Article

Community Perceptions about Participating in Urban Park Establishment in Ulaanbaatar City, Mongolia

Bayarmaa Enkhbold [1],* and Kenichi Matsui [2]

[1] Graduate School of Life and Environmental Sciences, University of Tsukuba, Tsukuba 305-8577, Japan
[2] Faculty of Life and Environmental Sciences, University of Tsukuba, Tsukubai 305-8577, Japan; matsui.kenichi.gt@u.tsukuba.ac.jp
*   Correspondence: ebayarmaa@must.edu.mn

Abstract: Urban parks are essential for communities to maintain and improve health, culture, and quality of life. However, Ulaanbaatar, the capital of Mongolia, faces a shortage of urban parks due to overpopulation and unplanned land use. A good community-based strategy can help urban park planners and decision-makers understand residents' needs. It can also improve livability and the urban environmental conditions at large. This paper attempts to understand residents' perceptions about participating in urban park establishment and maintenance. As the past studies showed a lack of community participation in urban planning in Ulaanbaatar, it attempts to determine the extent to which residents perceive urban park benefits, the importance of community participation, preferred types of contribution, and willingness to contribution land in establishing urban parks in their neighborhood. In doing so, it identifies socio-demographic factors that influence their willingness to participate and contribute. A total of 600 paper-based questionnaires were randomly distributed among ger and apartment residents, and only 535 were analyzed. The result shows that approximately 73% of the respondents considered community participation very important for establishing urban parks in their neighborhood. Most respondents perceived urban park benefits as playgrounds for children, and relaxation and recreation. Respondents' education and housing type were found significant in overall willingness to participate in park establishment and maintenance, whereas marital status and land size were observed statistically significant in the willingness of sharing some portions of their lands for park establishment in the ger area.

Keywords: ger residents; Ulaanbaatar city; urban park establishment and maintenance; community perception and participation

1. Introduction

Urban organizations and past studies on urban land-use planning emphasized multiple benefits of urban green space and parks [1–3]. Ref. [1] mentioned that the share of green space per capita, urban parks, and recreational areas are important factors to make cities livable and attractive for the urban population. Past studies also recognized these benefits that can be grouped into six categories: (1) environmental pollution remediation, e.g., air, noise and water pollution [4–7], (2) physical and mental health [1,8–11], (3) socio-cultural activities [12] (pp. 14–16), (4) educational opportunities [13,14], (5) recreation and relaxation [1,15], and (6) amenity and refuge [1,15,16].

Considering the health benefits urban green space/park can provide, the World Health Organization recommended that the share of green space per person in a city with one million population be at least than 9 m^2, and an ideal green space value be 50 m^2 per capita [17]. This standard has posed a tremendous challenge for many sprawling cities of developing countries like Mongolia. Ulaanbaatar city, the capital of Mongolia, has long faced a critical shortage of green space due partly to the rapid growth of inward migration from rural areas [18]. Accommodating these migrating people has led to haphazard urban

expansion, especially in the so-called ger area or congested and sprawling poor residential areas [19,20]. As a result, Ulaanbaatar city has gained much international attention as one of the most polluted and congested cities in the developing world [20,21]. In the ger area, residents have experienced a lack of safe domestic water and wastewater treatment facilities, intensified air pollution from burning coals at households, soil contamination, poverty, and rising security concerns, among others [22].

Ulaanbaatar city has undertaken its economic development Master Plan 2020 and Development Approaches for 2030. It aims to have 25–30 m^2 of green space per resident by 2030 [20]. The current size of green space for an individual is 4 m^2 only [23]. To achieve this 30 m^2 target, the city government has planted trees in existing parks. In 2019 alone, the city government spent about 7.5 billion tugrugs (US \$2.77 million) or 2.6% of its total annual budget for urban green space and park maintenance [24]. However, not much progress has been seen. Particularly, its ger area has not gained any new green spaces (e.g., urban parks, playgrounds, sports fields) in the last few decades. So far, most parks are in the built-up area, and it is difficult for ger residents to access these parks due to a long distance, a lack of public transport services, and chronic traffic congestion.

Therefore, the city government has commenced long-term urban redevelopment projects to improve the livability of the ger residential area. It has bought back some tracts of land to build apartments for the residents so that they can have access to piped water supplies, wastewater treatment and other basic utility services. Excess land after removing residents was to be used for parks and other purposes. However, the city faced a number of difficulties with implementing this policy due partly to financial limitation, unstable political leadership, and a lack of cooperation from ger residents, who are also the landowners [25]. In our past field interviews with Ulaanbaatar city officials regarding the ger area land readjustment project, the officials intimated to us about formidable difficulties to acquire sufficient land for urban parks as dealing with private property (land and real state) reacquisition is quite complicated. Thus, it is imperative to assess if ger residents were willing to share some tract from their parcel for setting aside park in their vicinity.

Some studies on residents' willingness to participate in urban planning and urban green space establishment pointed out that Ulaanbaatar's poor neighborhood residents in the ger area did not have motivation to participate [26]. Considering other developing countries, studies that connect urban land use and community participation have shown that governments in developing countries tend to take top-down approaches without a clear mechanism to incorporate community opinions [27,28]. Local authorities do not have sufficient capacity to establish dialogue with local people, especially the poor and marginalized [29,30]. Within this international context, limited studies have addressed why ger area residents, mostly poor neighborhood, did not participate in the park planning or fully cooperate with the Ulaanbaatar city government to set aside land for urban parks. In this respect, it is critical to better understand residents' perceptions about what they need to participate in urban greening activities. Several studies found that community participation becomes crucial for making cities green and livable [31–36].

