

Article

Factors Influencing the Visitation and Revisitation of Urban Parks: A Case Study from Hangzhou, China

Peng Zhan, Guang Hu , Ruilian Han * and Yu Kang

School of Civil Engineering and Architecture, Zhejiang Sci-Tech University, Hangzhou 310018, China; zhan1997@foxmail.com (P.Z.); 201931204010@mails.zstu.edu.cn (Y.K.)

* Correspondence: hug163@163.com (G.H.); hanrl@nwafu.edu.cn (R.H.); Tel.: +86-571-86843706 (G.H.); +86-135-72555728 (R.H.)

Abstract: Visitors' satisfaction and willingness to revisit urban parks are closely linked to park longevity. However, few details of this relationship have been studied. We explored the factors influencing urban park use and factors motivating revisitation in six urban parks in Hangzhou, China. Data from 600 park visitors were collected over three months using a face-to-face questionnaire. These included socio-demographic data, residential data, personal characteristics, park satisfaction, motivations for visit, and other information. A hierarchical regression model was applied to analyze the contribution of each variable to visitation by park users. Physical and mental benefits and previous positive experiences were the main factors motivating park visitation. Age and distance to the nearest park were the main factors driving park revisitation, and they were positively and negatively correlated with visitation frequency, respectively. Long-term and short-term residents, who commute by cycling or walking, made up the majority of park visitors. Interestingly, park features had no significant impact on revisitation. Weather and time limitations were major factors limiting visitation to parks, and traffic and inadequate park facilities limited revisitation. Our results could be useful for urban planners as they develop guidelines to improve visitor satisfaction and promote the longevity of urban parks.

Keywords: urban park use; park longevity; socio-demography; hierarchical regression; visitor satisfaction; park revisitation



Citation: Zhan, P.; Hu, G.; Han, R.; Kang, Y. Factors Influencing the Visitation and Revisitation of Urban Parks: A Case Study from Hangzhou, China. *Sustainability* **2021**, *13*, 10450. <https://doi.org/10.3390/su131810450>

Academic Editor: Tan Yigitcanlar

Received: 25 August 2021

Accepted: 15 September 2021

Published: 19 September 2021

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Increased urbanization has led to a rising number of people living in urban areas, and a subsequent decrease in contact between humans and the natural environment [1]. Urban parks have many benefits for the mental and physical well-being of urban residents [2] such as promoting physical exercise and reducing the risk of obesity [3] and cardiovascular disease [4], while also improving the ecology of an area [5]. Despite these benefits, many parks are underutilized [6,7].

Many studies have investigated the factors motivating and influencing the use of urban parks with the aim of promoting more regular and efficient utilization. Wang et al. [8] and Liu et al. [9] identified four main factors that influence the use of urban parks: socio-demographic factors, residential space characteristics, personal factors, and park characteristics. Relaxation, physical exercise, socializing, and playing with children have been identified as important motivating factors for park use [8–13]. Referrals from others may provide motivation too, and different information sources can have an impact on park usage [14]. The main factors limiting the use of parks were time limitations and limited park access [9]. Previous studies in European cities reported that the primary motivation for visiting urban parks is to seek moral relaxation and a natural experience [12,15,16]. With additional facilities for activities in parks, visit frequency may increase [17]. Studies in Ethiopia found that accessibility and transportation mode significantly affected park visits [18]. In China, some studies also indicated a similar impact on visits to urban parks

as that in Ethiopia [8,9,19]. Meanwhile, age, facilities, and leisure time were also positively associated with park visits [9,20,21]. Relaxation and rest, physical activity, and socialization were the main reasons for visiting parks in other studies [8,22,23]. However, few studies considered the revisiting of urban parks; in another words, how frequently the people use the parks.

Urban planners often hope to increase public satisfaction with respect to urban parks, promote sustainable park visitation, and achieve their full utilization potential. Satisfaction and sustainability of travel destinations are closely related to tourists' willingness to revisit these destinations [24–26]. Higher revisitation rates have helped urban parks to gain more market share [27,28], reduce their marketing costs, and expand their economic benefits [29]. They have also provided more targeted advice for the construction and management of parks [30]. A historically high proportion of repeat visitors indicates that it is difficult to attract new visitors, and the destination is in need of innovation [31]. It is important to understand the factors which motivate visitors to revisit parks in order to be better prepared to meet their needs and to ensure the longevity of parks [32]. Previous studies indicate that first-time and repeat visitors differ significantly in terms of their social demographics, motives for their visit, behavioral preferences, and satisfaction with the overall park experience [33]. Generally, repeat visitors comprise a high proportion of visitors to parks [30], and studies have shown that their main motivations are relaxation and familiarity, whereas first-time visitors are motivated by novelty and new cultural experiences. Furthermore, visitor satisfaction is key to promoting revisitation behavior [34,35]. However, studies focused on revisitation behavior have not included urban parks. Generally, most studies on urban park visitation do not distinguish between first-time and repeat visitors and why they choose to revisit the parks. Therefore, we aim to address the lack of research on urban park revisitation, further optimize the use of urban parks to meet the needs of their visitors, and promote their sustainable development.

Hangzhou, one of the “Garden Cities” in China, has recently undergone rapid urbanization. It has two World Heritage Sites, the West Lake and the Grand Canal, as well as multiple urban forests and wetland parks of various sizes. In 2020, the parks in Hangzhou, with their unique natural scenery and historical culture, attracted 176 million tourists to the city, resulting in a total tourism revenue of 333.5 billion yuan. The numerous local and foreign tourists provide valuable data on park visitation for this study. Herein, we attempt to answer the following questions: what are (1) the differences, if any, in volume and characteristics of first-time and repeat visitors to Hangzhou's urban parks; (2) tourists' main motivations for revisiting Hangzhou's urban parks; and (3) the main factors facilitating or limiting tourists revisiting urban parks.

