

《Research note》

## A preference survey for Japanese food among International students with a comparison to Japanese students

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### Summary

This report shows the Japanese food preferences of international and Japanese students. The subjects for the survey were 143 students who attended lectures in Japanese food culture between 2011 and 2014 (121 International students, 22 Japanese students). We conducted a questionnaire asking whether the students liked or disliked 20 kinds of Japanese food. The top (No.1) favourite Japanese food for international students was “Ramen (Noodles)” and the second favourite was “Sushi”. For 13 items out of the 20 items we investigated, the percentage of students who answered ‘like’ was higher for the international students who had stayed longer in Japan than for the ones who had been in Japan for a shorter period. We can say that preference becomes higher towards Japanese food when people have a greater chance to experience eating Japanese food. As the globalization of food increases, it is important that there is a familiarity towards Japanese food from not only Japanese people but also foreigners, in order to protect Japanese food.

**Keywords:** Preference, Likes Japanese food, Dislikes Japanese food, International students

### Introduction

From 2000, Nagoya University of Foreign Studies (NUFS) has annually accepted 80–100 international students from European and US Universities for between six months or one year to study Japanese language. NUFS also conducts a variety of lectures and workshops for international students.

From 2011, with the author as the main organizer, we conducted lectures and practical sessions for a course entitled “Japanese Food Culture” and we held 12~15 lectures (90 minutes per lecture). During the lecture periods, we also carried out a preference survey towards Japanese food, and within the lectures we were able to give some feedback back to the students, we have therefore managed to enrich our

lectures further. As we amassed the data of more than 100 international students’ preferences, we can now report on the results regarding the preference differences depending on duration of stay and also the results of a comparison with Japanese students’ preferences.

### Method

#### 1. Subjects

The survey subjects were 143 people who attended lectures about Japanese food culture offered seven times in the Spring and Autumn terms from 2011 to 2014 at Nagoya University of Foreign Studies.

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## 2. Questionnaire

The duration of this survey was from April 2011 to July 2014. We investigated it during a lecture for students. The investigation using self-administered questionnaire and the investigation items were subject demographics and preference. The survey items for demographics were sex, age, country of origin, the duration of stay in Japan. The contents of the food preference survey included the following 20 items, Sashimi (sliced raw fish), Natto (Fermented

soy beans), White rice, Miso soup, Sushi, Ramen (Noodles), Curry and rice, Tempura (Deep-fried seafood or vegetables), Soba (Buckwheat noodles), Tofu (Bean curd), Tonkatsu (Deep-fried pork cutlet), Oroshi (Grated Japanese radish), Omelet, Croquette, Ebi-fry (Deep-fried shrimp), Yakiimo (Baked sweet potato), Umeboshi (pickled plum), Takuan (pickled Japanese radish), Yakitori (skewered grilled chicken), Green tea. Multiple answers were allowed and we investigated whether or not they liked these

### Document 1

## Japanese food and its culture

Please answer all the questions. Write or mark boxes like this

1, Nationality ( )

2, Sex :  Male  Female

3, Age: ( )

4, How many months or years have you stayed in Japan?

Mark one box.

- ~6 months       7-12 months       1 year~  
 2 years~       5 years~       10years~

5, What are the Japanese foods you like?

Mark all the food you like.

- Sashimi    Natto                      White rice                      Miso soup                      Sushi  
Ramen      Curry rice                      Tempura                      Soba                      Tofu  
Tonkatsu (Pork cutlet)                      Oroshi                      Omelets                      Croquettes  
Ebi-fry (Deep-fried shrimp)                      Yaki imo (Roasted sweet potatoes)                      Umeboshi  
Takuan      Yakitori                      Green tea                      Other ( )

6, Are there any Japanese foods which you do not like or can not eat?

No

Yes → Mark all the food which you do not like or can not eat.

