Article

"We Need such a Space": Residents' Motives for Visiting Urban Green Spaces during the COVID-19 Pandemic

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Abstract: Since the outbreak of the Novel Coronavirus Pneumonia in 2019, several cities have been blocked to prevent the expansion of the infection. This qualitative study aimed to determine the motives of urban residents for visiting urban green spaces during the epidemic (especially within the context of the city blockade), and what might weaken these motives. In total, 47 residents (17 men and 30 women) were recruited from Chengdu, in China, to participate in interviews. A thematic analysis was used to analyze the interview data. According to the results, the motives of the respondents were divided into strong motives and weak motives. These strong motives for visiting UGS can be divided into four themes: "A place for health", "Escape", "Social support", and "A safe and important place for outdoor activities". Residents classified as the weak motive primarily considered the reasons of "Keep distance with others", "Potential infection risk" and "Seek compensation". The results of this study are significant for current and future urban management, green space planning, and social well-being.

Keywords: COVID-19 pandemic; management; urban green space; visiting motive; well-being

1. Introduction

Urban green spaces (UGS) are essential for activities and relaxation in the city. Regardless of the purpose, most residents in the city use these spaces every day. With the rapid urbanization, daily life in modern cities is moving further away from the natural environment, and various urban outdoor green spaces have become important places for residents to get close to nature [1].

Motive is an internal factor that guides human behavior, derived from the expectation of achieving a specific result or benefit [2]. In addition to the potential health benefits [3–10], other motives for visiting green spaces have been widely studied. An increasing number of studies has shown diverse motives for using green spaces. A study from Singapore shows that men usually choose the neighborhood park closest to their home for physical fitness tests and training. Besides the convenience, respondents are also attracted to neighborhood parks for the sheer appreciation and enjoyment of nature [11]. In Switzerland, the most important motive for visiting nearby UGS is the restoration associated with the experience of nature, while social bonding is considered as the weakest motive [12]. In Hong Kong, many residents visit the park at least once a week for entertainment purposes, and more than half of the respondents said they would visit with their family members and children to enhance family ties [13]. Other studies involved people's motives, purposes, and reasons for visiting UGS in the general situation, such as breathing clean air, enjoying the natural landscape, quietness, relaxation, accompanying family members, walking pets, escaping from the city, seeing people [13–18].

It is worth noting that other studies have also revealed UGS's unique value and personal experience after disastrous events. After Hurricane Sandy destroyed New York City (NYC) communities in 2012, community gardens played an essential role in NYC's social

and ecological resilience. Chan et al. (2015) surveyed five community gardens post-Sandy in NYC and stated that the community gardens in these cities are a multi-purpose community refuge of extraordinary significance, that promotes personal resilience, restorative greening practices, and the development of supportive communities. Simultaneously, the attachment and meaning of the garden members to these spaces make the community garden a refuge and gathering place after a disaster [19]. The research by Shimpo et al. (2019) also supports these findings, that is, community gardens can provide gardeners with social support, fresh food, safe gathering places, and restorative practices after an earthquake to remind people of normality. Moreover, visits to the garden can relieve stress, share experiences with others, socialize, and help themselves overcome the hardships following the disasters [20]. However, Conradson believes that settings are not intrinsically therapeutic but are experienced differently by different people, just like city parks are virtual spaces for young people to explore and develop their social and individual identities [21]. A study from Brisbane shows that as girls transition from adolescence to adulthood, the role of community parks in their lives also changes from "social interaction" to "retreat" [22]. Besides, the motive of disadvantaged groups for UGS visits is also an emerging research interest. The case study of Koprowska et al. (2020) in Poland suggests that UGS is important for people experiencing homelessness because the homeless can sleep, relax, meet other people, be silent, enjoy nature, and collect resources in these places. This research finds a broad understanding of UGS's accessibility and attractiveness to one of the most socio-economically disadvantaged groups [23]. These studies show that people hold multiple motives associated with UGS. The motive of people to visit UGS mirrors their needs and expectations. Understanding the motive of visitation is of great importance in ascertaining why people patronize green spaces as well as in understanding their visiting experience [11]. On the other hand, perceived safety is a prerequisite for the use of green spaces, and physical, managerial, and social features may negatively impact safety perceptions, leading to a low visiting motive [24]. Although previous studies have clarified the rank of residents' motive to visit UGS. However, the research about the residents' motive to visit UGS during the epidemic is still limited, and the impact of the pandemic on their motives is unclear. More research is needed to expand the results regarding these motives.

In summary, a large body of literature has studied the positive effects experienced in urban green spaces and the motives for visiting UGS. However, there has not been any research related to the urban residents' motives for visiting outdoor green spaces during the COVID-19 pandemic period (especially in the context of the city quarantine). Understanding these motives is important for current and future urban management, green space planning, and social well-being. Moreover, the results of this study can provide certain recommendations to fulfill public requirements and expectations for visiting UGS in other similar events [18]. Consequently, this study aims to determine the population's general motive to visit UGS during the confinement period, rather than based on the relative variation among social groups:

1. What is the urban residents' motives for visiting UGS during the pandemic; and
2. What would weaken the visiting motive.

2. Materials and Methods

2.1. Study Background

This study takes Chengdu, in the Sichuan Province, as the study area (Figure 1). In December 2019, a novel coronavirus disease broke out in Wuhan, Hubei Province, China. Beginning 23 January 2020, the Chinese government blocked cities gradually and implemented travel and outdoor controls. In addition to their regular work, residents were strictly prevented from going out [25]. On 26 February 2020, the Chengdu Municipal Government downgraded the level of epidemic prevention and control from first to second [26]. Simultaneously, Chengdu began to issue health cards, and residents marked as "healthy" were allowed to go out [27]. Due to this policy, the one-month city blockade was lifted.
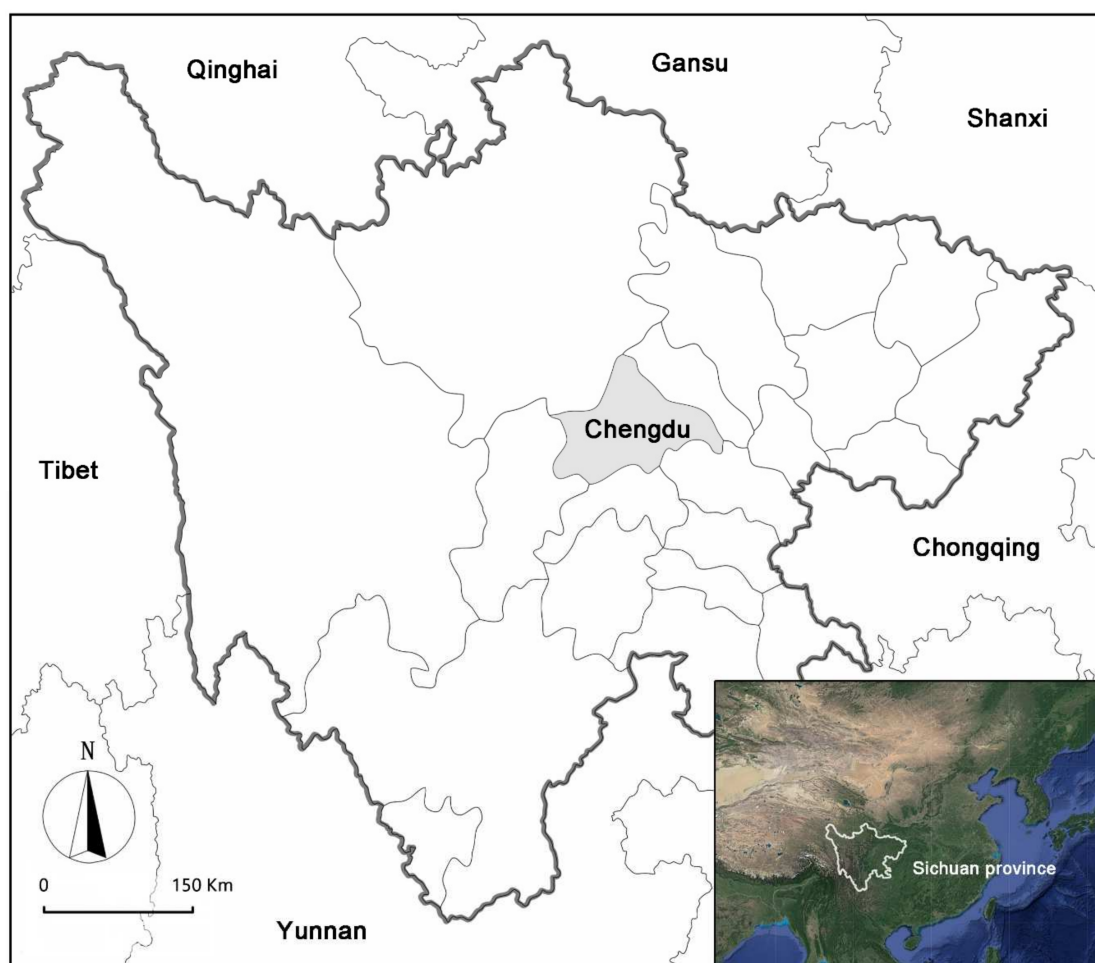
Figure 1. The location of the study area.

