Using Space Syntax in Close Interaction Analysis between the Elderly: Towards a Healthier Urban Environment

Yingyi Zhang *, Zhaqing Wu, Zeyang Wu, Yadi Liu and Zhenze Yang

School of Architecture and Urban Planning, Beijing University of Civil Engineering and Architecture, Beijing 100044, China
* Correspondence: zhangyingyi@bucea.edu.cn; Tel.: +86-159-2179-3823

Abstract: Population aging has become an issue that the world should to face together. Public spaces in urban areas play an important role in stimulating social interactions for the elderly, especially close social interactions. Although a volume of studies have focused on the health of the elderly and the shaping of urban space, they have neglected the need for close social behavior of the elderly group. This analysis addresses the question: What are the principles to improve public space qualities which facilitate age-friendly social interactions for the elderly? Blind-dating activities in Beijing City work as an example of close social interactions between the elderly. Methods include a case study in Beijing, field survey, and Space Syntax with related tools. The survey took place from 1 July to 30 September 2022. Around 102 elderly men and 84 women aging from 55 to 75 participated in the survey process. Results indicate that the close social interaction can positively comfort the elderly’s physical and psychological situations. It could be a path for the single elderly group meet a partner, make new friends, and establish new social networks. Consequently, three principles, including obtaining the safety of public space, keeping greenery in the social environment, and providing suitable space for close social interactions are proposed towards age-friendly urban areas. These support the regeneration of the elderly’s social life and stimulate a chasing of happy later lives.

Keywords: aging society; close interaction; elderly; public space; urban environment

1. Introduction

Nowadays, aging has become an essential issue that brings challenges regarding economic sustainability, health, and social systems’ maintenance [1]. Population aging, in general, refers to the process of increasing the proportion of the elderly in the total population. For example, the population aged 65 and above in China has reached more than 190 million in 2021, accounting for 13.5% of the total population, in which aged women make up a larger proportion than men [2]. It is believed China’s transition from an aging society to a deeply aged society will take over 20 years, evolving about half a century faster than the average speed of developed countries [3,4]. Population aging has led to the shrinking of workforce scale and the downward pressure on the economic performance of “old before rich” [5]. Worse situations may arise in the industrial field. The reliance on young laborers is possibly in conflict with the reality of an aging workforce. The change in labor supply pattern, economic operation cost, and consumer demand affect the stability of the financial system and economic growth potential [6]. Accordingly, focusing on the living conditions of the elderly is not only a need for human care and social stability, but also a need to find new industrial growth points.

In an increasingly urbanized society, and particularly in light of the recent global pandemic, there is an acknowledgment that the design of urban spaces can have a considerable impact on health and wellbeing inequities [7–10]. This paper investigates an elderly groups’ blind-dating activities in Changpuhe Park, the Temple of Heaven Park, and Longtan Park in Beijing. The requirements of close social interactions are analyzed according to the...
investigation alongside a series of public space evaluation works to indicate the public space’s characteristics and qualities. By analyzing the elderly population’s requirements and public spaces’ offerings, novel principles of regenerating public space are proposed for a healthy and caring urban environment.

2. Literature Review

Current studies on the social life of elderly people in urban environments includes various aspects. According to Zhou (2018), there were a large number of residential areas with complex environments in Chinese metropolises, among which the unbalanced allocation of pension facilities and the chaos of the walking system lead to a lack of soundness [11]. The elderly population’s demand for pension services was affected by the built environment of residential areas, which may lack a comprehensive support system especially for elderly people. Therefore, reasonable planning of elderly care services and the construction of walking systems in communities become the issues that should be addressed. Curla (2015) believed that the role of the built environment in facilitating physical activity was well-recognized; however, longitudinal studies into the effects of changes to the built environment on levels of activity and quality of life outcomes are lacking, especially for elderly people [12]. She proposed “home zone” style changes to residential streets, designed to make streets more livable by reducing the dominance of vehicular traffic and creating shared space. Borst (2008) described the relationships between the perceived attractiveness of streets for walking along and physical street characteristics, and indicated that walking was more important than other transportation means for the health of elderly people [13]. According to this former research, the elderly population’s living conditions have deep relationships with spatial structure. Additionally, variables were explored that affect the characteristics of a healthy environment, including climate, built environment, accessibility, and facilities, for the elderly people in urban communities. Public space could provide essential places for both mental and physical health on the basis of empirical investigation and observation [14]. Meng (2020) took Macau as an example to analyze the relationship between the elderly and urban space. He concluded that in the areas with aging trends, street openness, greening rate, and interface closure were positive elements to the elderly population as well as urban space-shaping [15].