- Sashimi    Natto                      White rice                      Miso soup                      Sushi  
Ramen      Curry rice                      Tempura                      Soba                      Tofu  
Tonkatsu (Pork cutlet)                      Oroshi                      Omelets                      Croquettes  
Ebi-fry (Deep-fried shrimp)                      Yaki imo (Roasted sweet potatoes)                      Umeboshi  
Takuan      Yakitori                      Green tea                      Other ( )

7, Please write down freely what you would like from this course.

( )

8, Thank you for completing this form.

items (Document 1).

### 3. Statistical Analysis

Differences in international students' preference among less than 1 year group and more than 1 year by duration of stay in Japan were evaluated using the Chi-square test. Differences in preference among international students and Japanese students were evaluated using the Chi-square test. A P value less than 0.05 was considered to indicate statistical significance for all analyses. The data were managed and analyzed using SPSS (Statistical Package for the Social Sciences, Windows version 18.0; SPSS, Inc., Chicago, IL).

## Result

### 1. Characteristics

#### 1) Sex and Age

Men (n = 65) and women (n = 78) aged 18 to 42 years old, the average age and standard deviation was  $22.0 \pm 3.3$  years old. In international students, men (n = 63) and women (n = 58) aged  $22.0 \pm 3.5$  years and in Japanese men (n = 2) and women (n = 20) aged  $21.7 \pm 1.5$  years.

#### 2) Country of Origin

International students' countries of origin are shown in Chart 1. If we look at the countries of origin, we note that most of the students were from the US at 51 with the second highest being the UK with 28 people.

#### 3) Duration of Stay in Japan

We conducted the survey by dividing the subjects into 6 groups according to the duration of stay in Japan as follows-less than 6 months, 7~12 months, more than 1 year, more than 2 years, more than 5 years and more than 10 years. We show the international students' duration of stay in Japan in Chart 1. 50 people had stayed less than 6 months. 37 people had stayed for 7~12 months, 34 people had stayed more than one year, and there were no international students who had stayed longer than 2 years.

**Chart 1** International students' background

Number of patients		121
Sex	Male	63
	Female	58
Age	Mean	22.0
	SD	3.5
Country	America	51
	Australia	13
	Canada	5
	England	28
	France	14
	Germany	1
	Hong Kong	1
	Israel	1
	Latvia	1
	Lithuania	2
	Mexico	1
	Nigeria	1
	Puerto Rico	1
Singapore	1	
Time in Japan	~6 months	50
	7~12 months	37
	1~2 years	34

### 2. International Students' Preference Survey towards Japanese Food

#### 1) Japanese food liked

For a total of 121 international students, the Japanese food liked was as follows from the highest; "Ramen" 84%, "Sushi" 77%, White rice" 76%, "Curry rice" 76% and "Tempura" 67%.

#### 2) Japanese food disliked

For a total of 121 foreign students, Japanese food which was not liked was as follows from the highest; "Natto" 49%, "Sashimi" 11%, "Umeboshi" 10%, "Miso-soup" 8% and "Ebi-fry" 7%.

### 3. International Students' Preference Survey according to duration of stay in Japan

#### 1) Japanese food liked according to the duration of stay in Japan

Figure 1 shows the results of which Japanese food 121 international students liked, the results show a comparison between two groups. Both groups were

divided according to the duration of stay, one was less than 1 year (n=87) and the other was more than 1 year (n=34).

For students who answered that they liked “Ebi-fry” the percentages of those who had stayed less than one year was 42.5% whereas it was significantly higher for those who had stayed longer than one year at 64.7%. ( $P<0.03$ ). In addition for the items “Miso-soup” and “Omelet”, there was a tendency for students who had stayed more than one year to answer that this was a food they liked, giving a higher percentage. However, if we look at “Natto”, 13.8% of students who had stayed less than one year answered it as food they liked whereas the percentage of students who had stayed longer than one year who answered Natto as food they liked was 2.9% so in this case there was a tendency for students who stayed longer to answer it as food they liked thus giving a lower percentage ( $P=0.08$ ). Among the 20 items of Japanese food we investigated, for 13 items, there was a higher percentage of people who liked these in the group of students who have stayed longer.

