

ASSESSMENT OF POST-PANDEMIC USER EXPECTATIONS, SATISFACTION AND INTENTIONS TO USE SEATING FURNITURE IN NIE ER COMMUNITY PARK, YUXI CITY, CHINA



Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirements for the Degree of Doctor of Philosophy

December 2023

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DEDICATION

This thesis is dedicated to my loving family, inspiring supervisor, and steadfast friends. Your unwavering support and encouragement throughout my academic journey have been invaluable. I dedicate this PhD dissertation to you, for without you, this achievement would not have been possible.



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

ASSESSMENT OF POST-PANDEMIC USER EXPECTATIONS, SATISFACTION AND INTENTIONS TO USE SEATING FURNITURE IN NIE ER COMMUNITY PARK, YUXI CITY, CHINA

By

ZHANG LING

December 2023

Chairman : Velu a/l Perumal, PhD Faculty : Design and Architecture

Seating furniture is essential for urban community parks. However, during the emergency of the COVID-19 pandemic, the traditional seating designs of community parks could not be adapted to users' new requirements, highlighting the lack of a comprehensive framework to guide designers, policymakers, and managers in adapting to new user expectations. This situation is exacerbated by the insufficient research on seating furniture in the post-pandemic context. This study aims to develop a comprehensive framework to capture post-pandemic user expectations, satisfaction, and intentions regarding seating furniture to guide designers, policymakers, and managers to improve the user experience and thereby increase the utilization of public spaces in the post-pandemic era. Semi-structured interviews and observations were used to collect data on the factors related to expectations, satisfaction, and intention to use park spaces post-pandemic. Subsequently, a questionnaire survey was conducted with 426 community park visitors in Yunnan Province to measure the aforementioned variables, and structural equation modeling (SEM) was used to confirm the hypothesized relationships among them. Five main dimensions (function, appearance, material, safety features, space environment characteristics and location) were found to be the main factors influencing users' expectations, satisfaction, and usage intentions regarding seating furniture. In addition, the results indicated that user satisfaction with park seating not only has a positive effect on intention to use the furniture but also mediates the relationship between user expectations and intention to use the furniture. Based on these findings, a comprehensive framework was developed and validated by experts to guide future design and management strategies for community park seating. This framework provides theoretical support for the design and management of seating furniture for urban community parks, which is essential for promoting park sustainability.

Keywords: Public space utilization, User experience, Park sustainability, Safety features

SDG: GOAL 3: Good Health and Well-Being, GOAL 4: Quality Education, GOAL 11: Sustainable Cities and Communities



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

PEMBANGUNAN DAN PENILAIAN JANGKAAN, KEPUASAN DAN NIAT UNTUK MENGGUNAKAN PERABOT TEMPAT DUDUK PENGGUNA PASCA PANDEMIK DI TAMAN KOMUNITI NIE ER, YUXI CITY, CHINA