Social interaction has been severely disrupted due to the outbreak of COVID-19. People were more inclined to prevent virus invasion and spread by reducing social activities. According to Tokazhanov, Tleuken, Guney, Turkyilmaz, and Kataca (2020), the COVID-19 pandemic is bringing about changes, and people can alter the way of designing living spaces [16]. For elderly groups, anxiety, depression, poor sleep quality, and physical inactivity were emerging during the isolation period [17]. Social interaction happened through using apps, online videos, or telehealth [17]. According to the US Centers for Disease Control and Prevention, loneliness and social isolation in older adults are serious public health risks affecting a significant number of people and putting them at risk for medical conditions [18]. With the development of a COVID-19 control situation, the reshaping of the physical environment may reduce the social isolation caused by the epidemic and improve the physical and mental health of the elderly [17,19].

With continuous research expansion and constantly changing aging situations, scholars evaluate urban environments from the perspective of health in comprehensive ways. It is widely accepted that exposure to green space, including urban green space, has health-promoting effects for humans [20]. Health and wellbeing are partly shaped by the neighborhood environment [21]. Green-space-shaping has the potential to describe and analyze the aspects of urban green space that have benefits to human health [22,23]. According to Pulgar et al., planning processes and visions, urban development goals, and neighborhood socio-material structures moderate the effect of green amenities on relational well-being by directing how these spaces are used [24]. A series of planning measures have been analyzed to encourage elderly people’s social participation in the metropolis. For instance, expanding blue and green space may bring positive influences to the mental
and physical health of elderly people by attracting them to go to public areas [25,26]. Optimizing the spatial planning of urban parks works as a way to improve the elderly’s public activity [27]. Black (2020) explored healthy aging from the perspective of community living. The research showed that the elderly population’s views on the characteristics of a built environment (space) varied with different health and family statuses, as well as age and income [28]. The availability of accessible healthcare facilities for the elderly is an essential requisite for a high quality of urban life [29]. The continuous growth of the proportion of elderly people may increase the demand for age-friendly communities to satisfy the requirements of elderly people. Hence, urban services need to be properly improved. The types of services, the transport system supply, and the urban morphology are some of the main features influencing users’ accessibility to urban services [30].

Beijing, the capital of China, works as an example to pursue the social requirements of the elderly population in an aging society and the close interaction of elderly people in public spaces in metropolitan areas. At the end of 2021, the resident population aged 60 and above in Beijing was 4.416 million, accounting for 20.18% of the total resident population [31]. People aged 65 and above have reached 3.116 million, accounting for 14.24% [31]. This means Beijing has entered a medium aging society. The population of Beijing has been growing continuously. Meanwhile, the pressure of population aging in Beijing may increase significantly with the combination of various factors, such as the total population control brought by the decentralization of the non-capital functions policy and the slowing down of the inflow of immigration from other provinces [32]. A volume of studies using combinatorial models has also indicated that the level of population aging was likely to deepen in the next decade in Beijing. Today, Beijing is in a state of aging development, and its urban development is finding a new age-friendly growth mode. Thus, this research takes Beijing as the site to explore the social interaction requirements of the elderly in an aging society and the relationship between close social interactions of elderly people and public spaces towards a healthy metropolitan environment.

