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# Building local partnership through community parks in Central Tokyo: perspectives from different participants

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**Introduction:** Cities globally, including Tokyo, face challenges in managing small urban green spaces due to limited land, aging infrastructure, and rising maintenance costs. This study explores effective community engagement strategies for park revitalization as cities focus on improving existing green spaces rather than expanding them.

**Methods:** This research investigates community park revitalization in Toshima Ward, Tokyo, using a case study approach involving three parks. Data were collected through interviews with seven park management stakeholders and a survey of 176 residents. The study aimed to identify key factors for successful community participation, evaluate perceptions of engagement activities, and assess residents' willingness to participate.

**Results:** Key factors for effective park revitalization include public buildings inside and outside the parks, sufficient greenery and open spaces, and local responsible persons. Despite these conditions, challenges such as high maintenance costs and low resident engagement persist. Among 176 respondents, 55 had participated in park events. Both genders noted increased use by parents and children and enhanced motivation to visit as significant impacts, with mean ratings of 4.36 and 4.37, respectively. Age differences were observed: respondents aged 18-39 emphasized increased use by parents and children (mean 4.75), while those aged 40-59 and over 60 valued motivation to visit (means 4.64 and 4.00). Long-term residents (over 10 years) reported lower impact ratings than newer residents, and larger families rated activities more positively than smaller or single-person households. Key issues included insufficient publicity (60%), restriction of normal use (20%), increased waste (14.5%), and noise (12.7%).

**Discussion:** The study highlights the need to address demographic differences in engagement preferences and barriers. Tailoring activities to diverse groups, including seniors and single-person households, can improve participation and effectiveness. These findings can guide localized park management strategies and foster more inclusive urban green space initiatives.

## KEYWORDS

park revitalization, community participation, engagement activities, urban green space, sustainable development goals

# 1 Introduction

Currently, many cities around the world, such as Singapore (Rosita et al., 2022), Hong Kong (Chung-Shing et al., 2018), Tokyo (Sari and Kinoshita, 2012), and Budapest (György et al., 2023), are faced with the limited amount of land available in their city centers, and municipalities are forced to consider the creation of small urban green spaces. Along with the increase in the number of small urban green spaces, the aging of park facilities and the increasing maintenance and management costs are becoming a serious problem (Niine et al., 2020). For these cities, the focus of urban construction and management has shifted from increasing the number of green spaces and the *per capita* area of parks to upgrading the quality of existing parks, revitalizing and managing these parks more efficiently, and maximizing the benefits of green spaces so as to promote the sustainable development of the cities.

It has been shown that the quality of life in densely populated urban areas is related to the use of urban parks by residents, because these parks provide many environmental and social benefits (Cristina et al., 2019). Urban green spaces provide recreational opportunities and beautify neighborhoods, as well as offer the potential for disaster preparedness (Anna, 2004; Rosa et al., 2021). Research on community parks has focused primarily on availability (Powers Sammie et al., 2022; Adjetey et al., 2023), distribution (Kyushik and Seunghyun, 2007; Mullenbach Lauren et al., 2022; Powers Sammie et al., 2022), physical activity (Keunhyun and Reid, 2017; Yanping et al., 2018), and accessibility (Niine et al., 2020; Yujin and Jean-Michel, 2020). However, the creation and provision of urban green spaces is not sufficient to ensure their use and appreciation (Chris et al., 2022; Dalia and Branka, 2022; Angelia et al., 2023). To maximize the benefits and services of green space, local engagement is critical for sustainable use and management (Ann, 2005; Alemaw et al., 2023).

In light of the above, broader participatory and collaborative approaches are becoming a global trend in urban green space management to achieve the sustainable city development. However, despite the high demand for local engagement, stakeholders' participation remains problematic in most urban community park management and maintenance practices. In Africa, lack of community participation is becoming one of the reasons for the gradual abandonment of community parks in some cities (Bosena et al., 2022; Maazou et al., 2024). In Asia and Europe, participatory approaches such as “co-production, co-creation and co-design” are proved to have the potential to improve and develop green spaces and meet the needs of local community (Nguyen et al., 2024). However, these case studies are mainly focused on European cities, for Asian cities with large populations, few cases have been mentioned.

The Japanese experience of sustainable urban green space management through engagement activities began when the Sustainable Development Goals (SDGs) Future City System was established in 2018 (Cabinet Office, 2018). Since then, the revitalization of urban green space has been considered important. Especially the revitalization of community parks, which are the most numerous of the urban parks in Japan. By the end of 2021, there were 98,632 community parks in Japan, an increase of 958 compared with the previous year (Ministry of Land Infrastructure Transport and Tourism, 2022). They were divided into three types: block parks, neighborhood parks, and district parks. Block parks have a standard area of 0.25 ha and a service radius of 250 m; neighborhood parks have a standard area of 2 ha and a service radius of 500 m; and district parks have a standard area of 4 ha and a service radius of 1,000 m (Ministry of Land Infrastructure Transport and Tourism, 2023). To meet the diversified needs of residents for park use, Japanese urban park

management is focusing on expanding the support for the activities of residents, non-profit organizations (NPOs), and other groups, rather than maintenance and management of parks by administrations (Ministry of Land Infrastructure Transport and Tourism, 2022).

In the context above, the case study of Japan helps to fill the gap in participatory research on community park revitalization in Asian cities. Although previous studies have included the rationale, phases, engagement activities, enablers, constraints, and outcomes of community participation, there is still a lack on the circumstances under which participatory approaches to community parks are useful and should be adopted, the willingness of different group of residents to participate, their activity preferences, and the evaluation of activity outcomes. In this study, we sought answers to the following questions:

- (1) What are the circumstances under which participatory approaches to community parks revitalization is appropriate by the partners?
- (2) What are the opportunities and challenges for participatory community park revitalization by the different partners?
- (3) How do residents perceive the engagement activities in community park revitalization?
- (4) What's the participatory willingness and engagement activity preferences of residents?

