in Islam regarding humility in showing the opposite sex certain body parts. This is no exception for this obligation when being treated at clinics and hospitals in Japan. However, given the situation that the ratio of female doctors in Japan is low, at about 20%, they often encounter difficulties to be seen by a female doctor.

Aurat problem. I will feel uncomfortable if I have to show some private parts of my body. I once had back pain, but because I was afraid that I would be asked to take off my clothes (at the clinic), I canceled to see the doctor. (No. 19, Indonesian, female, university student.)

They were referring to the concept of exigency (Darurat) when same-sex doctors, halal medications and foods were not available. According to Islam teachings, some flexibility is allowed when in crisis, especially when it is about safety and a matter of life and death. It applies to a situation when Muslims need to receive healthcare to save their lives or improve their health.

I think there are some Muslims who are particular... they will not take anything non-halal even during sickness. They will not consume anything doubtful or syubhah (questionable or dubious). But if I am sick or in any darurat (emergencies or unexpected, especially dangerous happening or situation) and the medications are needed, it is not much of a concern as long as I am cured. (No. 43, Malaysian, male, University student.)

There is another concern over the ingredients of the medicine. As some types of medications for oral intake contain porcine-derived ingredients or alcohol, Muslim patients tried their best to avoid them. However, if they could not obtain enough information about the ingredients of the prescribed medicine, they were worried. According to the participants, they were asking the healthcare providers not to prescribe the capsule type of medicine, as they know that the gelatin used in the capsule is often produced using animal-derived raw materials, which is considered as not permissible in the Islamic religion but often without an alternative.

It depends on the beliefs we hold as Muslims. For example, about the medicine with ingredients from pigs, if there is no other alternative, I think I can't help but consume it for my own health and safety. I heard a lot of the ingredients come from the pig because it's so cheap. Maybe in the future, there will be more drug choices made from safer ingredients for Muslims at competitive prices. So, if the medicine is very important for our health despite the ingredients, I will consume it anyway. (No. 16, Indonesian, University student.)

While some of the participants believe that if the halal version is not available, Islam allows the consumption for the sake of treatment or to cure a disease, but other

participants find it still difficult to accept them. Although alcohol can be found in some types of medicine as an inhaler for asthma and respiratory symptoms, as well as some cough medicines, most of the participants were not aware of the fact and sometimes just accepted in taking these medicines, by considering the situation as an exigency.

In my opinion, it is permissible because that alcohol is not from Khamr (Arabic word for intoxication, defined as alcoholic beverages, liquor. In Islamic jurisprudence, it refers to certain forbidden substances, and its technical definition depends on the legal school), but it is from pure alcohol for industry, so that's okay. (No. 24, Indonesian, female, Housewife.)

Some of the participants mentioned that, often, it is uncertain whether the medicine that they were prescribed at the clinic and hospital is halal (permissible) or not, according to what is specified by their religion. This is due to a lack of information and understanding about the raw ingredients of the medicine. Most of the participants mentioned that the use of alcohol for disinfection purposes, when used to clean the skin surface and not for consumption, is permissible, according to their religious obligations.

I just took it (medicine) because at that time I felt sick and didn't have to think about whether it was halal or haram, only recently did it come to my mind to find the information. In my opinion, basically, because Japan is not a Muslim country, so it's no wonder they don't understand the halal haram in medicines. I think that regarding the halal haram of medicine in Japan, maybe I am the only one who is concerned, other Malaysians may not think the same as me, they will have different views from me, and maybe many are not concerned. I think many are not aware of the issue of the fine line between halal and haram. (No. 10, Malaysian, female, Part-time employee.)

Regarding food during hospitalisation, Muslims have many restrictions. They are prohibited to consume porcine products. In addition, they are also prohibited to consume animal meat, that are not slaughtered according to the Islamic way of processing. As it is very rare to find a hospital in Japan that serves halal food for inpatients, Muslim patients need to make a request to the hospital to avoid serving them meat dishes. In addition, Japanese seasonings such as miso, mirin and soy sauce often contain alcohol as preservatives.