There is a substantial body of literature on the relationship between the social life of elderly adults and urban environments [33–35]. Nonetheless, there is limited research on the elderly population’s close social interaction, not just saying hello when meeting on streets in public spaces. There is a research gap regarding what the ideal public space looks like to fulfill the requirement of the elderly’s close interaction activities. Thus, this research limits the analysis range to the close interaction between the elderly in public spaces and uses their blind-dating activities as the object. It addresses the gap by observing and surveying the elderly population’s close interaction activities and requirements using Beijing as a case. Close interaction normally happens in private spaces, such as individuals’ own houses, while blind-dating activities, a new social phenomenon between elderly people, has become a trend in parks and gardens in Beijing. The occurrence of this phenomenon is due to the fact that divorced or widowed elderly groups needs more emotional care and company. They could be more worried about living and dying alone. Additionally, society’s acceptance of blind-dating activities between the elderly has become higher. Traditional Chinese marriages need to be faithful to husband or wife to the end. Today, people are able to understand and accept single, divorced, or widowed elderly people taking part in blind-dating activities. The research has two major targets. One is an analysis of the characteristics and requirements of close interactions, such as blind-dating, in public spaces between the elderly. The other is outlining principles for shaping an age-friendly public space towards an enhancement of the elderly population’s social interaction. The research question was: What are the principles to improve public space qualities to facilitate age-friendly social interaction for the elderly population? The potentiality of public space to promote an age-friendly urban environment is explored, assessing the facilitating of social integration for the health of elderly groups in urban areas. This study contributes to the improvement in the social interaction and well-being of the elderly, caring about the mental health of the elderly in an aging society.
3. Materials and Methods

The methodology limitation contains a survey between target elderly groups and spatial analysis of selected parks in Beijing based on Space Syntax. In Phase One, a field survey in Changpuhe Park, the Temple of Heaven Park, and Longtan Park was launched to collect survey data. The three parks were selected as they are all relatively popular places for elderly blind-dating in Beijing. Around 102 elderly men and 84 women aging from 55 to 75 participated in the survey process. They are blind-dating participants in the selected parks from officially organized groups or unorganized groups. The survey took place over 3 months from 1 July to 30 September 2022. The methods of behavior observation and semi-structured interviews were used during data collection. The main purpose of this phase was to understand the behavior characteristics, paths, and specific needs of close interactions for elderly blind-dating groups. As mentioned above, a quality public space could provide a suitable environment for the elderly’s social behavior, which is beneficial to their physical and mental health. Through data collection, the use of public space and preference of the elderly can be obtained. The results provide the basis for public space analysis in the next phase.

In Phase Two, a spatial analysis based on Space Syntax was performed. The research selected Changpuhe Park, which contains the largest blind-dating elderly groups compared with the other two parks, for in-depth analysis. The main purpose was to digitally analyze the public space characteristics of the blind-dating space and evaluate the accessibility, safety, and environmental quality of the space. Through the two phases, the behavioral rules of blind-dating for the elderly and corresponding public space optimization measures can be obtained comprehensively. They can support improvements in the quality of social interaction of the elderly population, enhance physical and mental health, as well as create an age-friendly urban environment.

3.1. Data Collection

Data collection methods mainly included behavior and semi-structured interviews. Thus, the characteristics of blind-dating between the elderly and their demand for public space design can be received. The observation method is the process of scrutinizing and describing the social interaction behavior [36]. It works to understand a series of dating behaviors of the elderly in urban spaces from acquaintance to determination of the couple relationship, so as to judge the usage of public space. The semi-structured interview method was used to gain a deeper understanding of the elderly blind-dating groups. While a structured interview has a rigorous set of questions which do not allow one to divert, a semi-structured interview is open, allowing new ideas to be brought up during the interview as a result of what the interviewee says [37]. In this phase, the semi-structured interview worked to analyze the attitude and willingness of the elderly blind-dating participants from the perspective of life, health, emotion, and family economy.

3.2. Space Syntax Analysis

Space Syntax is a method for the analysis of spatial configuration. As Space Syntax has evolved, certain measures have been found to correlate with human spatial behavior, and it has thus come to be used to forecast likely effects of urban spaces on users [38]. In the context of Space Syntax, spaces consist of different components. The components can be regarded as maps and graphs to indicate the connectivity and integration degrees using network choices. This research used Space Syntax to explore public spaces for the aspects of connectivity, accessibility, and visibility. According to the works of Lotaora and Porta, a series of interdisciplinary research has highlighted Space Syntax’s contribution to decades of previous studies in the physics of spatial complex networks [39,40]. DepthmapX was chosen as the analysis tool. It is an open source and multi-platform spatial analysis tool for spatial networks of different scales [41]. This tool focuses on various scales from buildings to urban areas. At each scale, the aim of the software is to produce a map of
spatial elements and connect them via a relationship (for example, visibility, intersection, or adjacency), and then to perform a graph analysis of the resulting network [42].

The methodological framework is shown in Figure 1.

