Original

Structuring Communication Difficulties of Foreign Residents When Visiting a Medical Institution in Japan

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Abstract

Aims: This study was conducted with the following two purposes; 1) To identify and structure difficulties caused by communication based on the experiences of foreign patients who reside in Japan and whose native language was not Japanese when they visit a Japanese medical institution; 2) To examine communication means for providing proper medical care to foreign patients.
Methods: Semi-structured interviews were conducted with foreign residents. The data were analyzed using the Methodology for Conceptualization of Nursing.
Results: Of the eight core categories formed, "provision of health care services that neglect the importance of patient-centered communication", "disparities in intercultural competence among health care providers", "one-sided use of machine translation led by health care providers," "lack of information about Japanese medical institutions and culture," "overexpectations for Japanese health care," and "structural problems of foreign community," indicated the factors that caused problems to arise due to communication. "lack of awareness of the need for medical interpreters to receive appropriate health care," and "the need of acquiring and maintaining professional medical interpreting skills to meet patient expectations" showed the problems and issues in expanding the use of medical interpreters.
Conclusions: The factors that cause difficulties in medical communication from the perspective of foreign patients were caused by both medical institutions and healthcare providers and foreign patients, but they were also caused by structural problems faced by the foreign community. Daily support to the foreign community is necessary for the provision of appropriate medical care to foreign residents. In addition, the active introduction of medical interpreters can be considered as a countermeasure for medical communication, but the following issues need to be addressed: (i) raising awareness of medical interpreters among foreign patients, (ii) proposing the proactive use of medical interpreters by health care providers, and (iii) acquiring and maintaining high interpreting skills of medical interpreters.

Article Information

Key words:
foreign resident,
foreign patient,
communication,
medical institution,
medical interpreter

Publication history:
Received: November 10, 2021
Revised: December 28, 2021
Accepted: December 28, 2021

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I. Introduction

The number of foreign residents in Japan has been increasing every year since 1990 when the Immigration Control and Refugee Recognition Act was revised. Although the number temporarily decreased in 2012 due to the impact of the Great East Japan Earthquake, it reached a record high of 2,933,137 in 2019.[1] In May 2012, the Japanese government set up the review conference on "the realization of a society of coexistence with foreigners[2]" and has been implementing various measures to accept foreign nationals, such as proposing an ideal harmonious society with foreign nationals and creating an environment to realize such society. In 2020, both the number of new arrivals and of foreign residents declined due to the spread of COVID-19, but the number of foreign residents in Japan is expected to increase again once the pandemic is over.

In the report on "Questionnaire survey for Foreign Residents[3]" released by the Ministry of Land, Infrastructure, Transport and Tourism, "language barriers" and "differences in culture and customs" were remarked as concerns in daily life by foreign residents. Looking at the increasing number of foreign residents by status of residence,[1] all of them were with a status of either technical interns or engineer/specialist in humanities/interna-

tional services, and stayed in Japan for medium to long term, likely to cause more visits to medical institutions in their daily lives. If foreign residents who cannot speak Japanese well visit a medical institution, they might not be able to tell their symptoms or to understand what a doctor explains. In fact, the report[2] showed 50% of the foreign residents responded that they had trouble communicating at the hospital, indicating that they experienced difficulties when visiting a medical institution due to "language barriers."

Communication with patients is essential for health care providers to carry out their tasks. It is also important in providing health care services in order to accurately know the patient's situation and encourage them to understand the treatment. It is also necessary in nursing care to build trust with a patient through communication in order to provide the best possible assistance and draw the patient's full strength. In this circumstance, research on communication problems with foreign patients from the standpoint of health care providers have been conducted in recent years.[4,5] However, other than Mizuta's research,[6] there are no studies that have investigated the difficulties faced by foreign patients at medical institutions, particularly that point out communication problems.

When foreign patients who could not communicate well in Japanese visited a medical institution, they brought their family or friends to have them interpret. However, one of the approaches for such foreign patients is the use of medical interpreters. A medical interpreter is an interpreter who acts as a "language mediator" or "cultural mediator" in a medical setting, facilitating communication between people who cannot communicate due to different languages or cultures.[7] By communicating through a trained medical interpreter, health care providers can accurately know the patient's symptoms, avoid unnecessary tests, make reliable observations and diagnoses, and accurately explain the treatment to the patient. However, there are not many medical institutions in Japan that can provide medical interpretation services. The absence of medical interpreters has been pointed out as the reason behind the medical accident involving a foreign resident occurred in Gunma Prefecture in 2015.[8] According to the data presented at the 7th Review Session on the provision of health care for foreign Visitors to Japan held in February 2020,[9] 88% of hospitals within the secondary medical area were able to provide either medical interpreters, phone or video interpretation, or tablet interpretation, indicating that arrangement of multilingual support has been in progress. On the other hand, Hamai et al.[10] conducted a survey on the needs for medical interpreters at municipal hospitals throughout Japan, and showed that regardless of the size of a hospital, more than 85% of the respondents chose "using the interpreter brought by a patient" as a mean to communicate with patients and their families who cannot speak Japanese. In addition, when asked if they needed specially trained medical interpreters, about 20% of the health care providers answered "No need," and stated the reasons as "an interpreter the patient brings works fine" and "There have been no problems so far." Although they were aware of the importance of communication, it was assumed that health care providers have not yet acknowledged the necessity of reliable communication and the benefits of using medical interpreters. On the other hand, since there have been few surveys on communication from the standpoint of foreign patients, it is not clear whether foreign patients think that the medical interpreter system is not necessary in the same way as health care providers do, or whether there is a gap in perception between them. Hence, this study aims to identify the communication problems at medical institutions from the standpoint of foreign patients, and to discuss the measures to ensure that foreign patients receive appropriate health care.

II. Objectives

1. To identify and structure difficulties caused by communication based on the experiences of foreign patients who reside in Japan and whose native language was not Japanese when they visit a Japanese medical institution.

2. To examine communication means for providing proper medical care to foreign patients.

III. Operational Definition of Terms

In this study, the terms are defined as follows:

1. Foreign resident

A foreigner who has a status of residence and stays in Japan for the medium to long term with an issued residence card.

2. foreign patient

A foreign national with a status of residence who has a different cultural background from that of Japan and whose Japanese language skill is limited, and whose physical or mental condition requires medical intervention.