2. Materials and Methods

2.1. Study Site

Hangzhou is the capital of China's Zhejiang Province and is one of the central cities on the Yangtze River Delta. It is a large city, renowned internationally for its natural landscape and cultural history [36]. Hangzhou has a subtropical monsoon climate with four distinct seasons and abundant rainfall. As of 2019, Hangzhou's resident population had reached 10.36 million, with a per capita gross domestic product of USD 23,921.7 for the resident population. In terms of green spaces, the city had 26,312 ha of greenery coverage in the built-up areas and 9246 ha of park green space. The total number of tourists that visited Hangzhou in 2019 was 208.14 million, and the total revenue from tourism was USD 62.8 billion [37].

Six important urban parks in Hangzhou were selected for this study: Xixi National Wetland Park, Taiziwan Park, Hangzhou Chengbei Sports Park, Chengdong Park, Qianjiang Century Park, and Jinsha Lake Park (Figure 1). These parks were selected based on the following criteria: (1) popular parks highly cited on online social media and tourism websites [38–41]; (2) free of charge; (3) large areas with adequate facilities to facilitate different activities; (4) located in the Hangzhou metropolitan area with a high density of population [42,43]; (5) distributed across different municipal districts (five municipal

districts of Hangzhou), which are at a certain distance from each other to reduce mutual influence [44]; and (6) involved different park types. A brief description of each park is listed in Table 1.



Figure 1. Locations of six selected parks in Hangzhou City.

Table 1. Brief description of each research park.

No.	Urban Park	Types	Area	Park Description
1	Xixi National Wetland Park	Wetland park	1150 ha	This park is rich in ecological resources; 70% of it is covered by rivers, ponds, lakes, and marshes. It has many architectural sites, as well as a full range of tourist facilities such as commercial markets, boutique hotels, and restaurants.
2	Taiziwan Park	Ornamental horticulture park	80.03 ha	This park is located in the southwest corner of the West Lake Scenic Area. The entire park is traversed by paths and waterways, and it has a large spacious lawn and service buildings for playing and resting. It has an abundance of Japanese Tokyo cherry trees and tulips. It is now a famous wedding venue and tulip exhibition site.
3	Chengdong Park	Ornamental horticulture park	10.66 ha	There are numerous residential areas surrounding this park. The park has swimming pools, tennis courts, and other sports fields. Pavilions, plazas, and spaces under viaducts provide numerous activity areas. Shady greenery and vegetation provide a natural habitat for many bird and insect species.
4	Hangzhou Chengbei Sports Park	Sports park	45.73 ha	This park has three sports halls, several basketball courts, soccer fields, tennis courts, and other sports fields, as well as abundant greenery and lawns.
5	Jinsha Lake Park	Waterscape park	64.6 ha	This park has the largest artificial lake in Hangzhou, which is lined with two rows of palm trees and a beach, rendering a seaside atmosphere. The park's garden has various forest paths and is suitable for fitness, walking, and as a wedding venue.
6	Qianjiang Century Park	Waterscape park	62 ha	This park is located on the south bank of Qiantang River, adjacent to Hangzhou Olympic Sports Center and was the main venue of the G20 Summit. There is a large lawn along the river with a fountain feature, as well as a dedicated dining area and business office area.

2.2. Experimental Design and Data Collection

This study used a structured questionnaire [45] designed to comprehensively understand the perceptions of park users toward the selected urban parks and their motivations for revisiting them. Park visitation is highest in April and May when the climate is ideal and various cultural events occur [46]. Therefore, this questionnaire survey was conducted face-to-face with park users over three months, from April 2021 to June 2021. The survey was conducted in each park on weekdays and weekends at the following times: morning (8:00–10:00), noon (12:00–14:00), afternoon (15:00–17:00), and evening (18:00–20:00).

The questionnaire was divided into five sections. Section 1 collected the number of visits of park users to the corresponding park during the survey period and their socio-demographic data. Section 2 asked about the visitors' personal factors and spatial attributes of residence. The questions in Section 3 were aimed at understanding the behavioral preferences of the park users. Section 4 collected information about their motivations for visiting the park. The questions in Section 5 were aimed at understanding their satisfaction levels and the factors limiting their use of park features, if any. In order to provide specific information pertaining to the promotion of park revisitation, we also left an open-ended question at the end of the questionnaire which read: "What do you think are the park's shortcomings or areas for improvement?" A person's number of visits to a specific park was used to quantify the extent of revisitation.

2.3. Variables

For statistical analysis, the dependent variable was the number of visits to the selected park. An interval between repeat park visits may lead to changes in motivation for park use; therefore, it is necessary to specify the average interval between each repeat visit. Factors affecting park use included socio-demographic factors (age, occupation, gender, income, and education level), personal factors (free time on weekdays, leisure time on weekends, family relationships, mode of transportation available, resident type), spatial attributes of residence (distance of permanent residence from the selected park, whether there are other parks nearby), and park satisfaction (noise, safety, maintenance, supporting facilities, aesthetics, historical significance, proximity to public transportation). Variables describing users' motivations for park visitation included social, entertainment, psychological and physical health benefits, environmental education, and recommendations from others.

2.4. Statistical Analysis

Descriptive statistics were calculated, and hierarchical regression analysis and correlation analysis were performed using SPSS 20.0. Hierarchical regression analysis compares multiple regression models by comparing the variances of the different variables. In traditional multiple regression analyses, overlapping contributions are excluded from the semi-partial correlation of any predictor variables. Therefore, the semi-partial correlation of one predictor depends on the other predictors (in this case, a predictor refers to any one of the factors mentioned in Section 2.3) [9]. In hierarchical regression analysis, overlapping effects are assigned to variables before entering the model so that the unique contribution and relative importance of backward predictors can be distinguished [47]. Hierarchical regression analysis was used to study the effect of socio-demographic and spatial attributes of residence, personal factors, and satisfaction with park features on the dependent variable. These four types of variables were entered successively into the model to form four models: Model 1, Model 2, Model 3, and Model 4. This analytical approach has been effective in previous studies of urban parks [8]. Thereafter, we used Spearman's rank correlation coefficient to analyze the motivational differences in the number of visits to different urban parks. Results were considered significant at the $p < 0.05$ and $p < 0.01$ levels.