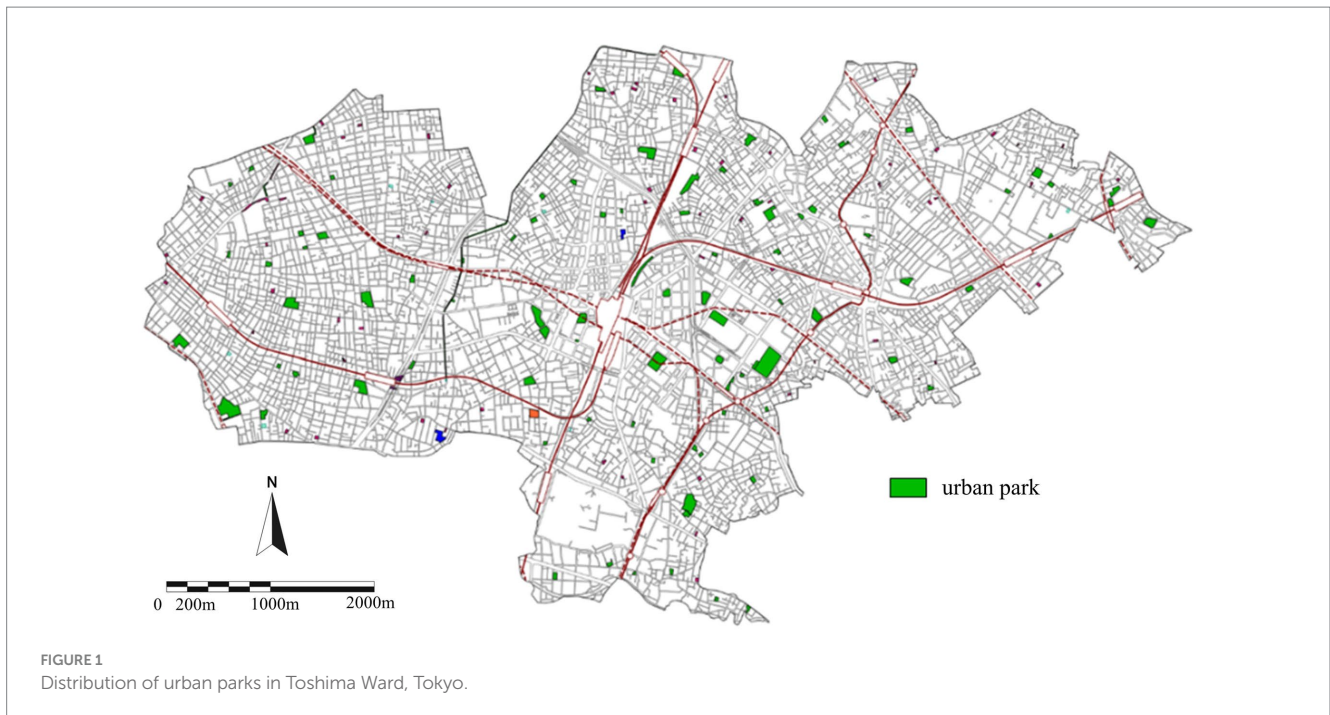
This study emphasizes the importance of listening to the opinions of different participants at the local level on the realization of global SDGs in the city, and provides an Asian case study of the creation of a city where people want to live sustainably through community parks that is relevant in an international context.

## 2 Study area and methods

### 2.1 Study area

Current attention to sustainable urban green space management is focused on high-density cities (Shanwen et al., 2023). High population densities and high demand for the use of urban green spaces by residents have led to an urgent need for sustainable approaches to urban green space management in large cities (Hassan Abbas and Hyowon, 2015). Therefore, Toshima Ward in Tokyo, which has a highest population density and a large number of community parks, was selected for the case study. Toshima Ward has a large number of parks in Tokyo (Figure 1). 98% of the parks in Toshima Ward are under 10,000 m<sup>2</sup>, which are classified as block parks according to the Toshima Ward Urban Planning (Toshima Ward, 2024). In May 2014, Toshima Ward was listed as a “disappearing city” because population projections showed that the number of women aged 20–39 in Toshima Ward would decrease by more than 50% by 2040 (Council Japan Policy, 2014). Against this backdrop, Toshima Ward has set the goal of developing the city with parks as its core. The Small and Medium-Scale Park Revitalization Project was started in 2017. The project emphasizes the creation of urban spaces where people are the protagonists, regardless of age, gender, or nationality.

The Small and Medium Scale Park Revitalization Project, initiated by the Toshima Ward Parks and Green Space Division in 2017, focuses exclusively on block parks within the district. In cooperation with local partners, model parks were selected and social experiments were started. In October 2018, the project team held several meetings at two



parks to collect suggestions for park revitalization. The team also collected plans for park renewal such as flowerbed renewal, expansion of recreational space, and toilet renovation, as well as suggestions for events for all ages such as barbecues, disaster prevention training, chess, and table tennis. They aimed to determine dates, roles, and budgets for these activities. Activities were conducted in additional parks in the district starting in December 2019 (Figure 2).

As the project has been implemented, more people have participated in the revitalization of the parks, including local vendors, university students, and NPOs. In addition to the diversification of participants, the organizers of the project are gradually changing from the Toshima Ward Park and Green Space Division to other stakeholders. In 2023, the program continued at a frequency of 15 to 20 times a year. In addition to the model parks, more parks in Toshima Ward have started to hold engagement activities. To better understand different participants' perceptions about community park revitalization, we screened case parks through two principles: first, participated by multiple stakeholders; second, the participation is sustainable. Finally, we selected Nishisugamo 2 Chome Parks, Zoshigaya Park, and Kami-Ikebukuro Kusunoki Park as study cases, all classified as block parks. (Figure 3).

## 2.2 Roles in participatory park revitalization progress

To gain a deeper understanding of the process of building local partnerships through community parks, it is necessary to examine the different roles involved in park revitalization (Gerben and Konijnendijk Cecil, 2007). After examining the parks in Toshima Ward that have hosted a lot of activities with multiple partners, the roles in the park revitalization process were categorized into two groups: organizers and local participants. (1) Organizers were mainly responsible for planning, executing and publicizing activities, liaising with partners, and providing equipment needed for the activities, such as tables, props, and folding

umbrellas. (2) Local participants were mainly responsible for providing activity-related advice, publicizing activities, and working on the day of the event. In the case of Toshima Ward, the organizers and local participants were different individuals and organizations. The specific involvement of each role is shown below.

### 2.2.1 Activity organizers

The organizers were mainly the Toshima Ward Parks and Green Spaces Division and local universities. The Toshima Ward Parks and Green Spaces Division initiated a project to revitalize small parks in 2017, and has played the following roles in the project: (1) assessing the environments of the 164 parks in Toshima Ward and selecting model parks; (2) collecting residents' opinions on the improvement of the park environments and the content of the activities; (3) updating the park environments and piloting the activities in the model parks based on residents' suggestions for the content of the activities; (4) conducting activities in more parks in the ward; and (5) developing a protocol for the participation of revitalization groups.

The Faculty of Regional Creativity and the Faculty of Expression Studies of Taisho University held workshops in Kami-Ikebukuro Kusunoki Park twice in 2023. The functions performed in the project were: (1) applying for a permit for the event from the Parks and Green Spaces Division of Toshima Ward; (2) planning and publicizing the event; (3) contacting local partners; (4) preparing facilities and props needed for the event; and (5) conducting the event.

### 2.2.2 Local participants

The local participants were mainly surrounding residents, representatives of neighborhood associations, members of NPOs, and local vendors. Resident representatives were volunteers who were interested in territorial activation and had strong local ties. They had been involved in the project since the co-creation phase, and their main tasks included: (1) giving opinions on the improvement of the park environment and the content of the activities; (2) publicizing the activities; and (3) helping to organize the activities.