And after that, I was hospitalized after I gave birth to my first child. I was worried about the food because they could not provide any halal options. I also could not rely on my husband at that time. So, we told the hospital that I could not eat non-halal chicken or beef, but seafood is OK. I added any food with alcohol like soy sauce, mirin, also animal-derived products like gelatin to my diet restriction, and when they

see the list went on and on, they were like so astounded. I might say that they only know that Muslims do not eat pork, but actually, we have a lot of things to be added to the list. The hospital said they would try their best to provide what we asked. So, I kind of believed what they said, I tried to convince myself that the food would be fine, and somehow, I let God do the rest. (No. 11, Indonesian, female, Housewife.)

There was another concern for the Muslims regarding their need for prayer space inside the hospital. Sometimes, when a patient visits a tertiary hospital for an outpatient visit, they may need to go through a series of tests. Due to a long waiting time, they need to stay inside the hospital building for a long time. The Muslim patients and their accompanying Muslim family and friends need a space to pray inside the hospital. However, most of the time, it is difficult to find such a space. They wanted to ask nurses and clerical staff but often hesitated to ask, as they were worried that they would bother their busy work. Many participants stated that it would be convenient if such a prayer space is available inside the hospital. The issue is to perform wudhu (ablution) as part of the praying process. If there is no attached bathroom in the inpatient room as in a single room or for those Muslim patients in the open ward, using the shared bathroom may displease other users since the floor would be wet when washing legs in the wudhu procedure.

When I was hospitalized, I didn't think there were any prayer room facilities there. If my husband and I travel to a place where there is no prayer room facility, we can do praying anywhere as long as we don't bother the others. I had the experience of being reprimanded by a security guard while praying. Of course, he didn't have any idea that during prayer we can't talk to someone else. So, I canceled the prayer to explain to the security guard, and later on, I repeated the prayer. In the clinic, it's a bit difficult to request a place to pray. If it's in a large hospital where we have to wait in the queue, I think there is a need to have a place for prayer. (No. 14, Indonesian, female, Housewife.)

Theme 1 (trying to comply with the recommendations of Islam) can be explained as a subjective norm of the Muslims in Japan, when referring to the TPB as a conceptual framework. For Muslims, it is considered normative within their religious standards to be examined by same-sex doctors and healthcare providers, receiving halal medicine and food during outpatient visits and hospitalisation, and find prayer space within the hospital buildings. Therefore, these factors affect their decision-making when receiving healthcare.

Theme 2: confusion about healthcare system

Most of the participants compared Japanese healthcare with those of their home countries, Malaysia and Indonesia, respectively, and highlighted the differences in

medical systems. In Malaysia, a participant mentioned that diabetes medications can be purchased directly at a pharmacy counter with the prescription document from the clinic. However, in Japan, a patient needs to visit the clinic if they would like to receive additional medicine. Other participants highlighted differences in the price of medicine and healthcare in Japan and Malaysia, noting that the cost of medical fees at a public hospital in Malaysia is almost free. It is due to the different policies of subsidising healthcare costs in each country. It is also due to the difference in the price of the commodities in general. Another mentioned topic was the difference in the frequency of performing medical tests such as blood and urine tests when visiting for a routine health check for pregnancy.

If we go for treatment in a hospital, the treatment fee, I think, is expensive compared to Malaysia. With the subsidy, the payment is 30% of the actual cost. With the doctor's consultation and medicine prescription, it generally costs about 2,000 yen. Compared to Malaysia, I think it is expensive because, in Malaysia, almost everything is subsidized. But in Japan, just imagine those without insurance. It will probably cost up to 10,000 yen. But in terms of the Japanese rate, 2,000 yen is like 20 ringgits (Malaysia). So, for me, per the salary, it is okay. It is expensive compared to Malaysia. But if the living expenses and the amount of student scholarship or salary is received, it is quite affordable. (No. 48, Malaysian, female, full-time employee.)

Many of the participants mentioned that they favour buying medicine in their home country and bringing it to Japan. They take medications at home when they become sick, rather than visiting clinics in Japan. For such symptoms as common cold, fever, stomachache and fatigue, they are accustomed to taking the familiar brand of medicine. Rather than buying a new and unfamiliar medicine, they prefer those that they know. Most likely, they cannot read the ingredients as it is in Japanese.

