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*Publication date:*  
2008

*Document version*  
Early version, also known as pre-print

*Citation for published version (APA):*  
Yang, B., & Zhao, C. (2008). *Urban Park: an Integral Part of Welfare for Citizens — A Case Study of Shangzhi and Qinbin Parks in Harbin Metropolis, China.*

# Urban Park: an Integral Part of Welfare for Citizens

—A Case Study of Shangzhi and Qinbin Parks in Harbin Metropolis, China

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**Abstract:** As a key part of the urban green spaces, urban park plays important role in city citizens' life. The significances of park treating as a green lung in urban area demonstrate its unique contribution to people's life not only in physical and tangible aspects such as environment, ecology and amenity, but also in mental and intangible aspects like aesthetics, health therapy (people's health), recreation and communication. With the life quality promoting, city inhabitants have arise higher and higher demands for their surrounding green spaces. However, during the rapid period of urban development in the past three decades in China, as the most representative of the green spaces in city area urban parks haven't still been satisfied people's need although the situation has progressed greatly.

This research takes threefold. First one focuses to reveal on how the city citizens use urban parks in their daily life, second one tries to learn what problems they meet during their visit and using, third one focuses on what problems and challenges of urban park need to be resolved by administrative officers and park managers. The research samples, Shanzhi Park and Qingbin Park, were selected in two districts from Harbin Metropolis of which the capital city of Heilongjiang Province according to the research designed. The methods of research carried in it were mainly based on questionnaire, interviewing and observation. This case study spent nearly four months from early March to middle June, in 2008.

The results of research found series features of park users, their visiting frequency and activity's types. Meanwhile, it has proved the urban park can not satisfy the citizens' needs in present days, and the most citizens wish this condition could be improved in the near future through increasing the green spaces in both numbers and sizes as the form of park. It also showed some problems and challenges faced in park design and management had to be enhanced. Finally, some suggestions aimed to improve the situation of urban spaces included constructing new urban parks and promoting the quality of park management and service have been contributed by this study. Specifically, the awareness for treating the urban park as an integral part of citizens' welfare should be arose and educated in entire society.

**Key words:** Harbin Metropolis, urban park, citizen, activity, benefit, welfare

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## Introduction

Urban parks have been treated as physical, environmental, ecological and social issues for promoting the quality of people's life and cityscape in western countries since the 19<sup>th</sup> century when the industrialization and urbanization started, especially, since 1850s when the Central Park in New York was created as a significant symbol. In recent decades, after second World War II, urban park as the important part of urban green spaces has played increasingly roles than ever before. The contributions of urban park have been demonstrated in all both aspects of citizens' daily life and city itself development, as well as tangible and intangible benefits. In term of the physical and tangible aspects, the contributions could involve environmental, ecological and amenity's issues. In term of mental and intangible aspects, they could imply aesthetic, health therapy, recreational and communicational. In terms of the mixture between both mentioned above, they could show in the areas of socially, culturally, economically, tourism and the city's image. Currently, urban park has been merged an integral part of the welfare system in the western society.

The urbanization in China has dramatically developed in the pass three decades since 1970s with the rapid economic growth and development. It is leading to that the society and cities are just on the way of transformation from traditional to modern. Under this situation, the development of urban green spaces encounters a great opportunity. The governments from local to the central have advocated constructing "gardening city" and "urban forests", which aim to promote and improve the situation of green space in urban area as the deterioration of environment, such as polluting air and increasing noise. In some cases, they have already been established the function-well urban park in urban areas.

However, as the biggest developing country in the world, in contrast with the western countries, the quantities and qualities of urban park in China are far behind the demands and needs of people for physical and mental health, wellbeing and the quality of life in general. Partly, the reason could be ascribed to the process of urban development in the Chinese history; partly it could be attributed to the developing phase of Chinese society in modern time. At current phase, the rate of green space and the green area by per capita in average are very lower than the cities in the western countries in general, and even some developing countries. For instants, the figure of green area by per capita is near 20 m<sup>2</sup> (Denmark, 2001) in Copenhagen, in contrast, it is only 7.27 m<sup>2</sup> in Harbin City (Harbin, 2006).

This research was carried out in Harbin Metropolis. Harbin is the capital city of Heilongjiang Province located in the northeast part of China. It consists of 7 districts and 12 counties within 4.7 million inhabitants in the metropolis area and 9.8 million populations in entire municipal region respectively. The metropolis covers 7,086 km<sup>2</sup>, and the entire municipal area is 53,775 km<sup>2</sup>. Since the New China was found in 1949, the urban area of Harbin Metropolis has been expanded several times than early 1950s' in size through the constant construction and successive development, especially in the past three decades. Comparing with the 1950s, a large area both inner city and peripheral areas included farmland, forest and other types of open land has been decreased by

transformed into urban area gradually as the consequence of the urban sprawl. The rate of green area and open space within urban area has declined from estimated more than 40% in 1950s to the less than 30% now (Fig.1) although in current years the situation has dramatically changed as the realization and consciousness rose (Fig.2, 3, 4). Until to 2007, there are 31 parks in urban area with around 25.25 km<sup>2</sup> in total, and among them there are 22 parks accessed by citizens freely (Yimei XU, 2006) (Table 1).