Phases	Time	Park	Content	Partner
Pre-intervention phase	November,2017		Set up an agreement	Toshima Ward +RYOHIN KEIKAKU CO.,LTD
	December.2017	Hinodemachi 2nd Park	Hinodemachi market	Toshima Ward +RYOHIN KEIKAKU CO.,LTD+Local vendors
	April.2018	164 Park in Toshima Ward	Park facilities, survey of surrounding environment, evaluation for park utilization purposes, selection of model parks	Toshima Ward +HINODE FACTORY CO.,LTD RYOHIN KEIKAKU CO.,LTD+Local vendors Toyoshima Ward +RYOHIN KEIKAKU CO.,LTD+Higepro CO.,LTD + Local vendors Toyoshima ward +KOTOLABO CO.,LTD
Co-creation phase	October,2018	Nishisugamo 2 chome Park	Content-free chat for 8 times (to collect proposals for park updates and event content, such as updating flowerbeds, expanding leisure space; finalize proposals for events such as barbecues, disaster drills, etc.)	Toyoshima Ward +RYOHIN KEIKAKU CO.,LTD
	April,2019			
	July,2019			
	August,2019	Sugamo Park	Flower bed activity, wellhead meeting, water activity	Association for the Utilization of Sugamo Park + Kitaotsuka 1-chome Mutual Friendship Community Association
	September,2019	Tachiagariyashiki Park	Content-free chat for seven times	Toshima Ward +RYOHIN KEIKAKU CO.,LTD + Tachiagariyashiki Community Association
October,2019				
November,2019				
December,2019				
Co-implementation phase	December,2019	Nishisugamo 2 chome Park	Park truck, temporary booths, disaster prevention barbecue, well-wishing party, chess, ping-pong and other games	Toshima Ward +RYOHIN KEIKAKU CO.,LTD
		Tachiagariyashiki Park		
	November,2020	Chihaya 2nd Park	Park truck	Toshima Ward
		Motoikebukuroshi seki Park	Flower bed activities	NPO Zoshigaya Hiroba Club
		Minami-ikebukuro Midori Park		
	September,2022	Chihaya Flower Park	Park market	Toshima Ward +General Incorporated Association CRADLE+ General Incorporated Association SEM
	October,2022	Kamiikebukuro Central Park	park truck, barbecue, game, temporary booth, wellhead meeting	Toshima Ward + General Incorporated Association Parks and Community Development
	November,2022	Zoshigaya Park	Flower bed activities, park market	Toshima Ward + General Incorporated Association Parks and Community +NPO Zoshigaya Hiroba Club
	January,2023	Kusunoki Park	Market & Workshop	Toshima Ward +Taisho University

FIGURE 2  
Timeline of the Small and Medium Scale Park Revitalization Project (Data editing based on the official website of Toshima Ward: <https://www.city.toshima.lg.jp/454/shisetsu/koen/2206271555.html>).



FIGURE 3  
Engagement activities in different parks of Toshima Ward (Photograph by the Author). (A) Nishisugamo 2 Chome Parks. (B) Zoshigaya Park. (C) Kamiikebukuro Kusunoki Park.

A neighborhood association was an organization made up of the inhabitants of a given geographical area. They advised on the improvement of the parks' environment and on the content of the activities, publicized the events and helped to organize them.

The local NPOs were organizations created for the purpose of community revitalization. They were involved in the project from the beginning and were mainly responsible for promoting the campaign and working together on the day of the campaign.

The local vendors were mainly residents. They were involved in the program since its inception, were in contact with the activity organizers, and were primarily responsible for publicizing activities and setting up stalls on the activities.

of Toshima Ward. Among them, the government (P1) and educators (P2) played the role of organizers in the project; residents (P3), the neighborhood association (P4), NPO members (P5, P6), and local vendors (P7) played the role of local participants. We selected participants who had been involved for a long time and had participated frequently, which meant that they had a full understanding and ample experience of the park revitalization process. Based on the information about the event, the organizers, and the participants that was publicly available on the official website of Toshima Ward (Toshima Ward, 2023), their relationships were divided into three types (Figure 4).

The interviews were all conducted on-site, allowing for further, more in-depth information to be uncovered based on the interviewees' responses and reactions, in addition to a pre-prepared interview outline (Metzger Marc et al., 2023). With the permission of the interviewees, we recorded the interview process. The recordings were then transcribed sentence by sentence using Clova Note software. Qualitative interview data were analyzed through content analysis (Mojtaba et al., 2013; Somayeh and Hashem, 2021). Each interview was read multiple times to identify key themes (Hsiu-Fang and Shannon Sarah, 2005; Virginia and Victoria, 2006) and coded for priorities, challenges,

## 2.3 Semi-structured interviews and questionnaires

### 2.3.1 Semi-structured interviews

The interviews took place between May and June 2023. The selected interviewees were involved in the revitalization of the community parks

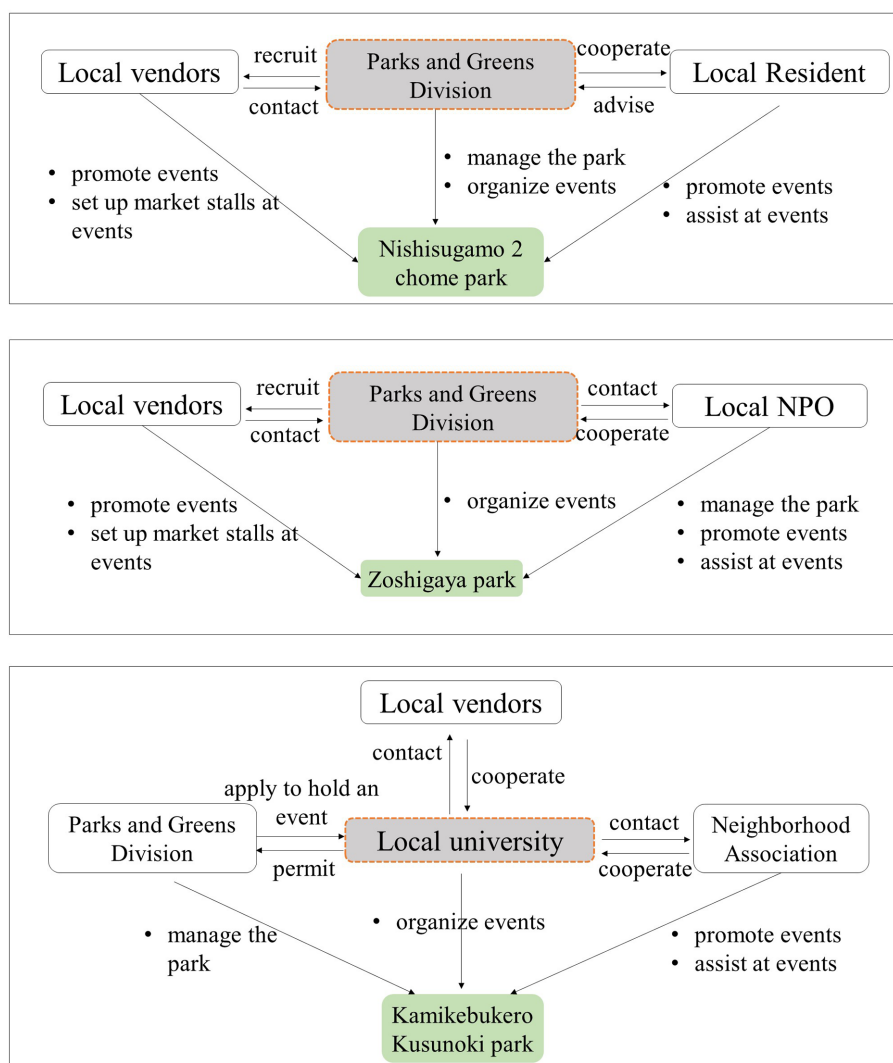


FIGURE 4 Operation and management relationship of the revitalization of three parks. Red dotted box indicates the main operator.

