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THE IMPACT OF COVID-19 ON THE USE OF URBAN PUBLIC FACILITIES: EVIDENCE FROM INDONESIA, JAPAN, AND EGYPT

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Abstract

Since COVID-19 emerged in Asia, the function of urban public facilities has been adapted to adapt to the pandemic conditions. This article discusses the use of public facilities during the COVID-19 pandemic in Indonesia, Japan, and Egypt using responses obtained from a questionnaire. The data retrieved were analyzed using the T-test statistical method and descriptive analysis. The results showed that the intensity of public facilities usage was reduced after community activities were restricted. Moreover, the decision to use the facilities tended to be based on the implementation of health protocols regardless of the distance from their homes. This is evident from the number of visits to modern shopping places rather than traditional markets to fulfill daily needs despite the longer distance and this indicates the focus on security and comfort. Information technology was also considered quite helpful in handling the pandemic as well as the latest information related to the development of the pandemic obtained quite easily from print media, announcements in several public facilities, and easily accessible websites.

Keywords: Use, Public Facilities, Urban Areas, Pandemic, Adaptation

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INTRODUCTION

COVID-19 affected the lives of people in urban areas in several ways including (1) environmental quality, (2) socio-economic impacts, (3) city management and governance, as well as (4) transportation and urban design (Sharifi & Khavarian-Garmsir, 2020). Restrictions imposed on activities in public places during the pandemic led to a reduction in the users of those located in working areas, schools, shops, and others (Howe & Hall, 2020). This indicates the effect of the pandemic on the adaptation of people's behavior (Mendolia, Stavrunova, & Yerokhin, 2020) and also raises public awareness on the importance of space as a shelter from virus transmission. It was, however, discovered to be a place considered to be prone to virus transmission during the pandemic (Devine-Wright et al., 2020).

The public is required to comply with the restrictions and social distancing imposed during the pandemic (Said et al., 2020) in order to prevent crowd formation (Mendolia et al., 2021). The term "social distancing" was used to ensure people stay at a reasonable distance from each other (Arimura, Ha, Okumura, & Asada, 2020) while restrictions were imposed on activities outside the home in order to reduce activities in public places (Li & Mutchler, 2020). However, these measures including restrictions on mobility, social distancing, and self-quarantine at home have the ability to cause mental health disorders in people (Sharmila Thinagar, et al., 2021) and have an impact on their health (Saraiva et al., 2021). The pandemic encourages urban areas to be more responsive to crises through smart, sustainable, and comprehensive planning in order to be able to face future crises (Eltarabily & Elghezanwy, 2020). Therefore, there is a need to study the adaptation of the community to the usage of public facilities during the pandemic based on the perceptions of the people in Indonesia, Japan, and Egypt as an academic contribution. The results are expected to be used by urban planners and policymakers in determining different forms of adaptation to be observed among the people in using public facilities during a pandemic. The third reason for choosing this country is that Japan, Indonesia, and Egypt experienced fluctuating pandemic waves and tended to rise in the second year of the pandemic (years of seeking research). Third countries have also never implemented a lockdown system but have applied the term restriction in various forms of various policies. The Japanese version of COVID-19 lockdown is a little weaker than those enforced elsewhere, where the stay-at-home request was voluntary (Sayeed & Hossain, 2020). In early April 2020, when Indonesia's neighbouring countries entered into lockdowns, the government tightened the work from home (WFH) orders by imposing large-scale social and announced an international travel ban a few weeks later, yet Indonesia did not enter into a full lockdown (Sparrow et al., 2020)

This research aims to study the community's adaptation in the use of public facilities during the pandemic (in three countries). **Research**

Question: How is the community's adaptation to using public facilities during the pandemic? (in three countries). Research Gaps (further developed/priority): various forms of adaptation to the use of public facilities can be implemented according to emergencies and policies of each country.

LITERATURE REVIEW

Health Protocol

The Government of Indonesia through the Ministry of Health issued a decree Number HK.01.07/Menkes/382/2020 concerning Health Protocols requiring public facilities to adapt to the new habits towards achieving a productive and safe society against COVID-19. Similarly, Japan and Egypt generally implemented some policies such as social distancing, wearing masks, and limiting the operating hours of several public facilities such as restaurants required to close before 8:00 PM. Moreover, educational facilities such as Elementary to Middle Schools were forced to limit the face-to-face learning process while universities were made to engage in hybrid learning in early 2021. Hospitals were made to be used only for emergencies with some clinics and hospitals rejecting patients that are not in emergency.