Therefore, this study aims to understand Ulaanbaatar residents' perceptions about the benefits. It attempts to find the extent to which the residents perceive the importance of community participation and are willing to participate in urban park establishment and maintenance. Also, we sought to understand the extent to which the ger residents would be available to set aside a particular land for parks in their neighborhood.

In the following discussion, we first provide information about the study area and research methods. We then discuss the results of our questionnaire survey and conclude summarizes our main findings. We also make future study recommendations about urban park establishment challenges in developing countries.

2. Materials and Methods

2.1. Study Area

Ulaanbaatar city, Mongolia's capital, is home to a total population of 1.54 million. The city accommodates approximately 47% of the total Mongolian population [37]. It consists of six central and three remote administrative districts. This study focuses on its six central districts: Bayangol, Bayanzurkh, Chingeltei, Khan-Uul, Songinokhairkhan, and Sukhbaatar, which occupy approximately 95% of the city's total households [34].

Ulaanbaatar city has two types of residential areas: built-up and ger residential areas (Figure 1). The ger area tends to have low-income people compared with apartment area. It constitutes 55% of the city's total households (mostly migrants from the rural areas) [38]. A ger household owns about 300 to 700 m^2 of land. Their lots are demarcated by two-meter-high wooden fences. A typical ger household consists of a round-shaped traditional ger dwelling and a small wooden or brick house called baishin. As the ger area is situated on hill slopes without much vegetation and appropriate water drainage systems, residents are vulnerable to floods in summer. Air pollution from coal-burning at households for cooking and heating stays afloat over the city like fog with pungent smell due to low air circulation in winter.
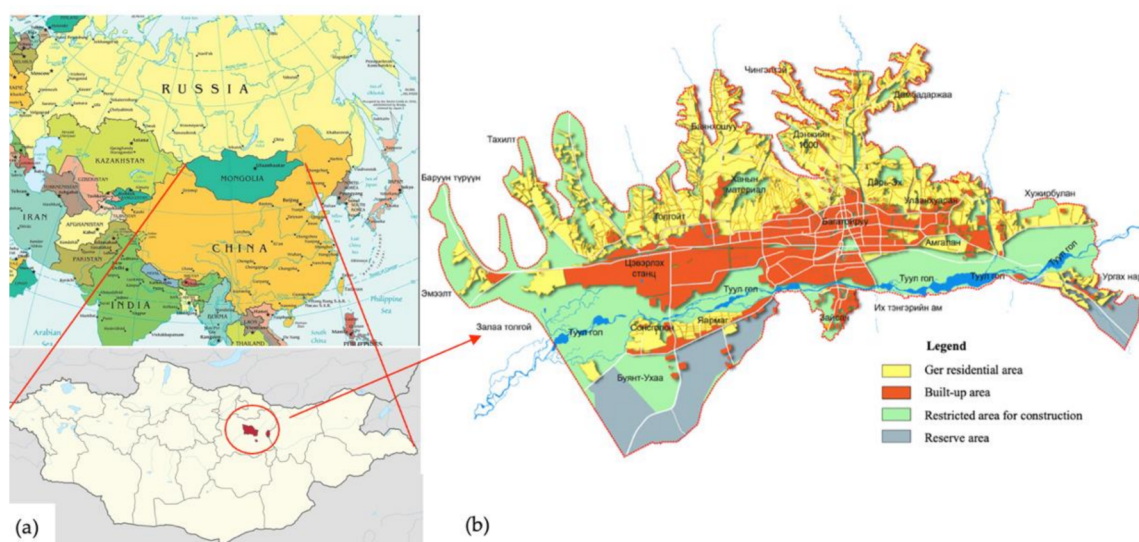
Figure 1. Residential zoning map of Ulaanbaatar city (ger and built-up area). (**a**) Source: https://mn.wikipedia.org/wiaki/Улаанбаатар (accessed on 3 August 2021). (**b**) Source: Ulaanbaatar Planning and Designing Institute, 2019.

2.2. Data Collection

We conducted an in-person questionnaire survey at multiple public service centers called "one-stop service centers" located at every district government building and other sites. These centers provide public services to both ger and apartment residents, such as labor and social welfare, social insurance, civil registration, property rights registration, small and medium business enterprise support, and land administration services. One-stop service center provides communities of approximately 200–300 people a day. We also obtained support from the Mongolian University of Science and Technology, National University of Mongolia, The First Central Hospital of Mongolia, Sports Center, Ministry of Education and Culture, Capital City Taxation Department, Ulaanbaatar Railway Headquarter. In total, we distributed around 600 questionnaires by using a convenience sampling method from 10 August to 15 September 2019 and received 535 questionnaires with valid answers. We made sure that one respondent represented one household.