## **2) Japanese food disliked according to duration of staying in Japan**

Figure 2 shows the result comparing Japanese food which students dislike according to the duration of their stay in Japan. In the case of “Natto”, the percentage of international students who have stayed in Japan less than 1 year and answered dislike was 42.5%, on the other hand, the percentage of international students who have stayed in Japan longer than 1 year answered dislike was 64.7%. This was a significantly high percentage ( $P<0.03$ ).

## **4. Japanese Students’ Preference Survey towards Japanese Food**

### **1) Japanese food liked**

The food 22 Japanese students liked from the top was; “Ramen” 82%, “Sushi” 82%, “Curry rice” 68%, “Tempura” 68% and “Sashimi” 68%.

### **2) Japanese food disliked**

For more than 10% of Japanese students, the Japanese food which was disliked was as follows “Natto” 14% and “Umeboshi” 14%.

## **5. Comparison to Japanese food preference between international students and Japanese students**

### **1) A Comparison of Japanese food liked**

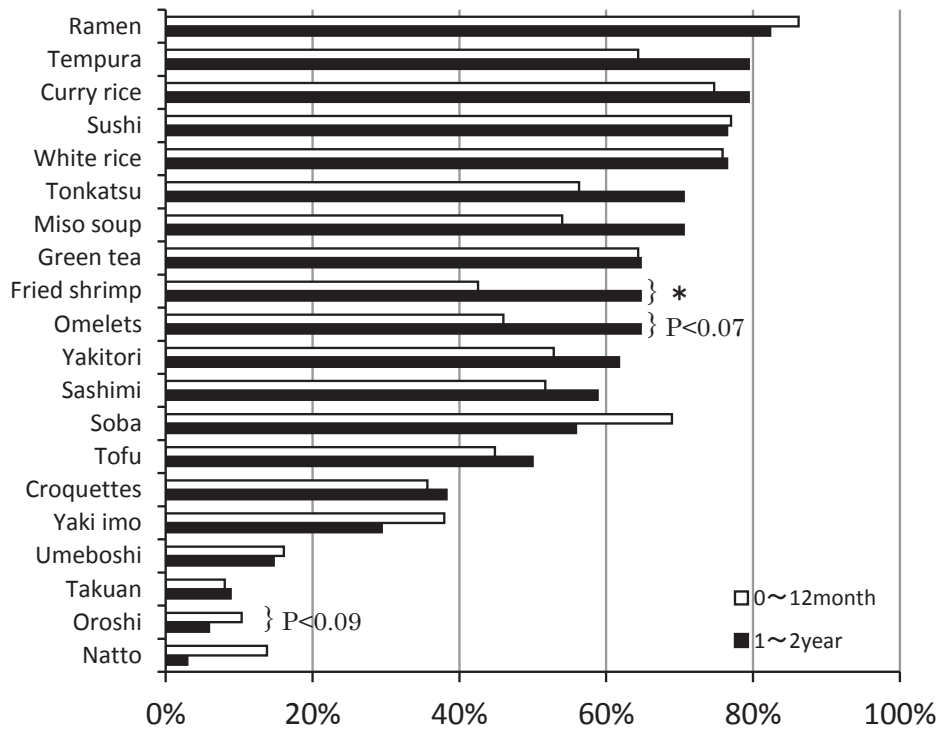
Figure 3 shows the comparison results of the survey carried out to see if there was any difference between international students and Japanese students concerning their preference of Japanese food. Due to the small number of male students among the Japanese students, there was a difference in male-to-female ratio compared to international students, however, we judged that gender has little influence in preference and we made no adjustment according to gender. In the case of “Natto”, 40.9% of Japanese students answered they like it, whereas 10.7% of international students said the same. The percentage of Japanese students who answered ‘like’ was higher than for international students and there was a significant difference ( $P<0.001$ ). In the same way, for “Oroshi”, 27.3% of Japanese students answered like and 9.1% of international students answered the same and there was a significant difference ( $P<0.016$ ).