3. Medical interpreter

A person who "has the adequate medical and health-related knowledge, vocabulary, abilities, and skills and, as a mediator between languages, enables effective dialogue between engaged parties during medical consultations and other related situations. This is done by precisely understanding the speaker's intent, and by faithfully conveying the message to the listener. A medical interpreter, when necessary, should support mutual understanding by intermediating between health professionals and patients who have different linguistic, cultural, and social background."[11]

4. Medical institutions

Hospitals, clinics, and pharmacies among the facilities that provide health care services as defined by the Medical Service Act.

Table 1 Interview guide for semi-structured interviews. I didn't use the word "medical interpreter" during the interview

1	Why did you choose that hospital when you visited a Japanese medical institution? And what made you want to see a doctor?
2	Did you feel free to go to the hospital when you wanted to go to there? If not, what was the reason?
3	Have you ever had any language inconvenience when you visited the hospital? What was it specifically?
4	How did the hospital staff respond when you were having trouble communicating?
5	How much did you say when you went to the hospital?
6	How well did you understand what the hospital doctors and nurses explained?
7	Have you ever felt that the treatment was not adequate compared to Japanese patients? What kind of situation is it? What did you feel was different compared to how Japanese are treated?
8	Have you ever had a friend, relative or family interpreter at the hospital? What was the situation like?
9	What do you think about your medical condition being known by friends, relatives, and family members?
10	If you needed an interpreter, which person would you choose to interpret - friends, relatives, and family member or a professional interpreter? And what is the reason?
11	Have you ever used machine translation (interpretation app) ? And how much do you think each other's intentions were conveyed at that time?
12	What do you think the difference between the hospitals in Japan and in your home country?
13	What do you expect from Japanese hospital staff?
14	How did you feel when using a cloud interpreter?

5. Machine translation

Translation using a device with a system that searches for a closest translation to the words or sentences from the enormous database of vocabularies and translations, and presents it as a "translation".

IV. Methods

Funashima's Methodology for Conceptualization of Nursing[12] was applied to this study. This is a methodology of research to explore factors. One of the conditions for the application of the method was that "there have been research on the thoughts, behaviors, and experiences to be clarified, but it is based on the perspective of other fields and needs to be reviewed from the perspective of nursing science." Since no research have been reported in the nursing science regarding the difficulty faced by foreign patients at medical institutions, our study cleared the conditions for application of the method. Additionally, the qualitative content analysis was to consistently and continually conduct comparative analysis from the data collection stage to the analysis stage (constant comparative analysis). In order to fix the viewpoint and maintain the consistency of comparative analysis, the "questions for continual comparison" is set before analysis.

1. Questions for continual comparison[12]

The purpose of this study was to identify and structure difficulties caused by communication based on the experiences of foreign patients who reside in Japan and whose native language was not Japanese when they visit a Japanese medical institution (Objective 1). Therefore, we set the questions for continual comparison to Objective 1 was: "What are the experiences and impressions of foreign patients in Japan from the perspective of the actual state of health care settings for foreign patients in Japan, and why is this a problem?" Based on this question, we discussed communication measures to ensure that foreign patients receive appropriate health care (Objective 2).

2. Research Period

The interview survey was conducted from February to July in 2021.

3. Research subjects

The subjects were foreign residents in Prefecture A who met the following three conditions: (i) those who have a status of residence and a living base in Japan, (ii) those who have concerns about Japanese language ability, and (iii) those who have visited or have been hospitalized in Japanese medical institutions. We obtained consent from all 18 subjects and conducted the interview survey. As we selected subjects, a foreign resident who was an acquaintance of one of the researchers introduced us some of the subjects, bringing us all the subjects by introducing one after another, which is called snowball sampling.[13] The number of foreign residents in prefecture A is 61,461 (as of December 2020), which accounts for 3.1% of the prefectural entire population. The top five countries by nationality are Brazil, Vietnam, the Philippines, China, and Peru.

4. Data collection method

1) We asked the subjects for cooperation on our research. We explained our research to the subjects in writing through an interpreter in their native language or in a language they could understand and obtained their consent.

2) A 30-60 minute semi-structured interview survey was conducted with subjects who agreed to cooperate in the study, using an interview guide (Table 1) that describes 14 semi-structured questions about their experiences in

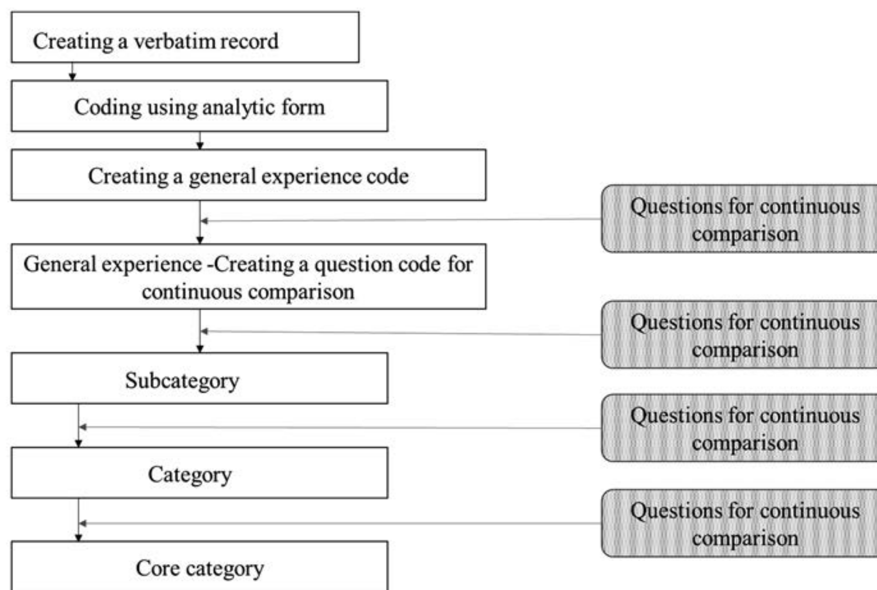

Fig. 1 The analysis procedure in Methodology for Conceptualization of Nursing is shown. At each stage of raising the level of abstraction of qualitative data, we asked questions for continuous comparison.

Japanese medical institutions and interpreting, with a focus on communication.

3) The interviews were recorded on an IC recorder with the consent from the subjects.

4) The interviews were conducted in the subjects' native language or the language they could understand, using "Cloud Interpreter" or the accompanying interpreter. It was English that they could understand other than their native languages. Cloud Interpreter is an interpretation application provided by Optage Inc. It is available in six languages: English, Chinese, Korean, Portuguese, Vietnamese, and Thai. The service of remote interpretation by a person is available on smartphones and tablet devices via internet.

