Research Note

# The Coming-of-Age Ceremony in Corona Pandemic: Student Behavior and Measures to Prevent the Spread of SARS-CoV-2

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**Background: The coming-of-age ceremony is a social ceremony marking the day when a person is recognized as an adult. The ceremony, in which participants wear a furisode (long-sleeved kimono) and hakama (traditional Japanese dress), has attracted much attention from overseas.**

**Objective: This study investigates the behavior of university students on the day of the coming-of-age ceremony to consider preventive measures against SARS-CoV-2 infection.**

**Methods: A total of 170 University students who attended coming-of-age ceremonies participated in this study. A questionnaire survey was conducted using Google Forms focusing on students' behavior, specifically whether they wore masks and ate or drank in social settings after the ceremony.**

**Results: Of the 170 participants, 150 chatted with their friends, and 140 had their photo taken (mostly without masks). Seventy-eight students (45.9%) ate and drank with friends after the ceremony, but only a few always wore a mask.**

**Conclusions: Students should be educated on strict infection control measures to prevent outbreaks on campus, and classes should be conducted online after potential cluster events.**

**Keywords:** coming-of-age ceremony, student behavior, SARS-CoV-2

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## I. Introduction

The coming-of-age ceremony is a social ceremony marking the day when a person is recognized as an adult. In Japan, this ceremony is held on the second Monday of January, a national holiday. The ceremony, in which participants wear a furisode (long-sleeved kimono) and hakama (traditional Japanese dress), has attracted much attention from overseas[1].

On a different note, the total number of people infected by the SARS-CoV-2 has exceeded 100 million worldwide, and the death toll has reached 2.5 million. Many people around the world are under restrictions that limit their movement and activities to prevent the spread of the infection. At the time of the study, the number of infected people in Japan was over 311,000 (by the end of January 2021), and the number of deaths was 4353. The Japanese government declared a second state of emergency in the Tokyo metropolitan area on Jan 7, 2021, and asked people to refrain from going out unnecessarily, limiting events, shortening the opening hours of restaurants, and promoting remote work, while many local cities held coming-of-age ceremonies on January 9 or 10.

The authors' university is a medical and welfare university consisting of three faculties and five departments, training nurses, physical therapists, occupational therapists, and care and social workers. It is located near Kanazawa (in the Hokuriku region). Participants often communicate with old friends they have not seen for a long time as if it were a reunion and enjoy a party with food and drinks after the ceremony. The university does not have an affiliated hospital, but doctors, nurses, and virus researchers work as a team

to conduct environmental hygiene patrols, teach hand hygiene, and provide infection education to students and faculty[2]. More than 95% of the students are from the three Hokuriku prefectures, and 70% of them are from Ishikawa Prefecture. This study investigates the behavior of university students on the day of the coming-of-age ceremony to consider preventive measures against SARS-CoV-2 infection.

## II. Participants and Methods

A questionnaire survey was conducted online using Google Forms for our university students who celebrated their coming-of-age ceremony this year. The response period for the questionnaire was from January 19 to 29, 2021. The content of the questionnaire included questions on "whether or not they participated in the ceremony," "behavior at the venue of the coming-of-age ceremony," and "behavior after the ceremony, especially whether and what they ate and drank." This study was approved by the Institutional Review Board of the University (No. 2020-12), Japan.

The collection rate of the questionnaire was 90.6% (259 out of 286). The coming-of-age ceremony for 55 students had postponed (42 students) or canceled (13 students), so we excluded them from this study and focused on the other 204 students.

The infection rate in Ishikawa Prefecture (January 10), where the coming-of-age ceremonies were held, was 1,077 cases per million population (2,275 in Japan and 5,419 in Tokyo), about half the national average (**Figure 1**). The incidence rate (per million people) for the past week (insert date) was 107.21 in Ishikawa, 133.14 in Toyama, 910.93 in Tokyo, and 347.01 in the whole country. In Ishikawa Prefecture, the number of infections ranged from five to ten people per day but the number of cases where the route of infection was unknown was increasing significantly. Thus, the university reminded the students to be cautious with their activities on the day of the ceremony and avoid participating in eating and drinking.

## III. Results

Of these 204, 170 (83.3%) attended the ceremony. As for their behavior at the ceremony, 150 students chatted with their friends (6 of them took off their masks), 140 students took commemorative photos (91 of them took off their masks), and only one student went home without talking to anyone (**Figure 2a**). Regarding the number of friends with whom they talked, four or more was the most common (**Figure 2b**). In terms of the time spent talking, 15-60 minutes was the most common, followed by 5-15 minutes and more than 60 minutes (**Figure 2c**).