Fig.1 The distribution map of park (in green) in Harbin Metropolis (2004)

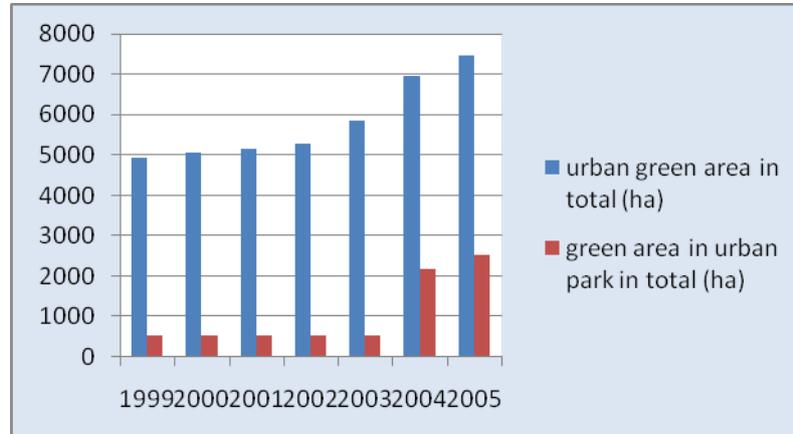


Fig.2 The indicators of urban green area in Harbin.  
Source: The Yearbook of Harbin, (From 1999 to 2003.)

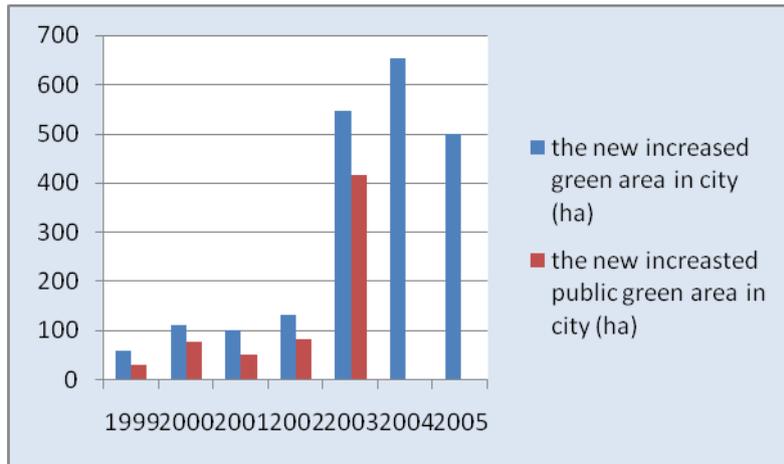


Fig3. The indicators of urban increased green area in Harbin Metropolis.  
Source: The Yearbook of Harbin (From 1999 to 2005)

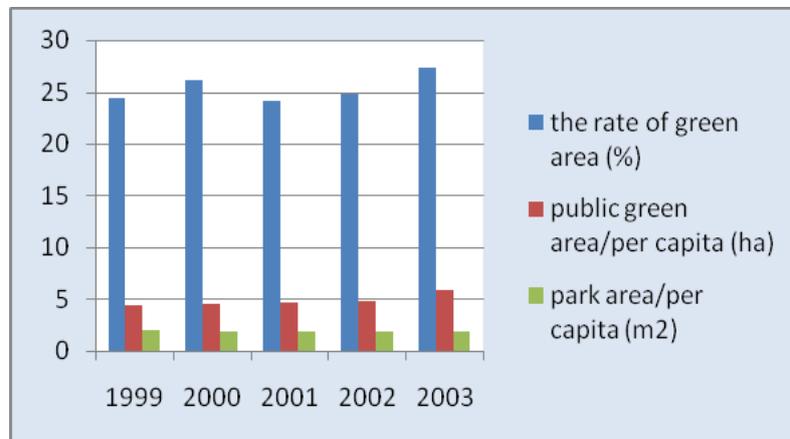


Fig.4 The percentage of urban green area and per capita's area in Harbin Metropolis.  
Source: The Yearbook of Harbin (From 1999 to 2003)

Table 1 The rate of urban green area in selected district of Harbin Metropolis (2006)

District	Rate of green area (%)	Green area/per capital m <sup>2</sup>
Harbin (in total)	27.02	7.27
Nangang district	25.16	5.55
Xiangfang district	14.98	0.83
Dongli district	34.15	7.17
New Xiangfang district*	24.57	4.00

\* New Xiangfang district is merged by Xiangfang district and Dongli district in 2007.