We brought our own medicines from Malaysia when we first arrived here. Those are much more convincing, like the Panadol that are confirmed halal. And then 'Gaviscon', a different type of medicine for any possibility of illness. Stomach pain or muscle pain, we also brought those medicines from Malaysia. That is why we did not feel any difficulties because we rarely become sick, thank God. (No. 32, Malaysian, female, post-doctoral researcher.)

There was another complaint from some Malaysian participants that they were not satisfied with the opening hours of clinics in Japan. In Japan, clinics are generally open in the morning from 9:00 am until noon, and then there is a break time in the afternoon after which the clinics reopen at around 16:00 or so. Opening hours vary slightly among clinics, so the patients need to obtain information beforehand about the opening hours of each

clinic. This is common sense for the Japanese, but seems surprising for Muslims living in Japan, especially when they compare with the opening hours of the government clinic, which is open 24 hours a day.

To improve on the service? For one, time of operation. Maybe Japan can increase the operation hours, just like Malaysia or similar countries. And then for an emergency, receiving emergency cases (during non-operating hours). (No. 21, Malaysians, female, part-time employee.)

Some participants felt the need to receive emergency room (ER) care when experiencing sudden changes in their health conditions, such as unexpected high fever or injuries, especially during the night. However, they did not know how to call an ambulance. Some participants thought that it would cost a lot when they need to use an ambulance service, so they intentionally used public transportation to get to the emergency department and visited ER without prior notice. In Japan, most emergency cases are accepted by ambulance and the ambulance service is free of charge. It is rare to find a patient visiting ER without using an ambulance. In addition, some of the Muslim patients did not know how severe their own condition was and used an ambulance when they had a relatively high fever and ended up not receiving any medical care as there was no need for specialised care at the ER in such cases. This created a sense of distrust towards Japanese healthcare as they thought that they were not treated fairly, or that their requests were not heard because they are foreign residents. Rather than visiting the ER, they were advised to visit clinics at regular opening hours.

The first time that I experience an ambulance was in Japan. So that's... yeah, and I was escorted to the emergency room in Japan, the thing is, quite surprised after my experience with the hospital. ...if you talk about the Muslim part... for me, if you don't, you cannot handle the... you cannot help yourself first, for halal or not, it's a problem. So, it's like... we cannot (get the) service, we don't know what happens to your body, that is the first thing. And second is that after that you don't know what happens to your body, they are gonna tell you, 'Oh, you are finished (with the checking). You can go home. There is your bill. (No. 12, Indonesian, male, full-time employee.)

In some cases, there were some panic situations. When a child had a relatively high fever with short breaths, a Muslim mother got panicked and rushed to a paediatric clinic, seeking immediate medical treatment. She was only told by the doctor that it is normal for a baby to have short breaths, and she was embarrassed that she visited the clinic with a panic response. In another case, a Muslim patient was suffering from a psychological disturbance like homesickness and had a panic attack and asked for emergency care. He was sent to the hospital by ambulance, with the help of Japanese colleagues, but ended up knowing that there was no special health problem.

The big one was an incident in the bathroom, I fell and something tore my eyelid, there was a blood-bath, I was very shocked, and I asked my Indonesian neighbor to accompany me to find ER. We walked to the nearest hospital, where my friend had been to. Nobody in the hospital understood that we needed an emergency room. It turned out that the ER was still closed that morning, it was a large hospital though. The receptionist suggested just waiting for a doctor instead at 9 AM and asked us to start the registration process. When I went to the clinic it wasn't difficult to communicate, I still can use my basic Japanese, but when an accident like that happened, there was a language difficulty to explain what happened in detail. (No. 26, Indonesian, female, university student.)

It was noteworthy that some participants considered it vital to evaluate the situation before making requests to the doctors and nurses in the clinics and hospitals in Japan. Since they are not in their home country, they are aware that they need to adjust to the commonly conducted medical procedures. Others have a strategy to try to observe the responses of the doctors and nurses if they are willing to oblige to the request of Muslim patients. They sometimes endured and become silent rather than expressing their wishes as Muslim patients, to ask specifically for a female doctor. There was another statement that they do not feel good if they sense that Japanese healthcare providers feel guilty when they can't meet the needs of Muslim patients, such as providing them with halal inpatient food.