After the ceremony, 78 students (45.9%) went out with old friends to eat and drink. Of that, most respondents (41) visited an izakaya (Japanese style pub) making it the most common destination (**Figure 3a**), followed by a family restaurant (9), a cafe (9), a friend's house (8), and a karaoke bar (5) (others not stated). Thirty-five people ate and drank with three to four people, 28 with five or more people, and 15 with only two people (**Figure 3b**). Of these, 22 ate and drank with friends at universities in the Tokyo metropolitan area and 27 in the Kansai area. Half of the students, 39 (50%), ate and drank for one to two hours, followed by 17 (21.8%) for more than three hours and 12 (15.4%) for two to three hours (**Figure 3c**). When eating and drinking, 11 (14.5%) "always wore a mask while talking" and 32 (42.1%) "tried a little" (**Figure 3d**).

It has been revealed that two students of our university were infected with SARS-CoV-2 after the coming-of-age ceremony. They were diagnosed through positive PCR tests by their local physicians three days after they had enjoyed eating and drinking for more than three hours with symptoms such as fever and sore throat. Although they wore masks, they conversed with others without wearing masks when they were eating and drinking.

## IV. Discussion

### 1. Ceremonies during the Coronavirus crisis

Many ceremonies and sports events have been canceled due to the spread of the SARS-CoV-2 infection, however, this is difficult to do in the case of traditional rituals such as coming-of-age ceremonies. In this survey, only 13 students (5%) were in municipalities that canceled the ceremony. More than 80% of students in municipalities that held the ceremony attended it. Fortunately, the authors' university is a medical and welfare university, and, thus the faculty members are generally well-prepared to deal with infectious diseases. Here, few students took off their masks except while having their photos taken.

On the other hand, it became clear that despite the warning not to participate in eating and drinking in the evening, nearly half of the students did not heed this warning and spent time socializing with old friends. In Japan, the government advocates avoiding the three