2.3. Questionnaire Structure

The questionnaire consisted of 14 questions that were grouped into three sections (Table A1. Questionnaire contents). The first section clarified the respondents' socio-demographic characteristics, including age, gender, marital status, the highest education level, number of children, type of housing, years of residence, income, and land size. The second section was to find out about respondents' perceptions about urban park benefits and the importance of community participation. In this section, we used five-point Likert-scale questions and established score 1 as the not important and 5 as the very important. They responded to the following six prospective benefits: (1) relaxation and recreation, (2) physical and mental health, (3) playground for children, (4) socio-cultural activities, (5) environmental pollution remediation, and (6) amenity and refuge. As for the importance of community participation, the respondents were similarly asked to rate the importance from 1 (not important) to 5 (very important). The third section was about understanding the respondents' willingness to participate in park creation and maintenance, and how, by offering a multiple-choice question to assess. The following scenarios were presented: (1) to participate in designing a park, (2) to participate in soil preparation, (3) to participate in planting trees, (4) to participate in installing park facilities, (5) to participate in plant/facilities maintenance, and (6) to provide a monetary donation. The last question was designed only for ger residents to assess the possibility of to setting aside part of their property if needed to create a park in their neighborhood.

2.4. Data Analysis

We used Microsoft Excel for descriptive and R software for multivariate regression analyses to process the questionnaire data. We performed a logistic regression analysis to estimate the effects of socio-demographic characteristics on the willingness to participate in urban park establishment and maintenance. Willingness to participate variable was assigned to *Yes* if survey respondents expressed their willingness to participate in any of six suggested activities, whereas the variable was assigned to *No* if the respondents had not selected any of the suggested activities. We used eight socio-demographic variables for apartment residents and nine for ger residents as predictor variables. We treated age, number of children and duration of residence as continuous and remaining as categorical. We also examined variables for multicollinearity to identify correlations between the independent variables. After testing, there was no correlation (>0.7) among them, particularly housing type and education. These multicollinearity tests of independent variables are presented as supplementary materials (Tables S1 and S2).

3. Results

3.1. Socio-Demographic Profile of the Respondents

The respondents' socio-demographic characteristics showed that the respondents' mean age was 35 and almost 60% of them were female. Approximately 70% were married, and the mean number of children was 1.4 (one to two children). Our respondents were, in general, well educated with 70.3% having completed a university degree. The average monthly household income was US $317.3 (based on the currency exchange rate on 28 November 2019), which is approximately 12% lower than the average monthly household income of Ulaanbaatar city residents, and 3.5% lower than the national level [39]. On average, the respondents had lived in their residence for about eight years (Table 1). Then, all respondents were classified by their housing types. Of the 535 respondents, 275 were from the apartment area (51.4%), 237 from the ger area (44.3%), 23 (4.3%) from luxurious houses at house village (1.5%), and shared apartments, in which residents share kitchen and lavatory (2.8%).

Additionally, the ger residents were asked about the size of their land. Under the national law on land and the national law on allocating land to Mongolian citizens with ownership, the maximum tract of land a household can own is 700 m^2. The mean land size of the respondents was 430 m^2. The breakdown of the respondents' socio-demographic

characteristics, according to the different housing categories, are included in the supplementary materials (Table S3).

Table 1. Socio-demographic characteristics of the respondents.

Variable	Category (Code)	Frequency (%)	Mean	SD
Age (years old)	Minimum Mean Median Maximum	17 35.3 33 78	35.3	11.9
Gender	Male (1) Female (2)	218 (40.7%) 317 (59.3%)	1.6	1.5
Marital status	Married (1) Single (2) Separated-widower/divorced (3)	373 (69.8%) 137 (25.6%) 25 (4.6%)	1.8	0.6
Education level	Elementary (1) Secondary (2) College/vocational (3) University & above (4)	5 (0.9%) 91 (17.0%) 63 (11.8%) 376 (70.3%)	3.5	0.8
Household income (MNT)	320,001–1,000,000 (1) 1,000,001–2,000,000 (2) 2,000,001–3,000,000 (3) ≥3,000,001 (4)	109 (20.4%) 256 (47.8%) 128 (23.9%) 42 (7.9%)	2.2 (US $317.3) *	0.8
Number of children	Minimum Mean Median Maximum	0 1.4 1 10	1.4	1.4
Housing type	Ger dwelling only in ger area (1) *Baishin* house in ger area (2) Apartment in a built-up area (3)	100 (18.7%) 137 (25.6%) 298 (55.7%)	2.4	0.8
Duration of residence (year)	Minimum Mean Median Maximum	1 7.8 5 47	8	8.2
Land size per household in ger area among 237 households (m^2)	≤300 301–400 401–500 501–600 601–700 ≥701	74 (31.2%) 37 (15.6%) 26 (11.0%) 27 (11.4%) 50 (21.1%) 23 (9.7%)	430 m^2	126

* Currency rate by 28 November 2019 in Mongolia.