Source: The Yearbook of Harbin 2006.

Concerning the functions and contributions of urban park, a numerous researches have been done over the past decades in the western countries, for instance, the research of BUGS (Benefits of Urban Green Space) project supported by European Council was carried out from 2001 to 2004. In contrast, the similar researches are just in initial stage in China and also fewer literatures focus on how urban parks are used by citizens in their daily life.

This study aimed at to reveal and refine how the citizens use urban parks in their daily life, what kind of the problems met by them need to be resolved and what types of urban park need to be created in the future. The results of this study attempt to contribute some suggestions to policy-makers, park designers and managers to make better urban parks both in forms and functions for inhabitants in future.

## Research Methods

### *Research Samples*

For carrying out this study, two parks were selected randomly as research samples, Shangzhi Park (SP) and Qingbin Park (QP), by different physical sizes and types, and the locations are from New Xiangfang and Nangang District respectively (Fig.5). The range of service for SP is between 1000 - 1500 m as a district park according to the Classification of Urban Green Area of Chinese National Standards (CUGACNS). There are other urban parks or larger green area within 3 km nearby it. For the latter, it is between 500-750 m of the range served as a residential small park according to CUGACNS. There are 5 km away to it for other parks or larger green area. So they both are the typical representatives for doing research focused on how the citizens to use urban park in their daily life.



Fig.5 The locations of Shangzhi Park (central red) and Qingbin Park (left red)

Shangzhi Park is 7.2 ha and was built in 1958 and rebuilt in 2001. Its layout is a traditional style of Chinese garden, and it is divided into five functional parts, central square, recreational area, elderly and children area, plant exhibition area, and lake and artificial hill. It has become a comprehensive park integrated recreation, entertainment and physical exercise after redesigned in April, 2001. The green area is 5.7 ha (included 0.5 ha lake) and the paving area included roads, paths and squares is 1.5 ha (Fig.6).

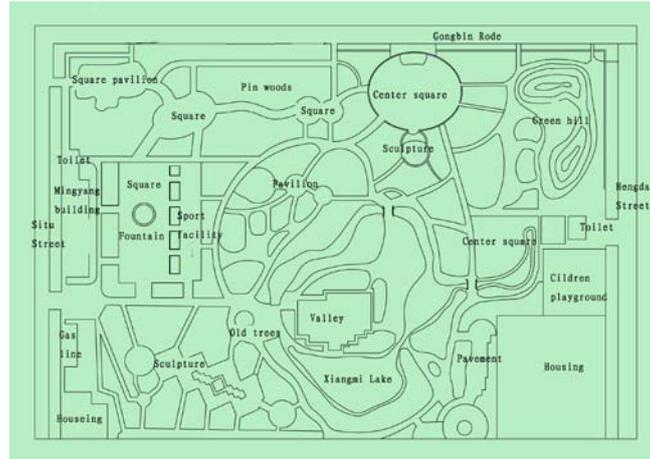


Fig.6 The diagram of Shangzhi Park

Comparing with SP, Qingbin Park is much smaller in size with only 3.3 ha. It was built at same year as SP. Its layout is normal style with Chinese tradition, and it was characterized by more than 7,500 trees planted in 40 species, such as poplar, willow, elm, clove, flowering plum and rose, after redesigned in 2000. The rate of green area covers by 78.67%, and the lawn is 1.8 ha. There are one bigger central square and sub-squares, and there are some other smaller open spaces (Fig.7).

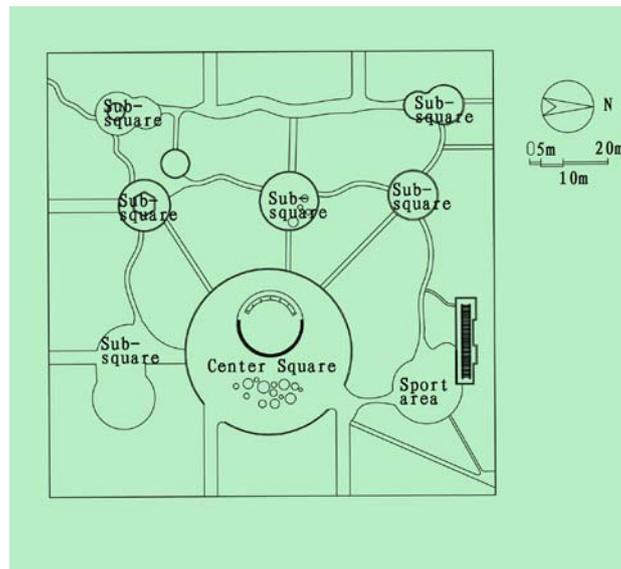


Fig.7 The diagram of Qingbin Park

### **Research design**

In this case study, the survey, field observation and interview were mainly used as research methods. Particularly, the questionnaire adopted by survey was a basic way for collecting first hand data. It was comprised by 25 questions. These questions could be attributed threefold. The first dimension focuses on the basic information of citizens who are the park users and visitors. It includes age, gender, accession, frequency and time spending. The second one concerns to the activities' motivations, forms and types, and effects and impacts. The third one concentrates on the problems

existed in park management and the enhancement in the future. The field observation and interview were a supplementary way for the questionnaire. The meaning condensations were necessary for those messages and information gathered by field observation and interview. The survey and other ways of data collection spent successively four months as designed from the early March to the late June, in 2008.