### **2) Comparison for Japanese food which was disliked**

Figure 4, in contradiction to figure 3, shows the result of the survey to see any differences in the food disliked between the two groups of students. In contrast to Japanese food liked, in the case of “Natto”, 13.6% of Japanese students answered ‘dislike’, compared to this, a high percentage at 48.8% i.e. nearly half of international students answered the same.

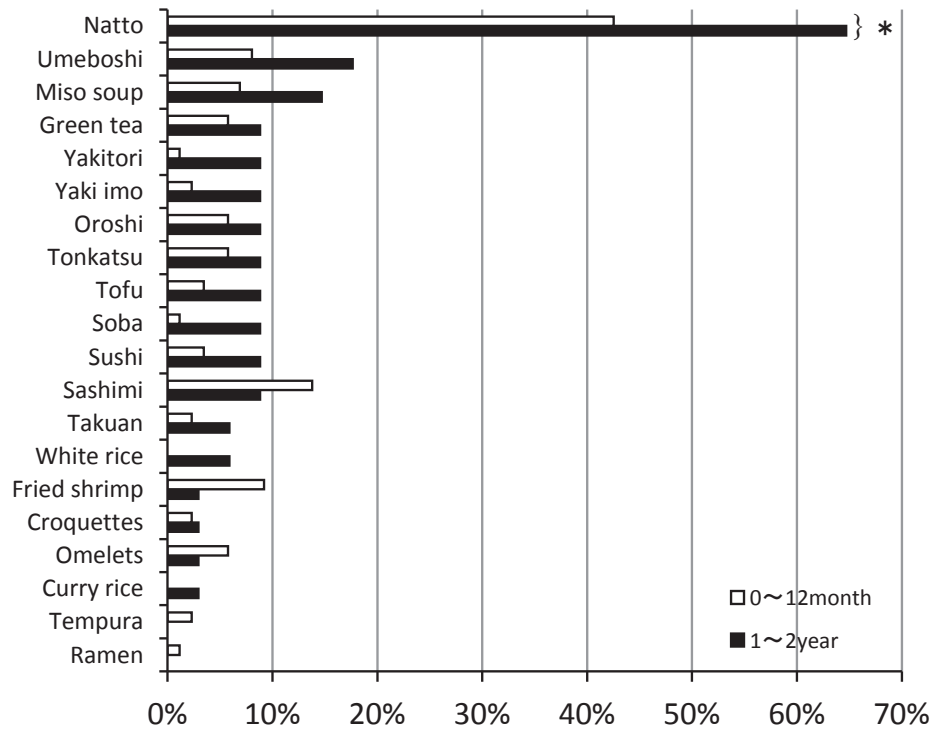
## **Discussion**

The surveys reporting this kind of food preference are few in number. The preference survey targeting