Figure 1. Methodological framework.

4. Results
4.1. Field Survey Result: Close Interaction Activities and Requirements of Elderly People
4.1.1. Stages of Blind-Dating Activities

According to the field study, it was found that the elderly’s close interaction activities, for example, blind-dating activities, generally have four stages. Firstly, the elderly dating groups exchange basic information to select an appropriate dating partner. This activity happens in public spaces, such as squares, pavilions, or landscape corridors. Basic information for blind-dating matching generally includes marriage condition, age, education, job, household condition, and health condition. As a semi-opened organization, an elderly blind-dating group tends to have one or two organizers. The organizers are responsible for classifying the basic information and matching the appropriate dating candidates quickly. Secondly, the elderly blind-dating participants start to attend a variety of social activities, including chatting, playing chess, leisurely walking, square dancing, etc., to more deeply understand each other. These activities happen in public space as well with group social characteristics. Different social activities indicate the blind-dating participants’ interests and hobbies. In the early period of blind-dating, the main purpose is mutual choice and to determine the potential dating person. In most cases, multiple men may keep social contacts with the same woman. During the third stage, elderly participants learn more about each other in a relatively private way. It is mostly one-on-one communication in order to deeply know one person. After full understanding, the fourth stage often leads to dating results. If participants choose to continue their relationship, they are more likely to become friends, lovers, or even get married. If they decide to end everything, this blind-dating activity is over. This result may be led by reasons such as economic conditions, big differences in personalities or habits, different attitudes to marriage, or children’s opposition.

4.1.2. Blind-Dating Requirements of Elderly People

- Requirements of the blind-dating process

The elderly participants need a mature and formal dating process to ensure safety and regulation. Considering the physical and mental health situation of elderly groups, they could not react and judge as sensitively as young people. Their ability to control social risks is lower than that of youth, especially during blind-dating. Thus, elderly participants of blind-dating activities need a mature matchmaking mode to meet a suitable partner, and meanwhile, avoid fraudulent money or emotions.
• Requirements of the blind-dating space

Due to a variety in the elderly’s personalities and preferences, the blind-dating experience could be diversification. About 72% of participants tend to prefer relatively private areas in public spaces to process blind-dating activities. They chase safe, quiet, and romantic environments to find a dream partner. There is no doubt that a suitable space and atmosphere can provide a pleasant interaction experience to the elderly blind-dating individuals. It can be indicated that the elderly participants focus on the built environment of public spaces, not too open or too private, to support their close interaction. The quality of the blind-dating space could be an essential element to avoid fraud, rape, or other crimes.

• Situation of public spaces for blind-dating

The blind-dating space for the elderly in Beijing is mainly distributed in the central urban area. Most of these spaces are concentrated in the second Ring Road, and some are scattered in the major parks within the fifth Ring Road. Outside the fifth Ring Road, there is a lack of blind-dating spaces for the elderly. The characteristics of the elderly blind-dating space are mainly related to the form of the park. The elderly population’s blind-dating space is set in combination with the park as the carrier. Urban parks’ comfortable natural environment and relatively open social attributes provide a better blind-dating space for the elderly. According to the arrangement of dating information and the distribution of elderly blind-dating groups, it can be summarized as three spatial forms of blind-dating.

Linear spatial form—represented by Changpuhe Park. The park presents a linear spatial form, and the overall space has certain limitations, which makes the communication space of the elderly expand and the social distance narrow.

Gathered spatial form—represented by the Temple of Heaven Park. Because the area of the park is relatively large and the crowd density is low, most of the elderly people choose the gathering space to make friends. In the space, people are distributed in dots, which will easily generate circles of acquaintances and form fixed spatial positions.

Scattered spatial form—represented by Longtan Park. This park is relatively large. Compared with the previous two parks, it has a wider distribution of public space and interaction areas. The blind-dating space for the elderly participants appears to be more scattered. Blind-dating partners are more likely to walk or sit around with their target partners. This kind of park with large areas creates a greater physical distance between older groups. This may lead to a certain degree of isolation for the elderly participants, especially the shy ones. Typical linear spatial form, gathered spatial form and scattered spatial form are indicated in Figure 2.