Personally, I would evaluate the situation (before asking for a request). Try to observe if they (hospital or clinic personnel) are willing to oblige to our request, or during the registration when they asked if we have specific requests. But in case if I am assigned to female doctors or nurses, for example, like my previous medical checkup. Frankly, I had to take off all of my clothes because they wanted to thoroughly check my body. The nurses were all female at the time. (No. 22, Malaysian, male, full-time employee.)

Theme 2 (confusion about healthcare system) can be explained as Muslims' attitude towards their healthcare-seeking behaviour in Japan, when referring to the TPB as a conceptual framework. Attitude is defined as 'the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question'.⁶ In this study, we found that Muslims in Japan were often confused when using healthcare in Japan. Overall, they often encountered unexpected things when receiving healthcare that led to their unfavourable evaluation of the Japanese healthcare. However, some of them had a mindset of evaluating the situation cautiously.

Theme 3: improvising an informal support system

Participants in this study tended to value information from Muslim friends who are living in the same community.

They have a group contact using SNS or LINE messages and exchange information among themselves regarding which clinic is good and what was their experience when they visited a specific clinic or hospital near where they lived. Muslim patients rely heavily on this type of word-of-mouth information when deciding which clinic or hospital they want to go to. They also actively ask their peer friends for hospital information, such as whether they have a female doctor or English-speaking doctor in a specific clinic. They improvised and created an information support system among the peers to help each other.

Our method of choosing (clinics and hospitals) is firstly based on suggestions or inquiries from other (Muslim) people, because both of us (the participant and his wife) are not very picky, or too demanding. We will ask (Muslim) friends which hospital is mostly patronized by foreigners. And then there is the recommendation by kindergarten teachers. Even the children's (daughter and son) kindergarten has its own clinic recommendation. (No. 22, Malaysian, male, full-time employee.)

Those who are not good at speaking or understanding Japanese, often visit the clinic, accompanied by Muslim friends who are fluent in Japanese. The Muslims in Japan are helping each other when they need to visit clinics and hospitals. Overall, Muslims in Japan improvise and create an informal support system, making do by sharing information about clinics and hospitals among Muslims. They extend support to each other, as they believe that they can trust Muslim peers better than local Japanese friends, since they share the same religious values.

That one time, it was her husband, who was down with appendicitis. So, he was in pain at home, but I didn't help him directly, just in terms of talking to the ambulance which arrived and dealing with which hospital he will be sent to. So, the ambulance (attendant/officers) could not speak in English or Malay, so I helped by translating into Japanese. The second time I was accompanying a friend, who injured her leg, to get treatment and consultation at the hospital. The third time was when I accompanied a friend to be admitted for Tuberculosis. That's it. (No. 25, Malaysian, female, university student.)

Theme 3 (improvising an informal support system) can be considered as perceived behavioural control when referring to the TPB as a conceptual framework. In need of satisfying their healthcare needs, Muslims were creative in improvising a mutual healthcare support system informally. They were able to collectively create shared opportunities and resources among the Muslim community in Japan, by sharing clinic information and helping each other as informal medical translators.

Theme 4: language barrier problems

The participants in this study generally preferred English-speaking doctors and nurses. Although some of them

stayed in Japan for several years, most of them were not fluent in Japanese. Especially when talking about their health conditions and listening to the explanation of the doctors regarding the diagnosis and treatment procedure, they wanted to be told and communicate in English. However, many doctors and nurses in Japan are not good at speaking English. Some of the participants sought specifically those clinics where it was known from other Muslim's experience that the doctors speak good English. Due to the language barrier, they often encountered problems at hospitals. One of the most often claimed problems was the difficulty that they encountered during registration. While some clinics and hospitals provided registration forms in English, the majority only provided documents in the Japanese language. Muslim patients who do not understand Japanese tried to understand the contents by looking up words using Google Translate and writing their responses in English. The problem is more serious when miscommunication occurred with the doctors due to language barriers. Some of the participants stated their wish to ask questions to the doctors in English until they felt satisfied to clarify their uncertainties and worries, but they were not able to do so due to their limited capacity to communicate in English. For others, they felt that their illness was not adequately diagnosed, as they had their views of suspected diseases in mind, but the doctor did not diagnose accordingly.