2.2. Methodology and Data Analysis

The thematic analysis [28] was used to analyze the data. Thematic analysis, an effective method to analyze qualitative data, is a process of encoding qualitative information to identify, analyze, and report on patterns within data. In detail, it is divided into six steps: (1) data familiarization, (2) generating initial codes, (3) organizing potential themes, (4) revising themes, (5) naming and defining themes, and (6) generating a report (Figure 2) [28]. Familiarity with the interview data is achieved by researchers participating in the interview process, transcribing the interview data and reading it repeatedly. The initial code is generated by encoding important content in the entire interview data, and they will be used to describe the content of the entire interview. The organization of potential themes is achieved by searching for patterns or themes with the same characteristics between codes in different interviews [29]. Revising themes ensures that the data within the same theme can be matched together meaningfully and that different themes can be divided correctly. In the fifth step, all captured themes will be named and defined to ensure that they can be distinguished from other themes. Finally, an analysis report is generated to clearly show the results.
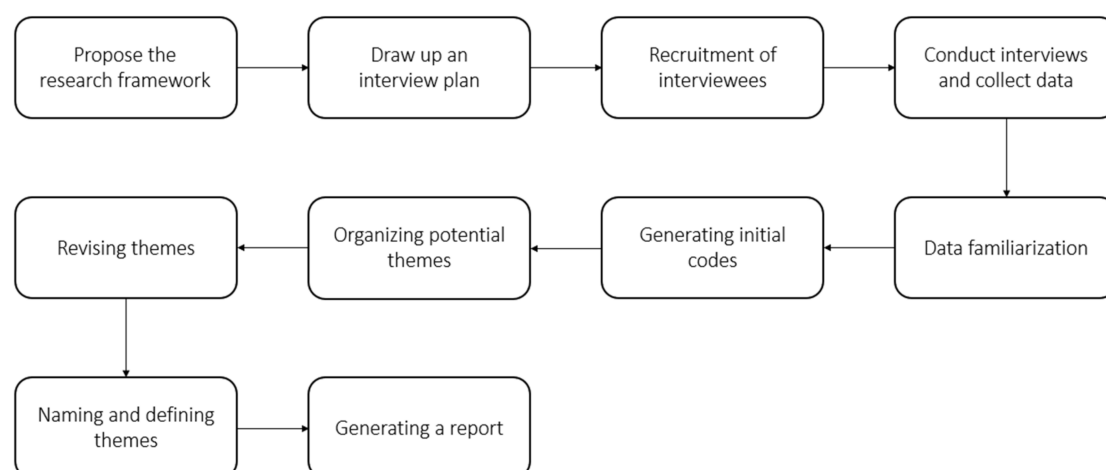
Figure 2. Research framework.

2.3. Participants

A convenience sampling was conducted. We posted recruitment information on a Chinese social media APP (WeChat), including contact numbers, privacy protection statements, volunteer qualifications, research purposes, and a simple outline. Residents could contact one of the authors by phone number; simultaneously, we also encouraged them to recommend family members and friends. The recruited residents from the study area included those who were willing to be interviewed through social media. The restrictions were that they must be at least 18 years old, a resident of Chengdu, and had been living in Chengdu during the infectious disease. Simultaneously, different occupations and ages were chosen to better understand the needs of different groups of people. According to Gill (2014) [30] and Van Manen (1989) [31], the purpose of an interview is to focus on the different experiences among individuals, and to adopt a perspective to provide basic knowledge for research. Most studies have a sample size of 7–28 respondents [32–39]. Besides, Gill (2014) suggests that an adequate sample size is achieved when interpretations are visible and clear and when new informants reveal no new findings [30]. Thus, information saturation would be superfluous. This study recruited 47 residents (17 males and 30 females) from March to May 2020. Participants were between 21–84 years old, with an average age of 35.4 years (SD = 15.4), and most respondents were unmarried (n = 25). We found that the existing sample size allowed us to capture enough individual experiences, and no new information was found. Thus, we believe that the current sample size (n = 47) can provide enough information for the study.

2.4. Materials

The study used semi-structured telephone interviews to explore residents' motives for visiting urban green spaces during the pandemic. To avoid the psychological pressure on the interviewees, they were all interviewed anonymously and were only asked about age, gender, and occupation (Table 1). A setting of interview question was designed, this semi-structured interview format set core guiding the questions to be raised with each participant. It primarily included: (1) the impact of the pandemic on daily study/life/work, (2) recent visit to UGS, (3) reason for visiting UGS, (4) the activities and experiences at green spaces, (5) reasons that affect or weaken the motive to visit, (6) how to evaluate the role and value of green spaces during the pandemic, and (7) some simple questions about their own experiences. In the broader discussion, we also asked "if the UGS visited during the period of containment was the same as the one they visited pre-pandemic". The interview was recorded for transcription into spoken language. Then, it was summarized and translated into English. A total of 47 telephone interviews were conducted in the form of individual interviews, each interview lasting approximately 25–40 minutes. The interviewees decided on the interview time, and most interviews were conducted in the

afternoon or after dinner. They were informed in advance of the purpose and process of the interview. All interviewees expressed their willingness to participate in the research. To ensure participant confidentiality and anonymity, no identifying information was recorded. Therefore, we were not required by our institutions to submit our research proposals for ethical review.

Table 1. Profile of anonymous respondents.

No.	Age	Gender	Occupation	No.	Age	Gender	Occupation
1	52	female	civil servant	25	43	male	doctor
2	50	female	nurse	26	50	female	self-employed
3	55	male	bank clerk	27	24	female	student
4	49	male	worker	28	27	female	teacher
5	25	male	student	29	27	female	civil servant
6	32	female	staff	30	23	female	Student
7	50	female	civil servant	31	29	female	staff
8	24	female	student	32	24	female	student
9	25	male	staff	33	23	female	student
10	23	female	student	34	42	female	teacher
11	75	female	retired	35	31	male	staff
12	83	male	retired	36	30	female	lawyer
13	37	female	staff	37	30	male	staff
14	51	female	self-employed	38	25	female	student
15	35	female	unemployed	39	25	male	staff
16	38	male	civil servant	40	84	male	retired
17	28	female	self-employed	41	51	male	Teacher
18	30	female	teacher	42	23	male	student
19	25	female	staff	43	24	female	student
20	29	male	engineer	44	23	female	student
21	29	female	bank clerk	45	21	female	student
22	30	male	teacher	46	23	female	staff
23	40	male	staff	47	30	male	staff
24	22	female	student				

3. Results

People come to UGS with different motives. According to the analysis results, most of the interviewees showed their strong willingness to visit UGS, and a few indicated a weak willingness. This study categorized these different willingness levels into "Strong motive" and "Weaker motive". The first section explores participants' motives to visit UGS, and the reasons that weaken residents' motive are located in the second section. Each of these themes is discussed in the following sections using the informants' own words to explain their unique perspectives and experiences.

3.1. Strong Motive

"Strong motive" indicates that the informants affirmed a strong desire for green space and outdoor activities in the interview, and revealed that UGS played an essential role in their daily lives during the pandemic. According to the statements provided, these strong motives for visiting UGS can be divided into four themes: "A place for health", "Escape", "Social support", and "A safe and important place for outdoor activities" (Figure 3).