Emergency Declaration

Through the Ministry of Land, Infrastructure, Transport and Tourism, the Japanese Government issued an emergency declaration on 7th April 2020, asking residents in cities with high infections to reduce unnecessary travel. During the COVID-19 pandemic, the Government promoted a 'new way of life' such as using more parks and greenery to promote health, encouraging people to active in outdoor and green spaces while taking care of infection prevention (Ministry of Land, Infrastructure, Transport and Tourism Urban Bureau Town Development Promotion Division, 2020). The terms of working from home is expected to have a positive impact in many areas, such as improving work-life balance, prevents individuals from leaving their jobs due to changing life stages, increasing work productivity, ensuring business continuity in the event of a pandemic and reduce commuter congestion in metropolitan areas (Ministry of Land, Infrastructure, Transport and Tourism City Bureau Park Green Space / Landscape Division Utilization Planning Section, 2021). This is necessary due to the fact that the maintenance of health and social interaction has been discovered to be the only solution to the use of public facilities while maintaining a distance (Eltarabily & Elghezanwy, 2020).

In Japan, people are restricted from going out, and the perception that taking public transportation increases the risk of infection make reduction of the use of public transportation, thus leading to a decline in the city's attractiveness. It is vital to reduce the need to suppress mobility in the context of preventing infection (Kanda, 2021). The emergency declaration had an impact on the

reduction of commuting, less on eating and sightseeing. People were less active in the city centre but more visiting residential parks near their home (Hiroi, 2020). Reduced use of public transportation implies a higher likelihood of using private vehicles, and there is a need to be concerned about the elderly while driving private vehicles (Yamauchi et al., 2021). A higher proportion of the group with increased time spent at home reported increased satisfaction with travelling before and after COVID-19. Greater emphasis is placed on shopping and medical facilities (Otsuyama et al., 2020). In February 2020, as the initial month of the infection, park users increased in 90% compared to the previous year. The number of outdoor plaza users where hold events have decreased. With limited cross-border travel and gatherings, parks with close access to residential area and trees are used more actively than larger busier parks in the city centre (Takeuchi & Hisama, 2021). The expansion of COVID-19 infection is associated with people movement and proper infection control requires the collaboration of multiple sectors, including the transport sector (Hayashi & Zhang, 2021). Several forms of adjustment are needed to make public facilities more flexible to ensure the community adapts to the new normal and makes use of them safely (Cheshmehzangi, 2020). This is necessary due to the changes in the workplace, education, trade, and recreation caused by the restrictions imposed as a response to health issues (Maturana, Salama, & McInney, 2021).

Public Health

Public open space is important to support public health (UN Habitat, 2020) as indicated by the increase in the role of city parks to support the recovery of both mental and physical health of the people during the pandemic (Aiswarya Raj, Angella, & Pooja, 2021). However, the intensity of using these public facilities as a place for social interaction decreased due to restrictions on activities outside the home (Honey-Rosés et al., 2020a). The market which is also one of the important public facilities has the potential for crowd formation, thereby, creating an avenue to spread the virus but there is a need to ensure the continuance of buying and selling activities in order to supply people's daily needs and support the economic sustainability of the poor (Warlika, Putra, Fitri, & Primadella, 2021). Brambilla's research is exploratory, and further long-term research is needed, the findings of which resulted in the development of the OFAT assessment tool, OFAT, to evaluate the extent to which health facilities meet the principles of flexibility (Brambilla, Sun, et al., 2021). The study carried out at the DABC Politecnico, Milano developed a research activity to bring scientific evidence regarding Healthy Urban Planning and Design Strategies identified (Stefano Capolongo, Buffoli, Brambilla, & Rebecchi, 2020). Brambilla made a study to assess the quality of methods and tools, mainly when applied to public facilities such as hospitals. The existing BPE and POE tools are not specific enough. The new version of the instrument presented in his research can bridge

the gap by incorporating informed evidence indicators and a systematic weighting methodology. (Brambilla, Lindahl, Dell'Ovo, & Capolongo, 2021).

The model in size, scalable and replicable, turned out to be highly functional and adaptable during the health emergency period to be rejected in different scenarios for measures and equipment such as exhibitions, supermarkets, logistics poles, and other buildings for tertiary use (Brambilla, Mangili, et al., 2021). Starting from the minimum requirements indicated by the Lombardy Region, a validation checklist has been developed by experts in design, health care layout planning, hygiene, and public health, planning, and compliance, to provide managers of large-scale COVID-19 vaccination centers with a valuable and easy-to-use tool to ensure quality, safety and efficiency of the various activities carried out (S. Capolongo, Brambilla, Girardi, & Signorelli, 2021).

Public Facilities

COVID-19 pandemic showed the importance of planning these public facilities towards ensuring people visit with spreading or contracting the virus (Alizadehtazi et al., 2020). It also indicated the need to make sure the facilities adapt to minimizing the risk of virus transmission (Litman, 2021). This is considered important due to the ability of community activities to ensure people socialize and enjoy civilizations (Jasiński, 2020). Meanwhile, architecture is involved in the urban planning process and the design of public facilities during a pandemic need to consider new values, new habits, and requirements (Ateek, 2020). The lockdown and stay-at-home policies changed people's views on public facilities and this has the ability to reduce their sense of attachment when the restrictions are sustained for a long period (Honey-Rosés et al., 2020b).