The survey was carried out three times a week and 25 times in total. It was divided into 6 time periods of a day (Table 2). The questionnaires and interviewers were made between 10 to 40 persons each day depending on the conditions of weather and the situation of residents' cooperation. Each questionnaire was spent five to ten minutes normally, and the interview was spent three to five minutes. The amounts of questionnaires and interviewers were 320 (male 189, female 131) and 380 (male 251, female 129) persons in total respectively.

Table 2 The time periods divided by day

	1	2	3
Morning	6:00-9:00	9:00-11:00	11:00-13:00
Afternoon	13:00-15:00	15:00-18:00	
Evening	18:00-20:00		

The observation aimed to know what activities happened at different small spaces within park in different time periods of day, and what features of park users' manifested in different groups and their activities, the features of their behaviors and park's management as well.

The most interviews were based on the questionnaire aimed to learn the individual personal details like the preferences for activities they took part in and the comments for park's circumstances, as well as to learn how they make new friends and what benefits they gain from park when they use, stay and visit it as a communication places.

## **Analysis and discussion**

### ***Features of park users***

Who are the park users? Through the survey we found the elderly people (over 60 years old) are the largest group in both parks as the Fig.8 showed. They were 39% and 43% of the total users in SP and QP respectively. Although there is little diverse of figures in second larger group in SP and QP, if concerned the figures of the 45-60 years-old group which were 26% and 22% in SP and QP respectively, it was still certainly found that the near over middle age (45-60 years-old) and elderly groups were the majority of park users. The main reason was that most of them were the retire people, and they have more spare time for their spending. In contrast, the teenagers and young group people are just engaging in their study and work since they fight with the strong challenges and competitions for their future and career, so they are hardly to find spare time for visiting and relaxing in parks excepted the weekend and holiday time occasionally through observation and

interview. Comparing with the Western countries, this is probably a unique phenomenon with Chinese characteristics and reflects the social structure and situation in China currently.

Comparing to male, the female citizens were less than male to use parks (Fig.9). There are two main reasons found by the field works. The First reason was women take more responsibilities for family and spend more time on house works at that same age group. And another one is they also take more time than their spouse to help their children taking care of third generation.

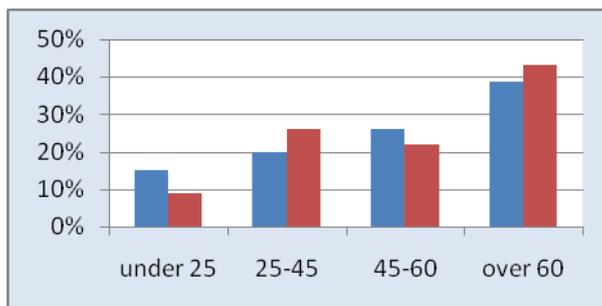


Fig.8 The percentage of age groups at Shangzhi Park (in blue) and Qinbin Park (in red)

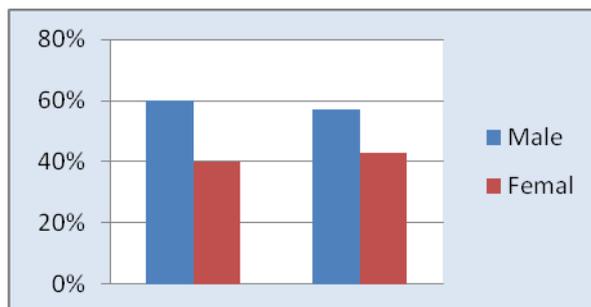


Fig.9 The percentage of gender at Shangzhi Park (in blue) and Qinbin Park (in red)

### ***Features of accession to parks***

The accession to park is an important parameter for both the quality of citizens' daily life and urban environment. According to the introduction before, it is easily to understand that the accession to nearby parks for citizens in their daily life is not convenient. The survey depicted the distance between homes and parks is a significant factor for people to access parks. Fig.10 has indicated the most park users were the people who live closer to the park. However, other users, more than 22.2% and 41.9% in SP and QP respectively, live at out of the range served which the standards mentioned before.