3.1.1. A place for Health

Beginning 23 January 2020, the Chinese government blocked cities gradually and implemented travel and outdoor controls. Residents were strictly restricted from going out [25]. The city quarantine made residents spend most of their time in their homes, and sedentary behavior increased correspondingly. Among the recorded statements, when asked about the motive for visiting UGS recently, the most frequently mentioned reason were physical health needs. These respondents stated that the community they lived in

was strictly controlled, so they could not go outside at will and lacked sufficient outdoor exercise or activities. Moreover, prolonged sedentary time led to increased weight, which caused a decline in physical health. One of the students explained to us: "Yes, it's a vacation now, so I have nothing to do. I often sit on the sofa and watching TV or playing my mobile phone. Sleep time becomes longer, and then I get fatter." (male, 25, student)
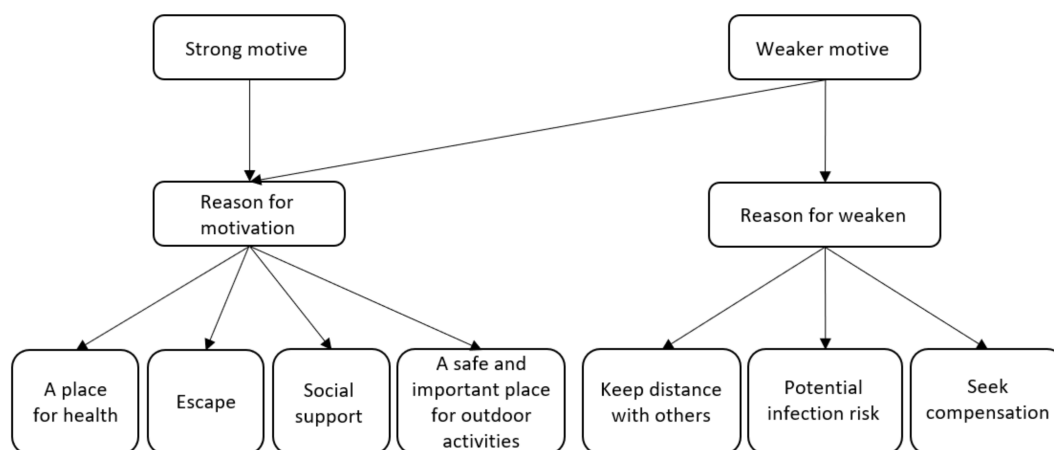

Figure 3. The framework of motives to visit UGS.

In addition to paying attention to their health status, some married and middle-aged groups also cared about the health issues of their family members, especially the elderly and the children. In an interview, a mother said that the community garden used to be a place of outdoor activities for her children to play with other kids. Due to the city quarantine, the lack of activities in the green space may have led to potential health risks: "I am most worried about my children and family. Especially my children, I can't take her out to play. I used to take her to the community garden every day to play with my neighbor's children. She is still young. If she stays at home for a long time, or if she can't play with other children, I'm afraid it will have a bad influence on her, such as potential personality disorders..." (female, 30, teacher). Due to the development of urbanization in China, a large number of people live in built-up areas. Residents in many cities live in apartments [40] with no private gardens available [41], and usually no enough space for exercise at home. Thus, many residents have reported a lack of adequate outdoor activity, which leads to deteriorated health conditions. Besides, they also tended to report mental and psychological health problems, such as poor sleep quality, anxiety, worry, and irritability. Some residents stated that being in a natural environment can significantly improve psychological and emotional well-being. As a woman mentioned that, during the containment period, her husband and son lived in another city, so she suffered from frequent insomnia due to trepidation. After being allowed to go out, she often walked in the community garden, which relieved her anxiety and insomnia.

The results of these interview studies show that health benefits are usually the main motives considered by residents when visiting UGS. Many interviewees said that due to epidemics and quarantine policies, they could not participate in adequate outdoor activities or physical exercises, and their physical and mental health was deteriorating. Therefore, visiting these green spaces became an important motive to improve their mental and psychological health.

3.1.2. Escape

For participants, the pandemic, reports of COVID-19, and city blockades were all seen as sources of stress, which was conceptualized as the subjectively appraised stressfulness of distinctive events and minor disturbances of daily life [42]. Some respondents believed UGS was a means of "escape". Activities (such as picnics, sunbathing, jogging) in the park

or other UGS could help them relax and temporarily forget the stress and annoyance of work.

Although many commercial facilities were forced to close during the containment period in China, some particular occupations (police, medical personnel, civil servants) still worked every day. A participant claimed that she had more jobs than before: "No, in fact, my job is more than before, because we are now completely telecommuting...yes, I work from home almost all day" (female, 27, civil servant). On the other hand, a study in China reported that doctors and nurses have a low level of mental health because they have direct contact with patients, leading to anxiety, stress, and even stigma [43]. As one interviewee said: "I work in a hospital, so I feel more stressed because of my work recently. I worry I will be infected, I worry my colleagues will be infected and I worry my family will be infected...In the past, after dinner, I could walk my dog with my husband in the nearby park, and occasionally I would go running there on weekends. These could make me feel better...yes, we have been allowed to go out recently, my husband and I went to the park last night, only half an hour, but it is enough for me" (female, 50, nurse).

Furthermore, people under lockdown are more prone to developing various symptoms of psychological disorders, such as stress, depression, emotional fatigue, and insomnia due to facing the same living environment for a long period [44]. One interviewee stated that he had become depressed and irritated because of prolonging his stay in the same place (home). Therefore, he hoped to visit UGS to relieve negative emotions: "Never! I have never stayed at home for so long. In the first week, I can bear it. I can play mobile phones and watch TV, but after more than 3 weeks, I started to become irritable and depressed...This is a new virus, I don't know when it will end...I want to go out, even just a walk in the park, I would be very happy" (male, 25, student). Sometimes, interviewees seemed to visit green spaces without a pre-set purpose (such as relieving stress, anxiety, etc.). They merely wanted to "escape" to another environment they used to visit before, which is a form of nostalgia for their former life and self-continuity. A female commented that she used to go to a community garden nearby to rest, but she still chose to visit this garden after the containment period, since it made her feel like she had gone back to the past:

> "I don't know what the future would be like, I'm worried...Sometimes, I go to the community garden to sit and rest because it makes me feel relaxed...It's just like everything go back to before".
>
> (female, 30, lawyer)

The results of these interviews indicate that visiting UGS provides residents with a possibility of "escape". They felt stressed because of the workload, anxiety, or stigma. Staying at home for a long time also negatively influenced their mood, even leading to frustration and irritability. On the other hand, being in a UGS also represented staying away from the urban environment and daily life during the epidemic, which made them feel nervous and annoyed. In these green environments, people can relax and imagine a return to the past, which makes these UGS a therapeutical place.

3.1.3. Social Support

From January 23 to February 26, residents were restricted and stayed home due to the city blockade. Except for daily work and the purchase of necessities, other outdoor activities were prohibited. As a result of the long-term restriction of going out and the obligation to keep a certain distance from others, residents' daily social behavior was significantly reduced. Social contacts are essential daily behaviors of urban residents and are positively related to better health, well-being, and quality of life. Reducing social behavior will lead to an increase in social isolation and loneliness [45]. At the beginning of the interview, most interviewees explained their aim to improve their health and relax. When we asked about the impact of the COVID-19 pandemic on their social contact, a company employee responded positively to these topics:

"Although I work with my colleagues, you know, we must keep a social distance, so we rarely talk...Yes, and do not chat with others even during the break...Before the epidemic, I often go for a walk in the nearby park with my wife after our dinner, where there are many of my neighbors, we will chat together...".

(male, 55, bank clerk)

On the other hand, to meet social interaction needs, many residents said they would use social media to connect with friends and family. However, the development of communication technology has reduced the possibility of face-to-face contact. For some people who do not use social networks, face-to-face social interaction is more important [46]. As an informant stated: "I can't go out, I can't meet my friends, I feel very bad. I can only contact my friends on mobile phone..." (female, 25, staff). Furthermore, social support has a buffering effect when individuals need to cope with stressful events [47]. When interviewees cannot see other residents outdoors, their perception of the disease's severity will increase. A small number of interviewees said that their sense of security increases when they are in green spaces (such as a park) because these places allowed them to see other residents, thereby reducing their fear. Simultaneously, cursory interactions (e.g., meeting others, a short chat, or just saying hello) [48] can also promote social support. An interviewee shared his experience with us:

"A month ago, the situation (of the disease) in the city was very serious. Sometimes, I looked out from the window of my home, and there was nobody in the streets. My family and I were very scared...Now, everything has improved, we are allowed to go out. I found other people are gradually moving on the streets, and I also met my neighbors in the park...This is very good, which shows that the situation of the diseases is starting to improve...I am very happy that I can still see them."