The results of an online survey conducted by Snapcart on March 17-28, 2020, show that the Coronavirus pandemic has disrupted lifestyles, work habits, and doing business for Indonesian people, especially people in urban areas. The most disturbing impacts of COVID-19 are: 1) Social life, which ranks highest (48%), 2) Worries about career and work (44%), 3) Changes in vacation and travel plans (39%), 4) Worries about limited religious activities (31%), 5) Disruption of shopping habits (24%) (Dinisari, 2020). In addition, there are also suggested walkways, bike paths, COVID stations, station sinks, and some street furniture that can be adapted in public spaces. It is necessary to look at and review the problems that exist in accordance with the current planning situation (Hamzah & Sinniah, 2022). By identifying and producing a framework of sustainable COVID-19 framework for office building, the building manager or COVID-19 management team in workplace is encouraged to set up a sustainable COVID-19 framework as an advancement for existing COVID-19 guideline by integrating with IEQ. However, this framework is not only resilient to COVID-19, but also resilient to sustainability and can be used as future reference in context of

sustainability (Rahman et al., 2023). (Hamzah & Sinniah, 2022) investigates the scope of public spaces that consist of areas of streets, pedestrian lanes, and bike lanes, as well as an emphasis on several alternatives that can reduce the rate of infection in public space areas. There are several alternatives, such as whole, semi, and limited transit space design. These include the growing emphasis on health and safety, with commuters prioritizing modes that offer lower exposure to potential risks, such as crowded public transport (Lim et al., 2023)

RESEARCH METHODOLOGY

As discussed in the introduction, this research aims to explain the use of public facilities during the COVID-19 pandemic. So, the urgency of using the T-Test is to see the differentiating factors of respondents' preferences in adapting and finding the aspects that respondents pay the most attention to in adaptation. A survey method was used in this research to collect respondents' opinions on the use of public facilities during the COVID-19 pandemic. It is important to note that 1219 people were surveyed and the questionnaire used consisted of questions (Table 1).

Table 1. List of questions and descriptions

Question	Measurements	Description
Intensity of public facilities usage	5-scale Likert (1= never, 5= very often)	Respondents choose one answer according to the intensity of their public facilities usage.
Consideration of public facilities usage	5-scale Likert (1= strongly disagree, 5= very disagree)	Respondents choose one answer according to considerations in using public facilities.
Public facilities measured based on health protocol standards	5-scale Likert (1= very unsuitable, 5= very appropriate)	Respondents choose one answer according to implementations of health protocols in public facilities.
The ease of obtaining information on the use of public facilities during the COVID-19 pandemic	5-scale Likert (1= very not easy, 5= very easy)	Respondents choose one answer on the level of ease of obtaining information on the use of public facilities
Respondents' opinion on the role of Government in determining policies related to health protocols in public facilities	5-scale Likert (1= very unresponsive, 5= extremely responsive)	Respondents choose one answer.

Source: Studio (2022)

A T-test was conducted to test the research hypothesis regarding the effect of each independent variable partially on the dependent variable. In testing the hypothesis, it can be said to be significant when the T-statistics value is greater than 1.96. In contrast, if the T-statistics value is less than 1.96, it is considered insignificant (Ghozali, 2016). Decision-making is done by looking at the

significant value in the Coefficients table. Regression test results were obtained with a significance level of 5% ($\alpha = 0.05$). If the significance value of the T-test > 0.05 , then H_0 is accepted, and H_a is rejected. This means there is no influence between the independent variables on the dependent variable. If the significance value of the T-test < 0.05 , then H_0 is rejected, and H_a is accepted. This means that there is an influence between the independent variables on the dependent variable.

ANALYSIS AND DISCUSSION

The T-test results showed that the public facilities most visited during the COVID-19 pandemic were modern shopping places or supermarkets because they provide daily necessities and are cleaner than traditional markets. The aspect considered to have the most influence on their visitation was the implementation of health protocols and level of cleanliness. This means the respondents preferred clean public facilities with strict health protocols even though they are located far from their homes. Moreover, health protocol implementation, physical distancing, and avoiding crowds were the factors observed to have made the respondents feel safe to visit and use the public facilities as indicated in Table 2.

