

Utilization of Public Space in Public Rental Housing Estates

Under the Outbreak of COVID-19

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Research Background

- The outbreak of COVID-19 in Hong Kong has affected numerous residents in public rental housing (PRH) estates
- Shrouded in fear of infection, residents’ utilization of public spaces in PRH estates are believed to be affected
- The research provides an overview of utilization of public spaces in PRH estates
- The findings contribute to future planning of public spaces in PRH estates to enhance the resilience of the low-income community

Mode of Utilization?

Usage, user behavior and activities	
Dimensions	Measurements
User	Quantity; Type; Temporality
Activity	Frequency; Diversity; Adaptability

(Bunawardi et al., 2016; Civic Exchange, 2018; PPS, n.d.; Putriutami et al., 2020; Wojnarowska, 2016)

Research Objectives

- To understand the type and distribution of public spaces in PRH estates
- To investigate utilization level and activities carried out in public spaces in PRH estates during the pandemic
- To evaluate whether the purposes of public spaces (in terms of public health and social interaction) are achieved through utilization during the pandemic.
- To identify the reasons affecting utilization in public spaces in PRH estates during the pandemic
- To provide recommendations on the planning of public spaces in PRH estates to be addressed in future

Effectiveness of Utilization?

Outcomes Achieved	
Dimensions	Measurements
Social Interaction	Form; Intensity
Public Health	Perceived Health Benefits

(Gehl, 1987; Ludvigsen, 2005; O’ Connor, 2020)

Research Questions (RQs)

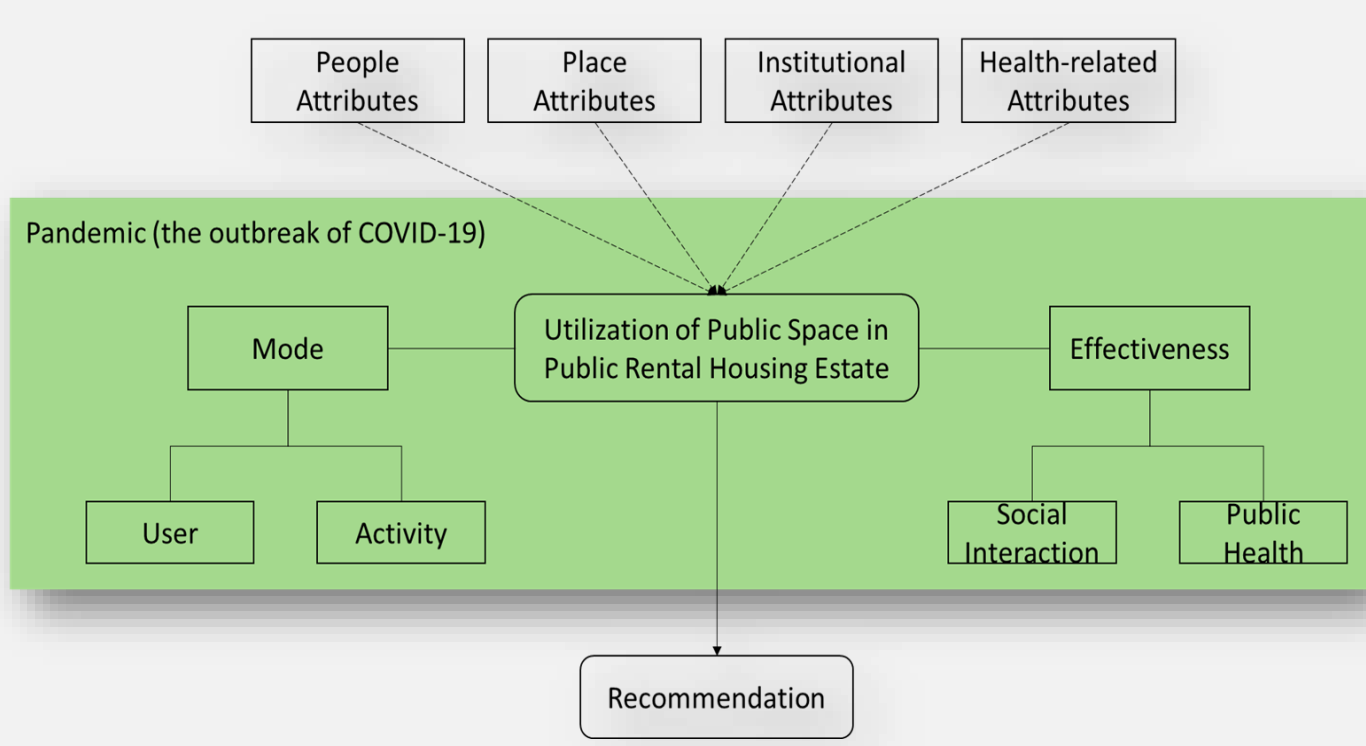
- What are the physical settings of the public spaces in PRH estates?
- How is the utilization of public spaces in PRH estates affected by the pandemic?
 - 2.1. What is the mode of utilization of public spaces in PRH estates under the pandemic?
 - 2.2. What is the effectiveness of utilization of public spaces in PRH estates under the pandemic?
- What are the reasons that explain utilization of public spaces in public rental housing estates during the pandemic?
- What could be done to improve the public spaces in PRH estates in future?

