

## **HIV/AIDS related risk perception, health behavior, and access to health care among Nepalese in Tokyo Metropolitan area**

Supriya Shakya, Reserch Resident, Japan Foundation for AIDS Prevention

### **Introduction**

Japan is a host nation for a large migrant population, and this population has been growing significantly<sup>(1)</sup>. With over 156,333 Nepalese residing in Japan as of June 2023, they represent the nation's largest South Asian population<sup>(2)</sup>. They comprise a range of demographic including the young populations trying to make a living and also advance their education. Without their families, they lead a solitary and socially predisposed existence with subpar living and working conditions. In addition to their independence, lack of supervision and demanding schedules make them vulnerable in their day-to-day lives and health, increasing their risk of exposure to contracting several diseases, such as HIV/AIDS<sup>(3-5)</sup>.

HIV/AIDS awareness, education, counseling, and access to testing and treatment facilities are extremely crucial, as it is still a global health concern<sup>(6,7)</sup>. Early HIV diagnosis is essential for directing patients toward appropriate counselling, preventive measures, and treatment uptake<sup>(1,7,8)</sup>. While AIDS cases grew from 33 in 2010 to 44 in 2017, the number of HIV diagnoses among foreign residents increased from 78 in 2010 to 152 in 2017 in Japan. Nearly 17% of new HIV cases in Japan are international migrants despite their proportion to the entire population is about 3% in 2022. Also, nearly 30% of new HIV cases among international migrants found their infection after they develop symptoms (it was above 30% in 2021, which was higher than their Japanese counterpart). Given the increasing number of foreign people entering Japan, there are likely a greater risk of increase in HIV/AIDS cases in Japan<sup>(1,9)</sup>.

Japan has one of the best universal healthcare systems in the world, serving both the Japanese and

migrant populations. As contributing members of the community, migrants are likewise recognized to receive equal access to the health benefits provided by the Japanese government, including free and anonymous HIV testing events implemented to engage the national and international public<sup>(3)</sup>.

However, because of social stigma and discrimination, language challenges, and limited access to resources and information, migrants are less likely to be able to access and attend such events<sup>(10-12)</sup>. Most commonly language challenge is a serious impediment which impedes migrants to approach basic health care<sup>(3,9)</sup>. As a result, it is likely that the migrant population has compromised health outcomes compared with the native population. These factors primarily manifest as detrimental barriers that can compromise daily activities and general health<sup>(3,13,14)</sup>. Hence, Public health strategies to promote early diagnosis should be strengthened and encouraged.

To reach out to the Nepalese population we conducted behavioral studies during the annual Nepal festival, held in Tokyo. This festival brings Nepalese from all over Japan to Tokyo to experience unity, savor the cuisine, and socialize with others. Hence, we utilized this opportunity to conduct a survey among the Nepalese population residing in the Tokyo metropolitan region to understand their basic knowledge about HIV, their subjective risk perception of contracting the virus, and their access to HIV testing, with the aim to further improving ways of conducting HIV testing that are friendly to the international community.

This research focused on ways to increase information accessibility, and establish connection to comprehend the needs of the community and communicate to spread knowledge and promote better utilization of the health care resources and free health facilities for HIV testing events, counselling, treatment advices available in Japan. This may prevent further progression of the virus and provide treatment guidance to the needy people.

## **Methods**

### **Study design, area and participants**

This quantitative study was conducted during the Nepali festival held in Tokyo, Nakano ward. Nepalese from inside and outside the capital participated in these 2 days event held from July 22nd and 23rd, 2023. Participants, male and female who meet with the certain criteria like 1). Nepalese 2). Age 18-59 years 3). willing to participate voluntarily were qualified for the survey.

### **Sampling strategy and sample size**

Two survey spaces were set up at the venue, and visitors were asked to for consent for the survey verbally followed by written form. The self-administered questionnaire was distributed to participants on paper or in the case of online, they showed their QR code and answered the self-administered questions online using their own smartphones. Convenience sampling was employed to recruit participants.

### **Measurements**

Dependent variable. By asking participants questions like; a) if they had ever used HIV testing in Japan and (b) if they are interested to get HIV testing in Japan.

Independent variables. We evaluated the sociodemographic details by inquiring about age, gender, nationality, marital status, and educational attained in their home nation.

To learn about migration- related characteristics we questioned about their nature of work, length of stay in Japan, and visa status.

Behavior, health, and HIV-related traits were evaluated by inquiring about their health insurance,

alcohol consumption, requirement for translators speaking Japanese while visiting medical facilities, use of HIV testing both in their home country and in Japan, awareness of anonymous and free HIV testing in Japan, and interest in taking HIV tests there. Further by asking respondents questions on their understanding of HIV, perceived risk factors for HIV, attitudes toward HIV testing, and HIV testing facilities, we were able to analyze their level of knowledge on HIV/AIDS.