Oleh

ZHANG LING

Disember 2023

Pengerusi : Velu a/l Perumal, PhD Fakulti : Rekabentuk dan Senibina

Perabot tempat duduk adalah penting untuk taman komuniti bandar. Walau bagaimanapun, ketika kecemasan pandemik COVID-19, reka bentuk tempat duduk tradisional taman komuniti tidak dapat disesuaikan dengan keperluan baharu pengguna, menyerlahkan ketiadaan rangka kerja komprehensif untuk membimbing pereka bentuk, penggubal dasar dan pengurus dalam mengadaptasikan diri dengan jangkaan baharu pengguna. Keadaan ini diburukkan lagi oleh kekurangan penyelidikan mengenai perabot tempat duduk dalam konteks pasca pandemik. Kajian ini bertujuan untuk membangunkan rangka kerja yang komprehensif untuk mengidentifikasi jangkaan, kepuasan dan niat pengguna pasca pandemik berkenaan perabot tempat duduk untuk membimbing pereka, penggubal dasar dan pengurus untuk meningkatkan pengalaman pengguna dan seterusnya meningkatkan penggunaan ruang awam dalam era pasca pandemik. Temu bual separa berstruktur dan pemerhatian digunakan untuk mengumpul data mengenai faktor-faktor yang berkaitan dengan jangkaan, kepuasan, dan niat untuk menggunakan ruang taman selepas pandemik. Seterusnya, tinjauan soal selidik telah dijalankan dengan 426 pelawat taman komuniti di Wilayah Yunnan untuk mengukur pembolehubah-pembolehubah yang disebutkan di atas, dan pemodelan persamaan struktur (SEM) telah digunakan untuk mengesahkan hubungan yang diramal antara mereka. Lima dimensi utama (fungsi, rupa, bahan, ciri keselamatan, ciri persekitaran ruang dan lokasi) didapati menjadi faktor utama yang mempengaruhi jangkaan, kepuasan, dan niat penggunaan pengguna berkenaan perabot tempat duduk. Di samping itu, keputusan menunjukkan bahawa kepuasan pengguna dengan tempat duduk taman bukan sahaja mempunyai kesan positif ke atas niat untuk menggunakan perabot tetapi juga menjadi pengantara hubungan antara jangkaan pengguna dan niat untuk menggunakan perabot. Berdasarkan penemuan ini, rangka kerja komprehensif telah dibangunkan dan disahkan oleh pakar untuk membimbing reka bentuk dan strategi pengurusan masa depan untuk tempat duduk taman komuniti. Rangka kerja ini menawarkan sokongan teori untuk reka bentuk dan pengurusan perabot tempat duduk untuk taman komuniti bandar, yang penting untuk mempromosikan kelestarian taman.

Kata Kunci: Penggunaan ruang awam, Pengalaman pengguna, Kelestarian taman, Ciri keselamatan

SDG: MATLAMAT 3: Kesihatan dan Kesejahteraan yang baik, MATLAMAT 4: Pendidikan berkualiti, MATLAMAT 11: Komuniti dan bandar yang lestari



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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfillment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

Velu a/l Perumal, PhD

Senior Lecturer, Ts. Faculty of Design and Architecture Universiti Putra Malaysia (Chairman)

Ahmad Rizal bin Abdul Rahman, PhD

Associate Professor Faculty of Design and Architecture Universiti Putra Malaysia (Member)

Mohd Faiz bin Yahaya, PhD

Senior Lecturer Faculty of Design and Architecture Universiti Putra Malaysia (Member)

Santhidran Sinnappan, PhD

Associate Professor Faculty of Creative Industries Universiti Tunku Abdul Rahman (Member)

ZALILAH MOHD SHARIFF, PhD

Professor and Dean School of Graduate Studies Universiti Putra Malaysia

Date: 13 June 2024

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CHAPTER 1

INTRODUCTION

1.1 Research Background

Society is advancing quickly, improving people's lives and increasing their expectations for quality of life. A comfortable outdoor environment is essential for urban dwellers, and park seating has become an indispensable aspect of city life, with its usage in China's urban parks on the rise (Li & Liu, 2019). Urban furniture has become a vital element of modern civilization as cities have grown, performing not only basic functions but also advanced ones such as safety, cleanliness, comfort, and entertainment, all of which improve daily living (Arruda et al., 2017; Calzolari & Balbo, 2018).

The COVID-19 pandemic has piqued global interest, causing changes in habits and urban uses of public seating furniture. Cities and public spaces were completely barren during the lockdowns, and new urban landscapes replaced the old ones, altering the landscape of public areas (Sepe, 2021; Abusaada & Elshater, 2020). "The Power of Parks in the Pandemic" by Surico (2020) demonstrates how numerous parks have become a vital lifeline for cities and their citizens during the pandemic. Consequently, since the emergency period of the pandemic, the expectations and needs for urban furniture have shifted (Cirrincione et al., 2020). Although open and green areas are essential for public health, there is also the need for further safety measures such as disinfection, physical distancing, and repurposing of urban furniture (Mansuroglu, 2021).