TABLE 1 Circumstances of the revitalized community parks as perceived by individual partners.

Role	Partner identifier	Partner role	Characteristics of the revitalized parks				
			Sufficient greenery	Adjacent to or within a community public building	With community director	Plenty of open space	Warehouse and electrical equipment
Organizers	P1	Government					
	P2	Education					
Local participants	P3	Local resident					
	P4	Neighborhood association					
	P5	NPO <sup>1</sup> member1					
	P6	NPO member2					
	P7	Local vendors					

The colored cells indicate “yes.”

<sup>1</sup> NPO is a non-profit organization.

opportunities, future plans, and support needed. In this process, key words were written in the margins of the transcribed data to summarize each passage, and these key words became the codes. Similar codes were then grouped into themes. Further sub-themes were identified.

### 2.3.2 Questionnaires

The questionnaire survey was conducted in November 2023. In designing the questionnaire, we took into account previous evaluations about the potential for diverse participation in community parks (King Diane et al., 2015; Jacob et al., 2020), the types of events that are common to community parks that are active (Peter et al., 2021; Helen and William, 2023; Van der Jagt Alexander et al., 2023), and population factors that may influence citizens' evaluations and willingness to participate (György et al., 2023). The questionnaire contains four parts, the first part is the residents' participation in park activities, including the presence or absence of activity participation, the type of activities participated in, and the number of times participated in, the second part is the residents' evaluation of the engagement activities, and a five-point Likert scale was used for the evaluation items, the third part is the residents' future willingness to participate in the community park activities, which includes the activities they would like to see added in the future, and the ways they would like to participate in the future, and the fourth part is the respondent's basic information, including gender, age, occupation, number of years of residence, and number of family members. Questionnaires were randomly sent to residents living in the neighborhoods of the three parks via mailbox delivery (Treiman Donald, 2014).

A total of 176 questionnaires were returned. SPSS 29.0 software was used to process the data. First, 55 respondents who had participated in park activities were screened, the mean and standard deviation of the evaluation items of different respondents were calculated and cross-tabulated. T-test was used to compare the significant differences in the impact evaluation of respondents of different genders, and ANOVA was used to compare the significant differences in the evaluation of respondents of different ages, occupations, years of residence, and number of family members. Then, the descriptive statistical method, cross-tabulation, was used to analyze 176 respondents' basic characteristics (gender, age, occupation, number of years of residence, and number of family members), as well as their willingness to

participate and activity preference, and chi-square tests were used to measure the association between the two categorical variables.

## 3 Results

### 3.1 What are the circumstances under which participatory approaches to community parks revitalization is appropriate by the partners?

When asked to describe the circumstances of the revitalized community parks, five main characteristics most commonly mentioned by participants were: (1) sufficient greenery, (2) adjacent to or within a community public building, (3) with community directors, (4) plenty of open space, and (5) warehouse and electrical equipment (Table 1).

Nearly all respondents identified the first four points as the most important circumstances, with warehouse and electrical equipment having some but not much impact on the organization of the activities.

#### 3.1.1 Sufficient greenery

Partners most commonly mentioned the presence of sufficient greenery as being important for the community park revitalization due to its role in creating comfortable spaces for relaxation and events, especially providing shade on sunny days. Conversely, partners point out that the lack of trees can affect the holding of summer events, as the park is so sunny that residents are reluctant to participate in activities.

*“Tall trees and enough greenery will make people more likely to stay, so we choose parks with plenty of greenery for our events.” (P1).*

*“We held workshops twice at Kami-Ikebukuro Kusunoki Park, the lack of large trees results in fewer event participants in the park during the summer months.” (P2).*

*“If you set up stalls in the park in summer, it will be very hot without big trees for shade, and it will be difficult to carry out events.” (P7).*

### 3.1.2 Adjacent to or within a community public building

Community public buildings were considered important characteristics for revitalizing community parks. The majority of partners expressed that public buildings had multiple functions, such as sites for conducting community activities and gathering residents, and they existed as community strongholds. When a community park was adjacent to or the community public building was within a park, it increased the potential for the park to serve as a space for community interaction. Specially, they were thought to provide gathering places even in the rainy days.

*“In Nishisugamo Nichome Park, there is a multi-purpose building next to the park where the community usually holds various cultural activities and where community exchanges are very active, providing good conditions for the active use of the park.” (P1).*

*“There is a cafe next to Kusunoki Park in Kami-Ikebukuro where various community events are held regularly, such as monthly coffee and cleanup activities. It’s also a place to meet on rainy days, where local members have formed their own community.” (P4).*

Partners also stated out that public buildings have the function of providing event information of community parks because posters can be placed on building walls. Contrastingly, lack of public buildings may lead to inadequate dissemination of information.

*“There is a bulletin board in the entrance of the public building of Zoshigaya Park with monthly information about various events. When residents enter the building, they can easily notice the event information.” (P5).*

### 3.1.3 With community directors

Partners commonly mentioned that community directors could connect the administration and residents, facilitating communication and cooperation between administration and residents. Community directors can be local residents, neighborhood association members and NPO members. Local directors could be role models, collaborators, and advocates, which leads to smoother implementation of park revitalization. In particular, local directors often know the parks best, because they live near community parks.

*“When discussing the content of activities and collecting opinions from residents, the district leaders can join the discussion first as a model, and gradually other residents will be attracted to join. They have also been active in publicizing and collaborating.” (P1).*

*“A management organization made up of people from the region will know more about the park than the management of Toshima Ward, and everyone will maintain the park as if it were home.” (P4).*

### 3.1.4 Plenty of open space

Plenty of open space were mentioned as important for community park revitalization. The presence of adequate open space provided the opportunity for people to gather for events. Conversely, the lack of open

space means that there are not enough venues for events and the number of people who can be accommodated is very limited.

*“When we choose a model park, one important thing we consider is whether there is enough open space inside the park, such as a plaza. Since more people will gather for the events, the space inside the park may be too small.” (P1).*

*“To set up stalls or hold other events in the park, enough open space is necessary for gathering.” (P7).*

Several partners also noted that adequate open space provided good sightlines, which is benefit to attract people due to visibility of events.

