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Knowledge of Risk Factors of Cancer Among Nepali Immigrants in Japan

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Abstract

Cancer accounts for 30% mortality in Japan. Increasing the basic knowledge on Cancer is vital to decrease the burden of cancer treatment and medical expenses. Since Nepal is the largest South Asian community in Japan, it is necessary to assess their awareness of Cancer. The purpose of this study was to identify cancer awareness among Nepali immigrants in Japan. A descriptive, cross-sectional study was conducted Hokkaido prefecture, Japan. A snowball sample of 100 Nepali immigrants aged 20-45 years participated in this study. SPSS V.22.0 was used for regression and descriptive analysis. Most immigrants (67%) were in between 31 and 45 years old and male (73%). Almost 21% did not have health insurance in Japan. The smoking rate was low (12%) while the alcohol rate was high (65%) among immigrants. Internet was reported to be the most common source of information. A total of 87% of immigrants showed a strong need for cancer education. The total range of score was 0-9. Female, university-level education, family history of chronic illness, and immigrants with the daily habit of healthy diet had better knowledge about risk factors of Cancer. Multiple regressions showed education level, length of stay, and healthy diet habit as a significant factor for knowledge about cancer (R^2 = 0.34, $p<0.01$). There was limited knowledge on risk factors of cancer among Nepali immigrants. This study showed a strong need for awareness about cancer and screening tests to ameliorate the increased risk of cancer.

Keywords: Risk factors, Cancer, Immigrants, Knowledge, Nepali

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1. Introduction

Cancer is the second leading cause of death globally, accounting for 8.8 million deaths in 2015 [1]. Globally, nearly one in six deaths are due to cancer. Approximately 70% of deaths from cancer occur in low- and middle-income countries [2]. Lung, prostate, colorectal, stomach, and liver cancers are the most common types of cancer in men, while breast, colorectal, lung, cervix, and stomach cancers are the most common among women [1]. The number of new cases is expected to rise by about 70% over the next two decades. According to current evidence, between 30% and 50% of cancer deaths could

be prevented by modifying or avoiding key risk factors, including avoiding tobacco products, reducing alcohol consumption, maintaining healthy body weight, exercising regularly and addressing infection-related risk factors [1]. Only one in five low- and middle-income countries has the necessary data to drive cancer policy [2].

Cancer accounts for 30% of mortality in Japan [3]. According to statistics compiled by the Ministry of Health, Labour and Welfare, 353.000 people died of cancer in 2010, accounting for one in every three deaths. While every aging society confronted by an increasing number of cancer patients, the actual peak of cancer deaths for Japanese males is in their sixties and for females in their fifties. These facts clearly show that cancer is a disease that attacks people in the prime of their life [5]. The migration of people has been a common phenomenon since the beginning of human civilization [6]. In the 21st century, labor migration has moved to the top of the policy agendas of many countries: countries of origin, of transit, and destination. Most of the world's estimated 150 million migrants are people searching for improved economic opportunities abroad [7]. Japan is one of the favorite work destinations among Nepali citizens. According to the Immigration Bureau of Japan (2016), at the end of 2015, there were 2.23 million foreign nationals registered in Japan [8]. The number of registered Nepali migrants increased from 5.314 in 2005 to 60.689 in 2016, making them the largest South Asian community in Japan. The health status of immigrants is a significant factor in their successful establishment in the host country. However, maintaining the optimum health and lifestyle of migrant populations has often been challenging both for migrants themselves and the host countries [9]. Hence, the purpose of this study is to ascertain the level of knowledge about risk factors for cancer among Nepali immigrants living in Japan.

2. Methods

The present study conducted among restaurant workers residing in Hokkaido prefecture, Japan. One of the leading associations of Nepalis in Japan asked for help in this study. Convenience sampling was done, and snowball sampling methods used. After contacting some leaders of this leading association, a mail survey method was used to send the questionnaire. A period of one month's duration was given to complete the questionnaire. Follow- up calls were made to the key person a week before the deadline. Around 105 participants returned the questionnaire. After excluding missing data, 100 questionnaires included in this study. A descriptive analysis, multiple regression was conducted to find out the predictor of knowledge. The level of significance set at 0.05. All analyses were performed using SPSS v 22.0 (IBM Corp., USA).