5) The Cloud Interpreter's interpreters met Optage's hiring criteria. The interpreter who accompanied us to the interview also makes a living as an interpreter, so we believe that the reliability of the interpretation content was ensured.

6) The interviews were conducted at the subject's home or in the office at the university. During the interview, only a researcher and a subject were present in the private room. The interview was conducted either individually or in groups of two to four. The number of interviewees were determined by the subject's preference. Since coronavirus disease-2019 COVID-19 was prevalent during the interview period, efforts were made to prevent infection by wearing masks and regular ventilation.

5. Data analysis

The data were analyzed using the procedure shown in Figure 1.

1) Data collection from the interview

A verbatim transcript was created from the audio clip on the IC recorder.

2) Coding

Data were coded according to the following procedures using the specified analytic form of the qualitative content analysis.[12]

(1) The verbatim transcripts of the interviews were summarized, organized, and transcribed as experiences in the initial code column.

(2) The experiences and thoughts of the foreign patients that were transcribed in the initial code were labeled at a higher level of abstraction from the perspective of "what those experience would be like if viewed as a general people's experience," and a general experience code was created.

(3) The questions for continual comparison were asked, and the responds to the questions were labeled, and the general experience-creating a question for continual comparison code was created.

3) Categorization

We aggregated similar codes based on the homogeneity and heterogeneity of the semantic content of the created codes, questions for continual comparison were asked to each aggregated group, and labeled each subcategory with the answers. We conducted the same procedures to form categories and core categories.

4) Reliability and objectivity of this study

To ensure the reliability of the analysis, we were supervised by a qualitative researcher. Furthermore, in order to maintain objectivity, we constantly discussed until disagreements were resolved.

6. Ethical considerations for research subjects

The research was conducted with approval from the research ethics review committee of the Gunma Paz University (Clearance No. PAZ20-33). When we asked for cooperation in the research, we explained the purpose and methods of the research, the right of self-determination to participate in the research, the protection of pri-

vacy and confidentiality in writing through an interpreter in the subjects' native language or the language the subjects could understand, and obtained the written consent.

V. Results

1. Background of the subjects

As shown in Table 2, of the 18 subjects we interviewed, six subjects were "long-term residents," seven were "technical intern trainees" and five were "international students". The nationalities of the six "long-term residents" were one from Brazil and five from Peru, the nationalities of the 7 "technical intern trainees" were five from the Philippines and two from Vietnam, and the nationalities of the five "international students" were two from the Philippines, one from Nepal, one from Indonesia, and one from Mongolia.

2. Experience of foreign patients when visiting a medical institution in Japan and their thoughts on medical interpreters

After analyzing the content of the interviews of 18 subjects, 100 codes were extracted and broken down into 39 subcategories,17 categories, and eight core categories (Table 3). The formed eight core categories indicated the factors of communication problems and the challenges in expanding the use of medical interpreters. The eight core categories were: "provision of health care services that neglects the importance of patient-centered communication," "disparities in intercultural competence among health care providers," "one-sided use of machine translation by health care providers," "lack of information about Japanese hospitals and culture," "overexpectations for Japanese health care," "structural problems of foreign community," "lack of awareness of the need for medical interpreters to receive appropriate medical care," "the need of acquiring and maintaining professional medical interpreting skills to meet patient expectations." In the following text, the core categories are shown in double quotation mark and the categories in single quotation mark.

1) Contents of each core category

(1) "Provision of health care services that neglect the importance of patient-centered communication"

This core category consisted of the following three categories: 'unequal relationships between health care providers and patients,' "existence of disparities in health care services due to inadequate multilingual support,' and 'environment where medical accidents are prone to occur due to poor communication.' This core category showed that one of the causal factors of communication problems was in the system of medical institutions.

In Japanese medical institutions, health care services are provided on the premise that patients understand Japanese, and foreign residents with limited Japanese language skills felt a gap between them and those with such skills in terms of understanding the contents of medical explanations and opportunities to express their thoughts. They also felt that they were only able to understand about half of the doctor's explanations in Japanese, and were able to express their thoughts even less half of that. With the addition of the fact that the positions of health care providers and patients were not equal, foreign residents were more likely to have strong conflicts because they could not make themselves understood.

(2) "Disparities in intercultural competence among health care providers"

This core category consisted of the following three categories: 'promoting of understanding for foreign patients,' 'forcing Japanese culture on foreigners,' and 'low intercultural competence of health care providers.' This core category showed that there were the factors on the side of health care providers among the causal factors of communication problems.

There were some health care providers who forced foreigners to use Japanese because they thought that they should understand Japanese if they lived in Japan, and reacted negatively to foreign patients who could not understand Japanese. In addition, there were some health care providers who decided the patients did not understand any Japanese, so they did not use more simple words according to the patient's level of understanding. On the other hand, there were health care providers who showed understanding toward foreign patients by giving understandable explanation to them and recognizing the need of interpreters. There was a difference in the response to foreign patients among health care providers.

(3) "One-sided use of machine translation by health care providers"

This core category consisted of the following two categories: 'inadequate use of machine translation' and 'communication using machine translation led by health care providers', and it showed that one of the communication problems lied in the issues of multilingual support.

Communication with foreign patient using machine translation was mainly initiated by health care providers as they prepared the service with translation device. In addition, since the foreign patients could not understand how to operate the device explained in Japanese, they could not use it at their own initiative, which made them anxious about using the machine translation that could mistranslate what they meant.

(4) "Lack of information about Japanese hospitals and culture"

This core category consisted of the following two categories: 'lack of opportunities to learn the Japanese health care system and culture' and 'confusion over Japanese peoples' expression of emotions', and showed that one of the causal factors of communication problems lied in the perception of foreign patients on current situation.