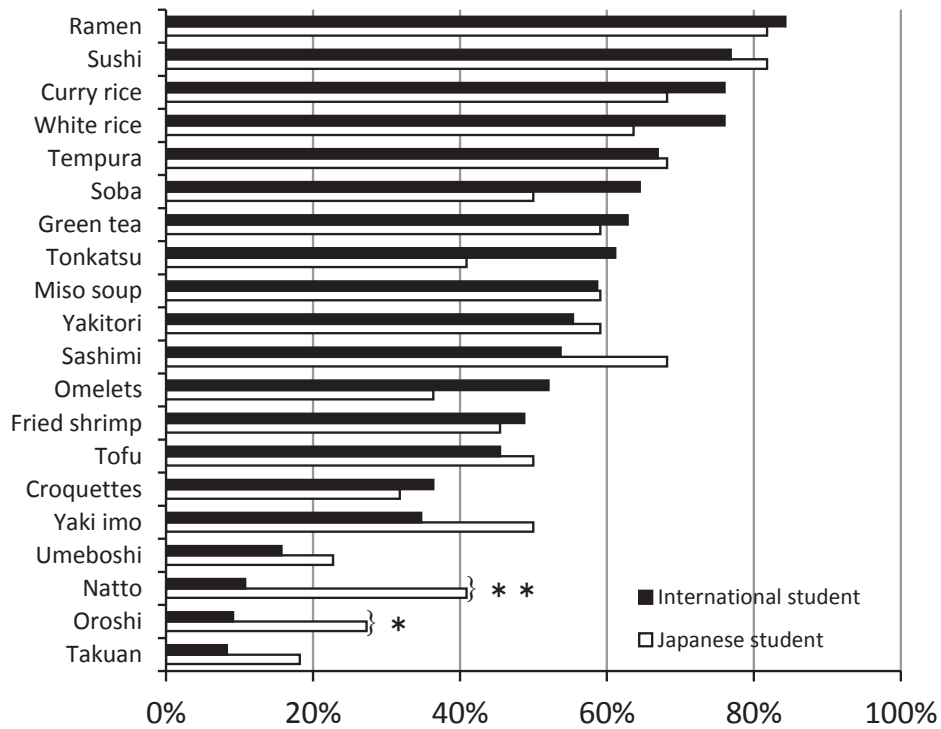
**Figure 1 Comparison on international students' preferences for Japanese food according to the duration of stay in Japan (like)**

□ Shows international students' duration of stay is less than 1 year (n = 87), ■ Shows international students' duration of stay is more than 1 year (n = 34), shows ratio (%) of students who answered "like" in each items. For difference in ratio, we evaluated using a Chi-squared test (\*: P<0.05).



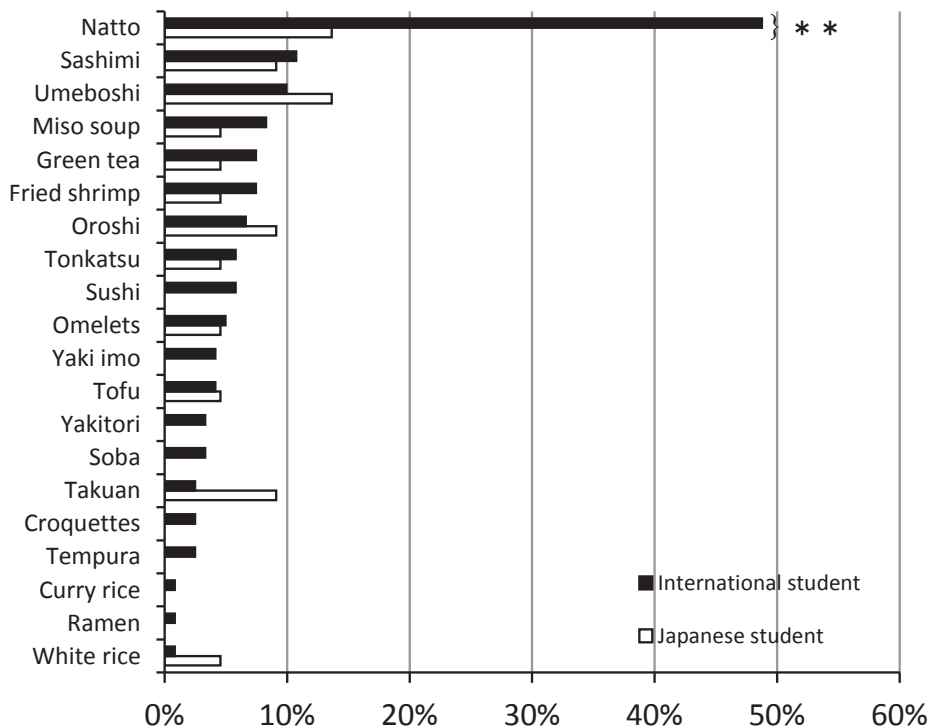
**Figure 2 Comparison on international students' preferences for Japanese food according to the duration of stay in Japan (dislike)**

□ Shows international students' duration of stay is less than 1 year (n = 87), ■ Shows international students' duration of stay is more than 1 year (n = 34), shows ratio (%) of students who answered "dislike" in each items. For difference in ratio, we evaluated using a Chi-squared test (\*: P<0.05).