3.2. Urban Park Benefits and Importance of Community Participation

In the second section of the survey, we tried to understand respondents' perceptions about urban park benefits. We asked the respondents to rate the importance of the following options by using a five-point Likert scale: (1) relaxation and recreation, (2) mental and physical health, (3) playground for children, (4) socio-cultural activities, (5) mitigating environmental pollution, and (6) amenity and refuge. The result shows that although all purposes were found somewhat important by almost all respondents, the following three benefits were identified as the most important to the respondents: (1) playground for children (20.9%), (2) relaxation and recreation (20.6%), and (3) mental and physical health (19.7%) In addition, the benefits of environmental pollution mitigation should be highlighted here because it was relatively highly perceived by the respondents than those of amenity and refuge, and socio-cultural activities (Figure 2).
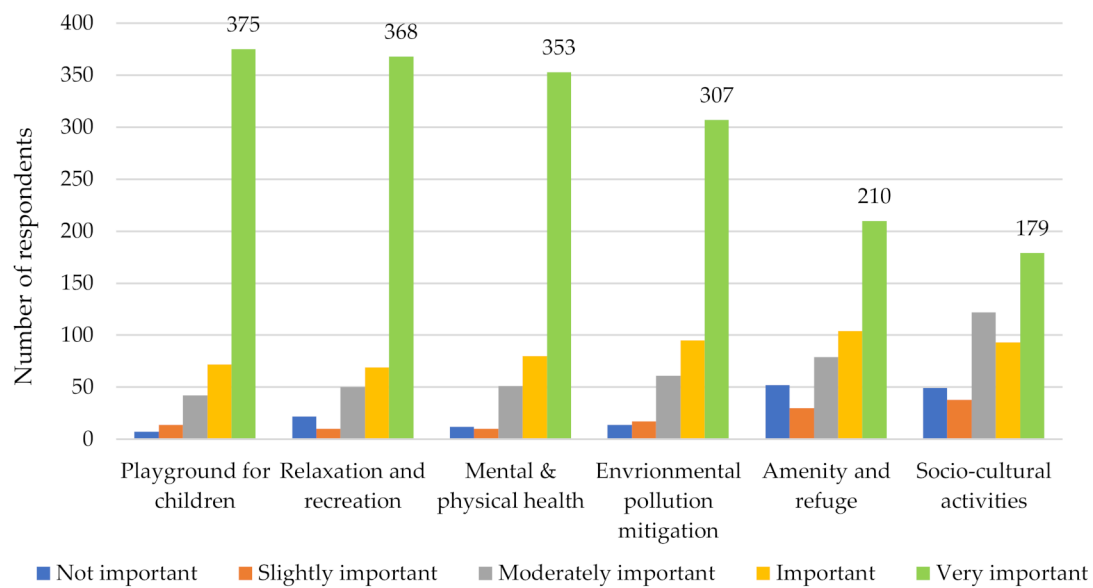
Figure 2. Respondent's perception about urban park benefits (used all data including three types of housing).

Then, in another Likert-scale question, we asked the respondents about the extent to which they found community participation important in establishing and maintaining urban parks. In response, 73.2% found it very important. Another 14.6% found it important. We also wanted to discover if residents in different housing types perceived the importance of community participation differently. We found that a marginally higher proportion of the respondents in the ger area (75%) perceived participation as very important than those in two other housing types of the residents did (73.7% and 70.8%) (Figure 3).
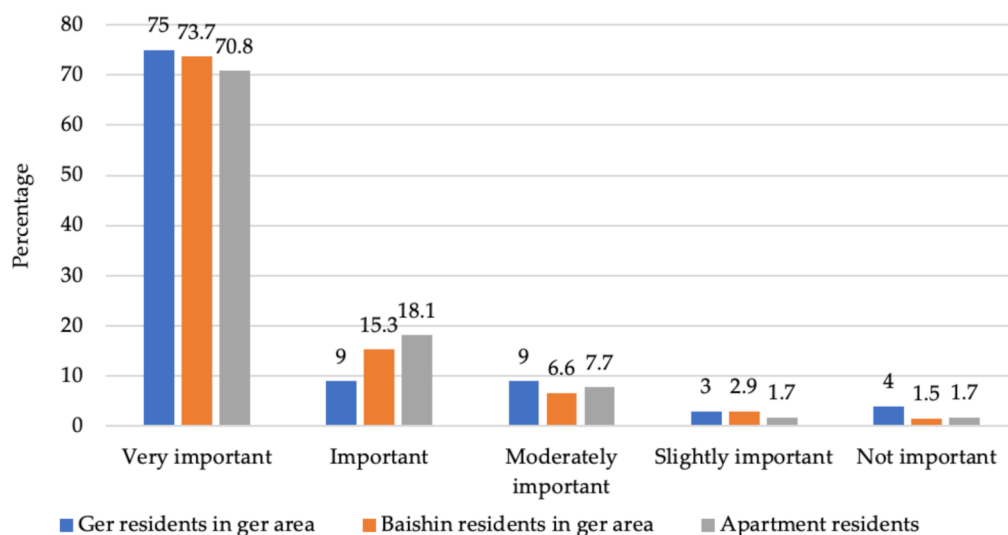
Figure 3. Respondents' perception about the importance of community participation in urban park establishment.

3.3. Contribution to Urban Park Creation and Maintenance

In the third section of our survey, we asked the respondents what specific action they would prefer to participate in urban park creation or maintenance. In this multiple-choice question, we provided the following options: (1) planning park designs, (2) soil preparation, (3) planting trees, (4) installation of park facilities such as fence, bench, bower, and pavement, (5) plant/facility maintenance such as watering and fixing park items, and (6) monetary donation. The result shows that 96.3% of the respondents were positive about