One of the major problems was the language barrier because they didn't have any translators or volunteers helping me to register. You know, there are several forms you are required to fill out for every hospital visit, all are in Japanese. I found it very difficult to read kanji (Japanese characters), while their English was not very good either. I had trouble reading Japanese, and they also had a problem translating them for me, so I can't help but call my husband, and he had to spare his time to accompany me during his working time. So mostly, we asked for help from nurses who can speak English. That was my first difficulty. The second thing was about the preparation of the nyuin (hospitalization), quite a lot of paper works were given. As for the facilities and all kinds, everything was very good. (No. 18, Indonesian, female, housewife.)

Those who had difficulty even communicating in simple Japanese preferred to ask for the support of a professional medical translator. In some of the hospitals, such service was available for free. On other occasions, the Muslim patients asked their Muslim acquaintances who can speak Japanese for help by providing a small fee. Muslim patients think it is vital to inform what their health concerns are by using a translator for communication, so such an arrangement is considered necessary. On the other hand, the disadvantage of using the translation service is that, for some of the hospitals which provided the translation service, it was not available every day but only on certain days, so the patients needed to adjust the days when they visit the hospital, according to when the

medical translator was on duty. For others who wanted to be flexible when visiting clinics and hospitals, without being restricted to when the medical translator was on duty, they used machine translation, such as Google Translate, when communicating with doctors and nurses. Only a few of the hospitals provided online translator services, where they used PC or electronic devices to connect to the medical translator who is working from a remote office, during the outpatient consultation.

When I got nyuin (hospitalization), the main problem was halal food. Initially, the doctor advised me to bring home food, but after asking a friend who had given birth in the same place, she suggested I talk to the nutritionist. I asked the nutritionist to have a special meal or Muslim meal like the one they gave to my friend. Because they do not understand why Muslims need halal food, we still have to explain some foods that are not allowed for Muslims as detailed as we want, such as pork, alcohol, non-halal meat, etc. Therefore, I declared to the nutritionist that I could not eat certain foods. It took up to 30 minutes to explain it all. I didn't speak Japanese and the nutritionist couldn't speak English, so I brought a translator with me at that time. From the beginning of pregnancy check-ups to the time I delivered my baby, I was always accompanied by a translator from X city for free. They helped me a lot to communicate about getting to know about hospital procedures, diet restrictions, and concerns about medications, thank God. (No. 14, Indonesian, female, housewife.)

Theme 4 (language barrier problems) can be considered as perceived behavioural control when referring to the TPB as a conceptual framework. Unlike expectations of the Muslims in Japan, most of the Japanese doctors and healthcare providers cannot explain well in English. This created a sense of frustration on the side of Muslim patients in Japan when communicating with the Japanese healthcare providers. On the other hand, some of the Muslims behaved adaptively by asking their friends to be a translator, or using machine translation for communication.

DISCUSSION

In this study, we aimed to identify factors influencing healthcare-seeking behaviours of Muslims from Southeast Asian countries (Indonesia and Malaysia) living in Japan. We also aimed to explore their issues regarding their healthcare experiences.

We found that the Muslims' attitude when using Japanese healthcare was generally favourable, meaning they were successful in obtaining the type of healthcare that they needed. At the same time, they also encountered some unfavourable conditions. Muslims were not able to fulfil their specific needs related to complying with the Islamic religion while receiving healthcare in Japan.

For example, it is important for Muslims to be examined by same-sex doctors and nurses. The importance

of gender concordance care regarding the healthcare of Muslims was highlighted in other studies conducted in the USA.^{12 13} In these studies, it was recommended to provide cross-cultural training to the healthcare providers to reduce their stereotype biases and uncertainties about the cultural and religious aspects of Muslim patients.