**Figure 3 Comparison between Japanese students and international students' preference (like)**

□ shows Japanese students (n = 22), ■ shows international students (n = 121), shows ratio (%) of students who answered 'like' for each item. For difference in ratio we evaluated using a Chi-squared test (\* : P<0.05, \*\* P<0.01).



**Figure 4 Comparison between Japanese students and international students' preference (dislike)**

□ shows Japanese students (n = 22), ■ shows international students (n = 121), shows ratio (%) of students who answered 'dislike' for each item. For difference in ratio we evaluated using a Chi-squared test (\* : P<0.05, \*\* P<0.01).

foreigners, there is one survey carried out overseas (China, Hong Kong, Taiwan, South Korea, the US, France and Italy) by Japan External Trade Organization<sup>1)</sup> (JETRO) and it reported that the (No.1) Japanese food was “Sushi” and after that, “Sashimi”, “Yakitori”, “Tempura”, “Ramen”, “Curry rice”. For the international students who were the subjects in our survey “Sushi”, “Tempura”, “Ramen” and “Curry rice” were also at the top. According to JETRO’s theory, there are several reasons for these preferences, one is they considered the influence of how Ramen specialty restaurants have expanded in Asia and Europe and in the United States which in turn became a business trend, and another is there are also a lot of scenes showing people eating curry rice in animations as Japanese culture spreads to the rest of the world (to Asia and Europe and the United States). As we can see, there are huge influences in preference considering how familiar Japanese food is.

In our survey, we carried out a preference survey for 20 kinds of Japanese food, however in 13 items out of the 20 items we investigated; the percentage of students who answered ‘like’ was higher in the international students who had stayed longer in Japan than the ones who had been in Japan a shorter period. With that more Japanese food becomes familiar and there are more opportunities to have Japanese food, it can be said that the percentage of Japanese food preference becomes higher, and people can be attracted to Japanese food.

If we consider a survey which targeted Japanese people, there is a survey report targeting elementary school students conducted by GAKKEN HOLDINGS CO.,LTD. in 2011<sup>2)</sup>

The favourite food items were “Sushi”, “Ramen”, “Curry rice”, “Yaki-niku” and “Hamburg” Concerning food not liked, “Grilled fish (Yaki-zakana)”, “Salad”, “Sashimi”, “Soba” and “Fried egg” were top. For Elementary school students’ their favourite food was mainly western food within Japanese food, which spread after the Meiji Era (1868–1912).

According to the survey report targeting Japanese young people over 16 years old (NHK Broadcasting Culture Research Institute ,2007)<sup>3)</sup>, the top favourite food types were “Sushi”, “Sashimi”, “Ramen”, “Miso-soup” and “Grilled fish (Yaki-zakana)”. Whereas “Sashimi” and “Grilled fish (Yaki-zakana)”, were those ranked as the highest food disliked among elementary school students. In this case such food types were the favourites in this survey targeting over 16 years old. As seen from the above, there is a difference in preference depending on the generation, especially the preference towards fish dishes was hugely different. It can be said that the opportunity to experience Japanese food also has an influence on one’s preference for Japanese.

To carry out a preference survey is important to lead to increased food production in the future. That is to say, food liked can lead to an increase in food demand and vice versa food disliked can decrease food demand and may influence the existence of food in the future. In a globalized food world, it is significantly important to understand both foreigners’ preferences towards Japanese food as well as encourage food globalization. However, within that we need to protect traditional Japanese food. From this survey, we discovered that Japanese food has a great appeal to be liked, but it is important that Japanese food is familiar and there is an opportunity to experience eating it. It is considered that increasing the opportunities to have Japanese food for not only Japanese but also foreigners, this in turn will lead not only to Japanese food globalization but also encourage the protection of Japanese food.

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