participating in urban park creation or maintenance by selecting one option of activity at least. In particular, approximately 39.1% of the total respondents were willing to plant trees, 17.1% preferred irrigation and maintenance activities, and 14.8% chose monetary donation (Figure 4).
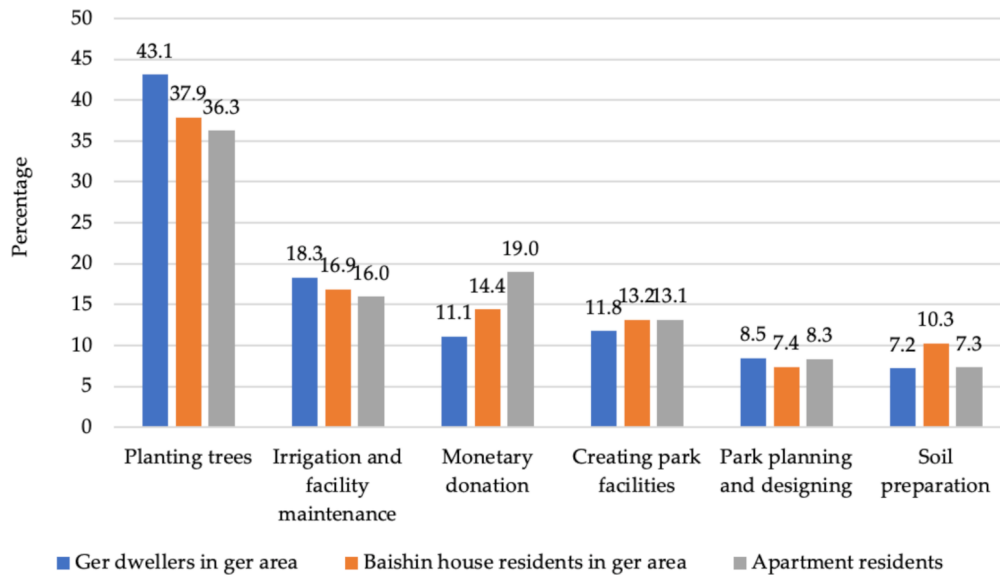
Figure 4. Respondents' favored contributions to urban park establishment and maintenance.

As shown in Figure 4, we found that all three groups were willing to contribute to all six suggested options. Physical activities (e.g., planting trees, maintenance, creating facilities and soil preparation) were favored. Ger and baishin residents were more receptive than apartment residents to planting trees and maintain parks, while apartment residents were more prone to donate money. Overall, the respondents showed relatively high interests in tree planting among other types of contribution, possibly indicating their aspiration to improve air quality and landscape.

Then, we conducted a multivariate logistic regression analysis to see if respondents' socio-demographic characteristics influenced their willingness to participate in urban park establishment and maintenance. We assigned the willingness to participate as a dependent variable. Age, gender, marital status, number of children, education level, household income, housing type, and years of residence were predictor variables (Table 2). The results show with a 95% confidence level that the baishin house residents had more willingness to participate than ger residents did ($p < 0.05$). Also, the residents who obtained a university or higher level of education were found only marginally significant when compared with the residents with a primary level of education ($p > 0.05$). This indicates that the more educated the residents are, the more willingly they participate in park creation and maintenance. Age, number of children and duration of residence did not show any statistically significant association with the willingness of participation.

Next, a simple statistical analysis was used to determine what percentage of the ger area respondents (both ger and baishin house landowners) agreed to donate part of their land. The result showed that the 53.6% showed willingness, and 14% was negative, whereas 32% was not sure (not *Yes*, nor *No*). Regarding both positive and negative answers, we executed the multivariate logistic regression analysis to reveal what socio-demographic characteristics influenced the responses. We found that the ger residents who owned 700 m^2 of land or more had a statistically significant association with land sharing ($p < 0.05$). Also, owners with 500–700 m^2 of land were found only marginally significant compared to the respondents who owned less than 300 m^2 ($p > 0.05$). These results imply that the larger the area the respondents owned, the higher their willingness to share part of it (Table 3).

Table 2. Results of regression analysis regarding respondents' willingness to participate (categorical and continuous variables).

Factor Variables	Reference Group	Levels	Estimated Coefficients	*p*-Value
Gender	Male	Female	−0.203	0.704
Marital status	Married	Single	1.243	0.161
		Separated	1.037	0.379
Education	Primary	Secondary	0.757	0.549
		College/vocational	1.083	0.416
		University or higher	2.237	0.083 *
Household income (US $)	Income (118.1–369)	Income (369–738)	0.748	0.228
		Income (738–1107)	0.589	0.484
		Income (≥1107)	−0.642	0.483
Housing type	Ger residents	Baishin residents	1.963	0.017 **
		Apartment residents	0.439	0.516
Age		17–78	−0.023	0.337
Number of children		0–10	0.089	0.652
Duration of residence		1–47	−0.026	0.339

* *p* < 0.1; ** *p* < 0.05.

Table 3. Results of regression analysis regarding the ger respondents' availability of sharing their land for park establishment (categorical and continuous variables).

Factor Variables	Reference Group	Levels	Estimated Coefficients	*p*-Value
Gender	Male	Female	−0.245	0.626
Marital status	Married	Single	1.324	0.045 **
		Separated	0.312	0.746
Education	Primary	Secondary	2.572	0.142
		College/vocational	2.927	0.104
		University or higher	3.254	0.073 *
Household income (US $)	Income (118.1–369)	Income (369–738)	−0.157	0.754
		Income (738–1107)	0.565	0.509
		Income (≥1107)	0.616	0.581
Housing type	Ger residents	Baishin residents	−0.903	0.076 *
Land size (m²)	≤300	301–400	−0.246	0.698
		401–500	0.329	0.671
		501–600	1.476	0.076 *
		601–700	1.185	0.075 *
		≥701	2.332	0.043 **
Age			−0.023	0.274
Number of children			−0.013	0.955
Duration of residence			0.045	0.147

* *p* < 0.1; ** *p* < 0.05.

In addition, the responses from the landowners with baishin house were found marginally significant but negative with land-sharing when compared to those ger residents ($p > 0.05$). Finally, a university or higher education qualification was also marginally significant when compared to the residents with a primary education level ($p > 0.05$). It implies that more educated residents tend to share a piece of their land for the park establishment.