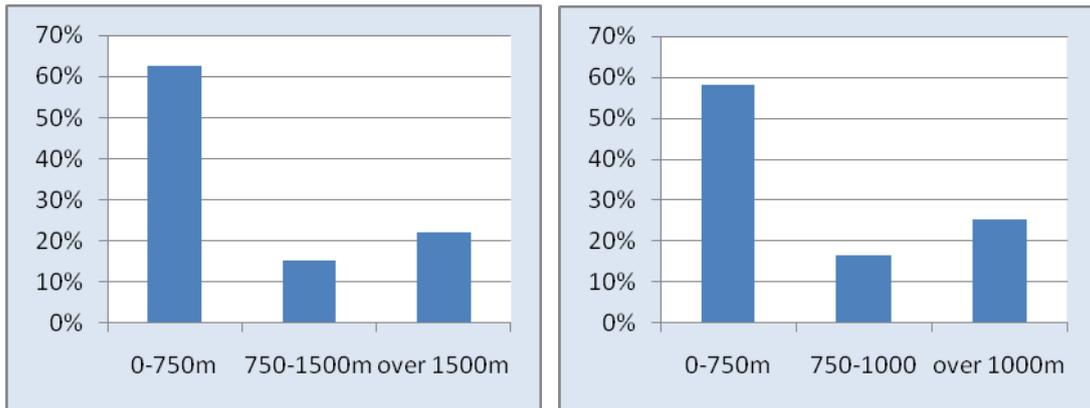


Fig.10 The distance of residents living from home to park at Shangzhi Park (left) and Qinbin Park (right)

In terms of the manner of citizens accessing to park, the survey and interview demonstrated about 70% of visitors by walk and jog, 20% by bus and 10% by bicycle. Nearly one of third interviewers claimed that they usually took about 30 minutes for accession to park on one way. Anyhow, in some cases the interviewers who live out of the range interpreted that they preferred to walk longer as physical exercise to visit park, and others preferred to visit those well-kept parks either functionally or aesthetically. The both indicators showed the green places are not sufficient for residents' demands which they can use nearby their living areas in general, on the one hand. As a result, the parks became to be overused, and it led to some people who lived within the range of park service had to change their visit time or to make another choice instead on the other.

### *Features of users' activities*

The features of citizens' activities could present by the figures, types, frequency and distribution. In terms of the figures of citizens' fluctuation by daily and monthly, the Fig.11 and 12 illustrated clearly the surveys results in both parks. Furthermore, concerning the figures of fluctuation in the time period of day, we could see the figures of resident performed rhythmically with the weather condition being warmer and better from March to June caused by geographic location in Harbin Metropolis. The peaks of visitor figures have presented similar trends comparing Fig11 and 12. The first and second peaks have emerged in the morning, 6:00-8:00 and 8:00-11:00, of June, because it is much more based on the temperature. Concerning the figures in fluctuation monthly, naturally, being the major users the elderly people would be increasing their outdoor activities following the temperature's rising gradually. It lead to the figures increasingly from 6000 in March to 9500 in June in SP and from 800 in March to 1800 in June in QP in total (Fig.13).

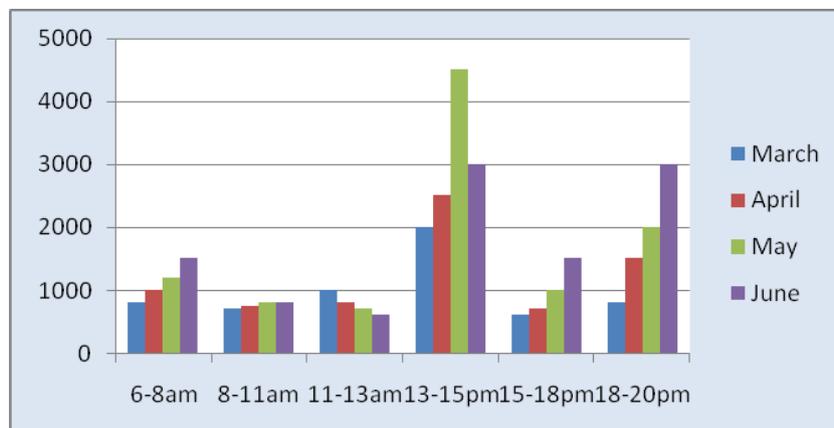


Fig.11 The figure of resident in the time periods of day in daily use in Shangzhi Park