*“Open space provides open sightlines so park activities are easily visible.” (P4).*

## 3.2 What are the opportunities and challenges for community park revitalization by the different partners?

The survey considered different partners’ perceptions of participatory community park revitalization, potential opportunities and contemporary development challenges as well as their worldviews. Alongside this, the in-depth qualitative interviews about opportunities identified five themes, including (1) realize SDGs, (2) improve local attraction, (3) build community trust, (4) expand community business influence, and (5) increase partners’ knowledge and skills.

In addition, considering the whole participatory process, including the pre-intervention phase, the co-creation phase, the co-implementation phase, and the evaluation phase, the challenges of the collaborators were categorized into six themes, they are (1) lack of funds; (2) lack of staffs; (3) compromise on maintaining cooperation; (4) discovery of new partners; (5) low willingness of residents to participate; and (6) enrichment of the activities (Table 2).

Building trust with the community was seen as the most important opportunity by most participants, followed by increasing the local attractiveness; for the organizers, achieving sustainable urban development goals and acquiring knowledge by the participants were seen as the most important opportunities. Furthermore, most of the participants identified the low willingness of participation of residents and the lack of staff as the main challenges; for the organizers, the discovery of new partners was seen as a common challenge, in addition, the municipalities expressed their concerns about compromise on maintaining cooperation.

### 3.2.1 Opportunities

When asked to describe their opportunities of participating in the community park revitalization, most local partners noted building trust with the local community as their common opportunity. Local participants noted that when community parks host regular activities, there are more opportunities for residents in the surrounding area to interact, which in turn contributes to a more trusting relationship between communities. They also indicated that small parks should not



TABLE 2 The opportunities and challenges of park revitalization as perceived by individual partners.

Role	Partner identifier	Partner role	Opportunities						Challenges							
			Realize SDGs	Improve local attraction	Build trust with local community	Expand business's local influence	Increase knowledge and skills	Lack of funds	Lack of staff	Compromise on maintaining cooperation	Discovery of more partners	Low willingness of residents to participate	Enrichment of activities			
Organizers	P1	Government	Yes													
	P2	Education					Yes									
Local participants	P3	Local resident			Yes											
	P4	Neighborhood association			Yes											
	P5	NPO member1			Yes											
	P6	NPO member2			Yes											
	P7	Local vendors			Yes											

The colored cells indicate "yes."  
 † SDGs are sustainable development goals.

only exist in the community but should become a link to strengthen the bonds between neighbors.

*"If regular activities are held in the small parks, the connection between neighbors can be built, thus provide an opportunity for building trust with the community." (P3).*

*"The revitalization of the park has increased the relationship among community members, and I am happy to be a part of it." (P4).*

*"Community parks can bring more people together, and some people who do not normally use the park come because they participate in the events, so it provides more opportunities for building the connection of community." (P6).*

Some local participants also pointed to the opportunity that activating community parks presents to increase the attractiveness of the area; the community becomes more attractive when someone knows that there is a park nearby where they can have a coffee and enjoy some fun activities. Not only the residents who live in the neighborhood, but sometimes people who are passing by are attracted to the area. Although some of the community activities include vending, local participants emphasized that expanding commercial influence is not the main opportunity. On the one hand, community parks are primarily a place for recreational activities rather than business; on the other hand, they do not have enough visitors to expand commerce.

*"Some of Tokyo's larger parks, or parks near stations, have stronger commercial potential, such as Shibuya's Miyashita Park; whereas smaller parks in the community have low visitor flowrate and are not suitable for commercial expansion, it's a secondary opportunity." (P7).*

Organizers expressed that realizing SDGs and increasing knowledge and skills were their main opportunities for engaging in community park revitalization. During the in-depth discussions, the administration indicated that Toshima Ward is the most densely populated of Tokyo's 23 wards, so the quality of the living environment greatly affects people's willingness to live there.

*"The revitalization of several parks is helping to increase residents' willingness to live here and achieve the Toshima Ward's SDGs." (P1).*

University participants also emphasized that, it is essential for students to develop skills and learn how to work with people in government and the community in a practical way.

*"The parks in Toshima Ward provide an opportunity to learn public participatory and practice skills, and the students are very active in them." (P2).*

### 3.2.2 Challenges

Low willingness of residents to participate was considered as a common challenge of local participants. Some participants noted that it's hard to keep an activity going if there aren't enough participants. It also led to difficulties in scaling up to make the activities available in more parks within the city.



“Occasionally there are few participants, and we hope to keep adjusting to broaden residents’ willingness to participate.” (P3).

“The events are community-based, so the willingness of residents to participate is important. If a lot of content is prepared but there are few participants, it is difficult to sustain the events.” (P7).

In addition, the lack of staff also was seen as the major challenge of local participants. Several participants expressed that activities typically took place on weekends, which meant that additional staff had to be recruited to attend because the regular park staff are often off at that time.

“There are only a few permanent staff members now, so understaffing is a huge challenge.” (P3).

“The current understaffing is the main challenge and it would be good to recruit more volunteers.” (P4).

“Activities are usually held on weekends when the regular park staff are off, so temporary staff have to be brought in.” (P5).

Discovering more partners is considered as the common challenges of organizers. The administration noted that partners could play an important role in activity content planning, promotion and execution, the lack of partners is a major challenge in promoting events in more community parks. The authorities are currently developing systems to encourage the participation of more partners. In the elaborated cooperation agreement, the conditions for occupancy of the park have been extended, and partners could receive the facility support for

activities. As the agreement is being developed, the authorities have expressed their expectation that more partners will participate.

“We host 10–15 events a year in small parks in the area, and currently have very few partners who are proactive in planning events, and we’d like to get more groups involved in planning and hosting events in the future.” (P1).

University participants pointed out the limitations of students in publicizing activities, while emphasizing the need to rely on more partners for the sustainability of participatory community park revitalization. This not only expands the publicity of the activities, but also enriches the content of the activities and attracts a broader group of participants.

“Students are responsible for publicizing the events, which are very limited in scope. If more partners join the project, the activities can be promoted to a wider range of groups and the content of the activities can be enriched.” (P2).

### 3.3 Evaluation of engagement activities by residents

#### 3.3.1 Positive impact of engagement activities

Among the 176 valid questionnaires returned, 55 respondents had participated in community park events, and t-tests showed no significant differences in outcome ratings by gender (Table 3). Both males and females rated “increased use by parents and children” and

TABLE 3 Evaluation of the impact of events by residents.