Table 2. T-test comparing the means of model variables and indicators with the neutral value of 3

Variable (indicator)	T	Significance (2-tailed)	Mean difference: 3
Public Facility			
PF1 (public transportation)	-27.305	0.000	-0.91058
PF2 (health clinic)	-35.607	0.000	-0.89582
PF3 (traditional market)	-18.295	0.000	-0.58783
PF4 (supermarket)	-2.889	0.004	-0.08532
PF5 (tourist spot)	-41.253	0.000	-1.06317
PF6 (city park)	-51.301	0.000	-1.31255
PF7 (place of worship)	-18.488	0.000	-0.65956
PF8 (sports venue)	-50.222	0.000	-1.38310
Considerations in using Public Facility			
CPF1 (distance)	7.164	0.000	0.23216
CPF2 (crowd)	6.577	0.000	0.25677
CPF3 (disinfectant)	38.627	0.000	1.14110
CPF4 (health protocols)	47.698	0.000	1.34126
Opinion on Public Facilities			
OPF1 (condition of public transportation)	3.711	0.000	0.10747
OPF2 (condition of health clinic)	29.108	0.000	0.71452
OPF3 (condition of traditional market)	-11.288	0.000	-0.32814
OPF4 (condition of supermarket)	9.519	0.000	0.26087
OPF5 (condition of tourist spot)	-3.582	0.000	-0.10418
OPF6 (condition of city park)	-2.220	0.027	-0.06317
OPF7 (condition of the place of worship)	20.720	0.000	0.56686
OPF8 (condition of sports venue)	2.018	0.044	0.05578

Variable (indicator)	T	Significance (2-tailed)	Mean difference: 3
Ease of Obtaining Information			
EOI1 (easy to get information)	23.848	0.000	0.68253
EOI2 (ease of use)	10.561	0.000	0.28630
Government Policies			
GP1 (government role)	10.930	0.000	0.34454

Note: n=1219. Shaded rows identify mean values that are not significantly different from the *neutral* value of 3 ($p < 0.05$).

Source: Studio (2022)

Table 2 shows that the public facilities that meet the COVID-19 health protocol standards according to respondents were health clinics and places of worship. The health protocols were implemented in places of worship by limiting the number of visitors, providing handwashing facilities, and checking body temperature. Moreover, the T-test showed the public facilities with values almost equal to the neutral value of 3 were tourist spots and sports venues indicating their health protocols were on the average and were rarely visited with over 50% of respondents stating they did not visit during the COVID-19 pandemic.

Use of Public Facilities During The COVID-19 Pandemic

- (1) public transportation, bus terminal, and train station: During the COVID-19 pandemic, 39.8% of respondents never used public transportation, bus terminals, and train stations, 29.9% used them regularly, 17% sometimes, 8% often, and 5.2% very often. Based on domicile, the majority of the respondents in Indonesia represented by 45.4% have never used public transportation nor visited bus terminals and train stations during the pandemic while 27% in Japan and 33% in Egypt use them sometimes and often, respectively.
- (2) Health clinic: The results showed that 24.3% did not use health clinic facilities, 49.2% used them regularly, 19.7% sometimes, 5.4% often, and 1.4% very often. Based on domicile country, 54.3% of Indonesians and 32% Japanese used them during the pandemic while 40% in Egypt used them very often.
- (3) Traditional market: It was discovered that 19.7% of respondents never shopped at traditional markets, 37.4% shopped regularly, 27.5% sometimes, 12.8% often, and 2.6% very often. Based on domicile, 38.5% in Indonesia shopped at the traditional market during the pandemic while 41% in Japan never visited the market and 40% in Egypt went there occasionally.
- (4) Modern shopping place, supermarket: A total of 6.2% of respondents never purchased from a supermarket, 31.6% shopped regularly, 34.6% sometimes, 19.9% often, and 7.7% very often during the pandemic. Based on domicile, 36.8% in Indonesia shopped while 30% in Japan never visit but 33% in Egypt often shopped at the supermarket.
- (5) Tourist spots: It was indicated that 37.7% never visited tourist attractions, 36.3% visited regularly, 21.5% sometimes, 3.7% often, and 0.8% very often.

Based on the country of domicile, the majority of respondents in Indonesia represented by 38.9%, Japan by 37.9%, and Egypt by 46% have never visited this public facility.

- (6) City Park and playground: The findings showed that 54.9% never used city park facilities and playgrounds, 26.4% used them regularly, 14.4% sometimes, 3.8% often, and 0.6% very often. Based on the country of domicile, the majority of respondents in Indonesia as indicated by 61.4% never used these facilities while the majority of those in Japan represented by 33.7 used them regularly, and 46% in Egypt used them occasionally.
- (7) Place of worship: It was observed that 31.4% never attended a place of worship, 31.2% attended regularly, 16.2% sometimes, 14.4% often, and 6.8% very often during the pandemic. Based on domicile country, the majority of respondents in Indonesia represented by 33.2% attended a place of worship while 54% in Japan and 46% in Egypt never attended.
- (8) Sports venues: The results showed that 64% of respondents never used sports facilities, 17.7% used them regularly, 12.2% sometimes, 4.8% often, and 1.3% very often. Based on domicile country, the majority of respondents in Indonesia represented by 66.8%, Japan by 52.4%, and Egypt by 73.3% did not go to sports venues during the pandemic.