(male, 49, worker)

Therefore, during the pandemic, the park was considered to provide residents with a meeting place. Although residents were prohibited from close contact or long conversations, simple interactions, such as watching others and greetings from a distance, can also promote social support. Thus, overall, the UGS acted as a place for social support during the pandemic.

3.1.4. A Safe and Important Place for Outdoor Activities

Interviewees were asked how they viewed the importance and unique role of UGS during the pandemic and the city quarantine. Generally, residents considered these outdoor green spaces (such as parks and community gardens) safer than other public places (such as shopping malls or city squares). These reasons mainly involved "open space", "large area", "being outdoors", "lower crowd density", "ventilation", and "higher air quality". Following the government's recommendation, higher air quality is considered the key to reducing the probability of infection, indoor ventilation should be maintained, and prolonged exposure in a closed space should be avoided [49]. Therefore, as an open space with air circulation, UGS is considered to provide residents with a safe outdoor environment to a certain extent. At the same time, some larger UGS (such as urban parks and urban forests) can keep tourists away from each other while exercising or relaxing.

On the other hand, following the COVID-19 outbreak, cities entered a state of quarantine. Many public places (such as shopping malls, gyms, places of community interaction, schools) were banned/restricted [50,51]. Sometimes interviewees began to complain, and they claimed that although residents could go out, many public places in the city were still closed, which led to insufficient public entertainment resources: "I could only be at home every day except for work and do not have any outdoor activities...I used to go shopping and watch movies with friends on weekends. But now, you cannot even go to the cinema" (female, 25, staff). Recreation is essential for active living. The health risks associated with

a lack of sports and leisure activities have become critical issues in contemporary public health. Dahmann et al. (2010) believe that the lack of opportunities for play and recreation may lead to social inequities [52]. Obviously, during the COVID-19 pandemic, a UGS in the city is an essential outdoor activity place, because some people cannot get enough recreation/leisure opportunities, which will worsen public health problems in cities. As an older respondent stated: "The green space in the community where I live is very small, and there are no facilities for me to sit down, so (before the epidemic) my wife and I often take a half-hour walk to a park in the city to stroll and sunbathe. That is the only activities we had, and we need such a space." (male, 83, retired).

3.2. Weaker Motive

"Weaker motive" indicates that the respondent affirmed this kind of motive but expressed hesitation when they were asked if they had used the UGS recently. After discussing the reasons for these hesitations, we divided the reasons for weakening motives into three themes: "Keep distance with others", "Potential infection risk", and "Seek compensation" (Figure 3).

3.2.1. Keep Distance with Others

When talking about the recent visitation of green spaces, some interviewees stated that they needed to decide according to the number of users at the time because they wanted to keep a certain distance from others. Interestingly, interviewees with strong and weak motives both mentioned this point. Unlike those with strong motives, some interviewees were worried about the potential infection risk because of too many visitors, which led to a weakened motive for visiting UGS. Among them, those who were married and those who had children emphasized that they were not only worried about themselves but also about their families and children. For instance, a 50-year-old female told us that she used to go to green sporting spaces with her children before the pandemic outbreak. However, she stopped visiting them to avoid being infected: "Two months ago, my children and I went to the greenway to run every day because the environment made me feel relaxed. But now, I will try my best to avoid going to these places, because there are sometimes many people in these places. I am worried that my family and I will be infected" (female, 50, civil servant). Besides, if some green spaces were too small, it would also make the interviewees worry and weaken their motive, because these small green spaces increased the possibility of close contact with others (e.g., passing by, sitting close to someone, and walking the same path).

Sometimes, these interviewees tended to choose visiting periods because with fewer visitors, so they could avoid a close distance with others: "My daughter and I usually go in the afternoon, because other people are working at that time, so only few people there. But we won't stay too long, we just want some fresh air, so we will go home immediately after we finish our walking" (female, 51, self-employed). On the other hand, they might choose to leave and find another place or use the same one for a shorter period, while maintaining a safe distance: "To keep my weight, sometimes I use the fitness facilities in the community green space. Just make sure no one is standing around me" (male, 25, staff), "...yes, if there are too many people, I will go elsewhere. Of course, you know, contact with other people is inevitable. Sometimes, I will encounter with my friends or colleagues. So, it's impossible to pretend you have not seen them and without saying hello to them" (female, 30, teacher). However, this kind of motive was sometimes weakened not only due to the fear of "being infected" but also of "infecting others". As this female teacher said: "...in most cases, you don't know whether your friend was infected, and you don't know whether you have been infected...so it's always a good choice to keep a distance from others".

3.2.2. Potential Infection Risk

Under the home confinement and urban quarantine, the government urged residents to minimize the frequency of going out to prevent the spread of the infection. Therefore, the

perceived infection risk often weakened their motives to go out. Notably, some interviewees explained that they wanted to go out, but worried about the elderly (such as their parents) or their children being infected when they went out. For instance, two interviewees clearly stated that they and their families would not go outdoors during the pandemic because they thought that the risk of potential infection would increase once they went out: "My parents are too old, this disease is very dangerous for them. I still have my own children. I don't want to be infected. I don't want them to be infected...So, I don't think I will specifically go outside for activities or exercises. It is the safest at home" (male, 29, engineer). On the other hand, when asked about some perceived "unsafe" factors, in addition to the number of UGS visitors, they mentioned "people without masks". A mother told us about her recent visits and said that she significantly reduced the frequency of outdoor recreation (about 1–2 days a week) and avoided crowded areas, especially with persons who did not wear a mask: "...I will go for a walk in the nearby park with my daughter, but we will try our best to choose a place with few people because it seems safe...Of course, if there are too many people, we will change the time or change to a place with few people...especially, some strangers who don't wear masks will make us nervous, and we will avoid them. Because you don't know whether he/she is healthy" (female, 50, self-employed). Besides, other informants usually associated "touch" with "virus" when describing their own experiences. They believed that all objects that had been used by others might be "unclean". The objects in the park's convenience facilities (i.e., seats, fitness facilities) were the most mentioned: "...I think some parks are still not safe, because a park is a public place, and everyone may have visited those places. However, sometimes, no one will check your health card before entering these parks...although I can take off my mask when there is no one around me, I don't know which seats are clean...so if an asymptomatic virus carrier has used some facilities, and it will be a disaster for the next user..." (male, 30, teacher).

3.2.3. Seek Compensation

In a broader discussion, some interviewees stated that the UGS visited during the confinement period might have been different from the UGS they visited before the pandemic. Therefore, we continued to ask which places could be chosen as alternatives to meet their needs for outdoor activities or the natural environment. According to the records, the most frequent responses were "rural area/suburbs", "mountain", "riverbank", and "natural scenic areas" due to the large area and the lower possibility of close contact with other people. They believed they could exercise and relax in these areas more safely, as reported by a male respondent: "Before the disease outbreak, I often go to play football in the community green spaces with my son because it was very close and convenient. But now, many people choose to go there, so we wouldn't...Of course, if I could choose, hiking in a mountain is good, you can exercise in a safe environment." (male, 38, civil servant)

Moreover, another group of informants reported other forms of urban green space, such as "large square", "roof garden", "greenway", and "balcony". City squares are usually large and have a broad view. Residents who visit a square can observe their surroundings. At the same time, one can stay connected with others in the square, reducing the adverse impact of social distance. Furthermore, "roof garden" is an interesting topic, although one interviewee said that "roof garden" was a helpless choice: "...sometimes I will go to my roof garden to sit down and take a break. But You know, I'm still in this city, I did not leave here" (female, 24, student). On the contrary, another respondent thought that visiting the roof garden during the pandemic was a safer choice, and the experience could satisfy her need for a natural environment: "Of course, I do need such a space. I like fresh air, and I also want to enjoy the sunshine. But these places (green spaces in the city), now, are too dangerous for me. Recently, I went to my apartment roof garden, where I can see flowers and fresh vegetables. I could stay there all day" (female, 75, retired).