![Figure 2. Spatial forms in the selected parks.](image)

The main infrastructure of the blind-dating space includes chairs, pavilions, squares, and greenery. Due to the different sizes of each blind-dating space, the infrastructure in the space is also different. For example, chairs are shown as scattered distribution and pavilions as point or corridor distribution. It is found that the actual space used by the elderly population’s blind-dating is not crowded with too many tourists. Greenery is favored by blind-dating participants.
4.2. Space Syntax Result: Analysis of Public Spaces for The Elderly Population’s Blind-Dating

Space Syntax analysis is a digital analysis process according to basic data collection and arrangement. The field survey found that Changhuhe Park has relatively the most frequent and longest history of blind-dating activities for the elderly population. Therefore, the public space of Changhuhe Park was selected as a case of spatial analysis. The inner relationship between the shaping of social interaction space and behavioral activities of the elderly can be represented.

- Convex space analysis

According to the research of University College London, public space in urban areas can be represented as convex maps in which streets and squares are treated as convex spaces and adjacent accesses as links [43]. The integration degree is used to describe the distribution degree of each node in the space system. It reflects the total steps required to traverse other points in the space from one point. The higher the integration degree is, the better the spatial accessibility is and vice versa. According to the different topological steps, the degree of integration can be divided into global degree of integration and local degree of integration. Through a study of the crowd distribution in the park, it was found that the accessibility of the park space is positively related to the attraction of the place to tourists.

Based on the integration of convex space analysis, the higher values measured represent warmer colors, and the lower values measured represent cooler colors (Figure 3). Compared with the overall integration, the space with the highest integration value is distributed in the middle and north side of the Changpu River and the space along the street, indicating that it has good accessibility to all spaces in the system (shown as red color). The integration of each independent node space is relatively low and independent, such as the scattered areas in the south parts in the dark blue color. It can be summarized that the landscape road on the north side of the Changhai River has the highest overall integration. Public spaces with rivers, flat paved alleys, and greenery may attract the elderly population’s blind-dating activities.

![Figure 3. Result of convex spatial analysis.](image)

- Visibility analysis of public space

Visibility analysis is essential in shaping elderly friendly public spaces in urban areas. A pleasant visible space helps the older population feel safe and ready to engage in social interactions, even close ones [34]. Conversely, venues with poor visibility may lead to hidden risks that put the elderly groups in danger. Once emergencies occur, it is difficult to be rescued or call for help. According to the Space Syntax method, the warm color in
digital calculation images means this area can be seen easily. It has good visibility. The cold color means this area is hidden to some extent. It presents private characteristics.

As presented in Figure 4, the visibility space analysis shows that the landscape road on the middle north side of the river is the leading axis in the spatial organization structure of Changpuhe Park (shown in red color). The red area extends from the axis to the west and east sides, and defines the spatial layout of the park—fishbone space. The important public spaces in the north of Changpuhe Park are closely connected with the leading axis. The location and organizational form of public spaces in the park are the leading factors in the formation of blind-dating activities.

![Figure 4. Result of visibility spatial analysis.](image)

- Concentration analysis of public space

Three intersections of the road on the north side of the park and sidewalks are set as the pedestrian exit. According to this situation, the concentration of people flow was analyzed. The higher values measured represent warmer colors, and the lower values measured represent cooler colors, as shown in Figure 5.

![Figure 5. Concentration analysis result.](image)

According to the colored concentration analysis image, it can be summarized that although greenery systems in public spaces can bring a pleasant environment for social interaction, it sometimes produce disadvantages. For example, in the blue parts of Figure 5, shrubs may have a more pronounced view blockage. Landscape vignettes, pavilions, and other spatial entities also have a certain negative influence on visibility. Grassland and trees have a minor effect on view blockage, whereas shrubs have a more noteworthy effect. Overall, it can be indicated that the warm color areas, such as red, have better visibility and are in the middle of the space, while the cool color areas, such as blue, form more visibility blocking areas from the center of the better visibility area to the outside behind the shade, and the visibility blocking areas indicate obvious size differences with the size of the space entity.
5. Discussion

According to the former study, it is believed that quality public spaces in urban areas are a significant opportunity to encourage the elderly to interact socially [36,44]. By 2050, the population over 60 years of age will double [45]. However, many cities are not prepared or designed to accommodate the physical limitations of older adults [46]. As the elderly population continues to rise, local government departments, urban planners and designers, and developers need to fully consider the physical and emotional requirements of the elderly population and incorporate the concept of all-age friendliness in the shaping of public space. The individual maintains his or her socio-cultural life in public spaces with the experiences and activities in these spaces [47]. In addition to the elderly, other vulnerable groups, such as children’s groups, also need to be cared for by urban space researchers and practitioners to ensure spatial justice to promote healthy social interaction.

