

Research on the Optimization of Old Community Public Space in Kunming from the View of Public Health

Chunhui Li^{1*}, Jiangshou Luo¹, Guolin Wang¹, Rong Hu¹

¹ Faculty of Art and Design, Yunnan University, Kunming, China

Email Address

2186442314@qq.com (ChunHui Li), 2353553472@qq.com (Jiangshou Luo),
309311344@qq.com (Guolin Wang), 1138242254@qq.com (Rong Hu)

*Correspondence: 2186442314@qq.com

Received: 16 May 2022; Accepted: 18 June 2022; Published: 20 July 2022

Abstract:

In the context of “Healthy China strategy”, community, as a link closely linked to people's healthy life, has attracted the attention of the whole society, especially the current research on old communities, which has pushed this issue to a climax. Based on the research on the public space of the old community in Kunming city, this paper analyzes the existing problems, the characteristics of people's behavior and different demands of healthy living environment, connects the public space with the healthy life of residents, and puts forward the optimization and transformation of the old community public space.

Keywords:

Kunming, Old Community, Public Space, Public Health, Optimization Research

1. Introduction

In 2015, China put forward the goal of building a “healthy China”, and gradually improved the urban health level on the basis of communities. Therefore, it is of great significance to the construction of “healthy housing” and “healthy China” to take the community as the basic unit of health, explore the essence of health, and improve the construction of “healthy residential space” and “healthy China”. With the theory of urban double repair, characteristic town and open residential areas, health, green and human interest are the main directions of the development and construction of the space outside of the residential areas in the future. [1] In urban planning and construction, the community is the focus of attention, but also the focus of urban residents concerned about the region. [10] It is an effective way to improve the health level of the whole people to combine health and space organically and to create a space environment conducive to the promotion of health. [5]

The world health organization of “health” defined as follows: “health is a including physiological, mental and social health state”, can see that health has a broader meaning, not only refers to the physical health, but covers everyone from inside to outside, from individual to social relationship, the surrounding environment for

residents' health has an important role, it can affect every aspect of our life, especially in the increasing society, our living environment plays an important role in our mental health. People are Social animal, community is an important place for people to live, whether in rural areas or urban streets, belonging to the community and living together is an inevitable form of people's spiritual needs. [6] Therefore, it is necessary for the aspects of the relationship between the public space in old communities and people's health. To promote the transformation and upgrading of the old community is an important measure to prolong the life of the old community and improve the quality of life of the people. [11]

2. Current Situation Analysis

2.1. Location Analysis

The old communities in Kunming are distributed in various districts, including Wuhua District, Panlong District, Xishan District, Guandu District, Chenggong District, etc. Most of the old communities in Wuhua District are distributed in the city center, while the Xishan District are mostly distributed in the periphery of the urban area, in the areas with inconvenient transportation, and the supporting facilities of the surrounding environment are relatively backward. The research in the news community, ChuangKu art community, MiLe temple community, NanQiang street 51, MaJie community, ChunYu road community, more than 50 communities, due to the old community in Kunming has more than 900, limited to time, we selected each typical old community for more than two months of research, from every 9-6 o'clock in the morning, from February to April in 2022, completed the project research task. Found in the research in wuhua old community as located at business circle, is more perfect, around convenient transportation facilities and shopping center, traffic time <30min, however, for some old community in west area, for example, ChunYu road community is remote, it is difficult to see around shopping center, bus station distance is far, the main traffic is relying on walking and bike sharing.

2.2. Analysis of Public Space Composition

many public spaces are lack of rest spaces, most of the area is narrow, or is too simple, just have some basic fitness equipment, in addition, the public activity area and the number of community area cannot be proportional relationship, many of them are lack of available public space, or even only one. Even some are no reasonable and standard parking space, some private cars directly stop on both sides of the road or stop randomly, seriously occupying the public area, making the relatively tense area become more tense. The whole found that the old community is only residential buildings, other leisure activity areas seem to be ignored, do not consider people's spare time life. This is a kind of spatial disorder phenomenon, which can lead to the lack of physical activity of residents, resulting in negative health outcomes, is an important factor in the emergence of urban chronic diseases. [8]

2.3. Space Environment Analysis

The public space environment of the old community is relatively limited. In some areas with fitness equipment, some equipment has been damaged and rusted because there is no reasonable regular inspection. For some space without fitness equipment, there are only tables and chairs, which is very simple and can not meet people's needs for healthy life. In addition, these areas did not get reasonable protection, and some

green seems to lack of care and repair, presents a disorderly, dirty, poor phenomenon, not only can not meet the requirements of public health, even threaten the normal health. In addition, the division of public areas is also unreasonable, which does not reflect the diversity and pertinence.