3. Results

Of the 100 workers whose questionnaires included, 67% aged between 31 and 45 years, and 73% were male. More than 65% had been living in Japan for two years or more. About 67% had at least six hours of sleep per night, and 21% did not have health insurance. Around 12% and 65%, respectively, had a smoking or alcohol habit, and 55% said

they had a habit of exercising during the week. Only 14% said they had a habit of daily food consumption. Socio-demographic information presented in Table 1.

Table 1: Socio-demographic Information N=100.

Variables	Categories	N (%)
Age	20-30 years	33 (33.0)
	31-45 years	67 (67.0)
Gender	Male	73 (73.0)
	Female	27 (27.0)
Educational level	Illiterate	3 (3.0)
	Up to grade 8	17 (17.5)
	Up to grade 12	58 (59.7)
	University level	22 (22.6)
Smoking status	No	88 (88.0)
	Yes	12 (12.0)
Alcohol status	No	35 (35.0)
	Yes	65 (65.0)
The family history of Chronic illness	No	95 (95.0)
	Yes	5 (5.0)
Exercise in a week	No exercise	29 (29.0)
	Sometimes	55 (55.0)
	Daily	16 (16.0)
Healthy food consumption (per week)	Sometimes	14 (14.0)
	3-4 times	72(72.0)
	Daily	14 (14.0)
Health insurance	No	21 (21.0)
	Yes	79 (79.0)
Length of stay in Japan	Less than two years	35 (35.0)
	More than two years	65 (65.0)

Figure 1 shows information concerning knowledge about the risk factors for cancer. Smoking was considered a major risk factor by 67% of the immigrants. Other risk factors identified were excessive alcohol consumption (57%), obesity (40%), excessive red meat consumption (38%), prolonged use of preservatives (36%), low physical exercise (32%), family history of cancer (31%), radiation (24%) and low fruit and vegetable consumption (19%).

Table 2 shows the relationship between demographic variables and cancer knowledge. There was no significant difference in knowledge levels among the age groups. Participants with a higher educational level had better knowledge than did those with a lower educational level, as did those with a daily habit of healthy food consumption, those who were female, and participants with a positive family history. Participants who had undergone cancer screening had better knowledge of the risk factors than did

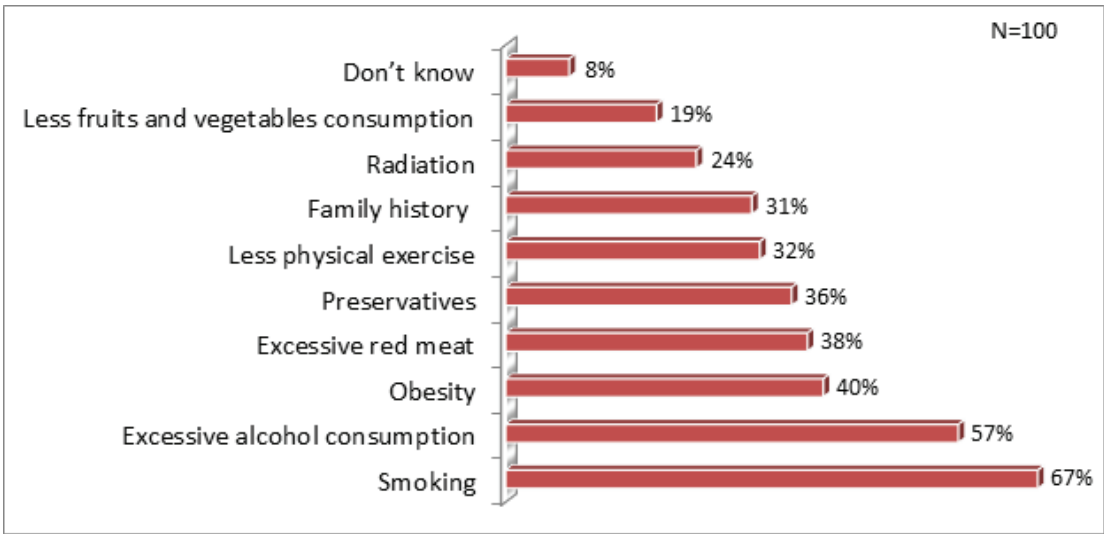

Figure 1: Knowledge on Risk Factors of Cancer.

participants who had never experienced screening. Participants who watched or listened to health-related programs had a better understanding of the risk factors than did participants who lacked the habit of watching or listening to health-related programs.