### **Data collection**

The questionnaire for the survey was arranged and initially translated into Nepali from English. After consulting with experts in the field of HIV and immigrant health, we developed a final version of the questionnaire. Self-administered questionnaires in paper and online were used to gather the data. We pretested it with ten participants, and based on the pretest findings, we revised or modified few of the questions. The data was gathered on the day of Nepal festival event on June 22<sup>nd</sup> and June 23<sup>rd</sup>, 2023. After explaining the goals and methods of the study, we handed the questionnaires to the participant inside the booth. The participants completed the questionnaires and gave them back to us in the time span of 10- 15 minutes. A total of 300 participant from inside and outside Tokyo participated in this study and provided us with their data.

### **Data analysis**

To examine sociodemographic traits, traits associated with migration, and traits related to behavior, health, and HIV, we used descriptive statistics. STATA software version 18 was used for all analyses.

### **Ethical considerations**

Ethical approval was obtained from the research ethics committee of Kyorin University, Tokyo, Japan. Each participants gave verbal informed consent and participated voluntarily. We protected the privacy and personal information of the participants. Additionally, we also obtained written and verbal consent from the Nepal festival's organizing committee to conduct this survey.

## Results:

### Demographic and migration characteristics

Table 1 shows demographic and migration characteristics of Nepalese living in Japan. Of the total 305 participants, 217 (71.15%) were male, 125 completed bachelor's degree (41.12%), and 211 were married (69.18%). The average age was 31.22 years (SD 7.7). Among participants, 160 resided in one of Tokyo's 23 wards (52.63%). Skilled labor visa was the most common visa type (n = 86, 28.38%) followed by dependent visa (n = 61, 20.13%).

**Table 1.** Demographic and migration characteristics of Nepalese living in Japan

Characteristics	Total (n = 305)	
	Mean	SD
Age in years	31.22	7.7
	n	%
<b>Gender</b>		
Male	217	71.15
Female	88	28.85
<b>Education level</b>		
Illiterate	3	0.99
Primary/secondary	25	8.22
Higher secondary	120	39.47
Bachelor's	125	41.12
Above bachelor's	31	10.2
<b>Marital status</b>		
Single	94	30.82

Married	211	69.18
<b>Residence in Japan</b>		
Tokyo	160	52.63
Outside Tokyo's 23 ward	14	4.61
Kanagawa	28	9.21
Saitama	44	14.47
Chiba	47	15.46
Others	11	3.62
<b>Visa</b>		
Student	56	18.48
Dependent	61	20.13
Long term resident	57	18.81
Permanent resident	20	6.6
Skilled labor	86	28.38
Others	21	6.93
<b>Type of work</b>		
Restaurant	58	19.53
Convenience store	37	12.46
Bento company	22	7.41
Factory worker	26	8.75
Hotel	7	2.36
Unemployed	8	2.69
Full time employee	84	28.28
Business owner/self employed	19	6.4
Others	36	12.12

### **Behavior and health characteristics**

Table 2 shows the behavior and health traits of the migrants, where 40.13% had never consumed alcohol. On self-rated health status 42.3% evaluated as good, 91.48% of participants owned insurance card, 75.08% had proper access to health care facilities, while 54.28% required language interpreter during visiting health facilities.

Table 2. behavior and health characteristics of Nepalese migrants

Variables	Total= 305	%
<b>Alcohol usage</b>		
everyday	11	3.62
2-3 times a week	46	15.13
once a week	56	18.42
less than once a week	69	22.7
never	122	40.13
<b>Self evaluated health status</b>		
excellent	44	14.43
very good	68	22.3
good	129	42.3
fair	61	20
poor	3	0.98
<b>Health insurance card</b>		
Yes	279	91.48
no	26	8.52
<b>Access to health care</b>		
Yes	229	75.08
No	76	24.92
<b>Interpreter required</b>		
yes	139	54.28
No	165	45.72

### Characteristics of HIV testing attitudes

Table 3 compares the HIV testing related characteristics of the migrants where 49.01% agreed that HIV testing helps people feel better, 51.97% agreed that HIV testing helps prevent further infection. About 45% of the participants disagreed that their close people will leave them if they are tested positive, 64% disagreed to hide the HIV from other upon diagnosis and 62% disagreed not knowing if they have HIV.