With little opportunity to learn the Japanese

Table 2 The background of the 18 interviewees is shown in a list. For the level of Japanese, I referred to the level of the Japanese Language Proficiency Test

No.	Sex	Age	Nationality	Status of Residence	Period of stay	Official language	Interview language	Japanese level	
1	male	50-59	Peru	Long Term Resident	Over 20 years	Spanish	Spanish	The ability to understand some basic Japanese	N5
2	male	20-29	Brazil	Long Term Resident	Less than 10 years	Portuguese	Portuguese	The ability to understand some basic Japanese	N5
3	male	50-59	Peru	Long Term Resident	Over 20 years	Spanish	Spanish	The ability to understand some basic Japanese	N5
4	female	20-29	Peru	Long Term Resident	Less than15 years	Spanish	Spanish	The ability to understand some basic Japanese	N5
5	female	50-59	Peru	Long Term Resident	Over 20 years	Spanish	Spanish	The ability to understand some basic Japanese	N5
6	female	20-29	Vietnam	Technical Intern Training	Less than 5 years	Vietnamese	Vietnamese	The ability to understand some basic Japanese	N5
7	female	20-29	Vietnam	Technical Intern Training	Less than 5 years	Vietnamese	Vietnamese	The ability to understand some basic Japanese	N5
8	male	20-29	Philippines	Technical Intern Training	1 year	Tagalog・English	English	The ability to understand some basic Japanese	N5
9	male	20-29	Philippines	Technical Intern Training	Less than 5 years	Tagalog・English	English	The ability to understand some basic Japanese	N5
10	male	20-29	Philippines	Technical Intern Training	Less than 5 years	Tagalog・English	English	The ability to understand some basic Japanese	N5
11	male	20-29	Philippines	Technical Intern Training	1 year	Tagalog・English	English	The ability to understand some basic Japanese	N5
12	male	20-29	Philippines	Technical Intern Training	Less than 5 years	Tagalog・English	English	The ability to understand a little Japanese	N5 or less
13	female	40-49	Peru	Long Term Resident	Over 20 years	Spanish	Spanish	The ability to understand some basic Japanese	N5
14	female	20-29	Philippines	Student	Less than 5 years	Tagalog・English	Jap anese・English	The ability to understand Japanese used in everyday situations to a certain degree.	N3
15	female	20-29	Philippines	Student	Less than 5 years	Tagalog・English	Jap anese・English	The ability to understand Japanese used in everyday situations to a certain degree.	N3
16	female	20-29	Nep al	Student	Less than 5 years	Nep ali	Jap anese・English	The ability to understand Japanese used in everyday situations to a certain degree.	N3
17	male	20-29	Indonesia	Student	Less than 5 years	Indonesian	Jap anese・English	The ability to understand Japanese used in everyday situations to a certain degree.	N3
18	female	30-39	M ongolia	Student	Less than 5 years	M ongolian	Jap anese・English	The ability to understand Japanese used in everyday situations to a certain degree.	N3

Table 3 As a result of analyzing the interviews of 18 subjects, using Methodology for Conceptualization of Nursing, 100 codes, 39 subcategories, 17 categories, and 8 core categories were extracted. L is the answer given by subjects from Latin America.A is the answer given by subjects from Asian countries

Core Category	Category	Subcategory		interviewees number
Healthcare services that neglect the importance of patient-centered communication	Unequal relationships between healthcare providers and patients	Foreign patients feel the positions are unequal between healthcare providers and patients, and hesitate to express their opinions.	L / A	1,2,3,4,5,6,7,13
	Existence of disparities in healthcare services due to inadequate multilingual support	Whether foreign patients have support from a Japanese people determines the ease of access to medical institutions.	L / A	1,6,7,8,9,10,11,12,14,15,16,17,18
		The language used in medical institutions is mainly Japanese, and multilingual support is not available.	L / A	1,2,3,4,8,9,10,11,12,13,14,15,16,17,18
		Foreign patients think that they can not understand the explanations at hospitals because their Japanese language skills are limited.	L / A	1,2,3,4,6,7
		Foreign patients want to express how they feel, but are not able to do so with their poor Japanese language skills and tend to have a strong conflict.	L	1,2,3,4,5,13
		Since I am used to living in Japan, I can somehow understand what is being explained and visit hospitals by myself for a mild condition.	L / A	1,2,3,4,14
		There is a gap in how patients are treated depending on whether they can speak Japanese.	L / A	1,2,3,4,14,15,16,17,18
		Medical terminology are difficult to understand because many of the words are not usually familiar to patients.	A	14,15,16,17,18
	Environment where medical accidents are prone to occur due to poor communication	Medical accidents have occurred due to insufficient communication.	L	2,3,4,
Disparities in intercultural competence among healthcare providers	Promoting understanding of foreign patients	Foreign patients are satisfied with how they are treated at hospitals.	L / A	2,3,4,5,13,14,15,16,17,18
		There are healthcare providers who try to explain in a way that foreign patients can understand.	L / A	1,2,3,4,6,7,13,14,15,16,17,18
		The understanding of support for foreign patients is gradually growing among healthcare providers in Japan.	L	13
	Forcing Japanese culture on foreign people	There are healthcare providers who show negative reactions to foreign patients.	L	2,3,4,13
		There is a perception among Japanese healthcare providers that foreign patients should understand Japanese language if they live in Japan.	L	13
	Low intercultural competence of healthcare providers	There are healthcare providers who do not try to explain in a way that foreign patients can understand.	L / A	1,2,3,4,6,7,8,9,10,11,12,14,15,16,17,18
One-sided use of machine translation by healthcare providers	Inadequate use of machine translation	Various machine translations are available, but foreign patients cannot fully use them because instructions for use are written in Japanese.	L	1,2,3,4
		Foreign patients are concerned about using machine translation because it cannot accurately translate their intent.	L / A	1,2,3,4,8,9,10,11,12,14,15,16,17,18
	Communication through machine translation led by healthcare providers.	Communication using machine translation is led one-sidedly by healthcare providers.	L	1
		Machine translation has become a means of communication with foreign patients.	L / A	1,2,3,4,8,9,10,11,12,14,15,16,17,18
Lack of information about Japanese hospitals and culture	Lack of opportunities to learn Japanese healthcare system and culture	Patients can see any doctors to receive healthcare services at any medical institutions without any restrictions.	L / A	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18
		Foreign patients feel confused with many differences in healthcare system between Japanese and foreign countries.	L / A	1,2,3,4,5,6,7,8,9,10,11,12,14,15,16,17,18
		There have been no opportunities to learn about Japanese medical institutions since coming to Japan.	L / A	2,3,4,13,14,15,16,17,18
	Confusion over Japanese people's expression of emotions	The Japanese people's attitudes without expression of emotions seem cold and uncompassionate.	L / A	2,3,4,5,8,9,10,11,12,13
Overexpectations for Japanese healthcare	Overexpectation for healthcare providers	Foreign patients want their body to be thoroughly examined.	L / A	1,6,7,8,9,10,11,12
		Foreign patients think doctors can understand their conditions when they are at hospitals.	L	2,3,4
		Foreign patients feel frustrated when healthcare providers behave in an unexpected way.	L	2,3,4,5,13
	Adaptation to Japanese culture	Foreign patients try to follow the Japanese way (in healthcare settings).	L	1,5
Structural problems of foreign community	Medium to long term stay in Japan	Foreign patients will continue to live in Japan for long term.	L	5
	Social structure of foreign community that does not require Japanese proficiency	There have been no need to have high Japanese language skills to live in Japan.	L	5
Lack of awareness of the need of medical interpreters for receiving appropriate medical care	Acceptance of interpretation by family and friends	How foreign patients feel about their friend being an interpreter and knowing about their medical condition is influenced by their own cultural background.	L / A	1,2,3,4,5,6,7,8,9,10,11,12
		Foreign patients want their family member to be an interpreter because they have no problems with them knowing everything.	L	1
	Lack of awareness of medical interpreters	Since there is no interpreter system, foreign patients have to find an interpreter by themselves if they are not confident with understanding the medical explanations.	L / A	1,2,3,4,5,6,7,13,14,15,16,17,18
		Ad hoc interpreters are used because foreign patients are not informed how they can request a medical interpreter.	L / A	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18
		It is not well known among foreign patients that there is a medical interpreter system in Japan.	A	14,15,16,17,18
		If hospitals don't decide that they need an interpreter, foreign patients can not use an interpreter other than a family member.	L	1,5
The need of acquiring and maintaining the medical interpreting skills to meet patient expectations	Expectations for medical interpreters	Patients would like to have a professional interpreter handle serious life-threatening matters.	L / A	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18
		Patients are anxious at hospitals and want to have an interpreter who can communicate in their language understand their situation accurately.	L / A	1,2,3,4,5,14,15,16,17,18
		Interpreters are required to have the ability to interpret accurately.	L / A	1,2,3,4,6,7,8,9,10,11,12
		Communication using machine translation takes a longer time since words have to be carefully chosen for machine, while foreign patients feel it is easier to use remote medical interpreters.	A	6,7,8,9,10,11,12