3. Results

3.1. Descriptive Statistics

A total of 650 questionnaires were distributed and 600 were returned (96 questionnaires were collected in Xixi National Wetland Park, 107 in Taiziwan Park, 99 in Chengdong Park, 109 in Hangzhou Chengbei Sports Park, 97 in Jinsha Lake Park, and 92 in Qianjiang Century Park), among which 15 were invalid due to unanimous answers and unclear replies (Supplementary Materials—Table S1). Young and middle-aged people accounted for the highest proportion of respondents, of which 48.40% were men, 51.60% were women, and 65.30% of the respondents had a monthly income of RMB 3000–10,000. Most respondents had an education below college and bachelor's degrees and worked in private companies. Local long-term residents accounted for 50.80% of the respondents. Most respondents were visiting urban parks for the first time (36.80%) or were regular visitors of more than six times (39.50%).

3.2. Motivations for Repeat Visits, Behavioral Preferences, and Factors Limiting Urban Park Visitation

According to the survey, 56.80% of respondents visited the urban parks to enjoy their aesthetic beauty (Supplementary Materials—Table S2). Many respondents were also motivated by perceived physical and psychological health benefits, such as being close to nature, breathing fresh air, walking, and engaging in physical exercise to reduce stress and increase relaxation. For parks which received more frequent visitation, the visitors' main motivational reasons were breathing fresh air, walking and other physical exercise, taking children to play in the park, and having had a positive previous experience (Figure 2). Among the survey participants, 72.16% of visitors revisited parks within a month. The majority would visit the park in the afternoon or evening and stay in the park for more than 0.5 h, though most stayed for 1–2 h. Half of the respondents were likely to visit the park only once a month or once a year. The main factors limiting park visitation included unfavorable weather and time limitations (42.10% and 40.30%, respectively).

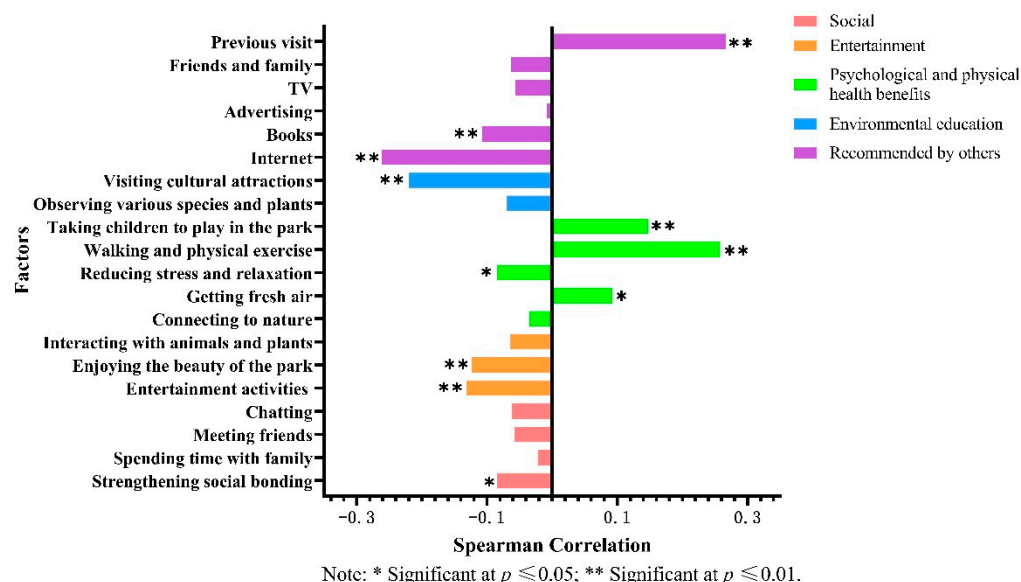


Figure 2. Correlation between motivating factors and the frequency of visits to parks.

3.3. Statistical Analysis

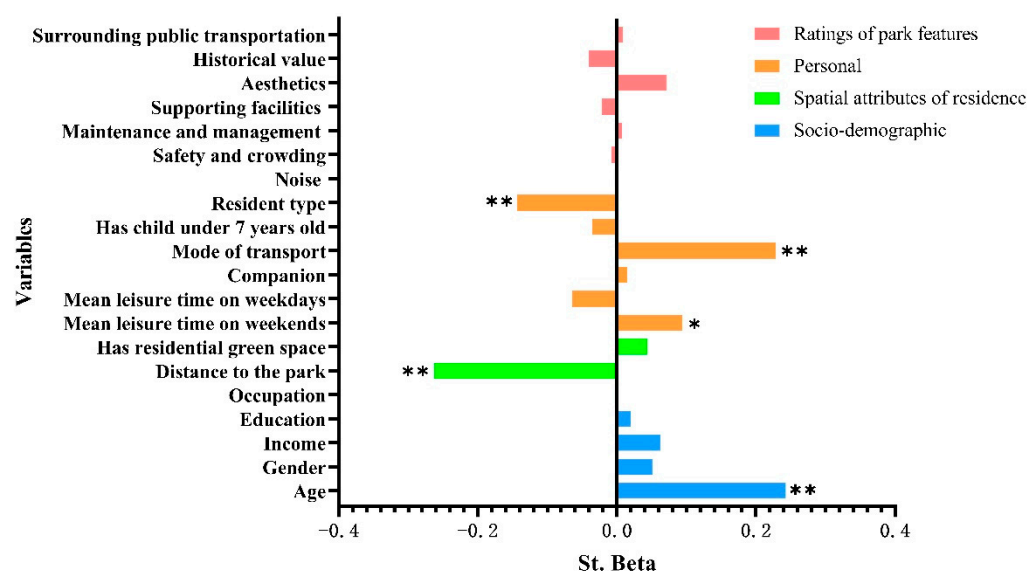
The impact of socio-demographic factors, personal factors, spatial attributes of residence, and satisfaction with park features on the number of park visits were explored through hierarchical regression (Table 2 and Figure 3). The socio-demographic variable explained 17.2% of the total variance (adjusted R^2), in which age was positively correlated with the number of park visits ($p \leq 0.01$). Model 2 added residential space attributes as a

variable (adjusted $R^2 = 35.1\%$), and the distance of residence from parks was negatively correlated with the number of park visits ($p \leq 0.01$). Personal factors contributed 6.4% to the model results, with “weekday leisure time” positively correlated with park visits ($p \leq 0.05$). The transportation options available and resident type also significantly influenced park visits ($p \leq 0.01$). Interestingly, visitor satisfaction with park features was not a significant predictor for park visitation. Few people visited the parks between four to six times; as such, for the sake of discussion, the number of visits were grouped into first time, moderate (2–6 times), and frequent (>6 times).