		Experience different from usual	Increase the use of parents and children	Motivate to go to the park	Increase interaction opportunity
		M ± SD	M ± SD	M ± SD	M ± SD
Sex	Male (N = 14)	3.93 ± 0.73	4.36 ± 0.63	4.36 ± 0.63	3.86 ± 0.67
	Female (N = 41)	4.34 ± 0.73	4.37 ± 0.80	4.37 ± 0.77	4.10 ± 0.86
	p-value	0.070	0.271	0.199	0.145
Age category	18–39 (N = 16)	4.44 ± 0.63	4.75 ± 0.45	4.38 ± 0.81	3.81 ± 0.91
	40–59 (N = 22)	4.45 ± 0.80	4.50 ± 0.60	4.64 ± 0.58	4.41 ± 0.67
	60 and above (N = 17)	3.76 ± 0.56	3.83 ± 0.88	4.00 ± 0.71	3.76 ± 0.75
	p-value	0.005**	<0.001**	0.023*	0.018*
Time of being resident in the neighborhood	0–5 years (N = 16)	4.56 ± 0.63	4.94 ± 0.25	4.81 ± 0.54	4.13 ± 0.96
	6–10 years (N = 15)	4.67 ± 0.49	4.33 ± 0.62	4.33 ± 0.62	4.27 ± 0.70
	10 years and above (N = 24)	3.75 ± 0.68	4.0 ± 0.83	4.08 ± 0.78	3.83 ± 0.76
	p-value	<0.001**	<0.001**	0.006**	0.242
Number of family member	1 (N = 9)	3.56 ± 0.89	3.78 ± 1.10	4.00 ± 0.71	3.78 ± 0.67
	2 (N = 12)	4.00 ± 0.74	4.17 ± 0.72	4.25 ± 0.75	3.92 ± 0.90
	3 and above (N = 34)	4.50 ± 0.56	4.59 ± 0.56	4.50 ± 0.71	4.15 ± 0.82
	p-value	<0.001**	0.008**	0.157	0.416

“motivation to go to the park” (means 4.36 and 4.37, respectively) as major impacts of the events.

The results of the ANOVA showed significant differences in the evaluation of the results of the campaign by citizens of different ages. For respondents aged 18–39, the main impact of the campaign was considered to be “increased use by parents and children” (mean of 4.75), while respondents aged 40–59 and respondents aged over 60 rated the main impact of the activity as “motivation to go to the park” (mean of 4.64 and 4.00, respectively), followed by “increased use by parents and children” (mean of 4.50 and 3.83, respectively) “Respondents over the age of 60 rated this activity lower than the other two groups.

In addition, there were significant differences in the results of the activities rated by people of different years of residence in terms of “Experience different from usual,” “Increase the use of parents and children” and “Motivate to go to the park.” Respondents who had lived in the park for more than 10 years rated the outcomes lower than respondents in the shorter groups.

The number of family members was significantly different on the results of the events in terms of “Experience different from usual,” “Increase the use of parents and children.” Respondents with three or more family members rated the program higher than the two groups with fewer family members, and one-person families rated the program lowest.

### 3.3.2 Problems of engagement activities

Based on the responses of 55 participants who identified various issues related to engagement activities, the findings are as [Figure 5](#). The most significant problem identified was “Activities are not well publicized,” cited by 60% of respondents. This suggests a critical need for improved communication and publicity strategies to enhance awareness and participation in park activities. Following this, other issues noted include: “Parks cannot be used as usual,” which was mentioned by 20% of respondents, indicating concerns about disruptions or limitations caused by activities in the park. “Garbage

increases with activities,” identified by 14.5% of respondents, highlighting challenges related to waste management during events. “Noise increases with activities,” cited by 12.7% of respondents, suggesting issues related to noise pollution associated with park activities. These insights underscore the importance of addressing communication gaps, managing park usage effectively, implementing proper waste management practices, and mitigating noise disturbances to improve the overall experience and community acceptance of engagement activities in the park.

## 3.4 What’s the participatory willingness and engagement activity preferences of residents?

### 3.4.1 Willingness to participate of residents

176 respondents responded to the willingness to participate in the event, of which those who were willing to participate in the event may have done so in one or more of the capacities of guest, event assistant, or operator ([Table 4](#)). The results of the chi-square test showed a significant correlation between the gender of the respondents and the willingness to participate in the event. Female willingness to participate was higher than male, with 14.93% of male respondents explicitly stating that they did not want to participate in the event, compared to 6.42% of female respondents. Of the male and female respondents who were willing to participate, the primary mode of participation was as a guest (53.73 and 72.48%, respectively), while male respondents indicated a secondary desire to participate as an event assistant (16.42%), while the secondary desire of female respondents was as an operator (15.60%).

In addition, there is a significant correlation between the age of the respondents and their willingness to participate in the activities. The highest willingness to participate is found among respondents aged 18–39, with only 2.08% unwilling to participate.

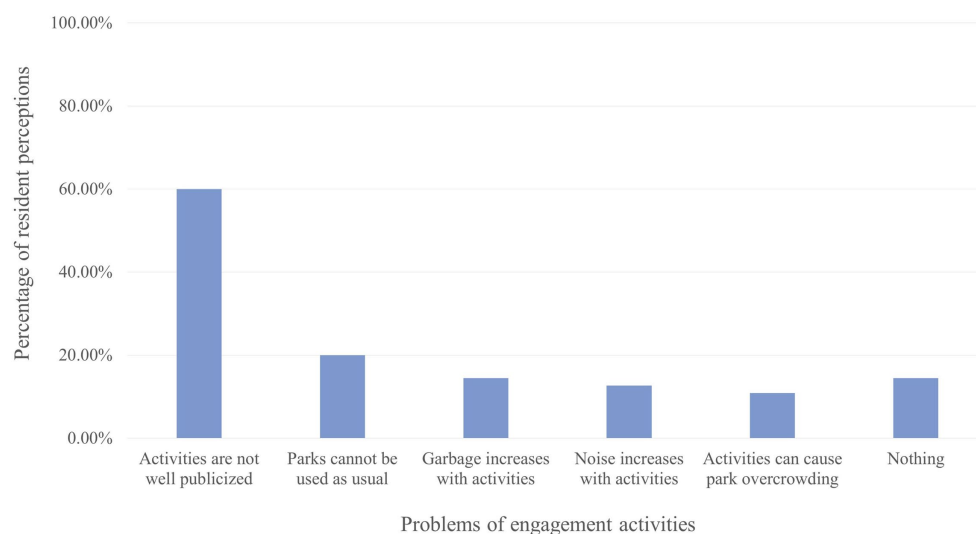


FIGURE 5  
Problems of engagement activities by residents.

TABLE 4 Willingness to participate of residents.