Considerations in Using Public Facilities During The COVID-19 Pandemic

- (1) Distance from home: The results showed that 10.3% strongly disagreed, 14.5% disagreed, 26.2% less agreed, 39.4% agreed, and 9.5% strongly agreed that distance from home was considered a factor to visit public facilities during the pandemic. Based on domicile country, the majority of respondents in Indonesia represented by 41.2% and Japan by 34.1% agreed that the distance was considered while 40% in Egypt strongly agreed.
- (2) Crowd level: It was discovered that 15% strongly disagreed, 16.4% disagreed, 18.3% less agreed, 28.5% agreed, and 21.8% strongly agreed that level of the crowd was considered a factor to visit public facilities during the pandemic. Based on domicile, 26.8% of respondents from Indonesia and 36.3% from Japan agreed that the level of the crowd was considered while the majority of respondents in Egypt represented by 66.6% strongly agreed.
- (3) Disinfectant: The results also showed that 4.4% strongly disagreed, 3.9% disagreed, 8.9% less agreed, 38.8% agreed, and 44% strongly agreed that the availability of disinfectant was considered a factor to visit public facilities during the pandemic. Based on domicile country, 26.8% of respondents from Indonesia and 36.3% from Japan agreed that availability of disinfectant was a factor considered while the majority of those from Egypt represented by 66.6% strongly agreed. Implementation of health protocol: The findings showed that 3.9% strongly disagreed, 2.6% disagreed, 5.9% less agreed, 30.7% agreed, and 56.9% strongly agreed that health protocol implementation

was considered a factor to visit public facilities during the pandemic. Based on domicile country, the majority of respondents in Indonesia represented by 47.3% and Egypt by 40% strongly agreed that the level of cleanliness was considered while 35.7% from Japan also agreed.

Respondent's Opinion on Public Facilities When Measured by Standard Health Protocols

- (1) Public transportation, bus terminals, train stations: The results showed that 8.9% strongly disagreed, 14.3% disagreed, 39.5% less agreed, 31.9% agreed, and 5.5% strongly agreed that public transportation, bus terminals, train stations conditions are in line with the standard health protocols during the pandemic. Based on domicile country, the majority of respondents in Indonesia represented by 42% and Japan by 31.3% believe the public transportation facilities are not in accordance with health protocol standards while 40% from Egypt showed they are highly not in accordance.
- (2) Health clinic: It was also discovered that 2.5% strongly disagreed, 6.5% disagreed, 20.3% less agreed, 58.3% agreed, and 12.4% strongly agreed that health clinic conditions are in line with the standard health protocols during the pandemic. Based on domicile country, the majority of respondents in Indonesia represented by 62.2% and Japan by 45.1% stated that health clinic facilities are in accordance with health protocol standards while 33% in Egypt showed they are not.
- (3) Traditional markets: The findings showed that 15.4% strongly disagreed, 24.3% disagreed, 40.7% less agreed, 17% agreed, and 2.7% strongly agreed that traditional markets conditions are in line with the standard health protocols during the pandemic. Based on the country of domicile, the majority of respondents in Indonesia as indicated by 42.7% and Japan by 34.9% believed the market facilities are not in accordance with health protocol standards while 53.3% in Egypt (53.3%) showed they are slightly in accordance.
- (4) Modern shopping places/supermarkets: The results also showed that 6% strongly disagreed, 13.1% disagreed, 34.8% less agreed, 41.1% agreed, and 5% strongly agreed that modern supermarkets' conditions are in line with the standard health protocols during the pandemic. Based on domicile country, 45% of respondents in Indonesia stated that supermarket facilities are in accordance with health protocol standards while 29.6% from Japan and 40% from Egypt stated otherwise.
- (5) Tourist spots: It was observed that 11.3% strongly disagreed, 19.3% disagreed, 42.1% less agreed, 23.2% agreed, and 4.1% strongly agreed that tourist spots conditions are in line with the standard health protocols during the pandemic. Based on domicile country, the majority of respondents in Indonesia as indicated by 44% and Japan by 36.6% stated that tourist spots

public facilities are not in accordance with health protocol standards while 33% from Egypt stated otherwise.