Table 2. Model summary and analysis of variance (ANOVA) for hierarchical regression models.

Statistics	Model 1 (Socio-Demographic Variables)	Model 2 (Model 1+Spatial Attributes of Residence)	Model 3 (Model 2+Personal Variables)	Model 4 (Model 3+Park FeaTure Variables)
F value	25.179	46.124	32.223	20.97
Significance	<0.001	<0.001	<0.001	<0.001
df	579	577	571	564
R^2	0.179	0.359	0.423	0.426
Adj R^2	0.172	0.351	0.41	0.406
Δ Adj R^2		0.18	0.064	−0.003

Note: Δ Adj R^2 indicates the change in explained variance by model 1, model 2, model 3, and model 4.



Note: * Significant at $p \leq 0.05$; ** Significant at $p \leq 0.01$.

Figure 3. Hierarchical regression analysis of the correlation and relative contributions of the factors that affect the visiting times in the full model.

The results of the analysis are presented in Figure 4. Figure 4a shows that the proportion of users who visit the parks multiple times increased continuously after the age of 30, and the proportion of elderly people (>61 years old) who frequently visited the parks was 83.54%. Figure 4b indicates that 72.38% of respondents used parks frequently when the travel distance was less than 1 km. When a park was 5–10 km away, the percentage of repeat visitors decreased by 23.3%, and the number of frequent park visitors decreased by almost 30%. Visitation increased significantly when users had 3 h or more of leisure time (Figure 4c). First-time visitors generally used public transportation (61.54%); however, a significant number of first-time visitors drove themselves to the park (45.71%) (Figure 4d). Temporary and long-term residents used urban parks more frequently (Figure 4e).

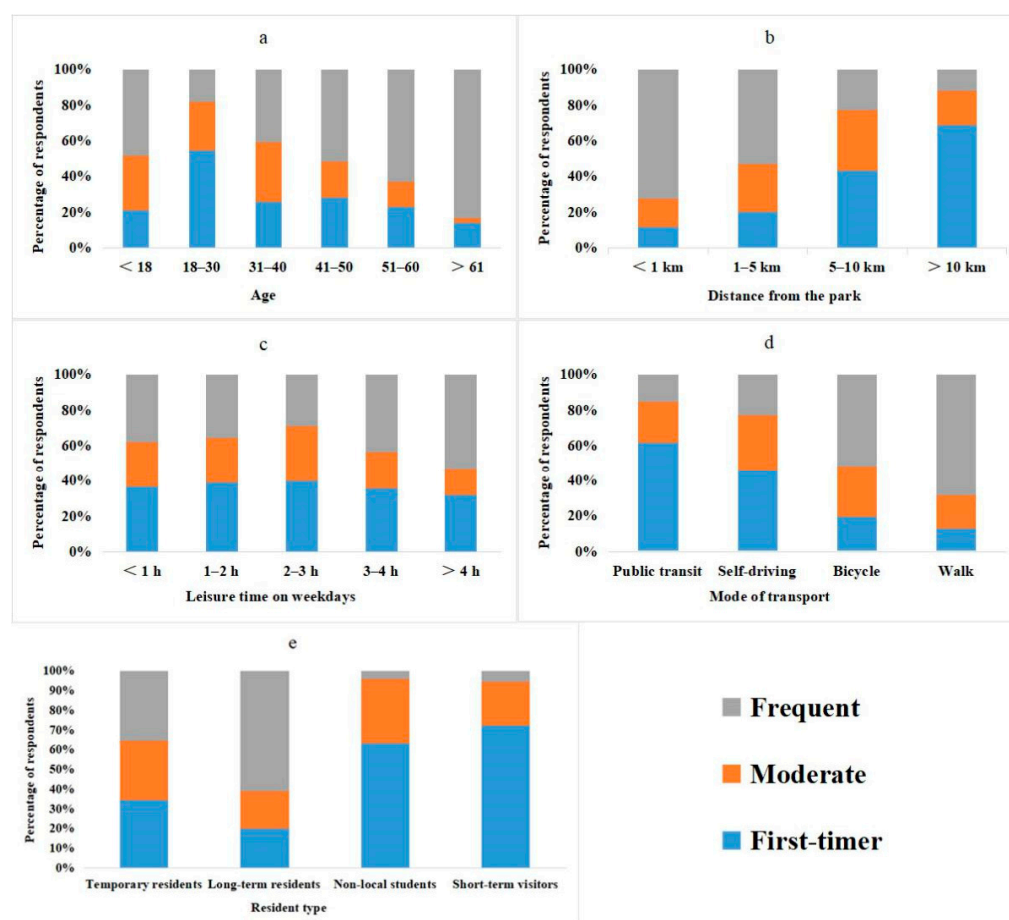


Figure 4. Relationship between the frequency of park visits and (a) age, (b) distance from the park, (c) leisure time on weekdays, (d) mode of transport, and (e) resident type.