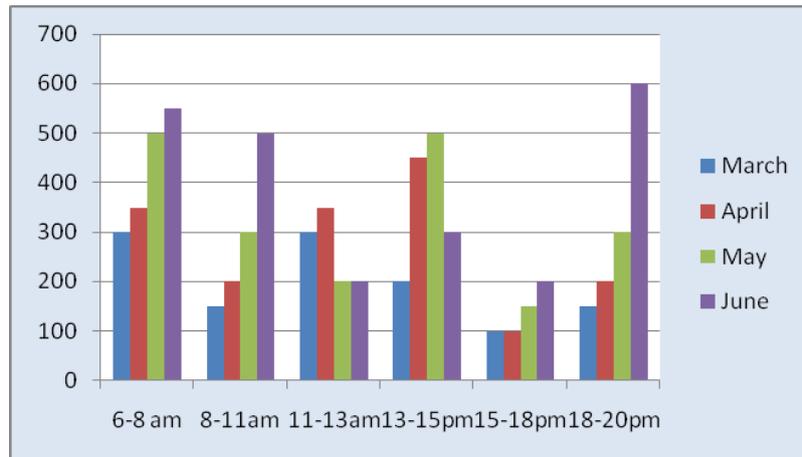


Fig.12 The figure of resident in the time periods of day in daily use in Qinbin Park

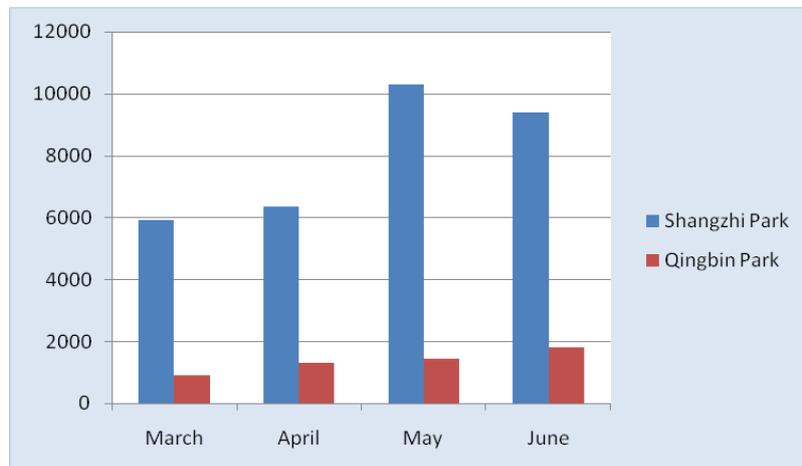


Fig.13 The number of residents' using park per day in Shangzhi Park and Qingbin Park

However, as the temperature becoming higher and higher, the visitors obviously have reduced their activities during the time period of the day at 11:00-13:00 from March to June. Meanwhile, in other time periods of day the visitors have increased in different extent. Emphatically, we have noted that citizens increased their activities in the afternoon and evening from March to June, as showed the figures at 15:00-18:00 and 18:00-20:00 in Fig.11 and 12. In addition, as a district park the numbers of visitor in SP have declined in June comparing with previous months since other forms of outdoor activities could be chose widely by citizens in summer. Conversely, as a residential park the figure of visitor in QP still kept growing.

In terms of the types of users' activities, it could be attributed into three groups. The first and foremost activities enjoyed by residents were physical exercises like walk, jog, playing Taijiquan and self-created gymnastic. The second group was various forms of entertainments, such as singing, dancing, playing various chess and cards, walking dog, watching birds and reading. The third one belongs to the social activities, like communicating with their friends, neighbor and other visitors, as well as company with their grandchildren. Usually, for most of people they would integrate and enjoy these activities together, and one third visitor would prefer to do separate activities as their favor.

In terms of the visit frequency, the indicator has showed the citizens how often to use the parks by per day and per week from Fig.14. The survey has revealed nearly 70% of the interviewer visit once a day at least in both parks. Over 50% of the senior citizens have expressed they usually visit parks twice a day in the morning and afternoon respectively if the weather suited the outdoor activities. The frequency of use by per week has showed more than 20% of people had visited park three or four times regularly.

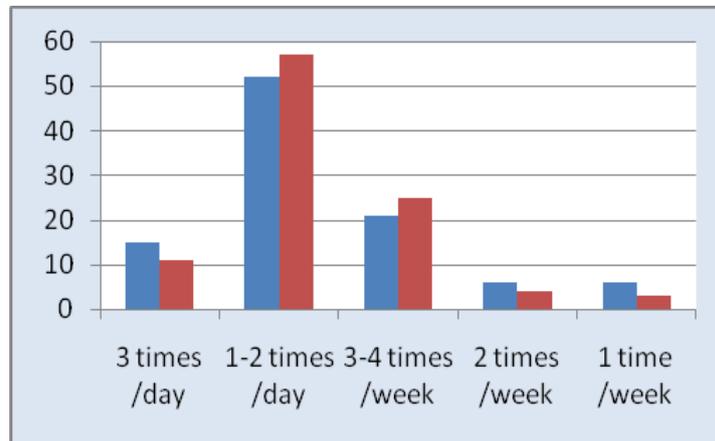


Fig.14 The visiting frequency of residents in Shangzhi Park (in blue) and Qingbin Park (in red)

In respect of people’s distribution in park spaces, observation revealed that visitors preferred larger flat open spaces to engage in their activities, so the spaces of edges, corners and artificial hill have not utilized effectively in SP. For instance, the central square in SP was usually over-crowded, and conversely, the dense of visitors in some spaces was much lower than it.