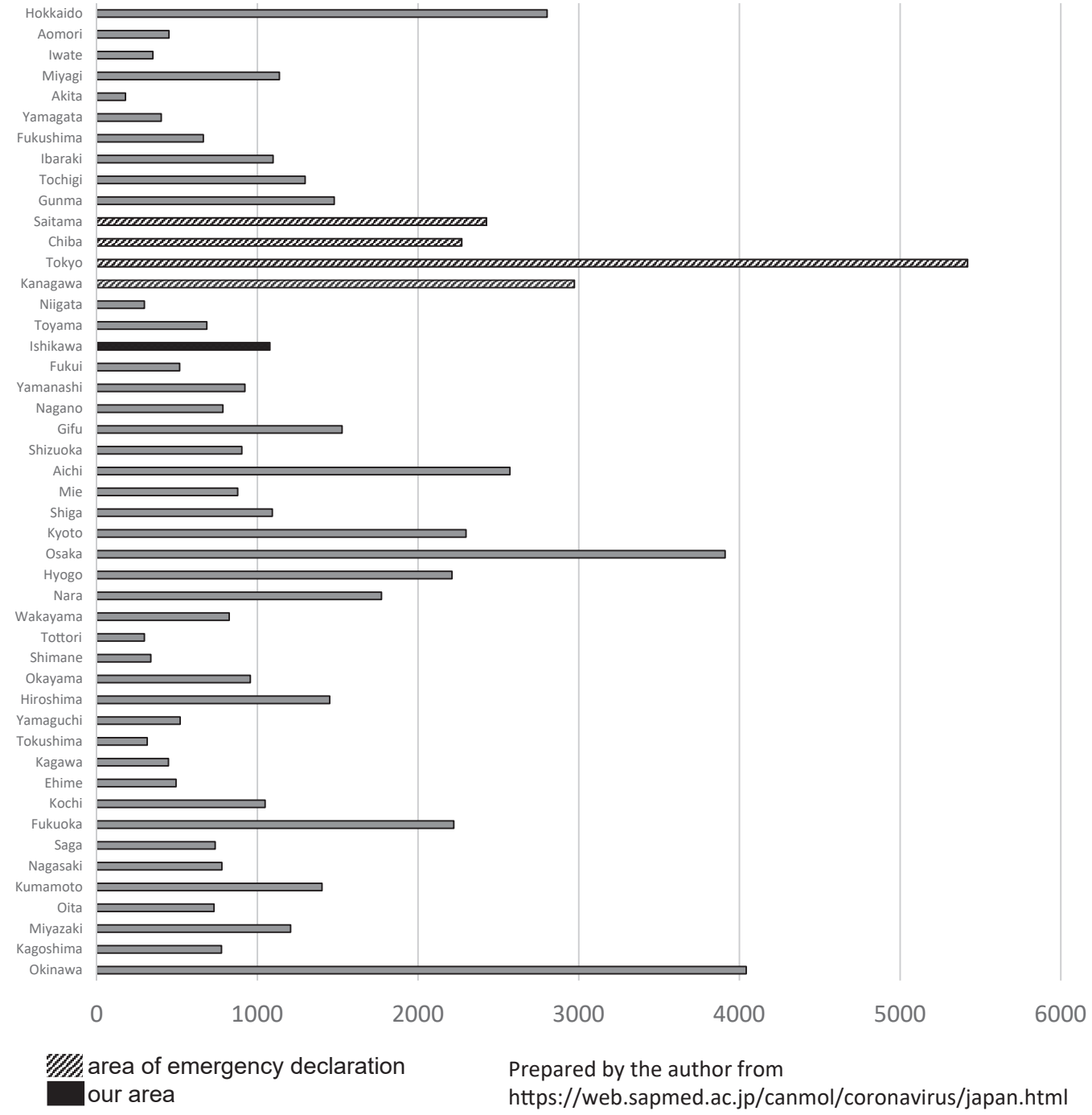


**Figure 1** Number of infected persons per 1 million population by prefecture on January 10, 2021

C's (closed spaces, crowded places, and close-contact settings) to prevent infection[3], but it is difficult to do so while eating and drinking. The government also recommends having drinking parties online, but, when one meets old friends at ceremonies, they might end up eating and drinking together with a large number of people. In this case, the risk increases because people speak more loudly, thus increasing the spread of saliva droplets. Since Japanese law prohibits minors from drinking alcohol, many young adults drink for the first time after the coming-of-age ceremony. In this study, 35.9% of the students were eating and drinking with five or more people. Doing this with a large group of people, with alcohol involved, may make people more neglectful of social distancing rules and they may spill drinks or share food. Therefore, more stringent infection control measures should be taken if this kind of social behavior is to be expected.