- (6) City parks and playgrounds: The findings showed that 10.1% strongly disagreed, 18.9% disagreed, 41.9% less agreed, 25.7% agreed, and 3.5% strongly agreed that city parks and playgrounds conditions are in line with the standard health protocols during the pandemic. Based on domicile country, the majority of respondents in Indonesia represented by 44% and Japan by 34.5% showed they are slightly in line with the standards while 40% from Egypt showed they were not.
- (7) Places of worship: The results showed that 3.9% strongly disagreed, 8.8% disagreed, 26.6% less agreed, 48% agreed, and 12.7% strongly agreed that the places of worship conditions are in line with the standard health protocols during the pandemic. It was also indicated that the majority of respondents in Indonesia (53.3%) believed they were in accordance with the standards while 39.4% from Japan showed they were not and 33% from Egypt indicated they were highly in accordance with the standards.
- (8) Sports venue: It was also discovered that 8% strongly disagreed, 16% disagreed, 42.5% less agreed, 29.5% agreed, and 4% strongly agreed that sports venues conditions are in line with the standard health protocols during the pandemic. Moreover, the majority of respondents in Indonesia represented by 44.4%, Japan by 34.9%, and Egypt by 46% indicated the sports facilities were less in accordance with the standards.

Respondents' Opinions on The Ease of Obtaining Information Regarding the Use of Public Facilities During the COVID-19 Pandemic

Ease of obtaining the latest information on the implementation of health protocols: A total of 3.5% of respondents stated it is very difficult to obtain the latest information on the implementation of health protocols, 10.7% believed it is difficult, 17.4% slightly difficult, 50.7% easy, and 17.7% very easy. Moreover, the majority of respondents in Indonesia represented by 55.8% and Japan by 32% found it easy to obtain the latest information while 26% from Egypt stated otherwise. Ease of use of public facilities for all people: The results also showed that 4.3% of respondents found it very difficult to use public facilities for all groups, 15.5% stated it was difficult, 33.3% slightly difficult, 40.9% easy, and 6% very easy. Moreover, the majority of respondents in Indonesia represented by 42% and Japan by 36.9% believed it was easy while 26% from Egypt felt it was slightly difficult.

CONCLUSION

The intensity of using public facilities as a place for social interaction in Indonesia, Japan, and Egypt was reduced due to restrictions imposed on activities outside the home during the COVID-19 pandemic. Therefore, several

adjustments were needed to make these facilities more adaptive for safe use by the public to reduce its potential for the transmission of the virus. The implementation of health protocols during the pandemic in the three countries affected the usage of public facilities with some selected to be used by the people due to the safety and comfortability they offered despite their long distance. Modern shopping places or supermarkets had a higher percentage of patronage compared to traditional market facilities due to the implementation of better health protocols and this was the same reason places of worship and health clinics had a large percentage of visits during the period. Places of worship are one of the public facilities with the potential for crowd formation but the number of users was limited during the pandemic but the respondents in Indonesia and Egypt considered these facilities safe to use due to their implementation of good health protocol standards while a contrary report was recorded in Japan. This contradictory finding is thought to be due to the difference in the dominance of the Muslim community in Egypt and Indonesia. They perform praying five times as a daily routine, while the Japanese people perform worship regularly (monthly or annually). The conclusions indicate that the three countries are compatible (Indonesia, Japan, and Egypt). This conclusion confirms the review in section 2. Some of the suggestions made for future planning of public facilities include strict application of health protocols, implementation of visitor restrictions, maintenance of the level of cleanliness and provision of handwashing facilities, usage of masks while in public facilities, regulation of visitor circulation to create a sense of security and comfort, limiting the number of public transportation passengers, paying attention to air circulation, especially in the room (indoor), as well as spraying disinfectants routine.

REFERENCES

- Aiswarya Raj, S., Angella, E. J., & Pooja, C. (2021). Impact of COVID-19 in shaping new resilient urban planning approach. *IOP Conference Series: Materials Science and Engineering*, 1114(1), 012040. <https://doi.org/10.1088/1757-899x/1114/1/012040>
- Alizadehtazi, B., Tangtrakul, K., Woerdeman, S., Gussenhoven, A., Mostafavi, N., & Montalto, F. A. (2020). Urban Park Usage During the COVID-19 Pandemic. *Journal of Extreme Events*, 07(04), 2150008. <https://doi.org/10.1142/s2345737621500081>
- Arimura, M., Ha, T. V., Okumura, K., & Asada, T. (2020). Changes in urban mobility in Sapporo city, Japan due to the COVID-19 emergency declarations. *Transportation Research Interdisciplinary Perspectives*, 7, 100212. <https://doi.org/10.1016/j.trip.2020.100212>
- Ateek, G. (2020). *Future of Sustainable Architecture: Rethinking COVID-19 a Pandemic or turning point?* (June), 1–10. <https://doi.org/10.13140/RG.2.2.33693.74722>
- Birawa, R. A., Arifin, M. A., Razak, A., & ... (2021). Influence Of Accessibility On Health Service Preferences In The Informal Sector In The Era Of The COVID-19 Pandemic In Makassar City. *Turkish Journal of ...*, 32(3), 10969–10973.