Muslim patients in this study also preferred to obtain more information about food during hospitalisation and prescribed medications, specifically whether they are halal or not. The importance of halal food and medicine for Muslim patients were described in other studies which elaborated that misunderstanding may occur between Muslim patients and healthcare providers when healthcare providers do not fully acknowledge that Muslims are keeping their religious faith when making specific and detailed request to exclude certain food items from their meal during hospitalisation or not to prescribe certain medications that is not halal. Some studies suggested the importance of including halal medicine or pharmaceutical contents in pharmacy and medicine undergraduate curriculums.^{14 15} While this would be relatively easily implemented in those countries where Islam is the predominant religion, it would be a challenge for non-Muslim countries.

Muslim patients in this study also wished for a prayer space inside the clinics and hospitals. Previous studies also addressed the difficulties for Muslims to meet the obligations of prayer within a healthcare facility in Australia.¹⁶ As some of the Muslim patients believe that by continuing praying, they could alter their fate regarding their illness, so in this aspect, prayer is an essential component of meeting their religious faith while receiving healthcare.¹⁷ Japanese healthcare providers generally would not have such information and knowledge on halal food or medications, or the fact that Muslims need to pray many times a day, as there is no demand for such information when dealing with Japanese patients. If the Muslims knew that these services are available before visiting clinics and hospitals, they could receive healthcare without worry. On the opposite side of the same coin, Muslims in Japan may refrain from or postpone visiting clinics and hospitals due to a lack of information. Regarding the availability of female doctors in Japan, it is reported by the Organisation for Economic Co-operation and Development (OECD) that the rate of female doctors in Japan is the lowest among the OECD countries, at 22% as of 2019.¹⁸ This is not easy to change in a short term. However, this study revealed that it is important for Japan to take seriously to increase rate of female doctors to meet global standards. It might be a feasible first step to provide accessible information in English regarding which clinics and hospitals have female doctors on duty. With respect to information about halal food and medications, it is necessary to provide information for healthcare providers about dietary guidelines for Muslim patients during hospitalisation.

For halal medications, a feasible first step for Japanese healthcare providers could be to check which medications contains alcohol. Awareness building among Japanese healthcare providers is necessary to educate

Japanese healthcare providers that not only for drinking purposes but for medical treatment purposes also, some Muslim patients, if given a choice, will prefer to avoid medicines that contain alcohol. Although flexibility in Islam is allowed especially when in emergency or crisis and the options are not available in healthcare, the participants of this study were struggling and trying their best to comply with their Islamic obligations as much as possible.

From the viewpoint of health system responsiveness, the degree to which the healthcare system is responding or trying to respond to the needs of the patients, Japanese healthcare is facing some challenges when accommodating the needs of foreign patients, including Muslim patients in Japan. It was revealed in this study that the healthcare needs of Muslims in Japan are something that may not be recognised by many Japanese healthcare providers. Due to the small size of the Muslim population in Japan, their requests are not fully acknowledged by the Japanese healthcare providers, thus they are in a vulnerable situation, which may lead to inadequacy or delay in receiving healthcare support.

At the moment, there are no organised efforts from the Japanese healthcare providers' side to further investigate this issue. However, those Japanese healthcare providers who are dealing with Muslim patients on an individual basis may experience difficulties when they face unfamiliar requests from Muslim patients. According to a study that reviewed existing knowledge of healthcare responsiveness, it is crucial to recognise both people and health systems sides of the interaction to enhance the conceptualisation of healthcare responsiveness.¹⁹ Therefore, it is important to educate both Muslims in Japan and Japanese healthcare providers and empower them so that the interaction between them would proceed smoothly.

We revealed that some Muslims in this study had rigid and fixed ideas about what type of healthcare services they preferred to receive, based on their previous healthcare experiences in their home country of Indonesia and Malaysia. Because of their preconceptions about the ways in which they wanted to be treated in the healthcare setting in Japan as similar to what they experienced in their home countries, they were confused when experiencing the culturally different medical system in Japan. Especially for Malaysian patients in Japan, there were some complaints about the opening hours of the clinics in Japan. Compared with the government clinics in Malaysia where they accept patients anytime for 24 hours, Japanese clinics are generally only open during business hours. Without knowing how the healthcare system varies according to each country, Muslim patients may feel some inconvenience to adapt to the healthcare system in Japan. Other participants mentioned that while they were able to obtain prescribed medications at the pharmacy in their home country, it is not possible in Japan. Due to these differences in how healthcare is provided in Japan and their home countries, they may be frustrated.