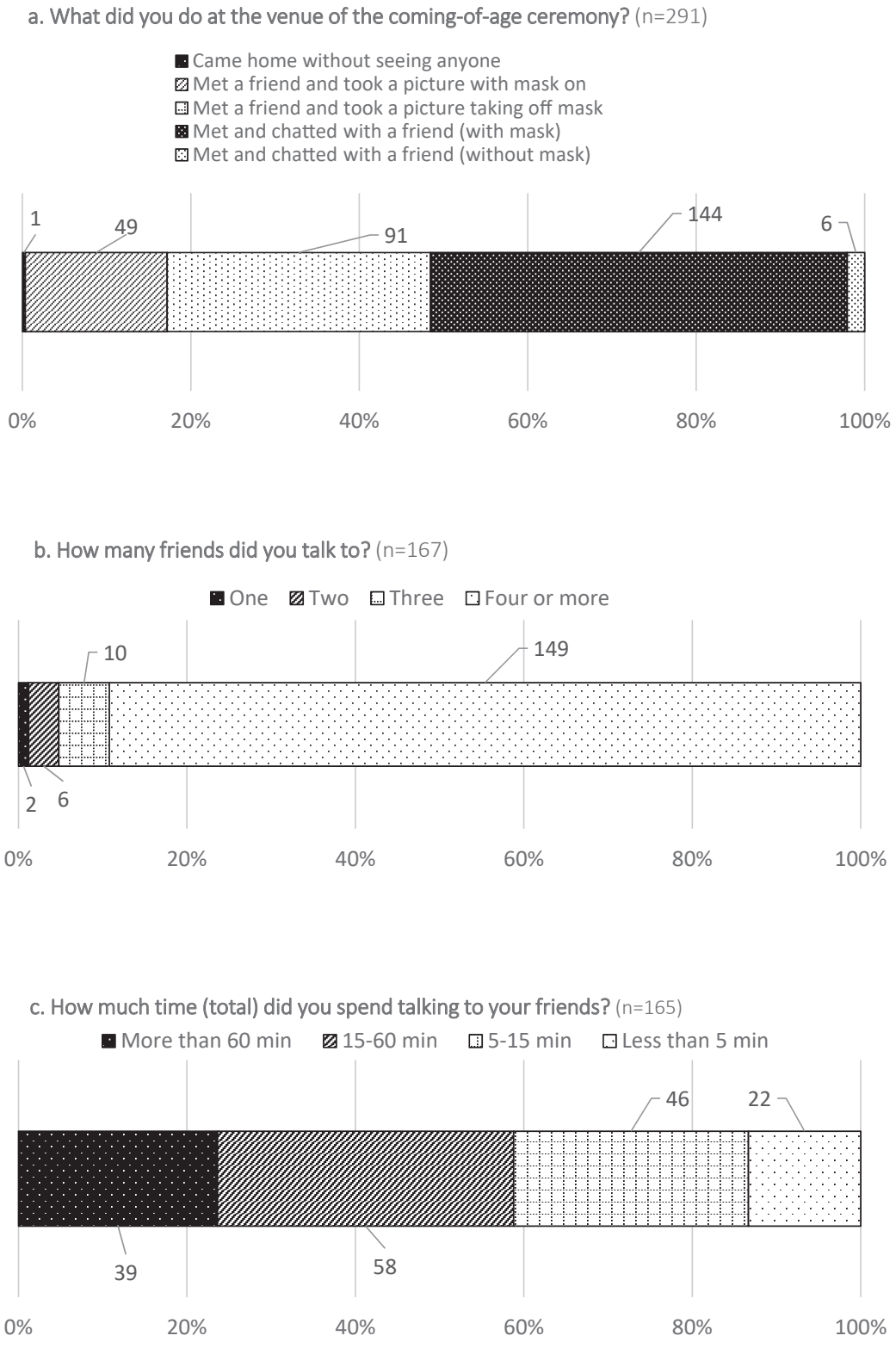


**Figure 2** Behavior at the venue of the coming-of-age ceremony

## 2. Transmission of SARS-CoV-2

SARS-CoV-2 is transmitted when fine particles containing the virus, which travel when an infected person sneezes, coughs, speaks or breathes, are inhaled by a person within a 1-meter radius, or when a person touches his or her mouth, nose, or eyes with a hand that has touched a surface with the virus on it[4-6]. Therefore, it is recommended that people wear masks in public places in addition to practicing good hand hygiene[7,8].