The COVID-19 isolation has highlighted the desire in people for outside activities, particularly to exercise, unwind, and spend time with nature. This translates into an increase in demand for parks and other urban green spaces, according to numerous research on the impact of the pandemic on the usage of parks (Ugolini et al., 2020; Kleinschroth & Kowarik, 2020; Geng et al., 2021; Lu et al., 2021). Several researchers have emphasized the importance of urban parks in reducing the psychological burden caused by the COVID-19 pandemic, including declining mental health, indications of post-traumatic stress disorders, and other detrimental psychological problems (Slater et al., 2020; Geng et al., 2021). Another group of researchers have drawn attention to the decreased physical activities caused by restrictions to public areas, which impacted vulnerable individuals who must maintain some degree of physical activity to lower chances of developing chronic health issues (Hart, 2014; Milne & Xie, 2020). In short, parks and urban green spaces are urban green infrastructures that benefit the community (Azagew & Worku, 2020).

Community parks and other specific urban green spaces have become more popular as a necessity to maintain physical and mental health since the start of the COVID-19 pandemic (Lin et al., 2023). COVID-19 transmission rates appeared to be lower outside than inside (McGreevy, 2021; Geary et al., 2021), meaning that when spacious parks are unavailable, congestion becomes dominant in metropolitan areas that lack opportunities for outdoor activities. As a result of the surge in park visits, the government implemented

several laws and policies to reduce the risk of viral transmission (Liu & Wang, 2021). A significant COVID-19 discovery, according to several investigations, is the availability of urban green spaces within walking distance of urban dwellers.

Some researchers have argued that the forms of urban green spaces readily accessible to communities, such as local green spaces and community parks, should be given more attention (Honey-Rosés et al., 2020). Consequently, Hassan and Megahed (2021) stressed the significance of reconsidering the designs of urban landscape components to manage the dynamics of the COVID-19 dissemination. Therefore, the objective of urban furniture design is no longer limited to iterating on the appearance, materials, and functional technology of products (Shuai & Yichun, 2021). It is critical for urban furniture designers to recognize the positive emotional value of the product and the importance of customer feedback as a design feature. Designs of urban furniture in the post-pandemic era must pay close attention to the emotional needs of users, as user needs continue to change with the dynamic development of the epidemic in the context of usable space.

The study by Li et al. (2023) investigated urban park use patterns before and during COVID-19 in Guangzhou, China, as shown in Figure 1.1.

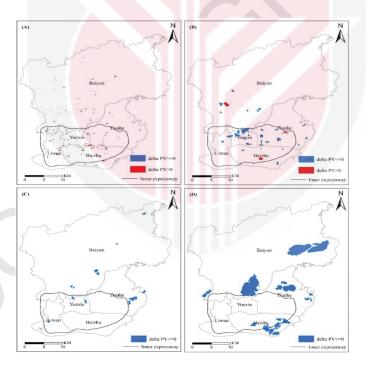


Figure 1.1: Changes in Urban Park Use During COVID-19. Changes (incremental PV, incremental park visits) are shown in red to indicate increases and in blue to indicate decreases.A: Community parks; B: Comprehensive parks; C: Theme parks; D: Nature parks

(Source : Li et al., 2023)

Table 1.1: Status of visitation of four types of parks before and during COVID-19

Emnty Cell		Community Park	Comprehensive Park	Theme park	Nature Park	Total
Pre-pandemic	Degree of Visitation	82060 .25	13515.32	1876.57	557.16	103018.3
	Ratio	0.8	0.13	0.018	0.054	
Pre-pandemic	Degree of Visitation	61507.16	5826.25	791.59	492.6	68617.59

Note: Ratio is the percentage of one type of parks visitation of the total visitation (Li et al., 2023)

Figure 1.1 and Table 1.1 show that by spatially displaying the changes in park visitation, it is possible to better identify the visitation patterns of each of the four types of parks before and after the COVID-19 pandemic. Since the epidemic period, the visitation to community parks decreased from 82,069.25 to 61,507.16 visits, but its share of total visits increased from 80 percent to 90 percent. Visits to integrated parks, theme parks and nature parks all declined, with integrated parks dropping from 13,515.32 to 5,826.25 visits, theme parks from 1,876.57 to 791.59 visits and nature parks from 557.16 to 492.60 visits. This data indicates that community parks became more important during the epidemic relative to other types of parks. It also suggests that urban residents frequented neighbourhood community parks during the epidemic, re-emphasizing the importance of community parks in urban areas during such crises (Geng et al., 2021). The importance of community parks is amplified by the increased demand for neighbourhood parks by residents (Li et al., 2023). As the pandemic has weakened interpersonal relationships among people, bringing them closer to the environment could help stablize them emotionally (Zhao & Zheng, 2021).