4. Discussion

4.1. Visitors' Motivations for First-Time and Repeat Visits to City Parks

People who revisit urban parks in Hangzhou are mainly motivated by the perceived mental and physical health benefits associated with park visitation and by previous positive experiences (Figure 2). Among the parks surveyed, many had permanent facilities such as sandpits, fitness trails, football fields, basketball courts, swimming pools, and other play facilities for children. The presence of these facilities tends to create a habitual demand for visitors and is likely to be the reason for repeat park visitation.

Interestingly, other motivational factors such as the strengthening of social bonds, partaking in entertainment activities (photography, dancing, etc.), enjoying the beauty of parks, reducing stress and improving relaxation, visiting cultural attractions, and online recommendations were negatively correlated with the number of visits to parks. These results indicate that first-time park visits may be related to social or group activities, the park environment, and the popularity of the park. The survey results (Supplementary Materials—Table S1) indicate that most visitors came to the park with their families (37.3%) and friends (39.7%), and this was confirmed by our on-site observations and interactions with questionnaire respondents. Many visitors organize picnics or camps with family or friends in the park, undoubtedly increasing opportunities for social integration and interpersonal interaction. Studies in India [13], Malaysia [48], and Hong Kong [45] obtained similar results, reflecting the unique collectivist cultural tendencies of Asia. Furthermore, the internet is a tool for many first-time visitors to learn about urban parks. The internet can be used to choose suitable parks so that they can easily host or join those activities.

4.2. Visitors' Urban Park Preferences

Our results suggest that people are not very enthusiastic about visiting urban parks. Most people visit parks 1–3 times per month (34.40%) or 1–3 times per year (24.80%). In contrast, past studies suggested that citizens visited parks weekly [45,48,49]. One possible explanation for the low visitation rates in our study is that the urban parks investigated attract many out-of-town visitors. These visitors may only come to the parks to participate in socializing, event hosting, or for travel purposes, and do not have the intention of revisiting. Indeed, in our survey, only 50.80% of respondents were long-term residents from the areas surrounding the selected park. Most repeat visitors usually return to the park within a short period of time, but the number of visits tend to decrease over time, which demonstrates that visitors who use the park more often are also those who use the park regularly.

Urban park users in Hangzhou visit parks more often in the afternoon (15:00–17:00) and evening (18:00–20:00). This may be due to the fact that school and work hours finish around late afternoon or that people have difficulty waking up early in the mornings [50]. Overall, more people chose to go to the park on weekends (77.80%). People were more likely to stay in the park for 1–2 h (34.90%); however, the number of visitors staying longer than 2 h decreased by 26.70%. This is valuable information as park managers can use this to delineate routes and park activities for visitors that meet a 2 h time limit.

4.3. Factors Limiting Park Use

According to most park users, unfavorable weather and time limitations are the main factors limiting their visits. The quantitative analyses in Table 2 and Figure 3 show a significant correlation between time of day and visitation, especially during weekday free time. Other major limiting factors include lack of recreational and fitness facilities in selected parks, traffic safety and convenience of travel within selected parks, and lack of companions with whom to enjoy park facilities. Many visitors are concerned with problems regarding traffic in parks, such as traffic jams on weekends, potential dangers caused by the failure to implement vehicle and foot traffic diversion, and safety risks associated with dim lights at night. There is also concern regarding the lack of ablution facilities and convenience stores. These issues may be partly related to mistakes in the early stages of park design, or at least a failure to anticipate the future rates of park visitation. Urban park construction lags behind the rapid urbanization process [51], which may lead to the overuse of some parks, impacting the experience and expectations of some park users. In addition to problems relating to park traffic and facilities, other frequently reported issues include those pertaining to noise complaints, greenery, and sanitary conditions. This could prove to be crucial reference information for urban park managers and designers for current park maintenance and future park design.

4.4. Factors Affecting Visitation and Revisitation to Urban Parks

Our results are consistent with the findings of Wang [8], in that socio-demographic factors and spatial attributes of residence are the two main groups of factors that affect urban park revisitation. Among the socio-demographic factors, age is an important variable that affects revisiting urban parks. As people age, they tend to visit parks more often [45,48,49]. This may be because they have more available leisure time or that they may pay closer attention to their health and well-being. Furthermore, younger citizens tend to be more curiously minded and adventurous and are willing to visit new parks rather than return to familiar ones. Conversely, older citizens tend to be more conservative and to seek stability, choosing to visit parks that are familiar.

Park users generally frequent parks that are close to where they live [8,52]. Tu et al. [52] found that parents who take their children outside to play are often willing to travel long distances to a park with child-friendly facilities. In contrast, those who use parks for daily exercise prefer to go to a park within walking distance [52]. Overall, most visitors (72.38%) had a habit of revisiting parks within 1 km of their residence. However, similar

to the results of Tu et al. [52], beyond 5 km, the number of visitors decreased significantly. Therefore, 5 km from residential areas may be an important distance parameter for building urban parks in the future.

Among the personal factors, available leisure time on weekdays was positively correlated with the frequency of park visits. However, there is little variation in first-time visitors based on their available leisure time. Only repeat visitors with more than 3 h of weekday leisure time used the park frequently (>6 times). This may be because most visitors who meet this condition are retired, elderly, unemployed, or freelancers who have enough time to participate in outdoor recreational activities on a regular basis.

The impact of transportation on urban park revisitation is significant. Most repeat visitors commute to parks by cycling or walking. This result may be related to distances from visitors' home residences to parks. First-time visitors, who may be farther away from parks, will have easier access to the park by using public transportation, subways, or self-driving, whereas repeat visitors, who may live closer to the park, can reach the park quickly by cycling or walking [52].

Both temporary and long-term residents frequently revisit parks, with 60.94% of long-term residents visiting parks > 6 times in our study period [13]. There may be multiple explanations for this result: (1) there are ample green spaces and facilities on campus to accommodate the regular needs of non-local students for activities and socializing; (2) most of the short-term visitors are foreigners who come to Hangzhou as tourists and would therefore register as first-time visitors to a selected park; and (3) temporary and long-term residents may tend to live in residential areas of the city, closer to urban parks. Furthermore, they usually have relatively stable jobs and incomes and may have their own cars, thus facilitating access to parks.