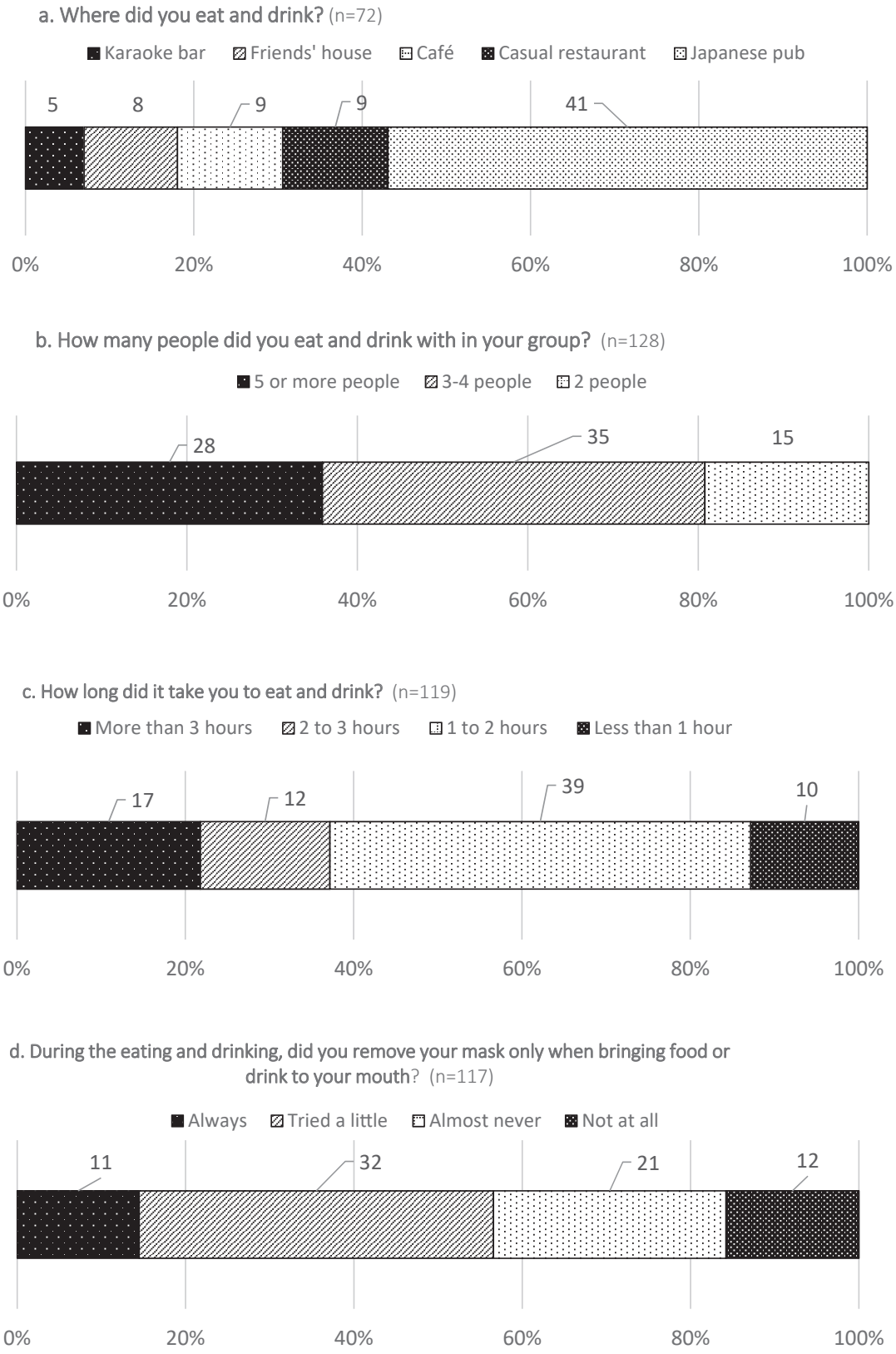


**Figure 3** Eating and drinking after the coming-of-age ceremony

In Japan, people are more accepting of wearing masks because their experience with other deadly epidemics and the habit of using masks to protect against hay fever is common[9]. Masks not only reliably reduce the spread of droplets from coughing and sneezing[10], but it is also known that people who wear masks touch their faces significantly less frequently than those who do not[11]. Wearing masks is thought to contribute to the suppression

of COVID-19 throughout the community by reducing subclinical infections and transmission by infected saliva and respiratory droplets from mildly infected individuals[12)13)]. Despite the reliability of this safety measure, it is not possible to eat or drink while wearing a mask. As a result, clusters are often found in eating and drinking establishments. It has been pointed out that most clusters in Japan form in indoor areas, venues with poor ventilation, crowded environments, and short-distance conversations[14)]. Perhaps eating and drinking with friends after the coming-of-age ceremony would increase the risk of infection as the distance between individuals would be less than one meter and masks would be removed. The Japanese government recommends masked meals (i.e., eating habits where masks are removed only when food and drinks are being consumed and worn for all other parts of the social engagement). In addition, university faculty members also directly instruct their students to wear masks except when they are eating. While this is the best countermeasure, this study found that it is difficult or impossible to wear masks while eating and drinking, and only 14.5% of students always wear masks, even while eating and drinking (**Figure 3d**).

In this case, the university was able to escape an infection cluster because they predicted that the students would participate in risky behavior after the ceremony, so the classes were conducted online and the campus was closed for the students. If such rituals are to be held, instructions to avoid eating and drinking in large groups must be strictly enforced while considering the infection situation in the country.

This study has some limitations, authors did not consider the type of masks worn in this questionnaire survey. Many students wear fabric or polyurethane masks that can be washed and reused instead of disposable masks. In the past, disposable masks were in high demand and were difficult to buy, but, in the last few months, they have become widely available again. Some studies have shown that non-woven (disposable) masks are the most effective and, more recently, wearing two masks together has been shown to prevent transmission[15)]. However, other routes of infection through masks may need to be considered. The surface of the mask can be contaminated and inadvertently touching one's mask can result in the contamination of one's fingers. Furthermore, when eating and drinking with several people, food served on a platter is often shared using the same chopsticks and spoons, thus increasing the chances of contamination. From this perspective, it is necessary to instruct students on reliable protective measures, including hand hygiene. In addition, this study was conducted on medical and welfare university students, and the results might have been worse for students from other faculties who lacked medical knowledge. Nevertheless, there are many events in Japan, not limited to the coming-of-age ceremony, such as Bon and New Year's festivals, which provide many opportunities for infection. Therefore, it is necessary to remind and instruct students to prevent infection repeatedly.