The balcony was an answer that surprised us. Although it is not a green space, two interviewees said that they could observe the parks nearby and plants in the street from their apartment's balcony, so the balcony seemed to offer a special compensation: "...I still

have other choices, such as a balcony, I can move a chair and sit there, and then just look at the city outside in a daze, look at the sky, look at the trees on the road. Sometimes, I found a few pedestrians walking on the road, and it makes me feel like everything is not that bad…" (male, 25, student).

4. Discussion and Implications

Urban green spaces provide residents with inexpensive or free spaces for leisure and social activities, contributing significantly to improving the quality of life and social well-being in cities [53]. The epidemic and the urban blockade policy [54] have significantly changed the daily behaviors of urban residents—at work, in school, while shopping, and in outdoor social activities. Due to the prolonged city quarantine restricting residents' daily outdoor activities, most interviewees wanted to visit green spaces for different motives.

4.1. Motives for Visiting Urban Green Spaces

Pandemics, COVID-19 reports, and city quarantine are all seen as sources of stress [55], causing considerable mental stress in residents. A study from Italy reported that more than half of its respondents reported different degrees of depression, anxiety, and stress during the urban lockdown period [56]. Leisure experiences or being in green environments such as parks will improve these negative mood states [57]. The distraction hypothesis shows that physical exercise can keep people away from stress stimuli, and meditation and yoga can also distract people and help reduce anxiety in daily life [58]. The natural environment can reduce the activity of the sympathetic nervous system and reduce mental stress [59]. The latest research shows that people in some countries have begun to have serious anxiety and worry about COVID-19, even influencing their normal lives, including reduced social interaction, difficulty sleeping, and panic about the news. Many people expressed the need for mental health experts to help them improve their mood and other psychological problems [60]. People under lockdown are more prone to developing various symptoms of psychological disorders, such as stress, depression, emotional fatigue, and insomnia due to facing the same living environment for a long period. This will potentially lead to a chronic disease [61]. A UGS provides residents with a possibility of "escape". In these green environments, people can relax and "return" to the past. Jim (2004) believes that humans prefer informal and wild places, which provide a sense of solitude and escape from the urban environment [62]. Lloyd et al. (2008) indicated that the purpose of escaping is more to seek peace, solitude, and getting back to a less structured environment, which means getting rid of stress and having free personal space [22]. A study found that stress also harms people's psycho-physiological health, and leisure experiences based on green environments can improve these negative mood states [57]. Therefore, the interviewee's experience indicated that the pressure from work, the pandemic, and a long-term stay in a built environment would create a strong motive to visit a green and natural environment.

It is worth noting that social support is another significant value of UGS during the pandemic. The prolonged city blockade and fear of disease will increase the negative emotions of the residents. A sense of security refers to an emotion generated by the perception of the potential risks to security or safety [63]. Long-term isolation and reports of diseases are stressful events [55] that increase residents' fear of disease. Social support can alleviate this stress [64]. Francis et al. (2012) state that spending time with others can improve mental health [65]. When interviewees cannot see other residents outdoors, their perception of the disease's severity will increase. A small number of interviewees said that their sense of security increased when they were in green spaces (such as parks) because these places allowed them to see other residents, thereby reducing their fear. Besides, the fear of the epidemic creates extremely isolated environments, both physically and psychologically. Due to the increase in infected people, many city governments had to block cities and restrict residents' outings. The city blockade forces residents to spend most of their time in their homes, reducing their daily social behavior. It has been found that a long-term lack of normal social behavior (without contact with people other than family

members) may lead to social isolation and more serious consequences, as shown in the literature [66–70]. Social support and social interaction regardless of age or gender can also promote many healthy outcomes, such as improving the sense of well-being perceived by emotions and mood [71], and alleviating symptoms of depression [72,73]. Although face-to-face social interaction is more important than social interaction through the Internet, to meet social interaction needs some residents in the interview stated that they could only use social media to connect with their friends and family. However, whether the source of support is emotional or informational, social support is considered a critical concept that has a major impact on well-being. Social support has a buffering effect when individuals need to cope with stressful events [48]. On the one hand, most informants stated that they often visited these areas with their family members (e.g., parents, husband, wife, or children), while a small number of people chose friends, colleagues, classmates, and other people other than family members. As an extension of the family space, these green spaces provide social interaction and accompany family members to a certain extent. On the other hand, although close contact or long conversations were forbidden, simple interactions, such as watching others and greetings from a distance, can also promote social support [48]. Thus, a UGS is thought to provide residents with a place for support and socialization during the pandemic.

Moreover, a UGS also provided a safe outdoor recreation and exercise place for urban residents during COVID-19, which was very important to maintain residents' active lives. Studies have found that this is a respiratory disease in which human-to-human transmission occurs through droplets, aerosols, and direct contact. In particular, the droplets generated during speaking, coughing, and sneezing by symptomatic patients can spread to 1–2 m [49]. Besides, although a recent research report shows that people are less likely to be infected by air in indoor environments [74], residents should still reduce the frequency of entering closed public environments and avoid crowded areas [75]. The results of this study are also consistent with our views. Some interviewees indicated that these outdoor green spaces made them feel safe because these public places provide a safer leisure environment. This can be explained by the fact that these green spaces are open rather than closed compared to crowded public places, such as shopping malls, city squares, or supermarkets, and have a lower crowd density, good ventilation, and higher air quality. According to the government's recommendations, higher air quality is considered the key to reducing the probability of infection; indoor ventilation should be maintained and prolonged exposure in a closed space should be avoid [49]. Therefore, as an open space with air circulation, a UGS is thought to provide residents with a safe outdoor environment to a certain extent. At the same time, some larger UGS (such as urban parks and urban forests) can keep tourists away from each other while performing outdoor activities. On the other hand, residents believed that they lacked the necessary outdoor leisure activities, which would have a potential negative impact on an active life. UGS (especially green spaces with a large area, such as parks) provide residents with a vital space for outdoor activities and leisure. Although the current results show that most interviewees were usually involved in simple activities (such as walking, jogging, dog walking, sunbathing), such outings for leisure and exercise were still useful for improving the quality of residents' daily lives. Furthermore, to reduce the possibility of infection (or stay near others), respondents were more inclined to choose a large open space area for outdoor activities. However, due to the quarantine policy, although the situation got much better in China in late March and early April 2020, many public places were restricted or forbidden. Thus, the UGS was considered as a safe and important place for outdoor activities during the pandemic.

4.2. Reasons for Motive Weakening

On the contrary, some reasons that weaken the motives for visiting UGS still need attention. Going out or close contacts with others may increase the risk of infection, but long-term home confinement will bring more public health problems [76]. Therefore, addressing

(or reducing these risks) and encouraging residents to go out is of great significance for maintaining the city's social well-being and management. First, some interviewees were worried about the potential infection risk because of other visitors (especially without a mask) in some green spaces. Thus, city managers should provide people with information on disease prevention and protection, and residents should wear a mask while performing outdoor activities, keep a distance of at least 2 m from others, and avoid direct contact for more than 15 min [49]. Second, park managers need to understand how residents use these spaces during the pandemic, as well as limit the number of users during the peak visiting period, set temperature detection measures in places with a large number of visitors, open and encourage residents to go to different parks for activities, and avoid crowds. Meanwhile, they should also increase the disinfection frequency of park facilities, use a mobile application to display the number of visitors in each park, and keep the environment clean [77]. Finally, a study result indicates that COVID-19 has a clear predilection for aged people, given their high mortality rate [78], while children are rarely infected and have less severe symptoms [79]. However, some informants stated they would reduce or even refuse to visit UGS because they were worried that their parents and children would be infected. Therefore, park managers can temporarily set up multiple activity areas specifically for the elderly and children, or activity venues for families.