- <http://repository.unhas.ac.id/id/eprint/7313/>
- Brambilla, A., Lindahl, G., Dell'Ovo, M., & Capolongo, S. (2021). Validation of a multiple criteria tool for healthcare facilities quality evaluation. *Facilities*, 39(5–6), 434–447. <https://doi.org/10.1108/F-06-2020-0070>
- Brambilla, A., Mangili, S., Macchi, M., Trucco, P., Perego, A., & Capolongo, S. (2021). COVID-19 massive vaccination center layouts. A modular and scalable model for Lombardy region, Italy. *Acta Biomedica*, 92(3). <https://doi.org/10.23750/abm.v92iS6.12229>
- Brambilla, A., Sun, T., Elshazly, W., Ghazy, A., Barach, P., Lindahl, G., & Capolongo, S. (2021). Flexibility during the COVID-19 Pandemic Response: Healthcare Facility Assessment Tools for Resilient Evaluation. *International Journal of Environmental Research and Public Health*, 21(11478). <https://doi.org/https://doi.org/10.3390/ijerph182111478>
- Capolongo, S., Brambilla, A., Girardi, A., & Signorelli, C. (2021). Validation Checklist for Massive Vaccination Centers. *Annali Di Igiene Medicina Preventiva e Di Comunita*, 33(5), 513–517. <https://doi.org/10.7416/ai.2021.2460>
- Capolongo, Stefano, Buffoli, M., Brambilla, A., & Rebecchi, A. (2020). Healthy urban planning and design strategies to improve urban quality and attractiveness of places. *Techne*, 19(July), 271–279. <https://doi.org/10.13128/techne-7837>
- Cheshmehzangi, A. (2020). 10 Adaptive Measures for Public Places to face the COVID 19 Pandemic Outbreak. *City & Society*, 32(2). <https://doi.org/10.1111/ciso.12335>
- Dinisari, M. (2020). Pengaruh Pandemi COVID-19 pada Gaya Hidup dan Kebiasaan Bekerja Orang Indonesia, Lifestyle:Bisnis.com
- Devine-Wright, P., Pinto de Carvalho, L., Di Masso, A., Lewicka, M., Manzo, L., & Williams, D. R. (2020). “Re-placed” - Reconsidering relationships with place and lessons from a pandemic. *Journal of Environmental Psychology*, 72(October). <https://doi.org/10.1016/j.jenvp.2020.101514>
- Eltarabily, S., & Elghezanwy, D. (2020). Post-Pandemic Cities - The Impact of COVID-19 on Cities and Urban Design. *Architecture Research*, 10(3), 75–84. <https://doi.org/10.5923/j.arch.20201003.02>
- Ghozali, I. (2016) Aplikasi Analisis Multivariete Dengan Program IBM SPSS 23. Edisi 8. Semarang: Badan Penerbit Universitas Diponegoro.
- Hamzah, M., & Sinniah, G.K. (2022). Intentions and Intervention of Public Space Design During Pandemic, *Planning Malaysia: Journal of the Malaysian Institute of Planners* 20 (5), Pp. 160 – 171
- Hayashi, Y., & Zhang, J. (2021). COVID-19 Pandemic Countermeasures and Policy, and the Role of the Transport Sector. *IATSS Review*, 46(1), 64–74. https://doi.org/10.24572/iatssreview.46.1_64
- Hiroi, U. (2020). A Study on the Effect of Japanese-style lockdown on Self-restraint Request for COVID-19. *Journal of the City Planning Institute of Japan*, 55(3), 902–909. <https://doi.org/10.11361/journalcpj.55.902>
- Honey-Rosés, J., Anguelovski, I., Chireh, V. K., Daher, C., Konijnendijk van den Bosch, C., Litt, J. S., Nieuwenhuijsen, M. J. (2020a). The impact of COVID-19 on public space: an early review of the emerging questions – design, perceptions and inequities. *Cities & Health*, 1–17. <https://doi.org/10.1080/23748834.2020.1780074>