Our results indicate that visitor satisfaction did not have an effect on park visitation. It may be that visiting city parks has become part of visitors' habits regardless of satisfaction levels, or that there are no other urban parks to choose from in the vicinity. Although visitor satisfaction had no significant influence on park visitation, the survey indicated that most visitors find Hangzhou's urban parks attractive. This is inextricably linked to Hangzhou's abundant greenery, dense water system, humid climate, and supportive policies (in 2020, Hangzhou added 776.47 ha of green space, >27,000 green spaces were inspected, 61 gardening and heritage protection approvals were rapidly handled online) [53]. Through interviews with respondents, we gauged the reasons for poor satisfaction in other areas, which can be summarized as: (1) noise complaints related to park users singing and dancing in the park, as well as traffic noise pollution such as trains passing Chengdong Park; (2) over-crowding of parks on weekends and holidays, with a large number of foreign visitors entering the park and exceeding the capacity of the park space and facilities; (3) lack of maintenance and management of streetlights and activity sites; (4) insufficient number of ablution facilities or lack of directional signs to easily find them; (5) impractical design of roads and parking spaces around the parks which cannot efficiently channel the vehicle and foot traffic during peak periods; and (6) lack of internal separation for pedestrians and vehicles creates a safety hazard in some parks. Nonetheless, visitors' overall satisfaction with Hangzhou's urban parks is high, which is conducive to park revisitation. Park users may also play a key role as an effective reference group to their family and friends, promoting the positive aspects of parks via word-of-mouth [34].

5. Conclusions

Urban parks are important places for city residents to enjoy their time outdoors. Using a field study and questionnaire, we examined the motivations and preferences of citizens who visit urban parks in Hangzhou; as well as factors that limit their return to these parks. Our research contributes to the field of urban park studies by considering the effect that socio-demographic factors, personal factors, spatial attributes of residence, and visitor satisfaction with park features have on visitors returning to urban parks for repeat visits.

Our research shows that (1) most of the current visitors in urban parks are either first-time visitors or regular visitors; (2) the main factors motivating park revisitation are the perceived mental and physical health benefits, and positive experiences from previous visits; (3) poor weather and lack of time are the most important factors limiting park visitation; (4) most repeat visits to a park occur within a month; and (5) people who tend to revisit parks are older citizens, those with more free time on weekdays, those who live closer to parks, and those who walk or bike to get to parks.

Our study can provide useful references for the construction of future urban parks, to ensure their sustainability, longevity, and frequent use. First, park design can be used to promote park revisitation by adding various types of permanent facilities and unique attractions. Park designers and managers can increase the potential of urban park revisitation in the future by improving the park environment, enhancing park aesthetics, installing venues that can accommodate different sizes of social groups or activities, and conducting social media marketing to increase the number of first-time visitors. Second, as far as possible, the size of urban parks and the design of internal routes and features should promote a 2-h visiting time for users. Third, urban parks should be located within 5 km of residential areas to promote their adequate utilization. Fourth, attention should be paid to the design and management of transportation routes and facilities around and within the park to meet visitors' needs for transportation convenience and safety.

In conclusion, we hope that urban planners and park managers will make timely adjustments based on our research findings, with the aim of providing a satisfactory experience for all visitors.

Supplementary Materials: The following are available online at <https://www.mdpi.com/article/10.3390/su131810450/s1>, Table S1: Descriptions of all variables and their values based on questionnaire answers ($N = 585$), Table S2: Factors motivating preferences or limiting the visitation of urban parks in Hangzhou.

Author Contributions: Conceptualization, P.Z. and G.H.; data curation, P.Z.; formal analysis, P.Z. and Y.K.; funding acquisition, G.H. and R.H.; investigation, P.Z. and Y.K.; methodology, P.Z. and G.H.; writing—original draft, P.Z.; writing—review and editing, P.Z., G.H. and R.H. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by the Zhejiang Provincial Public Welfare Technology Applied Research Project (LGN21C020008), National Natural Science Foundation of China (32171570), Science Foundation of Zhejiang Sci-Tech University (17052059-Y), and the Fundamental Research Funds of Zhejiang Sci-Tech University (2021Q036).

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: All data have been included in the text and Supplementary Materials.

Acknowledgments: We are particularly grateful to the editor, chief editors, and anonymous reviewers for their valuable comments on the manuscript. The authors thank Shi Qirong and six other students for their assistance in data collection. Thanks also to Stephen C. Gibson from Pepperdine University for his valuable advice on this study.

Conflicts of Interest: The authors declare no competing interest.

References

1. Hartig, T., Jr.; Kahn, P.H. Living in cities, naturally. *Science* **2016**, *352*, 938–940. [[CrossRef](#)]
2. Bertram, C.; Rehdanz, K. The role of urban green space for human well-being. *Ecol. Econ.* **2015**, *120*, 139–152. [[CrossRef](#)]
3. Knobel, P.; Maneja, R.; Bartoll, X.; Alonso, L.; Bauwelinck, M.; Valentin, A.; Zijlema, W.; Borrell, C.; Nieuwenhuijsen, M.; Dadvand, P. Quality of urban green spaces influences residents' use of these spaces, physical activity, and overweight/obesity. *Environ. Pollut.* **2021**, *271*, 116393. [[CrossRef](#)] [[PubMed](#)]
4. Tamosiunas, A.; Grazuleviciene, R.; Luksiene, D.; Dedele, A.; Reklaitiene, R.; Baceviciene, M.; Vencloviene, J.; Bernotiene, G.; Radisauskas, R.; Malinauskiene, V.; et al. Accessibility and use of urban green spaces, and cardiovascular health: Findings from a Kaunas cohort study. *Environ. Health BioMed Central* **2014**, *13*, 20. [[CrossRef](#)] [[PubMed](#)]