L: Latin America, A: Asia

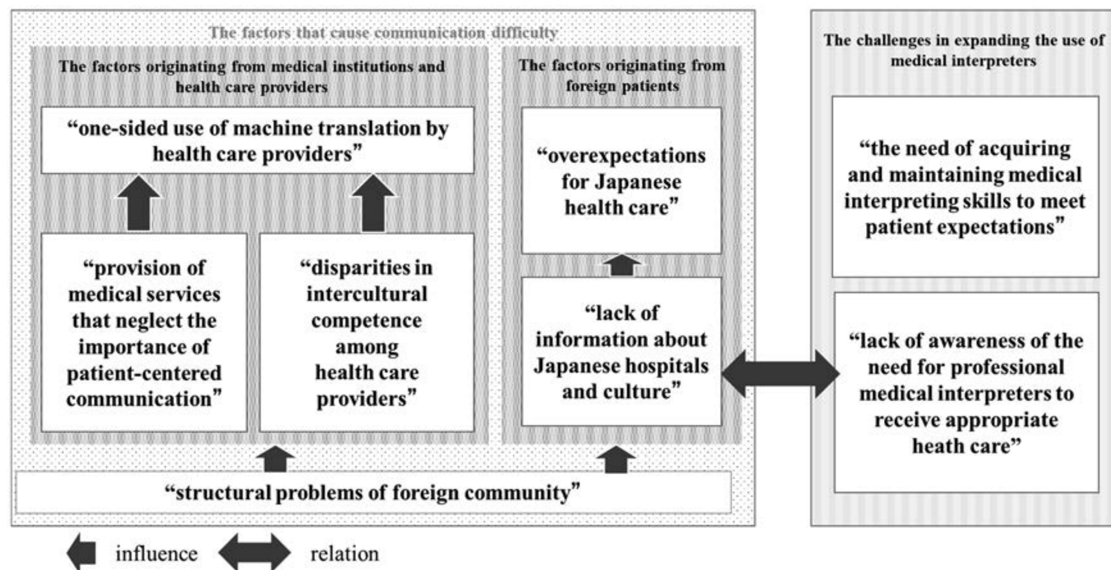

Fig. 2 The relationship between the extracted 8 core categories is shown.

health care system and culture before and after coming to Japan, and they felt confused by broad differences from their home countries. Without a chance to learn the Japanese health care system they did not fully understand what the system could and could not allow in Japan, they felt they were not treated well for something that was not allowed within the system.

Hindering the modest expression of emotions, they also felt that the Japanese people were cold and uncompassionate and their attitudes toward the elderly were also cold.

They also felt that Japanese people's hindering the modest expression of emotions were cold and unapproachable, and their attitude toward the elderly was also cold.

(5) "Overexpectations for Japanese health care"

This core category consisted of the following two categories: 'overexpectations for health care providers' and 'adaptation to Japanese culture.' This core category showed that one of the causal factors of communication problems lied in the overexpectations for health care providers from foreign patients.

were willing to adapt to and respect Japanese culture. They also expected health care providers to understand their conditions and to thoroughly examine them even though they could not speak Japanese, however they were increasingly frustrated with the situation that did not meet their expectations

(6) "Structural problems of foreign community"

This core category consisted of the following two categories: 'medium to long term stay in Japan' and 'social structure of foreign community that does not require Japanese language proficiency,' and showed that there were the continual factors in communication problems.

Foreign residents will reside in Japan for a long period of time. However, it was difficult for them to improve their Japanese language skills because they could communicate in their native language within the local foreign community and they were also not required to have such skills at work.

(7) "Lack of awareness of the need for medical interpreter to receive appropriate health care"

This core category consisted of the following two categories: 'acceptance of interpretation by family and friends' and 'lack of awareness of medical interpreters,' and indicated the current situation where foreign patients do not know about professional interpreters other than having a close person as an interpreter.

When the subjects we interviewed did not know about the existence and role of medical interpreters and how to request one, and if they were not confident enough to understand the explanations given by health care providers, they had to find an interpreter by themselves. However, when the hospital did not recognize the need of medical interpreters and did not request one, the foreign patients could not find an interpreter other than their family or friends.

They felt that they wanted their family members to be an interpreter because they felt that they had no problem with having their family members know everything about them. On the other hand, it differed from person to person in how they felt that friends might know all about their medical conditions if they were an interpreter.

(8) "The need of acquiring and maintaining the medical interpreting skills to meet patients' expectations"

This core category consisted of one category, 'expectations for medical interpreters,' and described some of the issues in expanding the use of medical interpreters,

Foreign patients visiting the hospital were anxious and wanted professional interpreters to deal with life-threatening matters. Therefore, foreign

patients expected professional interpreters to have professional skills to interpret the situation accurately.