4. Discussion and Conclusions

The present study has examined Ulaanbaatar residents' perceptions about urban park benefits, community participation, and willingness to participate. The survey results indicate that the respondents particularly needed urban parks for children's playgrounds, relaxation/recreation, and mental/physical health [1]. This result lends support to the findings of [40], who found that establishing more green spaces for multiple purposes is important to improve the residents' satisfaction level in both ger and apartment areas in Ulaanbaatar city. About 73% of the total respondents stated community participation very important for urban park establishment and maintenance [31,35]. About 96% of the total respondents indicated their willingness to participate in urban park establishment and maintenance with at least one type of contribution (Figure 2). The willingness to participate is similar to relevant study findings in Guangzhou, China, Dar es Salaam, Tanzania and Montreal, Canada [31,35,41], where respondents' strong willingness to participate in urban green space establishment and conservation was found. The most accessible and preferred actions for the respondents to participate in were physical activities such as tree planting, plant watering, and facility maintenance (>72%) (Figure 2). Regarding the non-physical activities such as monetary donation, the apartment residents were willing to donate money more than other types of residents. It is directly related to their income level. In this concern, what socio-demographic factors significantly influenced the willingness of the present study are discussed below.

University-level educated and baishin house-owned residents in the ger area were more willing to participate than those with primary-level education [31,35,41] and ger-only residents. This finding indicates that the higher the education level, the higher the awareness of the importance of urban green space for a livable city. Regarding the housing type, baishin house residents were negatively associated with the land contribution when compared to the ger residents. It is difficult to explain this result, but it might be related to the idea that baishin owners are more likely to invest in living comfortably on their land as their income level was found higher than ger owners.

Concerning the land contribution for green space/park establishment in the ger area, approximately 54% of the ger area respondents showed their willingness to contribute some part of their land. This finding is somewhat contrary to a previous study that demonstrated low local participation in urban re-planning initiatives in ger area [26]. This study may be correct in terms of conveying the perception of policy implementers. Our study instead looked at residents' perceptions. What we can safely say here is that there is a disconnection between residents' and government's needs in implementing urban greening policies in Ulaanbaatar city.

Regarding the land size, the respondents with the larger parcel (>501 m^2) were more likely to contribute land when compared to those with smaller lots (<300 m^2). However, many landowners (46%) responded to the question with *No* and *Not sure*. Further investigation of the reason(s) behind it is highly recommended in future studies. Based on our study findings, more appropriate interventions with the targeted education schemes are possible to motivate those negatively responded landowners.

As discussed earlier, some studies found that poor and marginalized residents tend not to show willingness to participate in city's urban planning. On the contrary, we argue that as long as residents, including low-income people, can have some degree of control over their local affairs, they willingly participate in land planning and management. In Ulaanbaatar city and some other haphazardly developing cities, a top-down approach by city authorities has instead created a communication gap. The findings of this paper, especially about residents' willingness to participate, can show some possible and achievable avenues for city officials to establish mutually beneficial relationships with ger area residents. As other cities in developing countries have similar communication gaps, this paper may shed some light on how officials can establish dialogue with residents in proceeding with land readjustment proposals.

Appendix A

Table A1. Questionnaire Structure.

I.	Socio-demographic characteristics
	1. How old are you? _____ years old
	2. What is your gender? ☐ Male ☐ Female
	3. What is your marital status? ☐ Married ☐ Single ☐ Widower ☐ Divorced
	4. How many children do you have in your family? _____ children
	5. What is your education level? Please select from the options below. ☐ Primary ☐ Secondary ☐ Vocational ☐ College, university
	6. What is your housing type? Please select from the options below. ☐ Ger dwelling in ger area ☐ Baishin house in ger area ☐ Apartment in built-up area (including luxury house and shared apartments)
	7. What is your land size (only for residents living in ger area)? Please select from the options below. ☐ Less than 300 m² ☐ 300–400 m² ☐ 400–500 m² ☐ 500–600 m² ☐ 600–700 m² ☐ more than 700 m²
	8. How long have you been living at your current address? For _____ years
	9. Your monthly household income? Please select from the options below. ☐ 320,000−600,000 Tugrugs ☐ 600,001−1,500,000 Tugrugs ☐ 1,500,001−2,500,000 Tugrugs ☐ 2,500,001 Tugrugs and more
II.	Perception about urban park benefits and importance of community participation
	10. What could be the benefits of having a park in your neighborhood? Please select and rate from 1 to 5. In this case, 1 equals "*Not important*" and 5 equals "*Very important*."
	1. Recreation &relaxation ☐1 ☐2 ☐3 ☐4 ☐5
	2. Mental and physical health ☐1 ☐2 ☐3 ☐4 ☐5
	3. Playground for children ☐1 ☐2 ☐3 ☐4 ☐5
	4. Socio-cultural activities1 ☐1 ☐2 ☐3 ☐4 ☐5
	5. Environmental pollution remediation ☐1 ☐2 ☐3 ☐4 ☐5
	6. Amenity and refuge ☐1 ☐2 ☐3 ☐4 ☐5
	11. How important do you think that community participation helps establish and maintain the urban park? Please rate from 1 to 5. Here, 1 equals "*Not important*" and 5 equals "*Very important*." ☐1 ☐2 ☐3 ☐4 ☐5
III.	Understanding respondents' willingness to participate in urban park establishment
	12. If you are willing to help, how would you like to contribute? Please select the options below (multiple choices can be chosen). ☐ Participate in planning park design ☐ Participate in soil preparation for planting ☐ Participate in planting trees and shrubs ☐ Participate in creating facilities (e.g., fence, bench, fountain, pavement, etc.) ☐ Irrigation and maintenance ☐ Monetary donation
	13. What do you think about current challenges to establish urban parks? Please write your opinion: _____ _____
	14. If you live in ger area, please answer this question. If the city government plan to improve the environmental condition by establishing parks in your residential area, will you help them set aside some area from your parcel? ☐ Yes ☐ No

