



Research Based on the Optimal Allocation of Public Leisure Activities Resources in Existing Residential Areas

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Abstract: Based on the investigation and study on the residents' leisure activities and the status of public leisure activities in the existing residential areas of Dalian, the residents are used from the perspectives of activity time attributes and crowd structure attributes, event location and facility attributes, and event type attributes. The characteristics of public leisure activity resources are analyzed in detail, the status quo problems and the actual needs of residents are summarized, and strategies for optimizing public leisure activity resources in existing residential areas in the north are provided to provide specific references for the renovation and reconstruction of the environment outside existing residential areas.

Keywords: existing settlement, leisure activities, optimization

1. Introduction

In recent years, the demand for leisure and entertainment of Chinese residents has been increasing, and the types and quality of leisure and entertainment resources in existing residential areas have also increased. The Work Plan for Comprehensive Rehabilitation of Old Communities (2018-2020), released in March 2018, proposes that the public areas of the community be divided into basic and optional categories for remediation, including projects such as adding community comprehensive service facilities.^[1]

However, the current situation of residents' leisure activities and the deterioration of resource shortages in existing settlements have caused serious contradictions. The investigation found that the existing residential areas generally lacked cultural and entertainment venues, sports and fitness venues and equipment, children's play facilities and space, and outdoor activity venues where the elderly are concentrated. These phenomena reflect that the current leisure activity resources of existing settlements no longer meet the actual needs of residents, and a systematic and comprehensive transformation is urgently needed.

2. Investigation research plan

2.1 Survey place

This study selected Nansha Community, Taishan Community, and Taihan Community of Shahekou District of Dalian City as the investigation sites. The three communities in this area have a certain number of leisure and sports venues. The population covers all ages and has a certain research representativeness.

2.2 Objects survey and people

The main objects of the survey are public leisure activity resources in the existing residential areas, including concentrated activity venues, scattered activity venues, activity venues, and event facilities.

The survey population covers the population of 0-90 years, and is divided into 0-17 years, 18-40 years, 41-65 years, 66-80 years, 80-90 years, and 80-90 years. The age group's activity behavior and activity needs.

2.3 Investigation process

This survey is divided into three parts. The first is the survey of the current status of public activity resources in existing settlements: including location distribution, scale, number of uses, status of activities, etc. The second is to investigate the characteristics of residents' leisure activities in the existing residential areas: including the basic attributes of the residents (gender, age); the attributes of the time of activities (the period of activities, the frequency of different types of activities); Choice of facilities); Activity type attribute (favorite activity type). The third is a survey of the actual needs of residents for leisure activities: including satisfaction with the status quo and expectations for improvement.

The survey was conducted in the form of field visit records and interviews with questionnaires. A total of 85

questionnaires were distributed and 80 were recovered. The effective recovery rate of the questionnaire was 94.1%. A total of 80 samples were used in the study.

3. An analysis of the status quo of public activity resources in existing residential areas in the north

3.1 General characteristics of public activity resource distribution

In this research area, there are 5 centralized activity venues, several decentralized activity venues, 1 cultural and sports venues, and 1 community activity center.

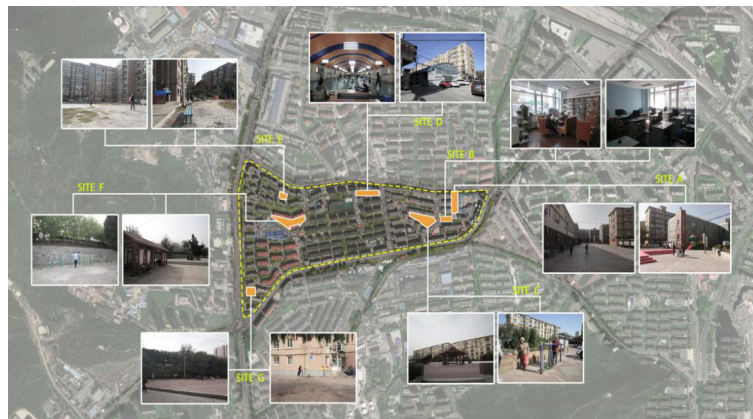


Figure 1. Distribution of public event venues

3.2 Specific usage characteristics of each activity resource

The activity resources in this study area mainly have the following characteristics:

(1) Centralized event venue: Plot A is a red harbor square with little greenery, and is equipped with gazebos, rest wooden chairs, sports activities equipment, cultural publicity bars and other entertainment facilities. The number of activities was large, and the population was mainly middle-aged and elderly and children. The site of Lot B is a hard paved ground with flower beds around the site. It is equipped with a gazebo, rest wooden chairs, sports activities equipment, and cultural propaganda columns. The number of activities is small, and the population is mainly elderly. Site F of the plot is a sunken space with steps, a small amount of greenery, and is equipped with a gazebo, sports activities equipment, and rest wooden chairs. ^[2] The number of activities is medium, with children, youth, middle-aged and elderly people.