The following variables showed a relationship to cancer knowledge score: female (p=0.032), educational level (p=0.001), healthy diet (p=0.012), family history (p=0.017), cancer screening (p=0.003), and watching/ listening to health-related programs (p=0.012). Therefore, a standard multiple regression was conducted to identify the best predictor of cancer knowledge. The results presented in Table 3. Of all these variables, educational level was the strongest predictor for cancer knowledge (R^2= 0.34, β=0.352, p<0.01)). Cancer screening habit (β=0.176), long length of stay in Japan (β=0.184), daily consumption of a healthy diet (β=0.175), watching/hearing to health programs (β=0.136), and family history (β= 0.106) were also a predictor for cancer knowledge.

4. Discussion

The study focused on the awareness of Nepali immigrants living in Japan of the risk factors for cancer. Japan has become a popular work destination for Nepali workers. Generally, in Japan, Nepali restaurant workers can earn more than ten times the average wages in Nepal. Social network and transnational ties have helped in the migration of Nepalis to Japan [8]. Around 27% of the workers were female in this study. A status report for Nepal 2013-14 concluded that overseas employment is heavily male-dominated: roughly 95% of all labor permits given to men [10]. About 67% of participants believed that smoking is a major risk factor for cancer. The overall smoking prevalence in Nepal ranges from 25% to 73% in men and from 0.8% to 60% in adult women, across different regions [11]. The smoking rate was lower among the workers (12%), a rate similar to that in a study conducted among Nepali migrants in the UK, where the smoking rate was 13.9% [11]. This situation might be due to the taxes imposed on tobacco/ cigarettes and the smoking ban in public places.

Table 2: The relationship between Demographic Variables and Cancer knowledge Score.

SN	Demographic variables	Category (N)	Cancer Knowledge Score	p-value
1	Age	20-30yr (33)	3.15±2.15	0.416
		40-60yr (67)	3.52±2.12	
2	Sex	Male(73)	3.12±2.05	0.032
		Female(27)	4.15±2.19	
3	Educational level	Illiterate(3)	2.00±1.00	0.000
		Up to grade 8 (17)	1.88±1.65	
		Up to grade 12 (58)	3.43±2.05	
		University level (22)	4.68±1.98	
4	Smoking history	No (88)	3.45±2.10	0.491
		Yes (12)	3.00±2.50	
5	Alcohol history	No (35)	3.74±2.27	0.240
		Yes (65)	3.22±2.05	
6	The family history of chronic illness	No (95)	3.28±2.08	0.017
		Yes 5)	5.60±2.07	
7	Cancer screening	No (94)	3.24±2.04	0.003
		Yes (6)	5.83±2.32	
8	Watch Health program	No (10)	1.80±1.55	0.012
		Yes (90)	3.58±2.12	
9	Healthy diet consumption (per week)	Sometimes (14)	1.86±1.61	0.012
		3-4 times(72)	3.61±2.18	
		Daily (14)	3.86±1.75	
10	Length of stay in Japan	Less than two years (35)	2.71±1.76	0.017
		More than two years (65)	3.77±2.23	
11	Exercise habit (per week)	No exercise (29)	2.66±2.12	0.057
		Sometimes (55)	3.82±2.10	
		Daily (16)	3.31±2.02	
Total Cancer Score=0 to 9				

The overall alcohol consumption is higher among these workers (65%) than alcohol consumption in Nepal (23.6%) [11]. The influence of local culture, westernization, or stress relief may explain this increase in the alcohol rate among immigrants. Although 67% of the participants had a habit of alcohol consumption, around 57% of participants believed alcohol to be a risk factor for cancer. This finding is similar to that from a study conducted in India, where 58.8% of participants thought alcohol to be a risk factor [12].