As urban park furniture is an indispensable part of parks, it is the most widely distributed public facility and has the closest contact with visitors. With the increasing improvement in the quality of life, people in cities are demanding better urban park furniture, with simple park furniture no longer meeting their needs (Yu et al., 2020). Good product design should be used to meet user needs in terms of being functional, pleasing to the eyes, and emotionally satisfying (Shan, 2009), especially during the epidemic when safety and emotional design were essential. However, in the post-pandemic era, there is still an urgent need for safe, healthy, and beautiful public recreational parks. The design community should take a long term view of the design ideas and methods of "antiepidemic" designs for urban environments and pay continuous attention to this proposition.

When the COVID-19 pandemic was in full swing, everyone was advised to stay at home and avoid any physical contact. This physical contact ban was in place worldwide to prevent the transmission of the virus (Moosa, 2020). This led to significant changes to the ways people used public seating furniture in terms of physical features, functions and uses (Drury et al., 2021). As a result, Morika and Rated (2021) predicted that the purpose of sitting facilities in public places have been altered as a result of the pandemic. Their research contributed to creating public seating which is essential for maintaining a healthy public environment in cities.

It was necessary to socialize safely outside during the pandemic to maintain good personal health. However, while the designs of urban public seating furniture were changed to limit the transmission of infectious diseases, these designs had not been thoroughly examined. Therefore, this study aims to develop a comprehensive framework to capture post-pandemic user expectations, satisfaction, and intentions regarding seating furniture to guide designers, policymakers, and managers to improve the user experience and thereby increase the utilization of public spaces in the post-pandemic era. A better understanding of the effects of park seating design can be utilized to improve the designs of urban neighbourhood parks, which can provide social resilience and promote urban vibrancy. Furthermore, the changes in the designs of public park seating furniture have the potential to increase social interaction among residents.

1.2 Problem Statement

The COVID-19 pandemic has profoundly impacted urban lifestyles, public spaces, and social behaviours, necessitating a reevaluation of urban furniture design, particularly seating furniture in community parks (Zhao & Zheng, 2021). During lockdowns and social distancing periods, people sought solace in natural environments, leading to a surge in demand for outdoor green spaces such as parks and urban forests (Mansuroglu, 2021). The pandemic further heightened public awareness of health and safety, consequently altering user preferences and expectations for park seating furniture. Consequently, traditional seating furniture designs may be inadequate to meet user needs, resulting in decreased feelings of safety and park seating furniture utilization. Liu et al. (2021) further argued that traditional urban furniture, including park seating furniture, fails to meet users' evolving expectations and requirements concerning safety, design, health, and overall satisfaction since the pandemic.

The following paragraphs present the problem statement of this study from three main perspectives.

a Serious deficiencies in seating furniture design

Different studies have shown that the arrangement of seating furniture does not facilitate people's communication and only considers the needs of the individual without considering the needs of the group (Lie et al., 2013). Some park seating furniture has only the basic function of sitting and resting, while little ergonomic attention has been given to designing seating furniture that is comfortable for people. Although existing park seating furniture is designed to accommodate several people, sitting on the ground is preferred (Luximon et al., 2015a). For example, backless seating benches in parks can cause discomfort in the lower back if seated for a long period and do not allow users to relax, lounge, and talk better (Chen, 2017). Therefore, the design of seating furniture does not meet the needs of users for these activities and interactions.

The design of public seating furniture in urban parks lacks innovation and personalization, and its lack of design in terms of colour, shape, and structure leads to singular functionality and low aesthetic value, which in turn causes visual fatigue among the public (Yingbo, 2015; Xiaoxi, 2015). In addition, Liqiu (2013) also emphasized the

lack of regional characteristics in the design of benches, stressing that design aesthetics is an aspect of park bench design that is an area for improvement. In addition, as Norman and Diego (2014) pointed out, highly rated products are rejected if they do not meet the value of the user's aesthetic needs. Huang et al. (2012) concur with this point of view, claiming that the appearance of the product has been recognized as an important factor in the success of the product. Because of this, there is an urgent need to improve the design of these public facilities in an aesthetically pleasing and functional way, which requires designers to improve the design of existing public facilities by adding new elements and functions to diversify the public facilities (Kai, 2020).