Notably, the current problem of insufficient space for community green spaces and the uneven distribution of urban green spaces seems to need more attention. Since 1978, China has been carrying out urbanization programs, and a large body of people have poured into cities [40]. Due to the land policies and high housing prices, the residents of many cities live in apartments, with no private gardens available [41]. Simultaneously, most of the old or low-cost communities have a lack of internal green spaces, which can only basically meet the function of landscaping, and it is difficult to provide sufficient entertainment facilities and spaces for outdoor activities. Before the epidemic, most residents often went to nearby parks/green spaces for sports and leisure activities, while some interviewees said that during the pandemic, the existing green spaces could not meet their outdoor leisure and sports/exercise needs. Simultaneously, groups with lower incomes usually lack private cars and can only rely on public transportation. During the epidemic, public transportation was unavailable, which made residents in some areas unable to access enough outdoor green spaces when compared to some other people with a higher income. Moreover, the elderly interviewed were not willing to go further away for safety reasons. On the contrary, they went to the nearest green spaces, such as roof gardens, because few people use these places, and they were often kept isolated from the outside. This shows that distance is an important factor that prevents older people from using public green spaces, especially during the epidemic. A long-distance commute or travel represents a high risk of infection. Another interviewee said that although their community green land could not provide enough space or infrastructure, they would still use the place as compensation. Therefore, the significance of community green spaces/gardens (especially those used by elderly populations) is much greater than that of centralized public green spaces in cities. These community green spaces/gardens can provide convenient and safe venues for nearby elderly people at any time. Besides, Larson et al. (2016) believe that general green spaces (such as community gardens and urban greenways) can also bring many benefits [80]. Managers could consider providing various types of green space resources in some urban areas with less green space (e.g., vertical gardens, green roofs, roof gardens) to reduce the burden of green space usage [77]. From the perspective of true environmental justice, it is critical to provide sufficient and available green spaces for all residents. City managers need to provide specific plans, facilities, and interventions for certain groups [81]. After all, fair health benefits mean far more than fair green space opportunities [82].

Therefore, this study aims to suggest that city managers pay more attention, follow the World Health Organization guidelines, and attempt to meet the daily activities of the crowd while blocking the city. For the current situation, it is necessary to strengthen the safety management of parks and green space in the city, reasonably open and limit the number of

people allowed, and encourage residents to undertake appropriate outdoor activities in community green spaces under the premise of taking protective measures. Always pay attention to the physical and mental health of urban residents. For the future planning of urban green spaces, the green space per capita standard should be carefully assessed. The distribution of urban green spaces should be wider to achieve true environmental justice. Simultaneously, the construction of public green spaces and community green spaces in high-density areas with older population should be increased to reduce the commuting time of the elderly, which will promote more use. The epidemic may be long-term, as well as the effects of the disease, and some negative effects may even exceed the time of the epidemic. Currently, the Novel Coronavirus Pneumonia still exists, and many cities and countries are still under a comprehensive blockade. The long-term blockades have restricted residents' outing and outdoor activities, which have caused serious negative physical and psychological effects. Governments should pay attention to these negative effects to avoid more severe potential health issues.

Moreover, the population density of cities is increasing urbanization, which greatly increases the risk of infection. Various types of urban green spaces may not be able to eliminate these viruses. However, a recent study shows that the smaller the area of a city green space, the higher the confirmed number of infections [83]. It can thus be assumed that UGS can effectively divide urban areas and reduce population density to reduce the infection rate of the population to a certain extent. Simultaneously, reasonably arranging urban green spaces can provide residents with safe outdoor sports and leisure places, meet the daily social needs of the crowd, and maintain their physical and mental health. The benefits of these measures will be long-term and proactive.

5. Conclusions

A widespread epidemic disease, as a special global crisis, will lead to a direct negative impact on many aspects of cities and society [84]. This study aims to review urban residents' motives for visiting UGS during the COVID-19 pandemic and the city quarantine, and what might weaken these motives. Simultaneously, based on the interviewees' experience, understanding, and motives, UGS's importance and unique role during the pandemic are summarized. The results of the study show that because the city quarantine restricted the residents' daily outdoor activities, most interviewees wanted to visit green spaces to meet different needs. These levels of motives were divided into strong and weak motives. Understanding these motives and reasons is clearly necessary for future urban management, green space planning, and social well-being. More broadly, the results of the study can also provide some recommendations and references for city managers to deal with similar events in the future. Besides, results to date have shown that urban green spaces are highly valuable. These spaces provide residents with safe and free spaces for outdoor activities, and contributed to improving the quality of life and social well-being. At any time, residents need such spaces. Particularly during the epidemic, green spaces provide residents with necessary and safe places for PA and leisure activities, which reduce public health risks and increase the residents' sense of security. Additionally, the epidemic poses challenges to environmental justice in cities. How to make urban residents obtain enough UGS resources still requires long-term efforts. Finally, some recommendations are proposed for urban green space planning and environmental justice. The benefits of these measures will be long-term and proactive.

If such a crisis occurs again, will our cities be ready?

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References

1. Walker, S.E.; Duffield, B.S. Urban parks and open spaces—An overview. *Landsc. Res.* **1983**, *8*, 2–12. [CrossRef]
2. Manfredo, M.J.; Driver, B.L.; Tarrant, M.A. Measuring leisure motivation: A meta-analysis of the recreation experience preference scales. *J. Leis. Res.* **1996**, *28*, 188–213. [CrossRef]
3. Maas, J.; Van Dillen, S.M.; Verheij, R.A.; Groenewegen, P.P. Social contacts as a possible mechanism behind the relation between green space and health. *Health Place* **2009**, *15*, 586–595. [CrossRef] [PubMed]
4. Bedimo-Rung, A.L.; Mowen, A.J.; Cohen, D.A. The significance of parks to physical activity and public health: A conceptual model. *Am. J. Prev. Med.* **2005**, *28*, 159–168. [CrossRef] [PubMed]
5. Japelj, A.; Mavsar, R.; Hodges, D.; Kovač, M.; Juvančič, L. Latent preferences of residents regarding an urban forest recreation setting in Ljubljana, Slovenia. *For. Policy Econ.* **2016**, *71*, 71–79. [CrossRef]
6. Humpel, N.; Owen, N.; Leslie, E. Environmental factors associated with adults' participation in physical activity: A review. *Am. J. Prev. Med.* **2002**, *22*, 188–199. [CrossRef]
7. MacDougall, C.; Cooke, R.; Owen, N.; Willson, K.; Bauman, A. Relating physical activity to health status, social connections and community facilities. *Aust. N. Z. J. Public Health* **1997**, *21*, 631–637. [CrossRef]
8. Frumkin, H. Beyond toxicity: Human health and the natural environment. *Am. J. Prev. Med.* **2001**, *20*, 234–240. [CrossRef]
9. Marselle, M.R.; Irvine, K.N.; Warber, S.L. Walking for well-being: Are group walks in certain types of natural environments better for well-being than group walks in urban environments? *Int. J. Environ. Res. Public Health* **2013**, *10*, 5603–5628. [CrossRef]
10. Kuo, F.E.; Sullivan, W.C.; Coley, R.L.; Brunson, L. Fertile ground for community: Inner-city neighborhood common spaces. *Am. J. Community Psychol.* **1998**, *26*, 823–851. [CrossRef]
11. Yuen, B. Use and experience of neighborhood parks in Singapore. *J. Leis. Res.* **1996**, *28*, 293–311. [CrossRef]
12. Home, R.; Hunziker, M.; Bauer, N. Psychosocial outcomes as motivations for visiting nearby urban green spaces. *Leis. Sci.* **2012**, *34*, 350–365. [CrossRef]
13. Lo, A.Y.; Jim, C.Y. Willingness of residents to pay and motives for conservation of urban green spaces in the compact city of Hong Kong. *Urban For. Urban Green.* **2010**, *9*, 113–120. [CrossRef]
14. Girma, Y.; Terefe, H.; Pauleit, S. Urban green spaces use and management in rapidly urbanizing countries: The case of emerging towns of Oromia special zone surrounding Finfinne, Ethiopia. *Urban For. Urban Green.* **2019**, *43*, 126357. [CrossRef]
15. Włodarczyk-Marciniak, R.; Sikorska, D.; Krauze, K. Residents' awareness of the role of informal green spaces in a post-industrial city, with a focus on regulating services and urban adaptation potential. *Sustain. Cities Soc.* **2020**, *59*, 102236. [CrossRef] [PubMed]
16. Song, X.; Lv, X.; Li, C. Willingness and motivation of residents to pay for conservation of urban green spaces in Jinan, China. *Acta Ecol. Sin.* **2015**, *35*, 89–94. [CrossRef]
17. Campagnaro, T.; Vecchiato, D.; Arnberger, A.; Celegato, R.; Da Re, R.; Rizzetto, R.; Semenzato, P.; Sitzia, T.; Tempesta, T.; Cattaneo, D. General, stress relief and perceived safety preferences for green spaces in the historic city of Padua (Italy). *Urban For. Urban Green.* **2020**, *52*, 126695. [CrossRef]
18. Shan, X.-Z. Socio-demographic variation in motives for visiting urban green spaces in a large Chinese city. *Habitat Int.* **2014**, *41*, 114–120. [CrossRef]
19. Chan, J.; DuBois, B.; Tidball, K.G. Refuges of local resilience: Community gardens in post-Sandy New York City. *Urban For. Urban Green.* **2015**, *14*, 625–635. [CrossRef]
20. Shimpo, N.; Wesener, A.; McWilliam, W. How community gardens may contribute to community resilience following an earthquake. *Urban For. Urban Green.* **2019**, *38*, 124–132. [CrossRef]
21. Conradson, D. Landscape, care and the relational self: Therapeutic encounters in rural England. *Health Place* **2005**, *11*, 337–348. [CrossRef]
22. Lloyd, K.; Burden, J.; Kiewa, J. Young Girls and Urban Parks: Planning for Transition through Adolescence. *J. Park Recreat. Adm.* **2008**, *26*, 21–38.
23. Koprowska, K.; Kronenberg, J.; Kuźma, I.B.; Łaszkiewicz, E. Condemned to green? Accessibility and attractiveness of urban green spaces to people experiencing homelessness. *Geoforum* **2020**, *113*, 1–13. [CrossRef]
24. Andrews, M.; Gatersleben, B. Variations in perceptions of danger, fear and preference in a simulated natural environment. *J. Environ. Psychol.* **2010**, *30*, 473–481. [CrossRef]