(2) Decentralized event venues: The decentralized venues enclosed by the houses are hard paved with 1-2 flower beds, most of which are unmanaged, 1-2 rest seats, no sports equipment, and no children's play facilities. Parking occupies most of the vacant land and has a small number of activities.

(3) Activity venues: a community activity center with a reading room, a small area, two chairs and tables, and a small number of activities, but the activity crowd has a fixed tendency, mainly elderly, some children. A cultural and sports center with 10 badminton courts, with a large number of activities, mainly children and young people.

4. Characteristics of residents in dalian taking leisure activities in existing residential areas as an example

4.1 Activity time and crowd characteristics

On the selection of activity days, 60 people chose to have outdoor leisure activities on both weekends and workdays, accounting for 75% of the total number of people surveyed, and 16 people chose to work only on Saturdays and Sundays, accounting for 20% of the total number of people surveyed. Generally, they work and go to work and school on weekdays. Crowd; 4 people choose to only work on weekdays, accounting for 5% of the total number of people surveyed. Generally, it is a group of people who work on Saturdays and Sundays.

In the selection of the activity time period, the number of activities in the morning gradually increased, reaching a peak at 9: 00-11: 00 in the morning, falling to a trough at 11: 00-13: 00 in the afternoon, and 13: 00-15 in the afternoon 0:00, the number of activities increased again and reached the second peak, fell at 15: 00-17: 00, reached the third peak at 17:

00-19: 00 in the evening, and decreased at 19: 00-21: 00.

In terms of the characteristics of the active crowd, young people aged 0-17 choose to do activities at 15: 00-17: 00 and 17: 00-19: 00, and young people aged 18-40 choose between 9: 00-11: 00 and 17: 00-19: 00. The number of people from 00-19: 00 is high. Middle-aged people aged 41-65 are mostly active at 9: 00-11: 00, 17: 00-19: 00, and 19: 00-21: 00, and elderly people aged 66-80 are at 5: 00-7: 00, 9: 00-11: 00, 13: 00-15: 00, 17: 00-19: 00. There are many activities. Older people aged 80-90 are at 9: 00-11: 00 and 13: 00-15: 00. There are more people at the event.

4.2 Event venue facilities and event type characteristics

At the event site, the centralized event venue is the choice of most people, and the scattered event venue is the choice of 66-80 years old, especially the 80-90 years old. The reading room of the community activity center is mainly elderly people on weekdays.^[3] Children will take a half-day vacation on Wednesday afternoon to learn and read. In activity facilities, fitness equipment facilities are used more frequently, especially among the elderly. Slides and swing facilities are most popular with children.

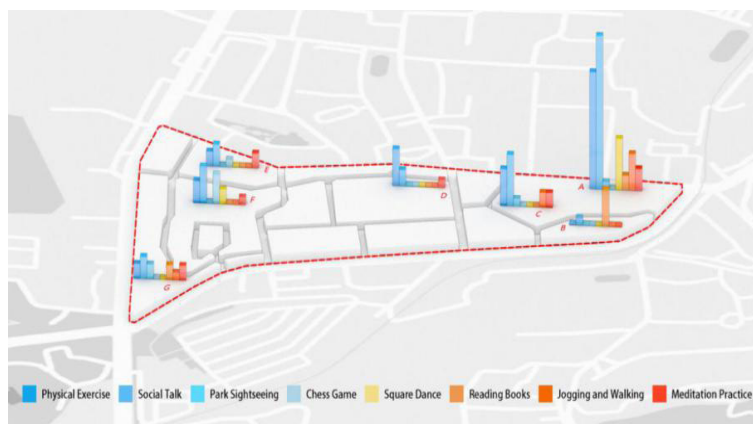


Figure 2. Distribution of outdoor activity types of people in different plots

In terms of types of activities, residents are mainly physical exercise, social chat, jogging, walking, sitting and recuperating, and some will perform square songs and dances, chess and card games, park games, etc., and reading newspapers account for a relatively small number.^[4] In the distribution of different types of activities, children are mainly play. Young people aged 18-40 are mainly engaged in physical exercise and social chat. Middle-aged people aged 41 to 65 are involved in all types of activities. 66-80-year-olds choose more physical exercise and social chat. 80-90-year-old seniors are mainly social chatting, meditation, walking, reading newspapers.