In addition, the aesthetics of seating devices currently on the market are not adapted to the stress levels of users after the pandemic, as they increase the likelihood of virus transmission. In order to increase usage, urban seating must be upgraded (Cirrincione et al., 2020). COVID-19 changed people's social behaviours and use of public spaces, especially the way they used seating in outdoor public spaces. After the pandemic, these facilities have been deemed unsafe and go unused (Morika & Ratum, 2021).

b Changes in user practice

Although park furniture meets functional needs, in the context of a rapidly developing society and improved quality of life, the public seeks not only functionality but also design that brings life and vitality; thus, furniture that lacks innovation can no longer attract the attention of modern people (Lie Wang et al., 2023). This has led to a decrease in public reliance on and usage of urban furniture, which in turn has caused the desolation of urban spaces and impeded the normalization of public life activities (Zhao & Zheng, 2021). This further illustrates that the above issues regarding park seating furniture have persisted and have not been resolved.

c Restrictions on seating furniture

As depicted in Figure 1.2, many community park seating furniture in China are restricted by the government and labeled with "do not use" signs. This set of images exemplifies the situation during COVID-19 at research sites in Yunnan Province, China. During the pandemic, seating in many urban community parks was deemed a safety and sanitary risk due to the outbreak, and consequently, tagged as prohibited for use. The photos show that the design of the seating furniture only satisfies the function of sitting, and there is a lack of design in the appearance of the seating, including shape, colour, and texture. Therefore, this exposes the deficiencies in existing seating designs in terms of functionality, appearance design, materials, and safety (Shuai & Yichun, 2021). To cater to the demands and expectations for public seating in the post-pandemic era, it is crucial to improve and optimize seating furniture designs (Cirrincione et al., 2020).

The issues above have led to reduced reliance on, and even aversion to, urban furniture, resulting in a significant decline in its use. As a result, the vitality of the urban environment has diminished, hindering the resumption of normal public life activities (Zhao & Zheng, 2021). There is thus an urgent need for a framework that will guide

designers to better meet new user needs, improve designs, and promote the sustainable development of urban community parks.

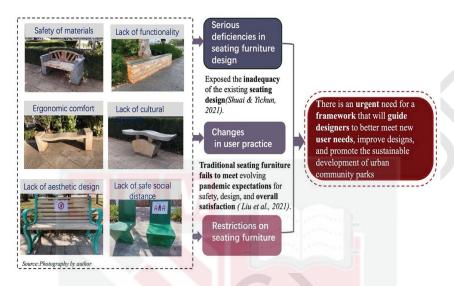


Figure 1.2: Problem Statement for This Research Source: Photographs by the author

In light of the issues highlighted above, this study addresses urban community park seating furniture design shortcomings in China concerning user expectations, satisfaction, and post-pandemic usage. Adapting to COVID-19 pandemic expectations requires evaluating park users' post-pandemic expectations, satisfaction, and intentions, informing safe and satisfying seating furniture designs. Optimizing designs enhances community park utilization, contributing to targeted recommendations for seating furniture designs, improving user experience, satisfaction, and adaptation to pandemicera requirements.

1.3 Research Questions

The following research questions were formulated to guide this study:

- i. What are the post-pandemic user expectations, satisfaction, and intentions to use seating furniture in Nie Er Community Park, Yuxi City, China?
- ii. What are the relationships between post-pandemic user expectations, satisfaction, and intentions to use seating furniture in Nie Er Community Park, Yuxi City, China?
- iii. How to develop a framework consisting of the post-pandemic user expectations, satisfaction, and intentions regarding the use of seating furniture in Nie Er Community Park, Yuxi City, China?

iv. How to validate a framework consisting of the post-pandemic user expectations, satisfaction, and intentions to use seating furniture in Nie Er Community Park, Yuxi City, China?