2.4. Summary of the Current Situation and Problems

Through the research, there are many problems to be solved in the public space of the old community, especially involving the health of residents, which has threatened the health of residents, rather than improving the health level of residents.

2.4.1. Lack of Space for Leisure Activities

The continuous improvement of people's living standards and the gradual enhancement of health awareness also increase the requirements for public activity areas. In this space, residents can exercise, release pressure, ensure physical and mental pleasure, and reduce the risk of disease. Moreover, the public activity area is the link between the residents and also symbolizes the public image of the community. However, in the process of research, it was found that some communities have activity space, but some have almost no. Including Yun news community has public activity area, there are mahjong room, but outdoor public activity space is not rich and diversified, just limit and simple table and chair, make residents can rest, for workers. MiLe temple community is no public activity space. There are also public activity areas in Majie community, but most of them have been dilapidated and not improved, and the sanitation environment is not good. For example, Chunyu Road Community has two fitness places, which can meet the general needs of residents, but there still have many aspects to be improved.

2.4.2. Greening of Public Space

The greening in the public space is able to directly affect the life and health of residents. The lack of natural plants in the living environment is easy to cause a variety of psychological diseases, such as common depression and skin disease problems, so there are physical and psychological threats to residents. MiLe Temple community is green but lack of care, Majie community is better overall greening, but without strict correction and planning, Chunyu Road community is an abandoned green space in the area, has not been used, there are many communities are also with greening problems, need timely improved.

Greening is not only a simple grass and tree planting, but also requires artistic design to bring people physical and mental pleasure and protect the physical and mental health of residents. In the process of research, it was found that some communities are green-conscious, but not enough, just some lawns. This artistic landscape is a fundamental factor to create a good living space.

2.5. Environmental Health Problems in Public Space

In the process of research, it was found that another more prominent problem in these public Spaces is the poor health environment, which poses a direct threat to the health of residents. The road is not clean, directly can see the garbage, and even in the corner have garbage heap. This problem is more serious in many old communities. The public space with good environmental quality can promote the exertion of subjective initiative more than the space with poor quality. [7]

2.6. The Cultural Characteristics of Community are not Obvious

The cultural characteristics of the community are formed by the consistent cultural atmosphere. Each community is an independent individual in the city, in the process of communication with other communities reveal the personality of the community. This has improved residents' satisfaction with a better life, increased the enthusiasm for life. In the research of the community public space found this kind of thing is very lack, just conventional activity space, without any characteristics, such as the news community, in the public space is just tables and chairs, without any other cultural characteristics, this problem is in 80% of the old communities.

3. Investigation

3.1. Questionnaire Survey and Analysis

This survey is divided into different communities, a total of 200 questionnaires, including 191 valid questionnaires, 9 invalid questionnaire, in the questionnaire covers the residents of this community public space satisfaction survey, and the need of improvement and whether can meet the needs of personal health movement, finally found that more than 80% of residents are not satisfied with the current public space. (Figure 1, Figure 2)

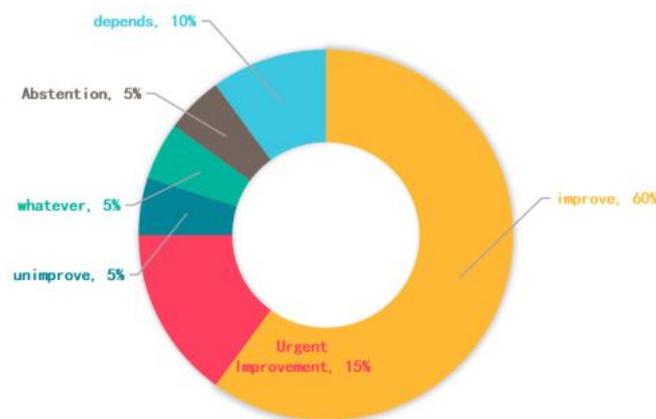


Figure 1. Satisfaction survey.