25. The Guardian. China Virus: Ten Cities Locked Down and Beijing Festivities Scrapped. 2020. Available online: https://www.theguardian.com/world/2020/jan/23/coronavirus-panic-spreads-in-china-with-three-cities-in-lockdown (accessed on 15 March 2020).

26. The People. Sichuan Emergency Response Adjusted to Level 2. 2020. Available online: http://sc.people.com.cn/n2/2020/0226/c345509-33828613.html (accessed on 15 March 2020).

27. Chengdu Government. Notification of the Health Status of Chengdu Citizens during the Prevention and Control of New Coronary Pneumonia. 2020. Available online: http://gk.chengdu.gov.cn/govInfoPub/detail.action?id=115402&tn=6 (accessed on 15 March 2020).

28. Braun, V.; Clarke, V. Using thematic analysis in psychology. *Qual. Res. Psychol.* **2006**, *3*, 77–101. [CrossRef]

29. Adevi, A.A.; Mårtensson, F. Stress rehabilitation through garden therapy: The garden as a place in the recovery from stress. *Urban For. Urban Green.* **2013**, *12*, 230–237. [CrossRef]

30. Gill, M.J. The possibilities of phenomenology for organizational research. *Organ. Res. Methods* **2014**, *17*, 118–137. [CrossRef]

31. Van Manen, M. Pedagogical text as method: Phenomenological research as writing. *Saybrook Rev.* **1989**, *7*, 23–45.

32. Gibson, S.K. Being mentored: The experience of women faculty. *J. Career Dev.* **2004**, *30*, 173–188. [CrossRef]

33. Haartsen, T.; Stockdale, A. S/elective belonging: How rural newcomer families with children become stayers. *Popul. Space Place* **2018**, *24*, e2137. [CrossRef]

34. Zhuang, T.; Qian, Q.K.; Visscher, H.J.; Elsinga, M.G.; Wu, W. The role of stakeholders and their participation network in decision-making of urban renewal in China: The case of Chongqing. *Cities* **2019**, *92*, 47–58. [CrossRef]

35. Kanakis, K.; McShane, C.J.; Kilcullen, M.L.; Swinbourne, A.L. "It's the people that keep me here": Exploring the role of community attachment in increasing length of residency. *J. Rural. Stud.* **2019**, *70*, 19–25. [CrossRef]

36. Chakraborty, A. Emerging Patterns of Mountain Tourism in a Dynamic Landscape: Insights from Kamikochi Valley in Japan. *Land* **2020**, *9*, 103. [CrossRef]

37. Sakurai, R.; Jacobson, S.K.; Kobori, H.; Primack, R.; Oka, K.; Komatsu, N.; Machida, R. Culture and climate change: Japanese cherry blossom festivals and stakeholders' knowledge and attitudes about global climate change. *Biol. Conserv.* **2011**, *144*, 654–658. [CrossRef]

38. McIntosh, A.J. The hidden side of travel: Epilepsy and tourism. *Ann. Tour. Res.* **2020**, *81*, 102856. [CrossRef]

39. Moriuchi, E.; Basil, M. The sustainability of ohanami cherry blossom festivals as a cultural icon. *Sustainability* **2019**, *11*, 1820. [CrossRef]

40. Xiang, W.N.; Stuber, R.M.; Meng, X. Meeting critical challenges and striving for urban sustainability in China. *Landsc. Urban Plan.* **2011**, *100*, 418–420. [CrossRef]

41. Cai, Z.; Liu, Q.; Cao, S. Real estate supports rapid development of China's urbanization. *Land Use Policy* **2020**, *95*, 104582. [CrossRef]

42. Glaser, J.P.; Van Os, J.; Portegijs, P.J.; Myin-Germeys, I. Childhood trauma and emotional reactivity to daily life stress in adult frequent attenders of general practitioners. *J. Psychosom. Res.* **2006**, *61*, 229–236. [CrossRef]

43. Ren, S.Y.; Gao, R.D.; Chen, Y.L. Fear can be more harmful than the severe acute respiratory syndrome coronavirus 2 in controlling the corona virus disease 2019 epidemic. *World J. Clin. Cases* **2020**, *8*, 652. [CrossRef]

44. Fofana, N.K.; Latif, F.; Sarfraz, S.; Bilal; Bashir, M.F.; Komal, B. Fear and agony of the pandemic leading to stress and mental illness: An emerging crisis in the novel coronavirus (COVID-19) outbreak. *Psychiatry Res.* **2020**, *291*, 113230. [CrossRef]

45. Kemperman, A.; Timmermans, H. Green spaces in the direct living environment and social contacts of the aging population. *Landsc. Urban Plan.* **2014**, *129*, 44–54. [CrossRef]

46. Kaźmierczak, A. The contribution of local parks to neighbourhood social ties. *Landsc. Urban Plan.* **2013**, *109*, 31–44. [CrossRef]

47. Adams, T.R.; Rabin, L.A.; Da Silva, V.G.; Katz, M.J.; Fogel, J.; Lipton, R.B. Social support buffers the impact of depressive symptoms on life satisfaction in old age. *Clin. Gerontol.* **2016**, *39*, 139–157. [CrossRef] [PubMed]

48. Peters, K.; Elands, B.; Buijs, A. Social interactions in urban parks: Stimulating social cohesion? *Urban For. Urban Green.* **2010**, *9*, 93–100. [CrossRef]

49. Cirrincione, L.; Plescia, F.; Ledda, C.; Rapisarda, V.; Martorana, D.; Moldovan, R.E.; Theodoridou, K.; Cannizzaro, E. COVID-19 pandemic: Prevention and protection measures to be adopted at the workplace. *Sustainability* **2020**, *12*, 3603. [CrossRef]

50. Dos Santos, R.M. Isolation, social stress, low socioeconomic status and its relationship to immune response in Covid-19 pandemic context. *Brain Behav. Immun. Health* **2020**, *7*, 100103. [CrossRef]

51. Zhang, Y.; Zhang, H.; Ma, X.; Di, Q. Mental Health Problems during the COVID-19 Pandemics and the Mitigation Effects of Exercise: A Longitudinal Study of College Students in China. *Int. J. Environ. Res. Public Health* **2020**, *17*, 3722. [CrossRef] [PubMed]