5. Kong, F.; Yin, H.; Nakagoshi, N.; Zong, Y. Urban green space network development for biodiversity conservation: Identification based on graph theory and gravity modeling. *Landsc. Urban Plan.* **2010**, *95*, 16–27. [\[CrossRef\]](#)
6. Zanon, D.; Doucouliagos, C.; Hall, J.; Lockstone-Binney, L. Constraints to park visitation: A meta-analysis of North American studies. *Leis. Sci.* **2013**, *35*, 475–493. [\[CrossRef\]](#)
7. Huang, Y.; Xu, J. Exploring the factors of using frequency of large-scale urban public space: Post-occupancy evaluation of the flower city square and the Pearl River park. *S. Archit.* **2013**, *4*, 86–90.
8. Wang, P.; Zhou, B.; Han, L.; Mei, R. The motivation and factors influencing visits to small urban parks in Shanghai, China. *Urban For. Urban Green.* **2021**, *60*, 127086. [\[CrossRef\]](#)
9. Liu, H.; Li, F.; Xu, L.; Han, B. The impact of socio-demographic, environmental, and individual factors on urban park visitation in Beijing, China. *J. Clean. Prod.* **2017**, *163*, S181–S188. [\[CrossRef\]](#)
10. Gundersen, V.; Mehmetoglu, M.; Vistad, O.I.; Andersen, O. Linking visitor motivation with attitude towards management restrictions on use in a national park. *J. Outdoor Recreat. Tour.* **2015**, *9*, 77–86. [\[CrossRef\]](#)
11. Gibson, S.C. “Let’s go to the park.” An investigation of older adults in Australia and their motivations for park visitation. *Landsc. Urban Plan.* **2018**, *180*, 234–246. [\[CrossRef\]](#)
12. Vierikko, K.; Gonçalves, P.; Haase, D.; Elands, B.; Ioja, C.; Jaatsi, M.; Pieniniemi, M.; Lindgren, J.; Grilo, F.; Santos-Reis, M.; et al. Biocultural diversity (BCD) in European cities—Interactions between motivations, experiences and environment in public parks. *Urban For. Urban Green.* **2020**, *48*, 126501. [\[CrossRef\]](#)
13. Dinda, S.; Ghosh, S. Perceived benefits, aesthetic preferences and willingness to pay for visiting urban parks: A case study from the city of Kolkata, India. *Int. J. Geoheritage Parks* **2021**, *9*, 36–50. [\[CrossRef\]](#)
14. Tang, X.; Wang, D.; Sun, Y.; Chen, M.; Waygood, E.O.D. Choice behavior of tourism destination and travel mode: A case study of local residents in Hangzhou, China. *J. Transp. Geogr.* **2020**, *89*, 102895. [\[CrossRef\]](#)
15. Halkos, G.; Leonti, A.; Sardanou, E. Activities, motivations and satisfaction of urban parks visitors: A structural equation modeling analysis. *Econ. Anal. Policy* **2021**, *70*, 502–513. [\[CrossRef\]](#)
16. Fischer, L.K.; Honold, J.; Botzat, A.; Brinkmeyer, D.; Cvejic, R.; Delshammar, T.; Elands, B.; Haase, D.; Kabisch, N.; Karle, S.J.; et al. Recreational ecosystem services in European cities: Sociocultural and geographical contexts matter for park use. *Ecosyst. Serv.* **2018**, *31*, 455–467. [\[CrossRef\]](#)
17. Grilli, G.; Mohan, G.; Curtis, J. Public park attributes, park visits, and associated health status. *Landsc. Urban Plan.* **2020**, *199*, 103814. [\[CrossRef\]](#)
18. Azagew, S.; Worku, H. Socio-demographic and physical factors influencing access to urban parks in rapidly urbanizing cities of Ethiopia: The case of Addis Ababa. *J. Outdoor Recreat. Tour.* **2020**, *31*, 100322. [\[CrossRef\]](#)
19. Zhang, S.; Zhou, W. Recreational visits to urban parks and factors affecting park visits: Evidence from geotagged social media data. *Landsc. Urban Plan.* **2018**, *180*, 27–35. [\[CrossRef\]](#)
20. Liang, H.; Zhang, Q. Temporal and spatial assessment of urban park visits from multiple social media data sets: A case study of Shanghai, China. *J. Clean. Prod.* **2021**, *297*, 126682. [\[CrossRef\]](#)
21. Mu, B.; Liu, C.; Mu, T.; Xu, X.; Tian, G.; Zhang, Y.; Kim, G. Spatiotemporal fluctuations in urban park spatial vitality determined by on-site observation and behavior mapping: A case study of three parks in Zhengzhou City, China. *Urban For. Urban Green.* **2021**, *64*, 127246. [\[CrossRef\]](#)
22. Sun, R.; Li, F.; Chen, L. A demand index for recreational ecosystem services associated with urban parks in Beijing, China. *J. Environ. Manag.* **2019**, *251*, 109612. [\[CrossRef\]](#) [\[PubMed\]](#)
23. Yin, M. Research on Recreation Motivations of City Park Recreationists in Changsha City. Master’s Thesis, Hunan Normal University, Changsha, China, 2008.
24. Baker, D.A.; Crompton, J.L. Quality, satisfaction and behavioral intentions. *Ann. Tourism. Res.* **2000**, *27*, 785–804. [\[CrossRef\]](#)
25. Chi, C.G.; Qu, H. Examining the structural relationships of destination image, tourist satisfaction and destination loyalty: An integrated approach. *Tourism. Manag.* **2008**, *29*, 624–636. [\[CrossRef\]](#)
26. Schofield, P.; Thompson, K. Visitor motivation, satisfaction and behavioural intention: The 2005 Naadam Festival, Ulaanbaatar. *Int. J. Tour. Res.* **2007**, *9*, 329–344. [\[CrossRef\]](#)
27. Darnell, A.C.; Johnson, P.S. Repeat visits to attractions: A preliminary economic analysis. *Tourism. Manag.* **2001**, *22*, 119–126. [\[CrossRef\]](#)
28. Kozak, M. Repeaters’ behavior at two distinct destinations. *Ann. Tourism. Res.* **2001**, *28*, 784–807. [\[CrossRef\]](#)
29. Shi, Y. Research on the Characteristics and Influencing Factors of Tourists’ revisiting Behavior in Ulanbutong Gramsland Tourism Destination. Master’s Thesis, Inner Mongolia Normal University, Hohhot, China, 2020.
30. Choe, Y.; Schuett, M.A.; Sim, K. An analysis of first-time and repeat visitors to Korean national parks from 2007 and 2013. *J. Mt. Sci.* **2017**, *14*, 2527–2539. [\[CrossRef\]](#)
31. Assaker, G.; Vinzi, V.E.; O’Connor, P. Examining the effect of novelty seeking, satisfaction, and destination image on tourists’ return pattern: A two factor, non-linear latent growth model. *Tourism. Manag.* **2011**, *32*, 890–901. [\[CrossRef\]](#)
32. Kruger, M.; Saayman, M.; Hermann, U.P. First-time versus repeat visitors at the Kruger National Park. *Acta Commer.* **2014**, *14*, 1–9. [\[CrossRef\]](#)
33. Shapoval, V.; Rivera, M.; Croes, R. The quality of gardens tourism and the visitor experience: Differentiating between first time and repeat visitors. *Ann. Leis. Res.* **2020**, in press. [\[CrossRef\]](#)