Attributes Affecting Utilization?

Attributes	Measurements
People	Age; Gender; Education; Employment
Place	Accessibility; Environment; Preference Against Non-local Public Spaces
Institutional	Governance
Health-related	Perceived safety; Cleaning Facilities; Personal Space

(Bunawardi et al., 2016; Civic Exchange, 2018; HKPSI, n.d.; James, 2020; Kan, 1975; O’ Connor, 2020; Pasaogullari & Doratli, 2004; Rahman et al., 2018; Schipperijn et al., 2010)

Conceptual Framework



Data Collection

- Questionnaires were distributed to all residents in PRH estates
- Observation in Choi Hung, Tsz Lok and On Tat to provide periphery data
- Interviews were conducted with PRH estates in select estates
- Secondary sources were analyzed to support discussion section

Data Analysis

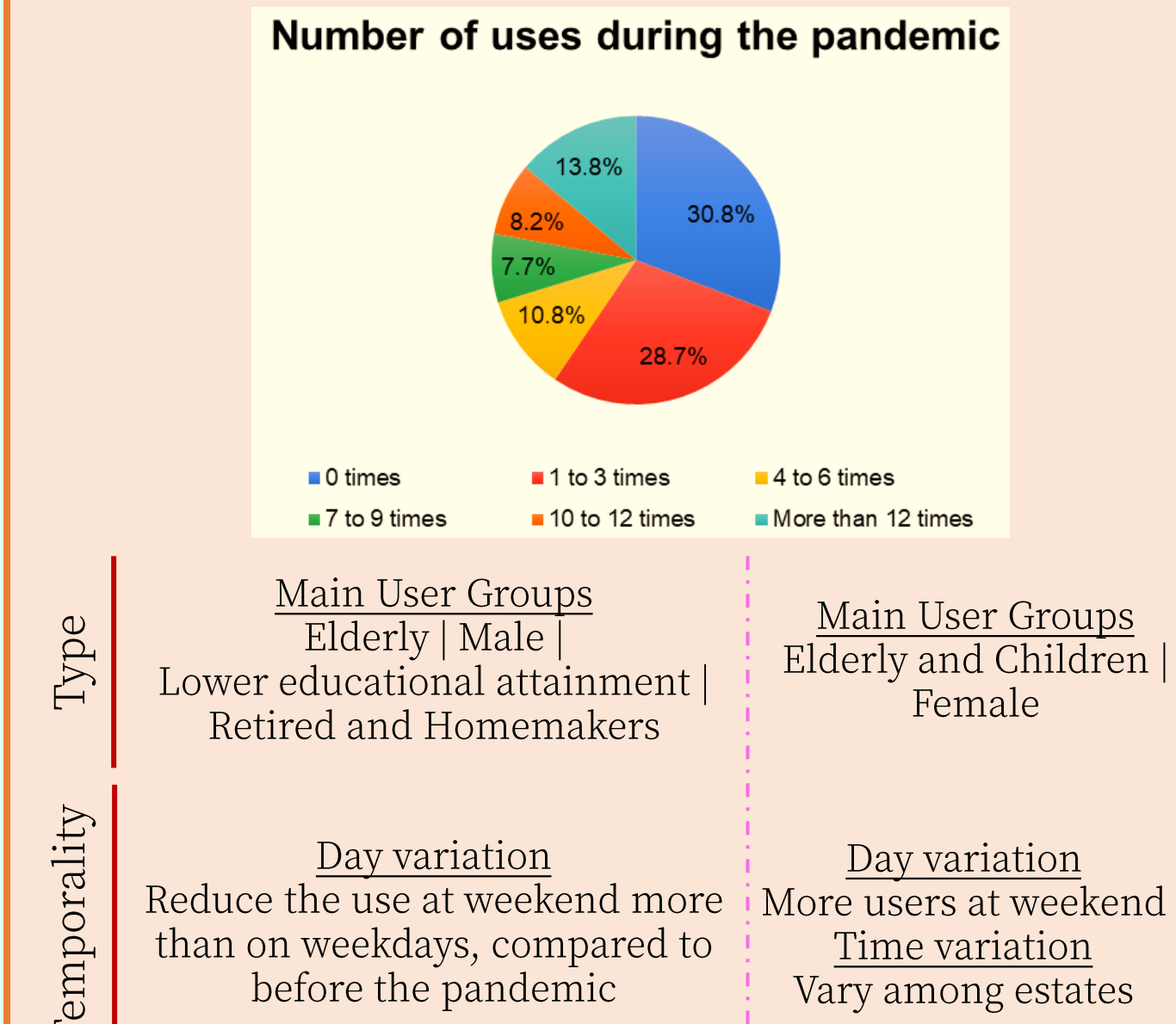
- Paired-sample t-test** for comparing change of utilization during the pandemic
- Independent sample t-test** for comparing utilization between genders
- One-way ANOVA** for comparing utilization between age, employment and education groups
- Correlation analysis** between utilization and place/institutional/health-related attributes
- Qualitative analysis** based on interviews, questionnaires and secondary sources

Major Findings