## V. Conclusion

Students should be educated on strict infection control measures to prevent outbreaks on campus, and classes should be conducted online after potential cluster events. We should also consider switching from face-to-face classes to online classes depending on the infection status.

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**References**

1) Marcotte G: Coming of age day. Japan Visitor, Japan Tourist Info. Available at: https:// www. japanvisitor.com/ Japanese-festivals/adults-day. Accessed March 22, 2021
2) Maeshima S, Nomura R, Nogami E et al.: Prevention of COVID-l9 at our university. Maeshima S (ed), In: Maeshima S ed. Contributions to the Local Community Through the University. IntechOpen, UK, 2022. Available at: http://dx.doi.org/l0.5772/intechopen.l02338
3) World Health Organization: Avoid the Three Cs. Be aware of different levels of risk in different settings. World Health Organization (WHO). July 18, 2020. Available at: https://www.facebook.com/WHO/photos/a.750907108288008/3339935806051779/?type=3&theate. Accessed January 5, 2021
4) Chan JF, Yuan S, Kok KH et al.: A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: A study of a family cluster. Lancet 395: 514-523, 2020
5) Nishiura H, Oshitani H, Kobayashi T et al.: Closed environments facilitate secondary transmission of coronavirus disease 2019 (COVID-19). MedRxiv. 2020. doi: https://doi.org/10.1101/2020.02.28.20029272
6) Czypionka T, Greenhalgh T, Bassler D et al.: Masks and face coverings for the lay public: A narrative update. Annals of Internal Medicine 174:511-520, 2021
7) Centers for Disease Control and Prevention: Use of masks to help slow the spread of COVID-19. Available at: www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/diy-cloth-face-coverings.html. Accessed December 2, 2020
8) World Health Organization: Mask use in the context of COVID-19. Available at: https://apps.who.int/iris/bitstream/handle/10665/337199/WHO-2019-nCov-IPC_Masks-2020.5-

eng.pdf?sequence=1&isAllowed=y. Accessed December 2, 2020
9) Horii M: Why do the Japanese wear masks? Electronic Journal of Contemporary Japanese Studies 14:1-14, 2014
10) Vuorinen V, Aarnio M, Alava M et al.: Modelling aerosol transport and virus exposure with numerical simulations in relation to SARS-CoV-2 transmission by inhalation indoors. Safety Science 130: 104866, 2020
11) Chen YJ, Qin G, Chen J et al.: Comparison of face-touching behaviors before and during the coronavirus disease 2019 pandemic. JAMA network open 3: e2016924, 2020
12) Cheng VCC, Wong SC, Chuang VWM et al.: The role of community-wide wearing of face mask for control of coronavirus disease 2019 (COVID-19) epidemic due to SARS-CoV-2. Journal of Infection 81: 107-114, 2020
13) Ueki H, Furusawa Y, Iwatsuki-Horimoto K et al.: Effectiveness of face masks in preventing airborne transmission of SARS-CoV-2. mSphere 5: e00637-20, 2020
14) Nishiura H, Oshitani H, Kobayashi T et al.: MHLW COVID-19 Response Team, Closed environments facilitate secondary transmission of coronavirus disease 2019 (COVID-19). MedRxiv. 2020. doi: https://doi.org/10.1101/2020.02.28.20029272
15) Brooks JT, Beezhold DH, Noti JD et al.: Maximizing fit for cloth and medical procedure masks to improve performance and reduce SARS-CoV-2 transmission and exposure. Morbidity and Mortality Weekly Report 70: 254-257, 2021

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- Maeshima S, Osawa A, Kondo I et al.: Differences in instrumental activities of daily living between mild cognitive impairment and Alzheimer's disease: A study using a detailed executive function assessment. Geriatrics and Gerontology International 21: 1111-1117, 2021
- Maeshima S, Tamiya T, Saeki T et al.: Remote rehabilitation conferences in the age of SARS-CoV-2. American Journal of Physical Medicine & Rehabilitation 99:783, 2020
- Maeshima S, Osawa A: Cognitive impairment caused by subcortical lesion. Journal of Rehabilitation Neurosciences19:1-9, 2019
- Maeshima S, Osawa A: Thalamic lesions and aphasia or neglect. Current Neurology and Neuroscience Reports 18:39, 2018

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