Challenges and Strategies for Community Parks During the COVID-19: Keep Social Distance, Keep Social Connections

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Keywords: COVID-19, community park, public space design.

Abstract: Keeping social distance in public space has become a vital policy measure to reduce the community spread of COVID-19. Many scholars have pointed out that COVID-19 and related regulations will have a long-term impact on public spaces. How this affects community parks and how to deal with such changes in the design of community parks remains to be studied. This research, based on Gehl's public space public life theory, investigates the habit and challenges of exercise outside in the famous Melbourne community park-Royal Park during the COVID-19 lockdown. Than take users' needs and behavior patterns as the basis for design, and put forward design suggestions for community parks. This paper provides valuable primary data of exercise outside during and provides a reference for the design of community parks in response to the pandemic in the future.

1. Introduction

From the end of 2019, COVID-19 suddenly hit humans and quickly spread to the world. From the weekly epidemiological update of the World Health Organization (WHO), about 21.2 million confirmed COVID -19 cases including 761 000 deaths all over the world were reported until 16 August 2020. What's more, the number of reported daily cases still keeps increasing rapidly [1]. Different countries and regions have formulated different levels of quarantine rules and social distancing measures to interrupt or delay and hopefully limit the virus spread. Take metropolitan Melbourne as an example, from 2 August to 13 September 2020, only can residents leave home with four reasons, that is essential shopping, exercise, permitted work, and permitted medical treatment. On the one hand, quarantine and social distancing do reduce transmission of COVID-19 effectively. On the other hand, quarantine is an unpleasant experience: with loss of freedom, uncertainty over disease status, and boredom. Lades et al. (2020) [2] demonstrate that exercising outdoors, although it only occupies for a small part of a day, is associated with markedly raised positive affect and reduced negative emotions during COVID-19. However, the government also has strict regulations and restrictions on going out to exercise. More specifically, The key points of restrictions of sport and exercise in metropolitan Melbourne are as follow [3]:

(1) Exercise is limited to a maximum of one hour, once per day and no more than five kilometers from your home;

(2) You can exercise with one other person. This can be a person you live with or a friend or family member;

(3) Outdoor sport facilities are closed. Indoor sports centers including gyms, training facilities and pools are closed;

(4) Community sport training and competition cannot occur.

Obviously, these strict regulations will affect the relationship between users and community parks. There are many discussions and hypotheses from designers and public observers. For example, more space for personal entertainment venues should be created to replace space for team sports [4]; running paths may become wider [5], more attention should be paid to ensure physical distancing of exercisers when designing a community park [6].

There is no doubt that COVID-19 will influence the residents' use, behavior, and perceptions in community parks. However, most of the changes in users' behavior are based on experience or inference, due to significant difficulty to collect data outside during the lockdown. In that way, the author conducts fieldwork to find out and verify the challenges of community parks and provides valuable primary data.

2. Methods and Results

PSPL (Public Space Public Life) survey method from Jan Gehl is a significant research method to study users' activities and behavior patterns in the public space [7]. It includes three parts: public space survey, public life survey and summary/suggestions. The public space survey mainly is a qualitative description, such as recording the location, layout, landscape facilities. The public life survey mainly examines the use of public space, including the group of users and corresponding activities. Finally, suggestions that are conducive to improving the quality of public space can be concluded by comprehensive analysis. Overall, the PSPL survey method pays attention to the interaction between users' behavior and the environment, and takes users' needs as the basis for public space design.

To find out the authentic challenges of exercise outdoor during COVID-19 lockdown in Melbourne, the author has done fieldwork with the PSPL survey method to collect primary data. Royal Park, the most important outdoor public space where the author lives, is located 4 kilometers north of the Melbourne CBD, Victoria, Australia, in the suburb of Parkville. There are many sporting facilities and venues to support various sports activities, such as tennis, golf, football, hockey, baseball and soccer. Most of them are closed due to COVID-19. On the corner of Gatehouse Street and Royal Parade, there is a native garden (within the red line in Figure 1), which is the selected site to conduct the survey. The nature playground and walking paths there are still open during the lockdown. There are also wide vistas of grassland and lightly timbered areas. Various landscapes and paths constitute an ideal place for residents to exercise.

Figure 1: Prepared by author.

From 16 August to 23 August 2020, the fieldwork was conducted on every sunshine afternoon, one hour at a time, on the premise of strictly complying with local regulations. During the observation, the author scan slowly from left to right (taking about 1 second per person) while using a mechanical counter to score each person in the area by sex, age group (children, teenagers, adults, the elderly), the group composition (alone, with a friend, with a family member), physical activities and corresponding venue preference. A total of 574 people were observed during 8 times observation. In short, more males (59%) than females (41%) were observed. As to the age group, adults (70 %) were seen most frequently, followed by teenagers (28%), children (20 %), and older adults (11%). Besides, 34% of people work out alone, 37% of people exercise with a family member and others (29%) come with a friend. Finally, the main activities in the targeted area are as follow: walking (42%), running (31%), walking dogs (15%), biking (9%), skating (3%). Along with the observation, the author will randomly interview different groups, especially when some interesting phenomena are observed. A total of 12 people were interviewed. They mainly asked about their exercise habits in the community park and cognition of distancing rules and psychological changes before and during the epidemic.