2) Structuring the difficulties caused by communication around foreign patients

The eight core categories were classified into two main groups: the factors that cause communication problems, and the challenges in expanding the use of medical interpreters (Fig. 2).

In the factors causing communication problems, there was the underlying social environmental factors, "structural problems of foreign community." The factors originating from medical institutions and health care providers included "provision of medical services that neglect the importance of patient-centered communication," "disparities in intercultural competence among health care providers," and "one-sided use of machine translation by health care providers," while the factors originating from foreign patients included "lack of information about Japanese hospitals and culture" and "overexpectations for Japanese health care".

The challenges in expanding the use of medical interpreters included "lack of awareness of the need for professional medical interpreters to receive appropriate heath care" and "the need of acquiring and maintaining medical interpreting skills to meet patient expectations."

VI. Discussion

1. Communication problems at medical institutions from the standpoint of foreign patients

In Japan, research on communication problems with foreign patients from the standpoint of health care providers have been conducted in recent years.[4,5] However, other than Mizuta's research,[6] there were no studies that have investigated the difficulties faced by foreign patients at medical institutions, particularly that point out communication problems. In this study, we clarified the factors that cause difficulties in communication from the perspective of foreign patients. In order to solve communication problems with foreign patients in medical institutions, opinions from the foreign patients' side are important. The results of this study will be useful in solving this communication problem.

2. Differences in the interviewees by attributes

Of the 18 people we interviewed, 12 were from East or Southeast Asian countries. The cultural characteristics shared among Asian people are that they relatively prefer harmony and avoid conflict, that they have a custom to respect their elders, and that men have more opportunities to make decisions.[14] Such a cultural background formed the basis for holding back from expressing their opinions to superiors, which presumably made them hesitate to express their opinions in Japanese medical institutions. The remaining six were from South American countries. As a characteristic of Latin American values and behaviors, Nakagawa[15] said, "The relationship with flesh and blood, especially family and friends, is central to their relationships. Laws and rules are not observed, or watered down for their benefit and convenience." The results of this study also showed that people from South American countries did not view things that were impossible under the medical system as they were not treated well (or not granted a favor) for something, and that they had no negative feeling for having their personal information known to family and friend interpreters. These opinions can be attributed to the cultural characteristics mentioned above.

The Japanese language ability of the subjects except international students was equivalent to N5 of the Japanese Language Proficiency Test *(N5 being able to pick up necessary information in short conversations spoken slowly in regularly encountered situations in daily life)*, meaning that they had very limited ability to understand Japanese. Therefore, they were not able to collect information about the newsletters of local government and about multilingual applications, resulting in lack of knowledge about the Japanese health care system and the use of multilingual applications.

3. Characteristics and relations between core categories

1) Characteristics of core categories

We discussed the characteristics of the eight core categories as the communication problems and as the factors that promote or hinder the use of medical interpreters, in accordance with the research objectives.

(1) "Provision of health care services that neglects the importance of patient-centered communication"

While it is recognized that communication with foreign patients is important, there are in reality no sufficient opportunities for communication. The Japanese patients who take only a short time to communicate tend to be prioritized over the time-consuming communication with foreign patients, indicating little consideration being given for adequate communication with foreign patients.

(2) "Disparities in intercultural competence among health care providers"

The gap in intercultural competence among health care providers is thought to attribute in part to the education at the training institutions for health care providers. In Western countries, competencies to be achieved for cross-cultural understanding are clearly defined in undergraduate degree program. However, there are no such goals for competencies in Japan.[16] This is the issue that indicates there is no systematic education in Japan for learning about foreign patients and their different cultures despite the growing number of foreign residents.

(3) "One-sided use of machine translation by health care providers"

Currently, various machine translation and interpretation applications have been introduced in the medical institutions in Japan, but the translation machines sold and operated in Japan are designed for Japanese people who need assistance with language. Foreign patients in Japan are not able to use them on their own initiative because they do not understand the instructions written in Japanese.

Therefore, this is the issue that shows the evaluation on usefulness of communication using machine translation is biased towards health care providers.

(4) "Lack of information about Japanese hospitals and culture"

There are various cultural differences between Japan and the home countries of foreign patients. This is the issue that indicates these cultural differences potentially lead to misunderstandings and misperceptions between health care providers and foreign patients. and there are little opportunities to learn about these cultural differences.

(5) "Overexpectations for Japanese health care"

Accepting what is being done in Japan means that they have "reassurance and expectations" toward Japan. However, some of their expectations cannot be met by the Japanese health care system and current situations. This is the issue that indicates foreign patients have unreasonable expectations.

(6) "Structural problems of foreign community"

This indicates that there are social factors causing linguistic problems behind the fact that hospitals face various communication challenges between health care providers and foreign patients.

(7) "Lack of awareness of the need for medical interpreters to receive appropriate health care"

The study revealed that with lack of information about medical interpreters, some foreign patients thought having interpretation by their family members was not a bad idea. However, previous studies[17] showed that family or friends could make serious misinterpretations, leading to misdiagnosis and inappropriate treatment. In addition, interpretation by children in particular has the ethical issue of children giving notice of diagnosis to their parents.[18] Therefore, this core category shows the factors on the foreign patients' side that hinder the expansion of the use of medical interpreters.

(8) "The need of acquiring and maintaining professional medical interpreting skills to meet patient expectations"

The study showed that foreign patients want their life-threatening conditions to be interpreted accurately. However, this cannot be expected from interpreters if they are family members or friends with no medical knowledge. This core category indicates that it is necessary to have professionally trained interpreters, or medical interpreters.

2) Relations among core categories

The social environmental factor, "structural problems of foreign community" lies at the basis of the causal factors of communication problems. In the foreign community where they talk in their native language, with no need to have Japanese language proficiency, no improvement is expected. In addition, they do not have much interactions with Japanese people, hindering their understanding of Japanese culture and way of thinking. This situation affects both the factors originating from medical institutions and health care providers and the factors originating from foreign patients. It implies that the communication problems between foreign patients and health care providers in medical institutions will continue until the underlying structural issues of foreign community are resolved. If Japan aims at building intercultural society in the future, It is necessary to continue to provide daily support to the foreign community and prevent them from becoming isolated.