References

1. Chiesura, A. The role of urban parks for the sustainable city. *Landsc. Urban Plan.* **2004**, *68*, 129–138. [CrossRef]
2. Walker, S.E.; Duffield, B.S. Urban parks and open spaces—An overview. *Landsc. Res.* **1983**, *8*, 2–12. [CrossRef]
3. Haaland, C.; van den Bosch, C.K. Challenges and strategies for urban green-space planning in cities undergoing densification: A review. *Urban For. Urban Green.* **2015**, *14*, 760–771. [CrossRef]
4. Janhäll, S. Review on urban vegetation and particle air pollution—Deposition and dispersion. *Atmos. Environ.* **2015**, *105*, 130–137. [CrossRef]
5. Nowak, D.J.; Hirabayashi, S.; Bodine, A.; Greenfield, E. Tree and forest effects on air quality and human health in the United States. *Environ. Pollut.* **2014**, *193*, 119–129. [CrossRef]
6. Dzhambov, A.M.; Dimitrova, D.D. Green spaces and environmental noise perception. *Urban For. Urban Green.* **2015**, *14*, 1000–1008. [CrossRef]
7. Livesley, S.J.; Gregory McPherson, E.; Calfapietra, C. The urban forest and ecosystem services: Impacts on urban water, heat, and pollution cycles at the tree, street, and city scale. *J. Environ. Qual.* **2016**, *45*, 119–124. [CrossRef]
8. Tzoulas, K.; Korpela, K.; Venn, S.; Yli-Pelkonen, V.; Kazmierczak, A.; Niemela, J.; James, P. Promoting ecosystem and human health in urban areas using green infrastructure: A literature review. *Landsc. Urban Plan.* **2007**, *81*, 167–178. [CrossRef]
9. de Vries, S.; Verheij, R.A.; Groenewegen, P.P.; Spreeuwenberg, P. Natural Environments—Healthy Environments? An Exploratory Analysis of the Relationship between Greenspace and Health. *Environ. Plan. A Econ. Space* **2003**, *35*, 1717–1731. [CrossRef]
10. Maas, J.; Verheij, R.A.; Groenewegen, P.P.; De Vries, S.; Spreeuwenberg, P. Green space, urbanity, and health: How strong is the relation? *J. Epidemiol. Community Health* **2006**, *60*, 587–592. [CrossRef]
11. Nordh, H.; Hartig, T.; Hagerhall, C.M.; Fry, G. Components of smalll urban parks that predict the possibility of restoration. *Urban For Urban Green.* **2009**, *8*, 225–235. [CrossRef]
12. Konijnendijk, C.C.; Annerstedt, M.; Nielsen, A.B.; Maruthaveeran, S. Urban parks and social cohesion. In *Benefits of Urban Parks—A Systematic Review*; International Federation of Parks and Recreation Administration: Copenhagen, Denmark, 2013; pp. 14–16.
13. Wolsink, M. Environmental education excursions and proximity to urban green space—Densification in a 'compact city.' *Environ. Educ. Res.* **2016**, *22*, 1049–1071. [CrossRef]
14. Rakhshandehroo, M.; Mohdyusof, M.J.; Tahir, O.M.; Yunos, M.Y.M. The social benefits of urban open green spaces: A literature review. *Manag. Res. Pract.* **2015**, *4*, 60–71. Available online: https://www.ceeol.com/search/article-detail?id=426919 (accessed on 8 May 2021).
15. Jim, C.Y.; Chen, W.Y. Recreation-amenity use and contingent valuation of urban greenspaces in Guangzhou, China. *Landsc. Urban Plan.* **2006**, *75*, 81–96. [CrossRef]
16. Bai, T.; Mayer, A.L.; Shuster, W.D.; Tian, G. The Hydrologic Role of Urban Green Space in Mitigating Flooding (Luohe, China). *Sustainability* **2018**, *10*, 3584. [CrossRef] [PubMed]
17. Russo, A.; Cirella, G.T. Modern compact cities: How much greenery do we need? *Int. J. Environ. Res. Public Health* **2018**, *15*, 2180. [CrossRef]
18. JICA. The Study on City Master Planning and Urban Development of Ulaanbaatar City. *Final Report.* 2, pp. 5-13–5-15. Available online: https://openjicareport.jica.go.jp/pdf/11937158_02.pdf (accessed on 27 August 2021).
19. Ishdorj, S. Housing Policy for Low-income Households (Ger Area) in Mongolia: Based on Generic Characteristic of Developing Countries. Master's Thesis, Seoul National University, Seoul, Republic of Korea, 2017.
20. Purevtseren, M.; Tsegmid, B.; Indra, M.; Sugar, M. The fractal geometry of urban land use: The case of Ulaanbaatar city, Mongolia. *Land* **2018**, *7*, 67. [CrossRef]
21. Capital City Master Planning Agency. Technical Summary of Ulaanbaatar 2020 Master Plan and Development Approaches for 2030. Published 2014. Available online: https://asiafoundation.org/resources/pdfs/UBMasterPlanTechnicalSummary.pdf (accessed on 11 November 2019).
22. So, Y.; Lee, N.; Kim, S.; Lee, Y.; Ochir, C.; Lee, K. Characteristics of Lifestyle and Living Environment of Ger District Residents in Ulaanbaatar, Mongolia. *Korean J. Public Health* **2019**, *55*, 12–21. [CrossRef]
23. Agency of Land Administration Geodesy and Cartography. Хот суурин газрын ногоон байгууламжийн судалгаа [Study on Urban Green Space]. in Mongolian. Published 2018. Available online: https://www.gazar.gov.mn/storage/reports/September2019/op0PxKu5fXKyhymqL4eO.pdf (accessed on 20 June 2020).
24. Mongolian Parliament. Монгол Улсын2019 оны төсвийн тухай хууль[The Budget Law of Mongolia for 2019] in Mongolian. Available online: https://www.legalinfo.mn/law/details/13781 (accessed on 4 May 2020).
25. Department of Ger Area Redevelopment of Ulaanbaatar City, 2014. "The Process of Ger Area Redevelopment of Ulaanbaatar City." Published in 2014. 2014. Available online: https://www.unescap.org/sites/default/files/3-2.%20Ulaanbaatar%20City%20GER%20District%20Re-development%20Program.pdf (accessed on 1 November 2021).
26. Shagdarsuren, C. A Study on Possibilities of Green Development to Solve Environmental Pollutions in Ulaanbaatar City: A Case Study on Eco-District. Master's Thesis, University of Tsukuba, Tsukuba, Japan, 2017.
27. Ranjani, A.P.; Matsui, K. An Impact Analysis of Environmental Policies on Reforestation and Urban Green Canopy Development in Sri Lanka. Master's Thesis, University of Tsukuba, Tsukuba, Japan, 2021.