		Participate as a guest	Participate as an assistant	Participate as an operator	Unsure	Do not participate	p-value
Sex	Male (N=67)	53.73%	16.42%	7.46%	28.36%	14.93%	0.010**
	Female (N=109)	72.48%	12.84%	15.60%	12.84%	6.42%	
Age category	18-39 (N=48)	81.25%	10.42%	12.50%	12.50%	2.08%	0.047*
	40-59 (N=71)	66.20%	18.31%	15.49%	14.08%	12.68%	
	60 and above (N=57)	50.88%	12.28%	8.77%	29.82%	12.28%	
Time of being resident in the neighborhood	0-5 years (N=60)	75.00%	10.00%	13.33%	16.67%	6.67%	0.050*
	6-10 years (N=27)	77.78%	25.93%	25.93%	7.41%	3.70%	
	10 years and above (N=89)	55.06%	13.48%	7.87%	23.60%	13.48%	
Number of family member	1 (N=67)	58.20%	13.43%	8.96%	31.34%	7.46%	0.015*
	2 (N=41)	65.85%	19.51%	19.51%	19.51%	4.88%	
	3 and above (N=68)	72.06%	11.76%	11.76%	5.82%	14.71%	

This is followed by respondents over the age of 60 with 12.28% unwilling to participate, and 12.68% of respondents between the ages of 40–59 were unwilling to participate. The primary mode of participation for respondents of all ages who were willing to participate was as a guest, with 18–39 year olds preferring to participate as an operator (12.50%), while 40–59 year olds and over 60 year olds preferring to participate as an event assistant (18.31 and 12.28%, respectively).

Respondents' length of residence was also significantly associated with willingness to participate in activities. Residents with 6–10 years of residence had the highest willingness to participate with 3.70% unwillingness, followed by residents with 0–5 years of residence with 6.67% unwillingness, while 13.48% of residents with more than 10 years of residence indicated unwillingness to participate in activities. In addition, residents with 6–10 years of residence also showed higher willingness to act as activity assistants (25.93%) and operators (25.93%).

The number of family members is significantly related to the willingness to participate in the activities. 2-person families have the highest willingness to participate with 4.88%, followed by single-person families with 7.46%. While the percentage of respondents who were unwilling to participate in a family consisting of 3 or more members was 14.71%. Among the respondents who were willing to participate, respondents whose family members consisted of 3 and above had the highest percentage of participation as guests (72.06%), and respondents from 2-person families had a higher percentage of participation as activity assistants (19.51%) and operators (19.51%) than the other two groups.

### 3.4.2 Engagement activity preferences of residents

In addition to those who explicitly stated that they did not want to participate, 145 respondents made one or more choices about the

types of events they would like to see added, as shown in the Table 5. The largest number of respondents chose “market” (75.86%), followed by “parent-children activity” (29.66%), “natural activity” (28.97%), “education activity” (27.59%).

The results of the chi-square test show that the activity preferences of the 145 respondents are significantly related to the age of the respondents. 18–39 year old respondents are most likely to want to add “market” (78.26%), followed by “parent-children activity” (39.13%) and “art activity” (30.43%). Respondents aged 40–59 would also like to add “market” (82.14%), followed by “nature activity” (35.71%) and “parent-children activity” (30.36%). respondents over 60 years of age would most like to add “market” (65.12%), followed by “education event” (41.86%) and “nature activity” (30.23%).

Respondents' activity preferences are also significantly related to the number of family members. The most preferred activity for single person families is “market” (80.00%) while the rest of the activities are less than 30%, the most preferred activity for two person families is “market” (71.43%) followed by “nature activity” (40.00%) and “education activity” (37.14%), and the most desired activity for respondents from families with 3 or more people is also “market” (74.55%), followed by “education activity” (72.73%) and “parent-children activity” (54.55%).

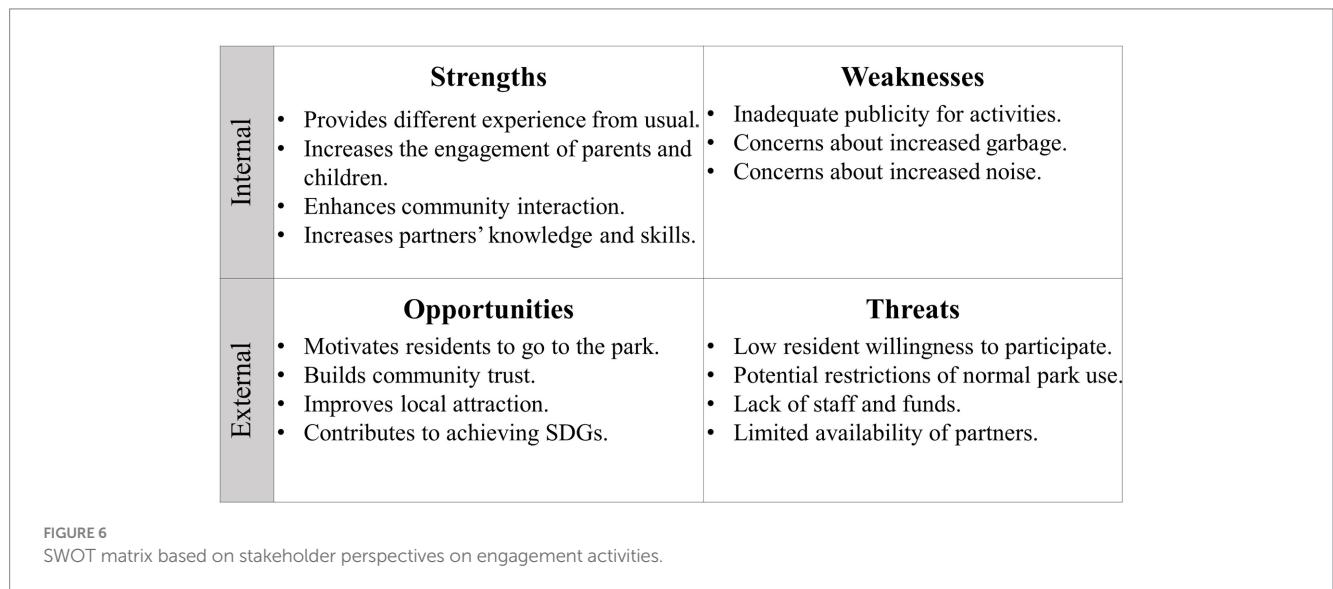
## 4 Discussion

### 4.1 Appropriate circumstances for participatory approaches to community parks revitalization

In established cases of small-scale green space co-creation, the involvement of local community workers, community greening, availability of sites, and accessible sites are seen as key conditions for community participation. Neighborhood social workers are key

TABLE 5 Engagement activity preferences of different residents.

		Parent-children activity	Nature activity	Art activity	Market	Exchange of view	Education activity	Game	p-value
Age category	18-39 (N = 46)	39.13%	19.57%	30.43%	78.26%	6.52%	13.04%	23.91%	0.025*
	40-59 (N = 56)	30.36%	35.71%	26.79%	82.14%	3.57%	28.57%	12.50%	
	60 and above (N = 43)	18.60%	30.23%	9.30%	65.12%	4.65%	41.86%	4.65%	
Number of family member	1 (N = 55)	7.27%	20.00%	20.00%	80.00%	7.27%	27.27%	1.82%	<0.001**
	2 (N = 35)	25.71%	40.00%	17.14%	71.43%	5.71%	37.14%	5.71%	
	3 and above (N = 55)	54.55%	30.91%	29.09%	74.55%	1.82%	72.73%	30.91%	



bridge-builders for the community (Magdalena, 2023); community greening provides possibilities for natural experiences, such as greening the edges of roads, planting street trees, or constructing flower beds (Katharina et al., 2024); and the availability of sites, as well as accessibility of sites, are key conditions for achieving broader and more inclusive participation (Katharina et al., 2024). The results of this study suggest that the involvement of community workers, neighborhood greening, and site availability (adequate space for development) are key conditions for co-creation to achieve shared participation at the community level, in addition to public buildings inside or outside the park. Community shared spaces help to promote social interaction among residents, and this study highlights that public buildings inside and outside community parks can be one of the priority conditions for community park revitalization.