The importance of cultural factors in healthcare, as highlighted by Flores, is described as the combination

of normative cultural values and personal experience and perceptions.²⁰ Flores recommends that healthcare providers may be required to adopt culturally sensitive approaches to patients by listening to the patient's beliefs when dealing with patients who have different cultural backgrounds. While it is not so easy to change Japanese healthcare systems in the short term, it may be good to empower the Japanese healthcare providers by enabling them to communicate in a culturally competent way, to be sensitive and non-judgemental with Muslim patients in Japan. This may alleviate some of the frustrations that Muslim patients in Japan may encounter in the process of receiving healthcare. In addition, some of the negative experiences that the Muslims in Japan encountered, especially concerning their access of emergency healthcare, are due to a lack of understanding of how Japanese healthcare operates. It is important to provide opportunities for Muslim patients in Japan to learn about how to call the ambulance, and how to access the ER when needed. In the case of Norway, it was reported that the immigrants used emergency healthcare services in different ways than the locals.²¹ Therefore, Japanese healthcare providers may need to keep in mind that non-Japanese patients may have a different understanding of when is the crisis conditions to call for an ambulance and the procedures for accessing emergency care in Japan.

We found unique ways in which Muslims seek healthcare in Japan, such as to prefer visiting clinics to obtain prescribed medications, rather than buying medicine at the drugstore. This is because the Muslims in Japan generally have difficulty reading the packages of medicine which are written in Japanese only. Rather than taking a risk of buying medicine that is not fit for them, they prefer visiting clinics and having the doctor prescribe the medicine that is right for them. The preference for English-speaking doctors is another specific aspect that most Muslim patients prefer when visiting clinics and hospitals. They shared the information among their peers about which clinics the doctors can speak in English, and they went to such clinics even though the location was not the nearest to their home. Phillimore introduced the concept of bricolage, an improvisation in accessing health service, that has become a popularly adopted phenomenon among migrants.²² Migrants tend to come up with their unique ways of maximising their healthcare access by using the available resources in resource-poor environments. In this study, we observed that Muslims in Japan improvised their own ways of healthcare bricolage, such as asking peer friends to play the role of medical translators, and using information from the Muslim community in choosing which clinics to go to.

Structured and organised efforts to improve the situation by increasing English-speaking medical staff in Japan is an important issue for the improvement of Japanese healthcare system as well as to improve the country's readiness to accept not only Muslim patients but also other migrant patients in general. Fortier reported that foreigners in Japan are facing challenges concerning the

seeking of healthcare services in the Japanese healthcare system.²³ Some of the examples of such challenges were the absence of English directional signage at the main entrance of a hospital, the limited English-speaking ability of the receptionist in an ER, and the unavailability of discharge and financial forms in English. The same comments were given by the participants of this study. Fortier stated that these challenges may lead to delays in seeking routine healthcare or not completing treatment courses or follow-up care. By ensuring the bi-lingual signage and documents of some of the essential components of healthcare in Japan, the healthcare system will be more friendly to foreigners as well.

This study has limitations concerning the characteristics of the participants. They were Muslims from Indonesia and Malaysia living in Japan. It could be the case that those Muslims from other countries who are living in Japan may have different patterns of healthcare-seeking behaviour in Japan. Having said that, most of the themes in this study were related to the fundamental aspects of Islam. Therefore, to some extent, we believe that the results of this study could apply to a similar population.

CONCLUSION

This study described the factors that are influential for Muslims when they seek healthcare in Japan. Muslims in Japan have some challenges in getting their healthcare needs because of communication barriers and in ensuring that they are not compromising their religious beliefs. The experience of a visit to clinics and hospitals in Japan as told by the Muslims expressed a shortfall of understanding and support to be provided to the Muslim patients who have different cultural and religious backgrounds in Japan, compared with local Japanese. Among various responses to address this issue, Japan needs to come up with a health policy to increase female healthcare providers, especially medical doctors.