28. Zakia, K.K.; Matsui, K. Current Conditions and Future Prospects of Urban Roof Garden Practices for Dhaka City, Bagladesh. Master's Thesis, University of Tsukuba, Tsukuba, Japan, 2021.

29. Hewawasam, V.; Matsui, K. Equitable resilience in flood prone urban areas in Sri Lanka: A case study in Colombo Divisional Secretariat Division. *Glob. Environ. Chang.* **2020**, *62*, 102091. [CrossRef]

30. Kisinger, C.; Matsui, K. Responding to climate-induced displacement in bangladesh: A governance perspective. *Sustainability* **2021**, *13*, 7788. [CrossRef]

31. Hassan, A. Urban community's participation in conservation of open spaces: A case of Dar es Salaam city. *Int. J. Nat. Resour. Ecol. Manag.* **2017**, *2*, 9–19. [CrossRef]

32. Shuib, K.B.; Hashim, H.; Nasir, N.A.M. Community Participation Strategies in Planning for Urban Parks. *Procedia—Soc. Behav. Sci.* **2015**, *168*, 311–320. [CrossRef]

33. Rosol, M. Public Participation in post-fordist urban green space governance: The case of community gardens in Berlin. *Int. J. Urban Reg. Res.* **2010**, *34*, 548–563. [CrossRef] [PubMed]

34. Bengston, D.N.; Fletcher, J.O.; Nelson, K.C. Public policies for managing urban growth and protecting open space: Policy instruments and lessons learned in the United States. *Landsc. Urban Plan.* **2004**, *69*, 271–286. [CrossRef]

35. Shan, X.Z. Attitude and willingness toward participation in decision-making of urban green spaces in China. *Urban For. Urban Green.* **2012**, *11*, 211–217. [CrossRef]

36. World Habitat. 30 Years of Planning Continuity in Freiburg, Germany. 2013. Available online: https://world-habitat.org/world-habitat-awards/winners-and-finalists/30-years-of-planning-continuity-in-freiburg-germany/ (accessed on 7 August 2020).

37. National Statistics Office. Population by Urban and Local Areas. 2019. Available online: https://www.1212.mn//tables.aspx?tbl_id=DT_NSO_0300_004V1&RESIDENT_select_all=0&RESIDENTSingleSelect=_11_12_1&SOUM_select_all=0&SOUMSingleSelect=_0&YearY_select_all=0&YearYSingleSelect=_2019&viewtype=table (accessed on 9 April 2021).

38. National Statistics Office. Household Number by Districts. 2019. Available online: https://www.1212.mn/tables.aspx?tbl_id=DT_NSO_0300_006V2&SOUM_select_all=0&SOUMSingleSelect=_5_511_51101_51104_51107_51110_51113_51116_51119_51122_51125&YearY_select_all=0&YearYSingleSelect=_2020&viewtype=table (accessed on 9 April 2021).

39. National Statistics Office of Mongolia. Average Wages and Salaries of Employees. *Published 2019.* Available online: https://www.nso.mn/content/2393#.YB_TUHczbDJ (accessed on 1 November 2020).

40. Anderson, R.; Hooper, M.; Tuvshinbat, A. Towers on the steppe: Compact city plans and local perceptions of urban densification in Ulaanbaatar, Mongolia. *J. Urban* **2017**, *10*, 217–230. [CrossRef]

41. Balram, S.; Dragićević, S. Attitudes toward urban green spaces: Integrating questionnaire survey and collaborative GIS techniques to improve attitude measurements. *Landsc. Urban Plan.* **2005**, *71*, 147–162. [CrossRef]