1.4 Research Objectives

Main Aim: The purpose of this study is to develop a comprehensive framework that captures post-pandemic user expectations, satisfaction, and intentions regarding the use of seating furniture in urban community parks, with a focus on Nie Er Community Park in Yuxi City, China. In doing so, this study aims to guide designers, policymakers, and managers to improve user experience and thereby increase the utilization of public spaces in the post-pandemic era. The specific objectives of this research are as follows:

- i. To identify the post-pandemic user expectations, satisfaction, and intentions to use seating furniture in Nie Er Community Park, Yuxi City, China
- ii. To examine the relationships between post-pandemic user expectations, satisfaction, and intentions to use seating furniture in Nie Er Community Park, Yuxi City, China
- iii. To develop a framework consisting of the post-pandemic user expectations, satisfaction, and intentions regarding the use of seating furniture in Nie Er Community Park, Yuxi City, China
- iv. To validate a framework consisting of the post-pandemic user expectations, satisfaction, and intentions to use seating furniture in Nie Er Community Park, Yuxi City, China

1.5 Research Hypothesis

The research hypothesis is based on the attributes of the designs of the product, expectations of users, and satisfaction. The attributes of the designs of products are considered as a design theory consisting of aesthetic, functional, and symbolic dimensions (Homburg et al., 2015). The hypotheses proposed for this study are a combination of the European Customer Satisfaction Index model (ECSI) (Homburg et al., 2015) and the Expectation-Confirmation Theory (Oliver, 1980; Churchill et al., 2013). Therefore, this study has four main research hypotheses, as shown in Figure 1.3.

The independent variable is the dimension of users' expectations of park seating furniture: function, appearance, materials, safety features, space environment characteristics, and location. The dependent variable is the intention to use urban community park seating furniture. The mediating variable is satisfaction with urban community park seating furniture.

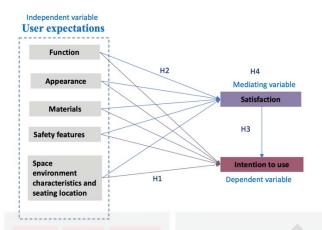


Figure 1.3: A model of the Expectations, Satisfaction, and Intention to Use Urban Community Park Seating Furniture in a Post-Pandemic Context

H1: User expectations positively affect the intention to use park seating furniture.

H1a: Function positively affects the intention to use park seating furniture

H1b: Appearance positively affects the intention to use park seating furniture

H1c: Materials positively affect the intention to use park seating furniture

H1d: The safety features positively affect the intentions to use park seating furniture

H1e: Space environment characteristics and location positively affect the intention to use park seating furniture

H2: User expectations positively affect satisfaction with park seating furniture.

H2a: Function positively affects the park seating furniture satisfaction

H2b: Appearance positively affects park seating furniture satisfaction

H2c: Materials positively affect park seating furniture satisfaction

H2d: Safety features positively affect park seating furniture satisfaction

H2e: Space environment characteristics and location of seating positively affect satisfaction with the use of park seating furniture

H3: Satisfaction positively affects the intention to use park seating furniture.

H4: Satisfaction mediates between user expectations and intention to use the park seating furniture.

- H4a: Satisfaction mediates between park seating function and intention to use the park seating furniture
- H4b: Satisfaction mediates between park seating appearance and intention to use the park seating furniture
- H4c: Satisfaction mediates between park seating materials and intention to use the park seating furniture
- H4d: Satisfaction mediates between park seating materials and intention to use the park seating furniture
- H4e: Satisfaction mediates between the environment characteristics and location of park seating spaces and the intention to use park seating furniture

1.6 Research Scope

According to the classification standard ("China Urban Park Classification Standard" CJJ/T85-2017), the five categories of urban parks are community parks, comprehensive parks, theme parks, nature parks, and ribbon parks (Li et al., 2021). Community parks are residential service parks for neighbourhood communities with limited and concentrated green space and activity support infrastructure. Comprehensive parks are parks with larger green spaces that can support a greater variety of outdoor recreation activities. Theme parks include children's parks, zoos, botanical gardens, historic sites and scenic areas. Nature parks are based on ecological reserves and focus on environmental and ecological benefits. They can support a range of activities such as recreation, leisure, fitness, science and other diverse outdoor activities. Ribbon parks are usually narrow strips of parkland along roads, walls and bodies of water that provide limited support for user activities. This research only focused on urban community parks in Yuxi City, Yunnan Province, China, excluding rural community parks, comprehensive parks, theme parks, nature parks, and ribbon parks. This exclusive focus is due to the importance of urban community parks during a pandemic. The specific research scope is described below.