Type of public spaces		
Playground	Sit-out area	Sport ground
Open space	Elderly Facilities	

Distribution of public spaces		
Choi Hung	Tsz Lok	On Tat
Scattered	Divided into three clusters	Divided into two parts situated around the site

Mode of Utilization: User	
Quantity	Number of uses per month 1 to 3 times* Average staying time Less than 0.5 hours*
Temporality	Number of users 56 to 184



Mode of Utilization: Activity	
Frequency	Main activities Passing by (83%) Walking (43%) Killing time by oneself (36%) Relaxing or resting (28%)
Diversity	Significant drop in pair 1,4,5,6 during the pandemic
Adaptability	Lower participation in special events

Effectiveness of Utilization	
Social Interaction	Form: Collective Action (3.94), Dialogue (3.69), Shared Focus (3.01), Distributed Attention (3.59) Intensity: Family or Friends (3.48), Acquaintances or strangers (4.03)
Public Health	Stronger mental benefits than physical benefits Perceived Benefits: Physically before pandemic (3.82), Mentally before pandemic (3.81), Physically during pandemic (3.04), Mentally during pandemic (3.28)

Factor Affecting Utilization		
1. Perceived Safety	2. Cleaning Facilities	3. Personal Space
4. Accessibility	5. Preference	6. Environment
7. Governance	8. Employment	9. Education