- Howe, J., & Hall, P. (2020). *A new reality for urban mobility Equipping cities for a resilient future by embracing change and adopting smart solutions*.
- Jasiński, A. (2020). Public space or safe space – remarks during the COVID-19 pandemic. *Technical Transactions*, 1–10. <https://doi.org/10.37705/techtrans/e2020020>
- Kanda, Y. (2021). COVID-19 and Public Transport: *IATSS Review*, 46(1), 40–48. https://doi.org/10.24572/iatssreview.46.1_40
- Li, Y., & Mutchler, J. E. (2020). Older Adults and the Economic Impact of the COVID-19 Pandemic. *Journal of Aging and Social Policy*, 32(4–5), 477–487. <https://doi.org/10.1080/08959420.2020.1773191>
- Lim, N, H, H., The, B, T., Hashim, N, H, N., Supramanian, R, K., Baharudin, W, W., Majid, M, R. (2023). Factors Influencing Pre-and Post-COVID-19 Transport Mode Shift in Workplace Travel. *Planning Malaysia: Journal of the Malaysian Institute of Planners*, 21(5). Page141–154
- Litman, T. (2021). Pandemic - Resilient Community Planning. *Victoria Transport Policy Institute*, 27p. Retrieved from <https://www.vtpi.org/PRCP.pdf>
- Maturana, B., Salama, A. M., & McInnery, A. (2021). Architecture, urbanism and health in a post-pandemic virtual world. *Archnet-IJAR*, 15(1), 1–9. <https://doi.org/10.1108/ARCH-02-2021-0024>
- Mendolia, S., Stavrunova, O., & Yerokhin, O. (2021). Determinants of the community mobility during the COVID-19 epidemic: The role of government regulations and information. *Journal of Economic Behavior and Organization*, 184, 199–231. <https://doi.org/10.1016/j.jebo.2021.01.023>
- Ministry of Land, Infrastructure, Transport and Tourism Urban Bureau Town Development Promotion Division. (2020, August 31). Urban Revitalization: Town development triggered by the new corona crisis [Go]. Town development triggered by the new corona crisis. <https://www.mlit.go.jp/toshi/machi/COVID-19.html>
- Ministry of Land, Infrastructure, Transport and Tourism City Bureau Park Green Space / Landscape Division Utilization Planning Section. (2021). Park and Midori: "New lifestyle" for health with the power of parks and greenery Ministry of Land, Infrastructure, Transport and Tourism. https://www.mlit.go.jp/toshi/park/toshi_parkgreen_tk_000100.html
- Otsuyama, K., Saito, Y., Komatsuzaki, N., Ishii, S., Matsumoto, S., Takenaka, D., & Hiroi, U. (2020). Typology of Lockdown amid COVID-19 and its Challenges. *Journal of the City Planning Institute of Japan*, 55(3), 1350–1357. <https://doi.org/10.11361/journalcpj.55.1350>
- Rahman, N. H. A., Azis, S.S.A., Zulkifli, M.A.A., Baskaran, S., Aziz, N., & Salleh, K.M. (2023). COVID-19 Standard Operating Procedure Advancement for Office Building Using Indoor Environmental Quality Elements, *Planning Malaysia: Journal of the Malaysian Institute of Planners*, 21 (3), Pp. 347 – 368
- Said, C. M., Batchelor, F., & Duque, G. (2020). Physical Activity and Exercise for Older People During and After the Coronavirus Disease 2019 Pandemic: A Path to Recovery. *Journal of the American Medical Directors Association*, 21(7), 977–979. <https://doi.org/10.1016/j.jamda.2020.06.001>
- Saraiva, M. D., Apolinario, D., Avelino-Silva, T. J., De Assis Moura Tavares, C., Gattás-Vernaglia, I. F., Marques Fernandes, C., ... Romero Aliberti, M. J. (2021). The

- Impact of Frailty on the Relationship between Life-Space Mobility and Quality of Life in Older Adults during the COVID-19 Pandemic. *Journal of Nutrition, Health and Aging*, 25(4), 440–447. <https://doi.org/10.1007/s12603-020-1532-z>
- Sharifi, A., & Khavarian-Garmsir, A. R. (2020). The COVID-19 pandemic: Impacts on cities and major lessons for urban planning, design, and management. *Science of the Total Environment*, 749, 1–3. <https://doi.org/10.1016/j.scitotenv.2020.142391>
- Sayeed, U. B., & Hossain, A. (2020). How Japan managed to curb the pandemic early on: Lessons learned from the first eight months of COVID-19. *Journal of Global Health*, 10(2)
- Takeuchi, T., & Hisama, A. (2021). Analysis of changes in the number of park users and the facility usage restrictions in Tokyo Metropolitan Parks under the COVID-19 pandemic. *Journal of The Japanese*
- UN Habitat. (2020). *Public Space and COVID-19: UN-Habitat*. 1–2.
- Warlika, H., Putra, S., Fitri, M., & Primadella, O. (2021). *Community Adaptation to Traditional Markets during the Pandemic Period in Palembang City*. 7, 368–375.
- Yamauchi, S., Shimazaki, K., Kojima, M., Yonekawa, T., Takeda, N., Shinkai, H., & Aoki, H. (2021). Changes of Behavior and Mobility in Elderly during COVID-19 Epidemic. *Transactions of Society of Automotive Engineers of Japan*, 52(5), 1143–1148. <https://doi.org/10.11351/jsaeronbun.52.1143>

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