The social interactions of the elderly, especially close social interaction, require not only the individuals’ communication, but also a suitable space provided by the urban environment. Compared with younger groups, the elderly generally need more emotional care from society. They may possibly be in a state of retirement, and meanwhile have lost their former social communication organizations and objects. There is a need to find new social interaction activities by themselves and re-establish a new social network. Many elderly people have to leave their family and original circle of friends. They come to urban public spaces to seek possible social contacts. Taking the elderly blind-dating as an example, it is usually necessary for the blind-dating participants to actively strike up a conversation to break ice. This step is not easy for many elderly people. It may be due to the inferiority complex of being separated from their original social network, or the unfamiliarity with the new social interaction and person that brings self-defense. After realizing the initial understanding, the elderly blind-dating participants also need to use a variety of social interaction paths, such as doing sports, playing chess, or chatting, etc., to deeply consolidate the social interaction and make it last as long as possible. These behaviors take place in public spaces, including parks and squares [36]. The shaping of urban public spaces provides a built environment for the social interaction of the elderly. According to Yung’s research, elderly people consider social and physical activities, community life facilities, and services and social networks, as well as a clean and pleasant environment to be their most important needs [48].

Whereas declines in physical, sensory, and cognitive function are common with advancing age, social functioning remains malleable and responsive to intervention throughout life [33]. The level of social interaction of the elderly is various, and so is the emotional comfort and the use of urban space. A nodding acquaintance generally does not need a specific public space. It can happen in any street, shop, restaurant, etc., that one encounters by chance. This kind of superficial social interaction may not bring much emotional comfort or have a significant impact on the daily social interaction needs of the elderly. In-depth social integration, such as making close friends or blind-dating, requires longer time and well-shaped places, such as urban squares, gardens, and tree-lined streets and alleys. This kind of close interaction has a relatively greater impact on the physical and mental health of the elderly. It is also the main content of age-friendly urban space shaping. This research propose a series of principles to shape age-friendly public spaces in urban areas towards an enhancement of the elderly population’s close social interaction.

The first principle is obtaining the safety of a public space. In previous studies, the behavioral safety of the elderly has been mentioned many times [35,49,50]. Creating a safe environment for social interaction has become a consensus in urban planning and design research. However, previous research mainly focuses on the safety of service facilities, land paving, ramps, etc., and seldom relates to the psychological security of the elderly population’s social interaction. This research proposes that the safety of public space design itself can fundamentally determine the safety of space users more than the addition or subtraction of some safety facilities. According to the digital simulation results of this study, the social security of the elderly relates to the accessibility and visibility of public spaces.
More public service facilities should be introduced into the public space design for places with quality accessibility and visibility. This measure could shape or reshape the core zone of social interaction activities for the elderly, thereby increasing the elderly population's safety. The judgement of accessibility and visibility conditions could be launched by using Space Syntax tools combined with field investigation.

The second principle is keeping greenery in public spaces. The extent and availability of urban green spaces are often considered among the most critical indicators of the quality of life and environmental sustainability of urban areas [51–53]. As mentioned above, green systems could provide a suitable environment for the social interaction activities of the elderly, especially the close social interactions. Green plants in public spaces are an important element that the elderly tend to get close to. Nevertheless, overgrown greenery can create visual obstructions. The number of green plants may be not as high as possible. It should be fully considered the seasonality of green plants and the size of their mature period. Tall plants could block sight line, which is not conducive to safety. The elderly have a strong preference for safe spaces. The selection and preservation of green plant species need to be integrated into the care of the elderly. This research suggests choosing low shrubs and ornamental flowers instead of tall trees to promote social interaction in public spaces.