34. Li, X.; Cheng, C.; Kim, H.; Petrick, J.F. A systematic comparison of first-time and repeat visitors via a two-phase online survey. *Tourism Manag.* **2008**, *29*, 278–293. [\[CrossRef\]](#)
35. Lau, A.L.S.; McKercher, B. Exploration Versus acquisition: A comparison of first-time and repeat visitors. *J. Travel Res.* **2004**, *42*, 279–285. [\[CrossRef\]](#)
36. Chen, Y.; Xu, Z.; Byrne, J.; Xu, T.; Wang, S.; Wu, J. Can smaller parks limit green gentrification? Insights from Hangzhou, China. *Urban For. Urban Green.* **2021**, *59*, 127009. [\[CrossRef\]](#)
37. Hangzhou Bureau of Statistics. 2020 Hangzhou Statistical Yearbook. 2020. Available online: http://tjj.hangzhou.gov.cn/art/2020/10/29/art_1229453592_3819709.html (accessed on 3 July 2021).
38. Song, X.P.; Richards, D.R.; He, P.; Tan, P.Y. Does geo-located social media reflect the visit frequency of urban parks? A city-wide analysis using the count and content of photographs. *Landsc. Urban Plan.* **2020**, *203*, 103908. [\[CrossRef\]](#)
39. Lv, M.; Jin, H.; Wang, Y. Effects of Small-scale Waters in Urban Parks on Summer Microclimate: A Case Study of Prince Bay Park in Hangzhou. *J. Chin. Urban For.* **2019**, *17*, 18–24.
40. Zhang, J. Satisfaction Evaluation of Hangzhou City Park Recreation Based on Logistic Analysis. Master's Thesis, Zhejiang Agriculture and Forestry University, Hangzhou, China, 2020.
41. Yang, J. The heterogeneous preferences for conservation and management in urban wetland parks: A case study from China. *Urban For. Urban Green.* **2021**, *60*, 127064. [\[CrossRef\]](#)
42. Hangzhou Bureau of Planning and Natural Resources. The Land and Space Master Plan of Hangzhou (2001–2020). 2019. Available online: http://ghzy.hangzhou.gov.cn/art/2019/10/31/art_1228962781_39671549.html (accessed on 3 July 2021).
43. Li, Z.; Wei, H.; Wu, Y.; Su, S.; Wang, W.; Qu, C. Impact of community deprivation on urban park access over time: Understanding the relative role of contributors for urban planning. *Habitat Int.* **2019**, *92*, 102031. [\[CrossRef\]](#)
44. The People's Government of Zhejiang Province. Zhejiang Provincial People's Government on the Adjustment of Some of the Administrative Divisions of Hangzhou City Notice. 2021. Available online: http://www.zj.gov.cn/art/2021/4/9/art_1229019364_2267333.html (accessed on 3 July 2021).
45. Mak, B.K.L.; Jim, C.Y. Linking park users' socio-demographic characteristics and visit-related preferences to improve urban parks. *Cities* **2019**, *92*, 97–111. [\[CrossRef\]](#)
46. Guan, C.; Song, J.; Keith, M.; Zhang, B.; Akiyama, Y.; Da, L.; Shibasaki, R.; Sato, T. Seasonal variations of park visitor volume and park service area in Tokyo: A mixed-method approach combining big data and field observations. *Urban For. Urban Green.* **2021**, *58*, 126973. [\[CrossRef\]](#)
47. George, D. *Data Analysis for Psychology*; Hodder Arnold Publishers: London, UK, 1997.
48. Sreetheran, M. Exploring the urban park use, preference and behaviours among the residents of Kuala Lumpur, Malaysia. *Urban For. Urban Green.* **2017**, *25*, 85–93. [\[CrossRef\]](#)
49. Shan, X. Socio-demographic variation in motives for visiting urban green spaces in a large Chinese city. *Habitat Int.* **2014**, *41*, 114–120. [\[CrossRef\]](#)
50. Typaldos, M.; Sockrider, M. Delayed sleep phase syndrome. *Am. J. Resp. Crit. Care* **2019**, *200*, P7–P8. [\[CrossRef\]](#) [\[PubMed\]](#)
51. Wang, F.; Tang, M. China's soccer field development status and countermeasures. *Sports Cult. Guide* **2017**, *8*, 109–114.
52. Tu, X.; Huang, G.; Wu, J.; Guo, X. How Do Travel Distance and Park Size Influence Urban Park Visits? *Urban For. Urban Green.* **2020**, *52*, 126689. [\[CrossRef\]](#)
53. Yang, H. Research on Urban Green Spaces Landscape of Hangzhou. Master's Thesis, Zhejiang University, Hangzhou, China, 2006.