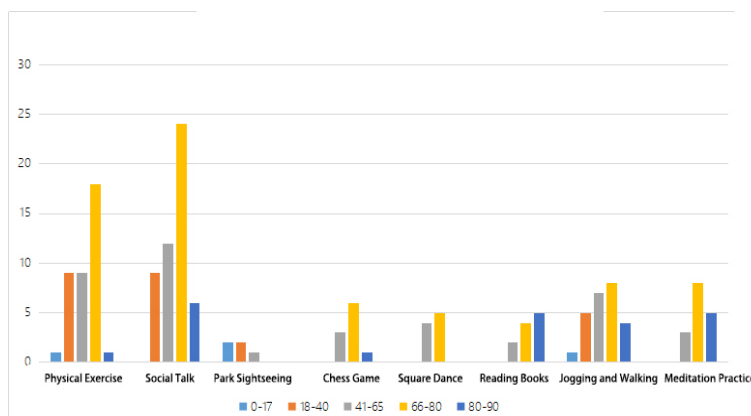


Figure 3. Distribution of outdoor activity types in different age groups

From the perspective of time distribution, residents mainly exercise and social chat in the morning, physical exercise, social chat, jogging and walking in the morning, social chat, physical exercise, board games, meditation and rest in the afternoon, and socializing in the evening. Chat, physical exercise, jogging and walking.^[5] In general, social chat and physical exercise are the main activities, followed by jogging, walking and meditation, and others are supplemented.

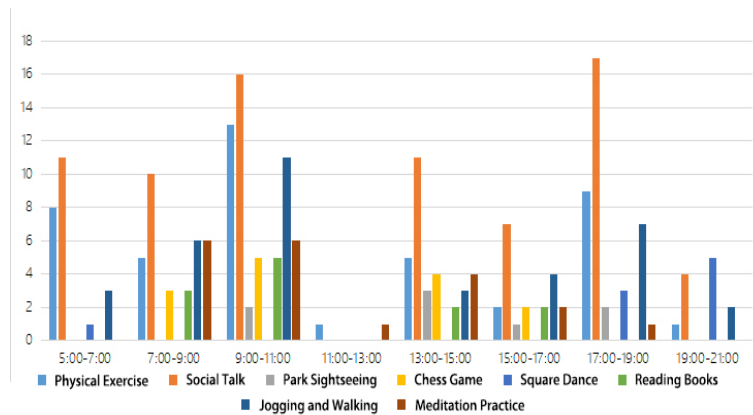


Figure 4. Distribution of outdoor activity types at different time periods

5. The actual demand and optimization strategy of residents' leisure activities in Dalian

From the time of the activity and the crowd, in the morning, it is mainly for the elderly, there are activities for all ages in the morning and afternoon, and at noon is the trough for all ages, reaching a peak at night. Therefore, considering the time and tide of activities of different groups of people, the primary school playground in the residential area can be opened after school evenings and on weekends for residents' leisure use.

From the perspective of the venue and facilities, the needs of children's facilities are slides, swings, and spacious open spaces for running and cycling. Soft paving must be considered. The majority of the parents accompanying the children are the elderly, and they need to set up a rest seat in the parent accompanying area.

The needs of young and middle-aged people are the requirements of sports fitness equipment and walking venues. The number and uniform distribution of equipment should be guaranteed on the fitness equipment, and regular maintenance should be performed. In the community's sports activity center, it is possible to consider the addition of swimming pools, ball stadiums and other rich venues. The promenade should take into account the diversion of people and vehicles, and be well-arranged with landscape plants.^[6] The site should be open and try not to intersect with other activities.

The needs of the elderly are safe and accessible venues and seating facilities. The distribution of rest seats should take into account both concentrated and scattered activity venues to facilitate the use of the elderly, and should also be equipped with sports equipment. The activity site should not be occupied by parking, to ensure the safety of the active crowd, and the surrounding green space should be regularly maintained to avoid degradation caused by unattended care. At the same time, in terms of activity types, community organizations can carry out activities such as singing, dancing, reading, and chess that the elderly love.

6. Projects fund

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