***Features of inter-impact between citizens and parks***

Urban parks are not only one component of the urban space system but also one stage of citizens’ life. The inter-impact between citizens and parks could stimulate city development towards to function-well and livable places on the one hand since the awareness for protecting urban environment and the demands for proving the urban green spaces including urban park by people are stronger than ever before. At same time, this inter-impact could benefit inhabitants’ life on the other. Focusing on the people’s benefits from urban parks in this case, the features of inter-impact could be characterized by following patterns.

First pattern could be presented by the inter-impact between people and place. People like urban park derived they love nature. Park could provide an amenity environment to citizens and made them escaped from pressed work, noise and polluted air. The first five most frequent words used by interviewers to describe their feeling for park were natural, comfortable, relaxant, free and beautiful in order in two sample parks. These five words together shared over 70% of the ten condensing words by people’s answers, and could be also treated as the main reasons probably for why people like to visit and stay in park. Furthermore, two evidences could help to understand this pattern. Firstly, most of interviewers felt they gained certain benefits in both physical and mental forms through year by year’s visiting. The five most benefits mentioned frequently in general by elderly

and mid-age groups in two sample parks were the keeping health (34%), reducing pressure (19%), resisting disease (13%), enhancing relationship with other people (11%) and proving sleeping (7%) from the interviewing condensation. Secondly, the day time spending in parks illustrated that visiting park has become a part of lifestyle for some inhabitants, especially for retired people. The result of interview demonstrated that users in elderly group staying park were 17% less 1 hour, 32% between 2-3 hours, 37% between 3-4 hour and 14% over 4 hours in average.

Second one is the inter-impact between visitors. As public communicating places, urban parks provide spaces for residents to communicate with each others. The motivations for people's visiting park were revealed by interviewing that about 70% users derived by physical and mental needs and another 30% derived by social needs. In terms of social needs, they, especially for retired people, felt alone at home. Therefore, they would like to contact with other people whose interests, hobbies or background were same or similar with themselves in the parks. Making friends and communicating partners were an important motivation for them. Other kind of social life like joining and enjoying various activities were main forms to them.

In addition, visitors and their activities would make some negative impacts on the park and its management, such as the compacting lawns and grounds, picking up flours, breaking branches of tree and leaving litters, and even damaging facilities. Consequently, these impacts brought non-doubtfully heavy burdens for park management.

### ***Features of users' perception to parks***

People like and prefer to enjoy the park's environment with its plant fragrance, fresh air, peaceful and safe site, sanitary condition, comfortable facility, beautiful scenery. The perception was measured by visitors' comments to parks from both of hardware and software.

In terms of hardware including pavement, light and space layout, over 60% and nearly 30% of respondents expressed respectively that the park's pavements and light were excellent and good, and conversely, there were 40% and 70% of respondents thinking it not good enough respectively in SP (Fig.15). 35% and 40.1% of visitors in SP consider that park's layout was excellent and good respectively, and 15.8% and 4% of respondents answered normal and bad. However, behind these figures it indicated that inhabitants like parks not only for park's layout itself exactly but also for the form of green spaces. Probably, a young business man's words were good example in some way. He, who came from southern part of China, said the SP was too normal comparing to his home town's park, but it was good in here and better than nothing. The main problems reflected by citizens were the seats insufficient and the lack of light for dark weather and evening.