More than 60% of the immigrants agreed to the possibility of suffering from mental health problems in the future. Japan is a country of punctuality and hard-working people where overtime is commonplace, which might be one of the reasons for this belief. It was interesting to find that 21% of the workers did not have health insurance in Japan.

Table 3: Multiple Regression to Find the Predictor of Knowledge.

SN	Variables	Constant	Unstandardized coefficient (B)	Standardized coefficient (β)	p-value
1	Educational level	-2.442	1.044	0.352	0.00
2	Family history		1.036	0.106	0.22
3	Cancer screening		1.568	0.176	0.04
4	Watch health programs		0.962	0.136	0.11
5	Healthy diet		0.703	0.175	0.04
6	Length of stay		0.816	0.184	0.03
a. *Dependent variable: Cancer knowledge score*					

National Health Insurance (NHI) is strongly recommended in Japan since it helps to cover medical costs during illness. If immigrants do not obtain NHI soon after moving to Japan, they will find themselves charged for back payments for that period, in addition to the first month's premiums, upon joining. Even so, some immigrants are not ready to pay, resulting in risky health behaviors. This finding contrasts with that of a study conducted among immigrants in Gulf countries, where 36.5% insured for health services [6].

About 31% of participants identified a family history of cancer as one of the risk factors for cancer. A family history of cancer increases the risk for certain types of cancer [13]. A study conducted in Pakistan also showed low awareness of respondents of the fact that there was a genetic risk factor for cancer [14]. Hence, it is important to create awareness among people about the importance of family history and early cancer screening.

Out of the 27 females, only six females had undergone cervical cancer screening. Cervical cancer screening (Pap smear test) is still not in a high priority for Nepali women. A lack of perception about the preventive role of Pap smear, a lack of time and a lack of permission from their husband to go for cervical cancer screening are other determinants acting as barriers [15]. Hence, a proper awareness program should be conducted among women to raise awareness of cervical cancer screening.

Only 19% of participants believed that low fruit and vegetable consumption could lead to the risk of cancer. This finding supported by an Omani study in which respondents showed a low awareness about eating small amounts of fruit and vegetables, and where obesity and the eating of red or processed meat associated with cancer risk [16]. With this reduced awareness, there is a high risk of Nepali people who have cancer.

Sometimes, cultural practices, health misconceptions, and myths may be barriers to healthy behavior [17]. Hence, a qualitative approach should be taken to understanding the cultural beliefs and barriers to healthy behaviors.

A significant association was found between education and knowledge. This study showed that the higher the educational level, the better the understanding. It is well known that education is essential for good health. This finding is supported by other studies, indicating that school is an important marker for healthy behavior [16, 18, 19].

Females had a better knowledge of the risk factors for cancer than did males. Another study conducted in Nepal also showed that women took cardiovascular diseases more seriously than did men. This condition may be because, in Nepal, females regarded as

the sole caretaker of family members; hence, they may take health issues more seriously than males do [17].

Public awareness about the importance of cancer as well as screening can be achieved by creating and raising awareness. Because the internet was the main source of health-related information among immigrants, the use of social networking sites could be beneficial for approaching the young. This is to ensure that all groups of people understand information and knowledge about cancer within the society and that the issue of culturally and religiously sensitive information about cancer is addressed [20].

This study had several limitations. First, the snowball sampling method was used which may have created a selection bias. Only 100 restaurant workers participated in this study, meaning the results may not be generalizable to adults working in other fields. There are several confounding variables affecting knowledge among adults that have yet to be checked. This variables opens the floor up to future research.

5. Conclusion

There is a lack of awareness of cancer risk factors among the immigrants surveyed. Cancer is an important lifestyle-related disease, and every country needs to place a greater focus on raising awareness of its risk factors, signs and symptoms, and prevention. Languages and a lack of access to health services may be barriers for immigrants in receiving health-related information. Hence, there is a strong need to conduct qualitative studies to identify the barriers and to provide accurate health services to Nepali immigrants.

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Ethical Approval

This study approved by the ethical review committee of Hokkaido University.

Competing Interest

Authors have no conflict of interests.

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