## 4.2 Swot matrix based on stakeholder perspectives on engagement activities

A SWOT matrix (Figure 6) was constructed based on stakeholder input from partners and local residents regarding engagement activities in community parks. Internal factors represent aspects within the control or influence of stakeholders conducting these activities, such as the unique experiences offered. External factors encompass elements outside stakeholders' direct control, like low resident willingness to participate. Strengths identified are internal factors that provide advantages to these activities, while weaknesses encompass internal challenges hindering their success, such as concerns about garbage increases. Opportunities identified include leveraging activities to build community trust, whereas threats such as lacking of staff and funding constraints pose potential risks. This



analysis underscores the importance of stakeholder perspectives in guiding strategic planning for park engagement initiatives.

Previous studies on participatory approaches in urban green spaces have extensively discussed enablers and constraints for stakeholders. Enablers include strategic support and participant learning effects (Trencher et al., 2014; Brokking et al., 2021; Collins et al., 2022). However, constraints like substantial time and resource investments are significant hurdles (Fongar et al., 2019; Katharina et al., 2024). This study identifies additional challenges at the community level, specifically the low participation willingness of residents and the scarcity of partners. Addressing these challenges will be crucial for sustaining and scaling efforts to revitalize community parks. The participatory process typically unfolds in four phases: pre-intervention, co-creation, co-implementation, and evaluation (Nguyen et al., 2024). While co-creation and co-implementation phases are well-documented, evaluation phases are less explored but crucial for understanding effectiveness (Voorberg et al., 2015; Jacob et al., 2020; Van der Jagt Alexander et al., 2023). Evaluation in this study highlighted the effectiveness of community park co-creation in enhancing diverse experiences, increasing park usage, motivating park visits, and fostering social interactions. However, preferences vary significantly across age groups, years of residency, and household compositions, suggesting that current activities may not fully meet the needs of residents aged over 60, long-term residents, and those in single-person households.

To enhance local partnerships through community parks, several strategies are proposed. Firstly, improving event publicity and raising awareness about waste management are crucial steps. Secondly, reducing noise disturbances from music and announcements can enhance the park experience. Addressing threats involves catering to the diverse needs of all age groups, especially older residents living alone, to boost their participation. Furthermore, incentivizing partnerships with local schools and volunteer groups can broaden community engagement and support park initiatives effectively. By implementing these strategies, community parks can become vibrant hubs that cater to the diverse needs of residents while fostering stronger community bonds and sustainable development.

### 4.3 Participatory willingness and engagement activity preferences of residents

Residents' willingness to participate has often been overlooked in previous research, and this study looked not only at whether residents wanted to participate, but also at how they wanted to participate. To encourage more residents to participate in the operation of community activities, priority can be given to females aged 18–39 years old who have lived in the area for about 6–10 years and have three or more family members, as they have a higher willingness to operate. Existing cases of engagement activities at the community level involve more educational and natural activities, they also include children's games. For example, in the Polish case of gardening and planting activities, citizens worked together to clean up their yards, plant greenery, and create rain gardens (Magdalena, 2023); the importance of natural connections is also explored in the UK project of children's

participation in creating a botanical garden meadow (Helen and William, 2023). The combination of play equipment and natural elements in Poznan incorporates children's play into the co-creation of community green spaces (Katharina et al., 2024). However, little research has been mentioned about community market activities. This study shows that market activities are widely enjoyed by community residents of all ages. Moreover, educational activities are not only for children, but older people also look forward to participating in educational activities, such as disaster prevention education. Parent-child activities are more popular among multi-member families.

### 4.4 Limitations

The study focuses on the pioneering case of Toshima Ward. However, the engagement activities have not yet been replicated in community parks across other urban areas, which may limit the generalizability of the findings. Bias may exist due to the small sample size of stakeholders and residents involved, as the project lacks extensive partnership involvement. Furthermore, since nearly all community parks in Toshima Ward are block parks, future research could explore neighborhood and district parks in other cities to propose strategies for enhancing local partnerships through different park types. Moreover, challenges persist in sustaining long-term community engagement and securing funding. Future research could delve into expanding project processes and conducting comprehensive longitudinal analyses of each phase.

## 5 Implications and conclusion

This study has underscored the priority conditions, key opportunities, and challenges associated with revitalizing community parks through participatory approaches. The findings emphasize the importance of community public buildings, the presence of community directors, ample greenery, and sufficient open space as crucial factors for successful park revitalization efforts (Alessandro et al., 2021; Katharina et al., 2024; Nguyen et al., 2024). Despite these enabling factors, significant challenges such as the substantial time and resource investments required for long-term maintenance, as well as low resident willingness to participate, pose ongoing hurdles (Claire et al., 2022; Wei-Shan and Shao-Yu, 2024).

Moreover, this study has revealed the diverse impacts of community park activities, including providing unique experiences, increasing park usage among parents and children, motivating visits, and fostering social interactions. However, these impacts vary significantly across demographic groups, suggesting the need for tailored activities that cater to the preferences of older residents, long-term inhabitants, and those in single-person households (Helen and William, 2023; Buijs Arjen et al., 2024).

Looking forward, future research should focus on several new avenues. Firstly, there is a need to explore strategies to enhance the participation of demographic groups currently less engaged, such as seniors and single-person households. Understanding the specific barriers to their involvement and developing targeted interventions could promote broader community participation (Katharina et al., 2024). Secondly, investigating the perspectives and participation

willingness of residents in different geographical areas could provide insights into regional variations and inform localized park management strategies (Wei-Shan and Shao-Yu, 2024).

In conclusion, by addressing these priority conditions and challenges, and by adapting activities to meet diverse resident needs, community parks can evolve into vibrant, inclusive spaces that strengthen social bonds and support sustainable urban development. This study not only contributes to the literature on participatory approaches in urban green spaces but also opens avenues for future research aimed at refining practices and maximizing the societal benefits of community-driven park revitalization initiatives.

## Data availability statement

The original contributions presented in the study are included in the article/Supplementary material, further inquiries can be directed to the corresponding author/s.

## Ethics statement

The requirement of ethical approval was waived by the Graduate School of Horticulture, Chiba University for the studies involving humans because Graduate School of Horticulture, Chiba University. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study. Written informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article.

## Author contributions

MZ: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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## Supplementary material

The Supplementary material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/frsc.2024.1445754/full#supplementary-material>

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