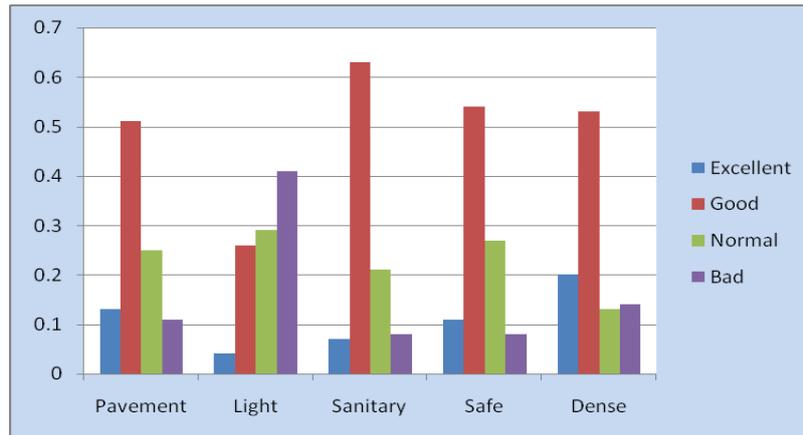


Fig.15 Visitors' perception to Shangzhi Park

In terms of software including scenery, sanitary, safe and visitor dense, it is associated directly with the quality of visitors' using and feeling (opinion). This study verified that the users paid more attention on it than hardware in sometimes. Generally in both park, the majority of visitors satisfied the parks' circumstance, management and maintain works. As showed in Fig.15, we could see that visitors gave the sanitary and safe were very high comments, for instance, excellent and good were over 70% and 60% respectively. However, over 70% of them complained that it was too crowded in SP, especially in the weekends and holidays, and also complained for too noise sometimes. In addition, some spaces in the edges and corners were neglected by visitors since they did not like this kind of places considered by inconvenient and unsafe.

## Suggestions

### *Planning more green spaces*

This study has showed there are huge gaps between citizens' demands in their daily life and urban green spaces, mainly as the form of urban park and forests, in both of the quantity and quality in Harbin Metropolis. This situation, historically and traditionally, the city planning had negated the green spaces not only urban parks and forests but also backyards since a lack of knowledge. However, even under this intense condition, the precious green spaces in recent year have been diverted by housing developing projects in some cases. In fact, the main interests of city development still focused on the economic growing and financial profits during the process of urban development in the past decades. This trend should be shifted and replaced swiftly by the more sustainable, harmonious and equilibrated pattern. Therefore, the planning and creating great accounts of available and accessible urban green spaces with high quality, particularly as forms of urban park and forest, are a arduous task for city authority and its citizens. Under this new situation, policy-makers, city planners and park managers should realize the significations of green space for urban inhabitants. Increasing urban park is not only for city's environmental and ecological promotion but also for its inhabitants' social welfares.

### ***Designing for elderly citizens***

With the Chinese society faster transforming, from traditionally into modernly on the one hand, from ordinarily into elderly on the other, the society is also faster to enter into the elderly society by rapid increasing elderly group population. According to the census in 2006 by the Statistics Bureau of Harbin Municipality, the elderly people (over 65 years-old) has reached 5.97% in total population in Harbin Metropolis increased 1.7% compared last census (Harbin, 2008). As survey showed, the senior group is the majority of visitor currently in two sample parks. Therefore, how to consider meeting their special demands and physical conditions are the challenges faced by urban and park's planners in their future planning and design. The materials of pavement, available seats and layout of toilet, for instance, are important issues for elderly people. During the survey and interview, the complaints from elderly citizens about paths unsmooth, seat and tables insufficiently and toilets inconvenient were often heard in SP, and there was even no toilet in QP. It reflected that the parks in current model need to rethink or improve.

### ***Creating safe and comfort urban park***

With the principle of people-oriented spreading extensively, people concern their life and protect their interests than ever before in China today. The issue of park as an integral part of citizens' welfare have been recognised and adopted by more and more people. Creating a safe, comfortable and sustainable park is one of best way to embody this principle fully. This study has showed that people wish to have an accessible, peaceful, comfortable and safe spaces rather than beautiful and functional spaces in park. The observation and interview have evidenced that weather, such as raining, strong wind and sunshine, and hot, would affect people's outdoor activities. Citizens wish, on the one hand, that park could provided more shelters, such as pavilion and barrier, to against raining, sunshine and wind for bad weather's conditions. Meanwhile, there are more seats provided for people's rest, more lights arranged for dark weather and evening's visitors, more art works distributed for appreciating on the other. In addition, the more precaution considered against dangers are necessary in future's design, for instance, the sharp fences used should be more carefully. If the suitable and safe facilities and comfortable environment were created, it will attract and encourage more people to visit park for their outdoor activities.

### ***Enhancing park management and service***

Although most visitors gave good comments to park in general, we found and gained by survey and observation following deficiencies existed in park management and service. Firstly, the park office should stop to rent the places for commercial purposes and return peace and quiet environment and places to visitors. Secondly, maintains should be enhanced so that the park could be kept in good condition. Thirdly, park could provide some rescuing equipments for senior citizens. In addition, park could provide some services to people, for instance, who intent to learn knowledge about nature and environment, particularly for teenagers and young generations. And they could communicate with visitors, and encourages them to cooperate with park to maintain the circumstance and condition. Thereby, the park users could gain more enjoyments and benefits from promoting the quality of parks' management and services.

## **Conclusion**

This study has approved that citizens in their daily life need green spaces as the form of urban park and forest, and the urban park plays more and more significant roles in work, live, recreation and health. And it also demonstrates the quantities and qualities of urban park has not met their demands. This issue for creating a livable and sustainable city is a crucially challenge faced by both city and its citizens, especially during this current developing stage in China which transfers from tradition to modern both of city and society. It is not only a kind of necessary infrastructure for city, but also an integral part of welfare for city's people.

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