52. Dahmann, N.; Wolch, J.; Joassart-Marcelli, P.; Reynolds, K.; Jerrett, M. The active city? Disparities in provision of urban public recreation resources. *Health Place* **2010**, *16*, 431–445. [CrossRef] [PubMed]

53. Dai, P.; Zhang, S.; Hou, H.; Yang, Y.; Liu, R. Valuing sports services in urban parks: A new model based on social network data. *Ecosyst. Serv.* **2019**, *36*, 100891. [CrossRef]

54. Chowell, G.; Mizumoto, K. The COVID-19 pandemic in the USA: What might we expect? *Lancet* **2020**, *395*, 1093–1094. [CrossRef]

55. Aneshensel, C.S.; Frerichs, R.R. Stress, support, and depression: A longitudinal causal model. *J. Community Psychol.* **1982**, *10*, 363–376. [CrossRef]

56. Mazza, C.; Ricci, E.; Biondi, S.; Colasanti, M.; Ferracuti, S.; Napoli, C.; Roma, P. A nationwide survey of psychological distress among italian people during the COVID-19 pandemic: Immediate psychological responses and associated factors. *Int. J. Environ. Res. Public Health* **2020**, *17*, 3165. [CrossRef]

57. Orsega-Smith, E.; Mowen, A.J.; Payne, L.L.; Godbey, G. The interaction of stress and park use on psycho-physiological health in older adults. *J. Leis. Res.* **2004**, *36*, 232–256. [CrossRef]

58. Bahrke, M.S.; Morgan, W.P. Anxiety reduction following exercise and meditation. *Cogn. Ther. Res.* **1978**, *2*, 323–333. [CrossRef]

59. Yu, C.P.S.; Hsieh, H. Beyond restorative benefits: Evaluating the effect of forest therapy on creativity. *Urban For. Urban Green.* **2020**, *51*, 126670. [CrossRef]

60. Roy, D.; Tripathy, S.; Kar, S.K.; Sharma, N.; Verma, S.K.; Kaushal, V. Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. *Asian J. Psychiatry* **2020**, *51*, 102083.

61. Poole, L.; Steptoe, A. Depressive symptoms predict incident chronic disease burden 10 years later: Findings from the English Longitudinal Study of Ageing (ELSA). *J. Psychosom. Res.* **2018**, *113*, 30–36. [CrossRef] [PubMed]

62. Jim, C.Y. Green-space preservation and allocation for sustainable greening of compact cities. *Cities* **2004**, *21*, 311–320. [CrossRef]

63. Ruiter, R.A.; Abraham, C.; Kok, G. Scary warnings and rational precautions: A review of the psychology of fear appeals. *Psychol. Health* **2001**, *16*, 613–630. [CrossRef]

64. Tabatabaei, S.A.; Abro, A.H.; Klein, M. With a little help from my friends: A computational model for the role of social support in mood regulation. *Cogn. Syst. Res.* **2018**, *47*, 133–146. [CrossRef]

65. Francis, J.; Wood, L.J.; Knuiman, M.; Giles-Corti, B. Quality or quantity? Exploring the relationship between Public Open Space attributes and mental health in Perth, Western Australia. *Soc. Sci. Med.* **2012**, *74*, 1570–1577. [CrossRef]

66. Kobayashi, E.; Fujiwara, Y.; Fukaya, T.; Nishi, M.; Saito, M.; Shinkai, S. Social support availability and psychological well-being among the socially isolated elderly. Differences by living arrangement and gender. *Jpn. J. Public Health* **2011**, *58*, 446–456.

67. Locher, J.L.; Ritchie, C.S.; Roth, D.L.; Baker, P.S.; Bodner, E.V.; Allman, R.M. Social isolation, support, and capital and nutritional risk in an older sample: Ethnic and gender differences. *Soc. Sci. Med.* **2005**, *60*, 747–761. [CrossRef]

68. Seeman, T.E.; Bruce, M.L.; McAvay, G.J. Social network characteristics and onset of ADL disability: MacArthur studies of successful aging. *J. Gerontol. Ser. B Psychol. Sci. Soc. Sci.* **1996**, *51*, S191–S200. [CrossRef] [PubMed]

69. Epstein, L.H.; Saelens, B.E.; Myers, M.D.; Vito, D. Effects of decreasing sedentary behaviors on activity choice in obese children. *Health Psychol.* **1997**, *16*, 107. [CrossRef] [PubMed]

70. Wheeler, M.J.; Dempsey, P.C.; Grace, M.S.; Ellis, K.A.; Gardiner, P.A.; Green, D.J.; Dunstan, D.W. Sedentary behavior as a risk factor for cognitive decline? A focus on the influence of glycemic control in brain health. *Alzheimer's Dement. Transl. Res. Clin. Interv.* **2017**, *3*, 291–300. [CrossRef] [PubMed]

71. Berkman, L.F.; Glass, T.; Brissette, I.; Seeman, T.E. From social integration to health: Durkheim in the new millennium. *Soc. Sci. Med.* **2000**, *51*, 843–857. [CrossRef]

72. Morris, P.L.; Robinson, R.G.; Raphael, B.; Bishop, D. The relationship between the perception of social support and post-stroke depression in hospitalized patients. *Psychiatry* **1991**, *54*, 306–316. [CrossRef] [PubMed]

73. Holahan, C.J.; Moos, R.H.; Holahan, C.K.; Brennan, P.L. Social context, coping strategies, and depressive symptoms: An expanded model with cardiac patients. *J. Personal. Soc. Psychol.* **1997**, *72*, 918. [CrossRef]

74. Faridi, S.; Niazi, S.; Sadeghi, K.; Naddafi, K.; Yavarian, J.; Shamsipour, M.; Jandaghi, N.Z.S.; Sadeghniiat, K.; Nabizadeh, R.; Yunesian, M.; et al. A field indoor air measurement of SARS-CoV-2 in the patient rooms of the largest hospital in Iran. *Sci. Total Environ.* **2020**, *725*, 138401. [CrossRef] [PubMed]

75. McCloskey, B.; Zumla, A.; Ippolito, G.; Blumberg, L.; Arbon, P.; Cicero, A.; Enderiks, T.; Lim, P.L.; Borodina, M. Mass gathering events and reducing further global spread of COVID-19: A political and public health dilemma. *Lancet* **2020**, *395*, 1096–1099. [CrossRef]

76. Brooks, S.K.; Webster, R.K.; Smith, L.E.; Woodland, L.; Wessely, S.; Greenberg, N.; Rubin, G.J. The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *Lancet* **2020**, *395*, 912–920. [CrossRef]

77. Xie, J.; Luo, S.; Furuya, K.; Sun, D. Urban Parks as Green Buffers During the COVID-19 Pandemic. *Sustainability* **2020**, *12*, 6751. [CrossRef]

78. Calderón-Larrañaga, A.; Dekhtyar, S.; Vetrano, D.L.; Bellander, T.; Fratiglioni, L. COVID-19: Risk accumulation among biologically and socially vulnerable older populations. *Ageing Res. Rev.* **2020**, *63*, 101149. [CrossRef]

79. Kloc, M.; Ghobrial, R.M.; Kuchar, E.; Lewicki, S.; Kubiak, J.Z. Development of child immunity in the context of COVID-19 pandemic. *Clin. Immunol.* **2020**, *217*, 108510. [CrossRef] [PubMed]

80. Larson, L.R.; Jennings, V.; Cloutier, S.A. Public parks and wellbeing in urban areas of the United States. *PLoS ONE* **2016**, *11*, e0153211. [CrossRef]

81. Jones, A.; Hillsdon, M.; Coombes, E. Greenspace access, use, and physical activity: Understanding the effects of area deprivation. *Prev. Med.* **2009**, *49*, 500–505. [CrossRef] [PubMed]

82. Lachowycz, K.; Jones, A.P. Does walking explain associations between access to greenspace and lower mortality? *Soc. Sci. Med.* **2014**, *107*, 9–17. [CrossRef]

83. Liu, L. Emerging study on the transmission of the Novel Coronavirus (COVID-19) from urban perspective: Evidence from China. *Cities* **2020**, *103*, 102759. [CrossRef]
84. Jin, X.C.; Qu, M.; Bao, J. Impact of crisis events on Chinese outbound tourist flow: A framework for post-events growth. *Tour. Manag.* **2019**, *74*, 334–344. [CrossRef] [PubMed]