Among the factors originating from medical institutions and health care providers, the core category of "one-sided use of machine translation by health care providers" was affected by the other two core categories, "provision of health care services that neglects the importance of patient-centered communication" and "disparities in intercultural competence among health care providers." Foreign patients feel hesitant to tell their opinions because they think they do not stand on the equal footing with health care providers. It can be said that this lack of patient-centered communication affects the "one-sided use of machine translation by health care providers. Furthermore, whether foreign patients can receive explanations according to each patient's level of understanding depends on the intercultural competence of health care providers. Therefore, a health care provider with lower level of intercultural competence could use machine translation only to confirm what he or she wants to confirm, however it is challenging to pay attention to how foreign patients understand or whether they have more to say but could not do so due to the difficulty of using machine translation. Therefore, we can say that "disparities in intercultural competence among health care providers" affects "one-sided use of machine translation by health care providers".

Among the factors originating from foreign patients, "lack of information about Japanese hospitals and culture" has an impact on "overexpectations for Japanese health care." It can be said that poor understanding on what is available in the Japanese health care system and how the system works leads to unreasonable expectations from foreign patients.

There is a connection between "lack of information about Japanese hospitals and culture" and "lack of awareness of the need of medical interpreters to receive appropriate health care", among the two groups of core categories ; group of communication problems and group of problems and challenges in expanding the use of machine translation. This means that foreign patients lack knowledge not only about Japanese health care system but also about medical interpreters. Medical interpreters are supposed to assist foreign patients with their communication. However since they are not recognized by foreign patients, the effectiveness in improving communication through medical interpreters has yet to be evaluated. It will remain difficult to evaluate whether medical interpreters can help improve communication problems from the perspective of foreign patients if the awareness for medical interpreter is not raised and the use of medical interpreters is not expanded.

4. Factors of communication problems caused by medical institutions and health care providers

1) Existence of medical paternalism

There is a huge difference in knowledge between health care providers and patients. In addition, patients tend to think that the future of their health is in hands of health care providers, causing patients to feel hesitant towards health care providers. This is not only limited to Japanese patients, but the study revealed that the same is true to foreign patients in the category of 'unequal positions of health care providers and patients.' The situation where foreign patients hold back their opinions to health care providers who do not give understandable explanations has occurred. Such relationship hinders smooth communication.

There were also health care providers who branded that the patients did not understand Japanese and did not respond by replacing the words with simple words that foreign patients could understand. Health care providers tend to think it is difficult for patients to understand medical information, but what needs to be given is the information for patient's decision-making and consent, but not so much medical information is needed. Thorough communication with each patient enables them to determine what information is needed for patient's decision-making. However, it is difficult for hesitant patients to start communication on their own initiative. In order to achieve shared decision making (SDM) by patients and health care providers, health care providers need to be aware of the need to offer such opportunities.

2) Provision of health care services according to the level of Japanese language, and inadequate multilingual support

The results showed that the gap lies in opportunities for explanation of their medical care depending on the ability of speaking Japanese, and that foreign patients feel that speaking Japanese is a condition to equally receive health care in Japan. Although there has been progress in introducing machine translation and translation applications, the main language is Japanese in most medical institutions and multilingual support has not been sufficiently arranged. As the degree of communication varies depending on whether the foreign patient can speak Japanese, the quality of communication is left up to the patient side.

The results of our study showed that most foreign residents were medium to long term stayer in Japan and felt that they could understand Japanese to some extent (about 50%). However, they were able to pick up some words but unable to speak in Japanese, leading to "strong conflicts due to the inability of putting their feelings and thoughts in words." Butler[19] stated that what is important for second language acquisition is "not simply the length of time spent in a second language environment, but how closely one receives its input and communicates in that language." Many foreign residents do not have as many opportunities to speak Japanese as the Japanese people might expect and they have not acquired sufficient Japanese language skills because the communities of their mother tongue exist within their residential district. However, it was presumed that health care providers might think that foreign patients "do not talk" instead of "are not able to speak" when they did not say their opinions or ask questions, and conclude that the communication went well. This perception leads to the one-sided use of machine translation. Since the health care providers believe that foreign patients have no "questions" or "opinions," they focus on only what they want to confirm when using the machine translation. This situation causes "one-sided communication using machine translation led by health care providers".

It is alarming that the fair provision of medical care and ensuring the quality of communication depend on patients when it comes to the quality of health care in Japan. In order to provide fair health care to patients regardless of their language ability, it is necessary to organize multilingual support. At the same time, it is also necessary to deepen awareness of the need for multilingual support among health care providers. Patients may be able to pick up some words, but not able to express their thoughts. Therefore, health care providers need to acknowledge that multilingual support is not only for them to "tell" the patients, but also to "listen" to the patients.

3) Factors that health care providers need in order to establish better communication

The results revealed that some health care providers showed negative reaction to foreign patients who could not speak Japanese even though they were staying in Japan for medium to long term. They think people who live in Japan should speak Japanese naturally, and it is difficult for them to picture a life in Japan without speaking Japanese. Also, they show negative reactions because it may seem to them that foreigners refuse to accept Japanese culture if they would not speak Japanese despite long stay in Japan since "language" is a reflection of culture, However, foreign residents do not need to speak Japanese in daily lives as much as Japanese people may think, and few Japanese people understand the fact.

The number of foreign residents in Japan is on the rise, which is advancing internationalization within Japan as well. Therefore, health care providers working in Japan are also expected to strengthen their intercultural competence at a global standard. The five concepts that make up intercultural competence are "cultural awareness," "cultural knowledge," "cultural skill," "cultural encounters," and "cultural desire."[20] In the medical field, "cultural knowledge" and "cultural skill" are required in particular, and "cultural awareness" is considered important for acquiring such competence.[14] In order to be aware of how ones see others with one's own values and prejudices, as well as to be aware of those of others, the hospitals located in foreign peoples' residential areas need to regularly offer in-service education program themed on interactions with foreign patients, and the training institutions for health care providers need to strengthen the content of intercultural education.

5. Causal factors of communication problems originating from the foreign patients' side

1) Existence of cultural differences between Japan and home country

There are various differences between Japan and the home countries of foreign patients. The Japanese people tend to view expressing their feelings as they are as "a shame". They also value non-verbal communication as represented by the idiom "Ishin-denshin" in Japanese, which is sometimes translated telepathy or tacit communication in English.[21] Nonverbal communication, the ability to understand each other without verbal communication, can pass in all aspects of daily life, and the level of nonverbal communication ability is sometimes considered as a measure of social skills and adaptability to groups.

