Health-Related Correlates of COVID-19 Infection among Foreign Residents during the Pandemic Period in Japan

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Introduction

The Japanese Government had a peculiar set of policy measures against the COVID-19 pandemic, including those for foreign residents, while the infection is said to have been controlled relatively well for Japanese residents. The implementation of health measures to deal with the CORVID-19 pandemic has been delegated to prefectural governments. Some researchers and journalists suggest that major metropolitan prefectures failed to deal with the pandemic because of the governors with theatrical politics, particularly the Osaka Governor, having advertised the superiority of "Osaka Model" (e.g., Matsumoto, 2020; Hamaoka, 2021). The governments' health measures should affect the health-related behaviors and outcomes among residents including foreigners.

But due to the lack of available microdata on foreign residents during the pandemic, it was difficult to analyze the effect of policy measures on health behaviors and outcomes at the individual level. The presenter has taken the opportunity to analyze the SRC (Survey Research Center) 2023 survey data set of foreign residents by joining the FY2023 Secondary Analysis Research Group (SSJDA, University of Tokyo). Recently, he has found a strong positive effect of Kansai Area (including Osaka) on the odds of close contact (with the infected), but it does not have any significant effect on the odds of infection (being infected). Therefore, the purpose of this study is to assess the possible effects of health-related correlates (including the residence in Kansai Area) on the experience of COVID-19 infection among foreign residents during the pandemic.

Methods

We will conduct the cross-tabulation and the binary logit analysis of correlates of health-related behaviors on the experience of infection among foreign residents, drawing on the SRC 2023 survey data set. No particular hypotheses will be constructed or tested due to the lack of existing empirical analyses in Japan. It is also because the information on some standard demographics is missing. Therefore, this study will be data-driven and fact-finding,

Results

(1) Cross-tabulation

According to the cross-tabulation, the percentages of foreign residents with the experience of infection are 29.4% (both sexes), 25.4% (males) and 34.3% (females) in Japan, while they are respectively 23.3%, 27.3% and 16.2% in Kansai Area. This is in contrast with the percentages for

close contact: 21.3% (both sexes), 19.9% (males) and 23.1% (females) in Japan; and respectively 36.0%, 45.5% and 19.4% in Kansai Area.

(2) Binomial Logit Analysis with Stepwise Selection

We have conducted binomial logit analyses with stepwise selection for correlates of infection experience.   The correlates with positive effects among both sexes in Japan include household size of 3, rent housing, account in the Postal Bank, account in the internet bank for remittances, while those with negative effects comprise of British and filling out the Japanese questionnaire.   The correlates with positive effects among both sexes in Kansai Area include Taiwanese, other types of health insurance, no visit to clinics or pharmacies when sick, sports as recreation, learning Japanese through correspondence or other methods, and regular body temperature check for prevention, while no correlates have significant and negative effects.

(3) Binomial Logit Analysis with a Fixed Model

The binomial logit analysis indicates that the residence in Kansai Area does not have any significant effects on the experience of infection, while it has a large effect on the experience of close contact among both sexes and males.   Health-related correlates with positive effects on infection include visit to clinics or pharmacies when sick, while those with negative effects comprise of difficulties in understanding COVID-19 information and being insured by the National Health Insurance.   After the deletion of the correlate for Kansai Area, the effects of all the other correlates hardly change, possibly because Kansai Area does not have any significant effects on infection.

Conclusion

There are enough health-related correlates with significant effects on infection experience among foreign residents, but the direction of effects can be against the intuition, possibly because of the reversed causation due to the nature of cross-section data.   While it is difficult to directly relate the individual behaviors with governments' policy measures, the "epidemiological" measures called "Osaka Model" may have increased the foreigners with close contact in Kansai Area, but they may not have decreased the foreigners with infection experience.

References

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