The third principle is providing more public spaces for the close social interactions of the elderly. Social interaction spaces are significant for elderly groups, as they provide places for seniors to integrate into modern society and know what is happening in this era. Taking Beijing’s blind-dating behavior as an example, there are about 12 blind-dating corners in the urban area. The number is too low to meet the elderly population’s social interaction needs. Some of the blind-dating corners are far from the residences of many blind-dating participants. Blind-dating corners are not only places for the elderly to find a partner, but also for single elderly groups to meet new friends and establish new social networks. Considering the behavioral characteristics and emotional needs of the elderly, more public spaces suitable for close social interactions should be planned around the residential communities of the elderly.

This study proposed three principles for facilitating age-friendly public spaces for close social interactions between elderly individuals. The results are based on the case study of Beijing. Future studies can be expanded in many aspects. For example, from the perspective of the behavioral needs of the elderly, the specific impacts of urban space-shaping and environment generation on the physical and mental health of the elderly in urban areas should be explored. The research extension could promote the growth of an all-age-friendly urban society and sustainable development.

6. Conclusions

As age and mindset change, older adults may not be as active, exuberant, and assertive in their social interactions as younger adults. However, the elderly population’s desire for social acceptance has not diminished. Being closely connected with society and obtaining certain emotional feedback are basic life demands of people of all ages. It is often ignored by urban planners or designers when they shape urban public spaces.

This study explores the needs of the elderly for intimate social behaviors, taking Beijing’s elderly blind-dating participants and blind-dating space as an example. Urban space provides places for the close social interaction of the elderly. It directly affects the quality of social interaction. Through data collection and digital analysis, this study puts forward three principles for shaping public spaces, namely ensuring safety, greening, and suitable public space planning. According to Yung’s research, it is a challenge for urban planners, designers, and architects to establish comfortable environments that are inclusive and caring to their residents, especially to elderly people [38]. Public spaces in urban areas support the regeneration of the elderly population’s social life and stimulate a chasing of happy later lives. On the basis of this paper, future research can be deepened in terms of elderly people’s social requirements as well as urban public space design. To study the
elderly’s social requirements, elderly groups could be divided into multiple age layers. It could be significant to explore more deeply the diverse social needs according to the characteristics of the elderly of different ages. For a public space design study, it could be based on the needs of the elderly to conduct in-depth research on the design guides and methods of urban public space, so as to make urban spaces more humanistic and become the material basis for promoting a friendly society for all ages.

**Author Contributions:** Conceptualization, Y.Z.; methodology, Y.Z., Z.W. (Zhaoqing Wu), Z.W. (Zeyang Wu), Y.L. and Z.Y.; software, Z.W. (Zhaoqing Wu) and Z.W. (Zeyang Wu); validation, Y.Z.; formal analysis, Y.Z.; investigation, Z.W. (Zhaoqing Wu), Z.W. (Zeyang Wu), Y.L. and Z.Y.; resources, Y.Z.; data curation, Z.W. (Zhaoqing Wu), Z.W. (Zeyang Wu), Y.L. and Z.Y.; writing—original draft preparation, Z.W. (Zhaoqing Wu), Z.W. (Zeyang Wu), Y.L. and Z.Y.; writing—review and editing, Y.Z.; visualization, Y.Z., Z.W. (Zhaoqing Wu) and Z.W. (Zeyang Wu); supervision, Y.Z.; project administration, Y.Z.; funding acquisition, Y.Z. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research was funded by “the Beijing Municipal Education Commission, grant number KM202110016017” and “the Pyramid Talent Training Project of Beijing University of Civil Engineering and Architecture, grant number 01082722012”.

**Conflicts of Interest:** The authors declare no conflict of interest.

**References**

7. Cassarino, M.; Shahab, S.; Biscaya, S. Envisioning happy places for all: A systematic review of the impact of transformations in the urban environment on the wellbeing of vulnerable groups. *Sustainability* 2021, 13, 8086. [CrossRef]
15. Meng, L.; Wen, K.H.; Zeng, Z.; Brewin, R.; Fan, X.; Wu, Q. The impact of street space perception factors on elderly health in high-density cities of Macau—Analysis based on street view images and deep learning technology. *Sustainability* 2020, 12, 1799. [CrossRef]


24. Perez del Pulgar, C.; Anguelovski, I.; Connolly, J. Toward a green and playful city: Understanding the social and political production of children’s relational wellbeing in Barcelona. Cities 2020, 96, 102438. [CrossRef]


**Disclaimer/Publisher’s Note:** The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.