3. Findings and Discussion

3.1.Challenge 1: Keep Social Distance

By direct observation, the author finds that residents stay closer than the social distance from time to time. The main reasons are as follows. First of all, the main walking paths are about 2m, it's hard to keep 1.5m with each other when there are a group of people (see Figure 2). When two couples meet head-on, they even occupied the entire path (see Figure 3). Given that all residents prefer to exercise outside at a sunshine time which is limited in a day, they usually come out at the same time. Thus the difficulty to maintain social distance on paths with limited width is the most common problem. Besides, some users ignore the social distance rule when they are excited. To be specific, it is common to meet friends or neighbors who have not seen for a long time while exercising. Finally, as children have a week concept of following the rules, they will not deliberately maintain social distance when playing in the park (see Figure 4).

What's more, some people do not wear face masks when exercising, which greatly increases the risk of virus transmission in the community.

Figure 2: Photoed by author.

Figure 3: Photoed by author.

Figure 4: Photoed by author.

3.2.Challenge 2: Keep Social Connections

Social interactions have always been recognized as a major way in which community parks improve people's health (Litt et al. 2015). However, COVID-19 sharply reduced the capacity of community parks for social connections from the following aspects. First, there are no team sports training and competition which used to be vital community activities. Second, because of the limited time of going out, residents tend to choose basic exercise to meet physical needs, such as running and walking. Thus the diversity of solo activities has decreased. An interviewee said that he used to always play drones here while he gave up to play now because it took half an hour to adjust the machine. Third, fear and anxiety hinder the social connection in the community. When residents exercise in open space, they are concerned about the possibility of coming into contact with those who might be infected [8].In this way, social relations in community parks become unfamiliar and distant and some residents even stay at home to avoid the risks.

During the observation, the author finds that about 70% of people who exercise alone are making voice calls during walking or running. Compared with single exercisers before the COVID-19, this phenomenon is far from such a high proportion. Therefore, a reasonable hypothesis was put forward: the social connection needs of exercisers were not met.

4. Design Strategies

4.1. Design Strategies for Keeping Social Distance

First of all, the paths system in the community park should be more diverse. From Figure 1, the paths in the Royal Park are too simple and all the residents are running on the same road. Although some people take a walk or walk their dogs on the grass, it's hard to change the route for runners and cyclists, which leads to the challenge of keeping enough distance. Instead of adding trails in the woods, more crossing or parallel paths in the same main direction can allow a better evading when meeting other people and increase the fun of exercise (See Figure 5). Besides, it is even possible to build a path on the second floor, enriching the paths system in vertical. In this case, users are naturally isolated and they can say hello to residents on the path without any worries.

In addition, warning signs can help to keep the social distance. In other public spaces in Australia, such as supermarkets and banks, there are clear signs on the ground: one mark every 1.5m. However, such warning signs have never appeared in the park. In fact, the signs can help the users keep a distance effectively (See Figure 6). Also, some landscape elements can be the signs to mark the social distance, for example, planting a tree every 1.5m.

Figure 5: A community park in Chongqing.

From Shangyou News [8]

Figure 6: A square in Edinburgh.

From Xinhua News Agency [9]

4.2. Design Strategies for Keeping Social Connections

While other third spaces such as a coffee shop or a library closed during the COVID-19; community open spaces, as the few public spaces the residents have access to, provide important physical places for keeping social connections. So it is necessary to redesign community parks to reinforce community ties. There are some design strategies.

First, expand visual boundaries. If residents can see others' activities in the distance or at high places, they can have social connections within a safe distance. Everyone is an audience and a performer, which increases their sense of community identity. According to the result of observation, more users tend to the relatively crowded playground instead of trails obscured by woods, which partly shows their needs to see others in the community. What's more, when the venue is eye-catching and in an open space, some residents can see others' outdoor activities at home, which is also a safe way to socialize.

Second, combine outdoor sports and social networking through advanced technology. For example, some "smart paths" can record exercise information such as the number of steps, trajectory, time, mileage and calories burned and they will be displayed in the app of a smart phone. The sports performance rankings of residents who are exercising here are also displayed on the surrounding large screens. Also, the users can share the information with friends and families online. In that way, users can interact with others in the community without physical contact.

5. Conclusions

According to Forsyth [12], "the current pandemic brings the question of designing for infectious diseases back to the forefront, however, and raises important questions for future research and practice." Therefore, the development of healthy environments must be central to architects and urban planners in the future. Thus challenges in practice should be paid enough attention, in order to be better prepared for the next time.

The author selects the Royal park in Melbourne as the case study, based on PSPL theory, collect the primary data by direct observation and interview. Through the observation results, the author separately analyzes the causes and mechanisms of challenges for keeping social distance and challenges for keeping social connections. In addition, combined with the interviews, the physical and mental needs of users are clarified. Then, based on the needs of users, suggestions are given to make community parks particularly adaptable to allow social distance while strengthening the social and emotional connection. The diversity paths system in horizontal and vertical could help users to

keep social distance during exercising outside. Suitable warning signs are also useful for distancing. As to keep social connections, wider visual boundaries will allow more social activities in distance in community parks. What's more, the smart park design with advanced technology can extend the scope of community social activities to virtual networks.

There are limitations to this research as the impacts of COVID-19 are still changing. The survey is also limited due to the lockdown restrictions. However, this article still provides valuable primary data during COVID-19 and can provide references for designs of community parks.

Acknowledgments

This work was financially supported by the China Scholarship Council (CSC) fund.

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