The scope of this study encompasses assessments of:

- i. User expectations of seating furniture in Nie Er Community Park following the pandemic.
- ii. User satisfaction with existing seating furniture.
- iii. Users' intention to use the seating furniture following the pandemic.
- iv. Factors influencing users' expectations, satisfaction, and intention to use the seating furniture following the pandemic.

The scope of this study does not include considerations of:

- i. Forms of park infrastructure other than seating facilities.
- i. User interactions with park facilities that are not directly related to seating.
- ii. Locations other than Nie Er Community Park or parks outside of Yuxi City.
- iii. Parks that are not directly related to seating.
- iv. Pre-pandemic use patterns and expectations.
- v. Parks that do not include indoor public spaces.
- vi. Seating furniture that does not include indoor public spaces.

1.7 Definition of Key Terms

Seating furniture: A seat is a piece of furniture designed to sit and provide support for the body. From a macroscopic point of view, it is an object in an urban public open space for people to use freely. It can meet people's rest behaviour as well as psychological needs, and it is an artwork in urban space (Ling et al., 2017).

User expectation: An emotional expectation that something will occur or hold in the future. Expectations are still needed to be met by reality. User expectations in this research refer to the expectations of users of seating designs of the post-pandemic community parks.

Use pattern: Using something to serve one's purpose. In this sense, the use pattern in this research refers to the posture of sitting and the seating furniture used.

User satisfaction: Refers to the degree to which a user's desires, expectations, and requirements are met by a product, service, or experience and the resulting sense of enjoyment or contentment that the user derives from experience. In this study, satisfaction is an emotional state that arises when the user expects a high confirmation level. The satisfaction paradigm was created to meet users' "hierarchy of needs" like functionality, usability, and enjoyment of usage (Jordan, 1998). This study is on user satisfaction of the community park seating furniture and is defined as "the effectiveness, efficiency, and satisfaction of a given user in achieving a given goal in a given situation" (Orth & Malkewitz, 2008).

Intention to use: The user's judgement of whether or not to use the park seating furniture, considering the current situation and possible circumstances.

1.8 Thesis Structure

The research is divided into six chapters, as detailed below:

Chapter 1: Introduction – Briefly describes the research background, problem statement, research objectives, research questions, hypotheses, the scope of this study, and structure of the thesis.

Chapter 2: Literature Review - Comprehensively reviews the literature on urban community park values, the importance of post-pandemic seating furniture, user expectation factors, satisfaction factors and intention to use factors, as well as the relevant theories involved in the study, namely the Expectation Confirmation Theory and ECSI. Finally, the conceptual and theoretical frameworks are presented for this study based on the literature review and the objectives.

Chapter 3: Research Methodology—Describes the research design. This chapter also explains the sample, sites, data collection procedures, and application methods.

Chapter 4: Data analysis and results - The results, including the objectives of study, are interpreted. This research involves determining the relationship between the post-pandemic factors that affect expectations of users of urban community park seating furniture, satisfaction, and intention to use factors and to present the result of the study. Preliminary data analysis, including data screening, multivariate analysis of the hypothesis in structural equations, and descriptive analysis, are presented. In the second phase, validation techniques are excplained, measurement models are evaluated, and empirical results are provided. Statistical results are obtained based on either the empirical results support or reject the hypotheses.

Chapter 5: Discussion and findings - Discussion of the research findings that examines the results, compares them with previous research, and concludes by discussing how the findings fill a knowledge gap in this area.

Chapter 6: Conclusion - Summarises all the information extracted from the research objectives and discusses the contribution of the research to post-pandemic urban community park seating furniture planning. It also acknowledges limitations and offers recommendations for future research.

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