Table 3. Characteristics of HIV testing attitudes of Nepalese migrants

Variables	Total= 305	%
<b>HIV testing helps people feel better</b>		
Agree	149	49.01
Somewhat agree	78	25.66

Somewhat disagree	27	8.88
Disagree	50	16.45
<b>HIV testing helps prevent further infection</b>		
Agree	158	51.97
Somewhat agree	75	24.67
Somewhat disagree	19	6.25
Disagree	52	17.11
<b>close people will leave if I tested positive</b>		
Agree	62	20.39
Somewhat agree	66	21.71
Somewhat disagree	40	13.16
Disagree	136	44.74
<b>People who test HIV positive should hide it from others</b>		
Agree	40	13.16
Somewhat agree	39	12.83
Somewhat disagree	31	10.2
Disagree	194	63.82
<b>Do not want to know if I have HIV</b>		
Agree	61	20.07
Somewhat agree	27	8.88
Somewhat disagree	28	9.21
Disagree	188	61.84

### Characteristics related to the use of HIV testing services in Japan

Table 4 denotes that about 57% did not know about HIV testing access, 91.15% did not know where to go for testing. Furthermore, while 88% in Nepal, and 94.43% in Japan had not utilized testing services available in Nepal and Japan respectively. Although nearly 90% of them did not have knowledge about free HIV testing, 25.33% did show their interest in future testing events.

Variables	Total= 305	%
<b>Proper access to testing in Japan</b>		
No	42	13.77



Yes	90	29.51
I do not know	173	56.72
<b>Know where to go for testing</b>		
Yes	27	8.85
No	278	91.15
<b>Utilization of test service in Nepal</b>		
Yes	37	12.13
No	268	87.87
<b>Utilization of test service in Japan</b>		
Yes	17	5.57
No	288	94.43
<b>Knowledge of free testing in Japan</b>		
Yes	31	10.16
No	274	89.84
<b>Interest in test in future</b>		
Yes	77	25.33
No	226	74.34

In the logistic regression analysis, those with higher perceived risk of HIV infection (aOR:4.11; 95% CI: 1.61-10.46), those with lower AIDS-related stigma scores (aOR1.05; 95% CI: 1.01-1.1), and those who knew that they could be legally allowed to stay in Japan even if they were infected with HIV (aOR: 1.75; 95% CI: 1.01-3.01) were associated with positive attitudes toward taking the test.

## Discussion:

Japan's South Asian population is primarily composed of Nepalese citizens, which is contributing to the country's fast increasing migrant population. In this study, we examined the sociodemographic information of immigrants from Nepal by asking about their age, gender, nationality, marital status, and level of education in their native country. Their type of job, length of stay in Japan, and visa status in order to gather information concerning migration-related

features.

For the assessment of their behavior, health, and HIV-related characteristics involved asking questions about their health insurance, alcohol intake, need for Japanese-speaking interpreters when visiting medical facilities, use of HIV testing in Japan and in their home country, knowledge of anonymous and free HIV testing in Japan, and interest in taking HIV tests there was inquired. Moreover, by asking respondents questions on their understanding of HIV, perceived risk factors for HIV, attitudes toward HIV testing, and HIV testing facilities, we were able to analyze their level of knowledge on HIV/AIDS.

The results shows that the majority of respondents were men (71.15%), 41.12% holds a bachelor's degree and 69.18% were married. A vast majority of them had insurance cards and had easy access to medical facilities, however 54.38% of them reported that language barrier presented as a hinderance<sup>(3,10)</sup>. This suggests that, even though they have easy access to medical services, language barrier kept them from receiving the necessary treatment and could have even cause them to be uninformed of crucial information. Studies conducted with international students in Japan revealed similar results, indicating that access language barriers limited their access to health care<sup>(3)</sup>.

According to the testing attitude toward HIV/AIDS, 51.97% and 49.01% of the migrants believed that HIV testing helps prevent future infection and that HIV testing makes people feel better. About 45% of participants disagreed that if they test positive, their close friends and family will abandon them. Similarly, 64% disagreed that they should hide their HIV diagnosis from others, but 62% disagreed that they should not know if they have the virus. This indicates that people prefer to know and not hide if they have infection and consider that being tested will prevent spreading infections.

HIV testing attitude data revealed that 91.15% of respondents did not know where to get tested, and 57% did not realize that HIV testing was available. It indicates that immigrants were not only unaware of the location but also of the availability of free testing. Additionally, 88% in Nepal and 94.43% of immigrants in Japan, respectively, did not utilize the testing services that were offered in the respective nations. Even though almost 90% of them were unaware that HIV testing is free, 25.33% expressed interest in participating in testing events in the future. This suggests that immigrants living in Japan are unaware of one of the many free services offered by the government. There should be a greater effort made to connect with, engage, and incorporate foreign nationals within the testing services. Despite the interest in taking HIV test, only a few Nepalese are getting tested during outreach testing activities, which indicates the necessity of foreign friendly testing services.

### **Conclusion:**

The study findings indicate the need to modify the outreach testing activities so as to effectively cover those who feel they may be at risk for HIV infection and those willing to know their status with testing. Since there are number of respondents at the Nepal Festival stated they would be interested in testing, it is crucial to lessen the stigma linked to HIV, and spread accurate information about HIV among Nepalese communities in Japan.

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