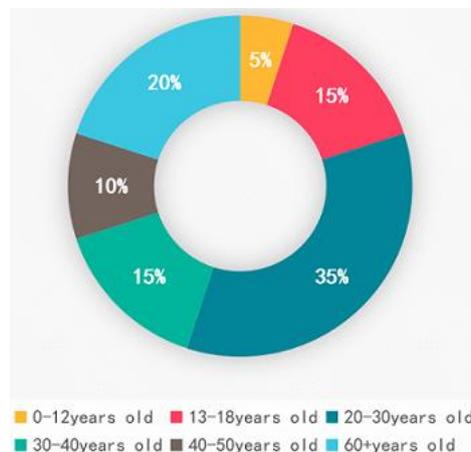


Figure 2. Population survey.

3.2. Analysis of Residents' Behavior Characteristics

In this project, our group conducted several field visits to observe the behaviors of residents, and found that they were tend to the following behavior patterns:

Collective type

This collective behavior mode is mainly manifested in the sports of 3-5 people, such as playing football, basketball and badminton, which requires the participation of many people. This mode generally lasts for about 60min, with low requirements for equipment, and is more dependent on enough sports fields.

Separate type

Individual generally shows alone running or self-exercise, such as the elderly play tai Chi, middle-aged people use equipment for fitness and so on, this has less requirements for the area of the site, more is a separate place can be carried out, will last about 50min.

Viewing type

Most people are sitting in chairs around a public space, chatting for 2-3 people, without any signs of exercise, just keep staying in a place, this behavior mode generally does not last long, roughly around 15-30 min. (Figure 3)

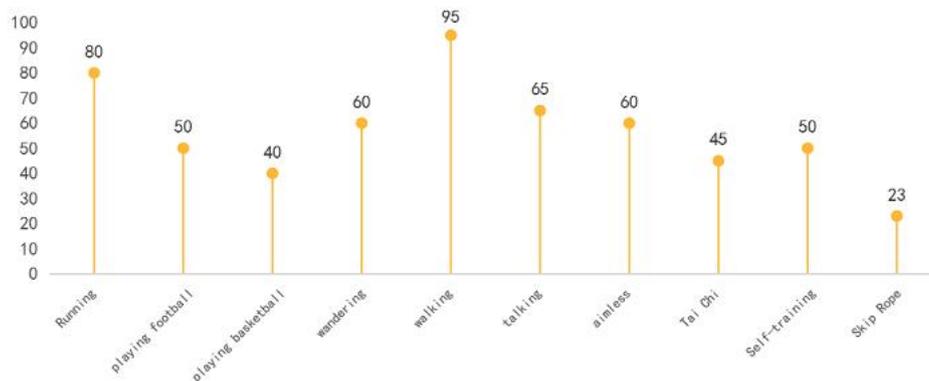


Figure 3. Activity type analysis.

3.3. Analysis of Space Activity Requirements

Public space activity area to be able to have targeted, diversity, can meet the needs of different age groups, The old community uses the crowd mainly is the old age and the child, these two kinds of special crowd to the activity place request is high.[9] in this survey, we will be divided into four age groups, and then extract their activity requirements.

Age of 5-12 years

In this age group, children do more sports, running and jumping, there are no requirements for sports facilities, but it also need some climbing, jumping facilities that it can gather people, since children need to move under the gaze of parents.

Age of 13-18 years old

This group of teenagers choose more collective activities and tend to play football and basketball, so they need to have sufficient basketball courts and football fields to meet their activity needs.

Between 20-30 years old

Young people choose to run more, less strenuous exercise, more jogging or long-distance running, so it is necessary to set up a properly track to meet the needs of such group activities.

Age of 40-50 years old

There are more middle-aged people who choose jogging or taking fast walking, so it is necessary to set up some runways.

Over 60 years old

Elderly people tend to static exercise, so more leisure seats or pavilions is necessary for them.

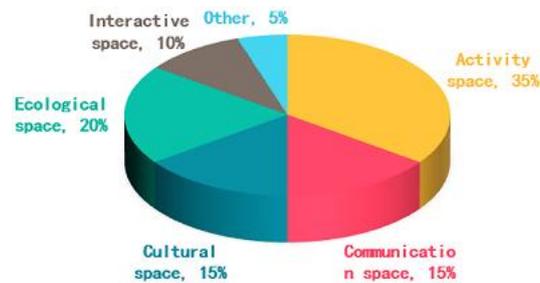


Figure 4. Spatial Demand Analysis.