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Contributors AK initiated the idea for this research, designed the protocol, secured ethics for the study, undertook recruitment including invitations to take part, provision of participant information and collecting written informed consent. Interviews, transcription and translations were conducted by three research assistants (RM, EYA and SFA). AK undertook initial data analysis and developed preliminary codes. AK, MD, DK, ID, HR and TN reviewed and refined codes and

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Interview Guide

Section 1: Your Experience of Hospital Visit

Have you visited a clinic or hospital in Japan? If yes, how was your experience at that time? If no, what is the main reason of you to avoid visiting clinics or hospitals?

Please tell me more about the details of your experience when visiting clinic or hospital in Japan.

What were the difficulties you had encountered to find a clinic or a hospital?

Section 2: Choosing Hospitals

Is there any information that you wished to receive prior to visiting a clinic or a hospital in Japan?

What is important to you when deciding which clinic or hospital to go to?

Is a word-of-mouth (information from your friends and relatives) important in choosing which clinics or hospital to go to?
How do you utilize word-of-mouth information?

Is language a barrier to you when visiting hospitals in Japan? What type of support do you want to have?

Section 3: Your Religion and Healthcare

What are the things forbidden in your religion concerning receiving medical treatment at the clinic or hospital?

Section 4: Your Worries or Concerns

What are your worries or concerns if you have to visit a clinic or hospital again in near future?

Section 5: Healthcare Cost

Are you subscribed to any type of health insurance in Japan?

If yes: Was the medical expense (30% of the total cost when covered by National Health Insurance of Japan), expensive for you?

If no: May I ask why? If not subscribed to any insurance, did you have to pay 100% of your medical fees?

Section 6: Self Care

What are the things you do when you feel sick, other than visiting hospitals?

Section 7: Use of Pharmacy

Did you ever go to Japanese pharmacy and bought medicine without prescription for the cure of your ill symptoms?

If yes, for what purpose? Were you satisfied?

If no, what are the reasons that you do not want to buy medication from Japanese pharmacy?

Supplementary Document 2: Themes, Sub-themes, and Codes

Themes	Sub-themes	Codes
Trying to comply with the recommendation of Islam	Keeping the Aurat	Request for a Female Doctor
		Call Beforehand to Ask for Female Doctor
		Keeping the Aurat
	Permissible to Receive Healthcare	Exigency (Darurat)
		Health Benefit Priority than Halalness of Medicine
		Permissible to Survive
		Given No Choice
	Preference for Halal Food	Preference for halal food
	Struggle to Obtain Halal Medicine	Look for Halal Medicine
		Uncertain about What is Halal Medicine
Use of Alcohol in Medical Treatment is Permissible		
Need for Prayer Space inside the Hospital	Need for Prayer Space Inside the Hospital	
Confusion on Healthcare System	Accustomed to the Medical System in Home Country	Different Medical System Compared with Home Country
		Buy Medicine Home and Bring to Japan
		Not Satisfied by the Opening Hours of Clinics
	Evaluate the Situation before Making Requests	Evaluate the Situation before Making Requests
Not Knowing How to Access Emergency Care		Experience of Calling for an Ambulance
		Visiting ER by Their Own Without using Ambulance

		Panic Situation
Make do with Information and Support among Peers	Relying on Information from Muslim Friends	Valuing Information from Muslim Friends
		Asking Friends for Hospital Information
	Helping Each Other among Muslim Friends	Accompanying Friends to the Hospital
		Being Accompanied by Muslim Friends to Visit Hospital
Language Barrier Problems	Prefer English Communication for Healthcare	Prefer English-speaking doctors and nurses
		Information in English at clinics and hospitals
	Encounter Problems due to Language Barrier	Language problem
		Encountered difficulties during registration
		Miscommunication with the doctors due to language barrier
	Depend on Translation	Supported by medical translator
		Conversation using machine translation