In contrast, among the interviewees in this study, especially those from South American countries belong to a culture where they try to show individual opinions and attitudes.[15] When foreign patients from countries with such values encounter the Japanese culture of not expressing their emotions, they may feel cold and alienated for not being communicated. Feeling "cold" and "alienated" as in the category of "confusion over Japanese expressions of emotion" were the thoughts based on the cultural values of their home country. Therefore, it is desirable for them to have an opportunity to learn about the characteristics of Japanese communication culture.

2) Overexpectations for Japanese health care

As shown in the category of 'lack of opportunity to learn the Japanese health care system and culture,' it was found that foreign patients did not have sufficient understanding of the Japanese health care system when they came to Japan. The three potential factors that may have led to this situation include (i) lack of information about Japan in their home country, (ii) lack of opportunities to obtain information, and (iii) lack of interest in information. And it also indicated that they did not have opportunities to learn about the Japanese health care system after coming to Japan unless they seek for such an opportunity. On the other hand, they had expectations of Japan and health care providers, and thought what was possible in their home countries was also possible in Japan. However, there are differences in health care system and social roles required for health care providers between Japan and their home countries. These differences in recognition seemed to cause problems. It is necessary to upgrade the website of local government in multiple languages so that people can obtain information about the Japanese health care system.

6. Communication measures to ensure that foreign patients receive appropriate health care

1) Measures to make up for shortcomings of machine translation and interpretation by family and friends

The results of this study showed that foreign patients were not able to say what they wanted, and their level of understanding was about 50%, which was far from sufficient. In addition, there were various cultural differences between Japan and the home countries of foreign patients. The cultural difference can work negatively in recognizing each other's conduct, causing various misunderstandings. This situation was also observed when using machine translation and when using family and friends as an interpreter. One of the ways to solve these problems is to use a medical interpreter.

In order to enhance the system for accepting foreign nationals, the Japanese government have started the Japanese Medical Institution for International Patients (JMIP) certification system and promoted multilingual services including the use of medical interpreters.[22] A medical interpreter is "a person who comes between health care providers and patients who have linguistically, culturally, and socially different backgrounds, and acts as a cultural bridge between them as necessary to support mutual understanding"[11]. It can be said that the introduction of medical interpreters is important to ensure that there are no misunderstandings between the two parties and that foreign residents receive appropriate health care in Japan.

2) Issues in expanding the use of medical interpreters

(1) Raising foreign residents' awareness of medical interpreters

The fact that none of the interviewees knew about the existence and role of medical interpreters and how to request one suggested that foreign patients barely know about medical interpreters. As the first step is to let people know about the medical interpreters in Japan, it is necessary to post information on local government websites and bulletin boards at medical institutions.

(2) Proactive proposal of using medical interpreters for foreign patients by medical institutions and health care providers

The use of medical interpreters comes in various ways in Japan today depending on municipality or organization, but they are requested mostly by medical institutions as a general rule. In other words, if the health care providers decide the they do not need to use medical interpreters, foreign patients cannot use them even if they want to. However, the results of this study revealed that "foreign patients can somehow pick up some Japanese words, but cannot tell their own thoughts in Japanese, so they feel frustrated. Foreign patients are not able to communicate what they want to say as much as health care providers predict, however, health care providers are not aware of their stress, it is not suitable for them to judge the necessity of using medical interpreters. Therefore, the system needs to be arranged so that foreign patients can choose whether to use a medical interpreter.

(3) Acquiring and maintaining the high level of interpreting skills required for medical interpreters

The study revealed that foreign patients who visited hospitals were anxious and wanted to have life-threatening matters handled by professional interpreters. Medical interpreters are expected to have a high level of interpreting skills to respond to

such needs. It is also important to offer opportunities for on-the-job training (OJT) for medical interpreters to learn practical knowledge through interpreting practice in the medical settings so that they can continue to maintain and improve their skills. In order for medical interpreter providers and medical institutions to cooperate and collaborate with each other, the status of medical interpreters must be guaranteed and laws must be established in Japan. In America, Australia, and other countries, medical interpreters are indispensable in the global medical environment, and legislation for medical interpreters is being developed based on the understanding that adequate communication through medical interpreters is not only a patient's right, but also protects health care providers from risks.[23] At present, the qualifications for medical interpreters in Japan are being developed, such as the certification of medical interpreters by academic societies,[24] but the legal status of medical interpreters has not been guaranteed and the number of registered medical interpreters nationwide is also not known. Therefore, it is crucial to establish a legal framework for medical interpreters in Japan, which will not only ensure the status of medical interpreters, but also is expected to raise the recognition of medical interpreters.

VII. Conclusions

1. In this study, we clarified the factors that cause difficulties in communication from the perspective of foreign patients. The results of this study indicated that the factors that cause communication problems when foreign patients visited medical institutions: "provision of health care services that neglects the importance of patient-centered communication," "disparities in intercultural competence among health care providers," "one-sided use of machine translation by heath care providers," "lack of information about Japanese hospitals and culture," "overexpectations for Japanese medical care," "structural problems of foreign community." It also indicated that the challenges in expanding the use of medical interpreters included "lack of awareness of the need for professional medical interpreters to receive appropriate health care" and "the need of acquiring and maintaining medical interpreting skills to meet patients' expectations."
2. Difficulties arising from medical communication were caused by both medical institutions and healthcare providers and foreign patients, but they were also caused by structural problems faced by the foreign community. Daily support to the foreign community is necessary for the provision of appropriate medical care to foreign residents.
3. The active introduction of medical interpreters is considered to be a communication measure to ensure that foreign patients receive appropriate medical care. However, in expanding the use of medical interpreters, the following issues need to be addressed: (i) raising awareness of medical interpreters among foreign patients, (ii) proposing the proactive use of medical interpreters by health care providers, and (iii) acquiring and maintaining high interpreting skills of medical interpreters.

VIII. Limitations of this study and future challenges

This study was conducted in prefecture A using snowball sampling as a data collection method, which resulted in a bias in nationality. The Chinese and Koreans, who accounted for 41.8%[1] of the population of foreign residents in Japan by nationality, were not enrolled in this study, there is a limit to the generalization of this as a communication issue for foreign residents.

In the future we should examine the effects of the differences in cultural background and length of stay on communication problems among foreign residents, and devising and testing the effectiveness of medical interpretation methods to solve the problem.

Conflict of Interest

No potential conflicts of interest are disclosed.

Acknowledgments

I would like to express my sincere gratitude to the many people who cooperated with me in conducting this study. In particular, I would like to express my deepest gratitude to the foreign residents who cooperated in the interviews.

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