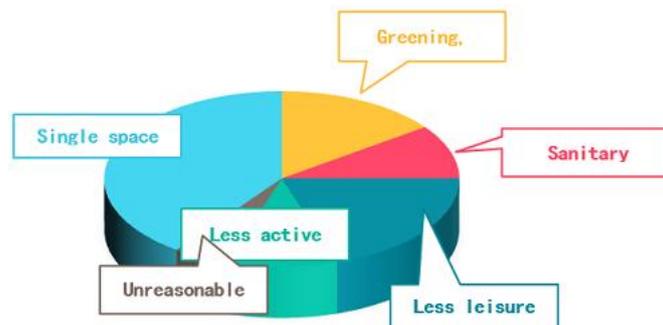


Figure 5. Space Problem Analysis.

4. Strategy

Community is the basic unit of a city and the direct subject of controlling public health hazards. Improving the health and resilience level of the community itself is an important measure to improve the urban public health status. [3] Faced with the increasingly diversified development needs under the background of the new era, the construction of community public space has been given more significance whether from vertical space or horizontal space, from macro or micro perspective or from physical or spiritual level. [4] It is very necessary to study the old community public space in Kunming from the perspective of public health. On the basis of full investigation, the problems existing in the current public space are summarized. At the same time, public health refers to five aspects: physical health, living environment health, mental health, interpersonal relationship health and social adaptation health. Therefore, a public space that can meet people's health should include the following aspects:

4.1. Open Space

Open space refers to the spatial mode that can accept all people into, showing the characteristics of outward, open and sharing. In this space, the communication between people and nature is unimpeded, and people are in a state of voluntary and positive contact with the outside world. For example, in the space of concentrated movement, children jump in the space, run, climbing need to use the track, artificial grass, climbing nets and so on. And adding some interactive space and intelligent space can give virtual rewards to encourage more people to participate in sports, increasing the opportunities for communication between people, and making the sense of community collectivism stronger. However, the open space should also take into account the quality of the surrounding environment. The quality of the space has a direct impact on people's health. Good space quality will induce people to participate in the place sports, and gain a sense of belonging and identity. Bad space quality makes people resist to healthy exercise. [1] Therefore, even the open space in the layout of the surrounding environment, especially the ecological environment is the most direct, the public space around the community greening should be strengthened, and design some landscape or characteristic landscape, plant selection should have diversity and safety, to ensure beautiful at the same time, to ensure the plants in the space will not produce harmful gas on people's health.

4.2. Semi-Open Space

Semi-open space refers to the semi-occlusion through plants or other objects, with a certain privacy. Since people's personality has diversity, it is necessary to have semi-open space in public space in order to ensure the mental and physical health of everyone. Such as the tea house is semi-open for the elderly, what is more, the communication area and rest area is particularly important, this is the lack of many old community. There are many kinds of rest space, among which the most needed rest space is the space used for rest, including some small squares, small platforms and so on. [2] You can also form an independent semi-open space through the height difference processing, or choose to use the occlusion relationship of plant collocation to create, and you can even use transparent materials such as glass to form a space different and different from the surrounding environment. Generally, this kind of semi-open space can accommodate at least 3-4 people, similar to the communication and communication places of small groups.

4.3. Private Space

Private space in public space is less, but its importance should not be ignored, especially in the face of special groups and teenagers, because of this kind of people's personal consciousness is stronger, even in public space do not want to have comprehensive contact with the outside world, hope to be able to have personal space, will give a sense of security. And this situation will also appear in some adults, they also want to find a place to acquire serenity. Especially in some old communities, through research, the elderly are mostly prefer a peaceful environment. Therefore, it is necessary to build some private Spaces only for 1-2 people, such as psychological cultivation rooms, music sanatorium and other healing Spaces.

5. Conclusions

The research on the optimization of public space in old communities in Kunming from the perspective of public health can not only play a role in transforming and beautifying the existing public space, but also give full consideration to the public

health, which helps to enhance the health awareness of residents and improve the health level. It can also improve the ecological environment of the community, and guide people to build a positive lifestyle, so as to restore or maintain physical and mental health. [4] This is a positive response to the “Healthy China strategy”. Starting with the community public space, the public space is gradually improved from the perspective of health, considering the most comprehensive health for the public, creating a public space that satisfies people more, and creating a healthy living environment for people.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

Funding

This work supported by the Scientific Research Fund of the Department of Education of Yunnan Province.

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