

TRENDS IN SUPPORTING OUTDOOR PHYSICAL ACTIVITY IN PUBLIC SPACES BASED ON WARSAW PARTICIPATORY BUDGETING (WPB)

Kinga Kimic¹, Paulina Polko²

¹Department of Landscape Architecture, Institute of Environmental Engineering, Warsaw University of Life Sciences, Nowoursynowska Street 159, 02-776 Warsaw, Poland

²Faculty of Applied Sciences, WSB University, Ciepłaka Street 1C, 41-300 Dabrowa Gornicza, Poland

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Abstract

The growing importance of recreation, which enhances the health and well-being of city dwellers, is driving changes in public spaces: they are becoming more open to a wider range of outdoor physical activities, including those supported by social initiatives. To examine the extent to which this issue is important to the residents of Warsaw (Poland), projects implemented as part of the Warsaw Participatory Budget (WPB) between 2015 and 2024 were analysed in terms of their role in supporting outdoor physical activity in the following categories: recreational and bicycle paths, parks, squares and pocket green spaces, children's playgrounds, sports facility, rest equipment, physical exercises and training courses. The results show that across the 10 WPB editions studied, 496 projects related to outdoor physical activity were carried out. They gained in importance in the first years of the WPB operation, but the number of projects implemented fell significantly during the COVID-19 pandemic. However, despite the identified decline, the approximately 10% share of outdoor physical activity projects among all completed in the WPB between 2015 and 2024 underscores their importance to residents and provides guidance on the direction of public spaces development.

Key words: urban public spaces, green spaces, recreation, health and well-being, public participation, placemaking

Introduction

Physical activity is assessed as a health-enhancing behaviour positively associated with improved physical and psychosocial health. Recreation, as one of the popular functions of urban public spaces, including green areas, is an important contributor to human development and well-being, whose role has increased significantly in recent years (Djukic et al., 2025). It comprises various activities undertaken by people in their free time for pleasure, voluntarily, to develop their personality, or to increase their psychological and physical capacity (Meyer, 2018), and becomes especially important during the Covid-19 pandemic (Kimic et al., 2024; Freire et al., 2025). A rich recreational offer may transform public spaces into vibrant, functional, socially cohesive, and multi-functional areas. Appropriate infrastructure supports active lifestyles and reduces health risks (Lopez-Haro et al., 2024). The city of Warsaw has extensive green spaces and diverse recreational facilities. They enable residents to spend their free time outdoors, which has become a priority for the city government. The operational objective 2.2. 'We spend time actively in our neighbourhood' is a part of the #Warsaw2030 Strategy (2018). It covers the creation of free local activity areas, the development of infrastructure in all districts, and the promotion of sports. One of the popular programs supporting the development of recreational opportunities in public spaces is Warsaw Participatory Budgeting (WPB), implemented to meet Varsovians' needs and expectations (Smaniotto Costa et al. 2024; Polko et al. 2025). This placemaking tool, operating in Warsaw since 2014, supports many initiatives, allowing city residents in an easy and inclusive way to decide how a part of the city's budget is spent by submitting proposals to improve their neighbourhoods, verification by city officials, public voting, and implementation of the winning projects (General information ..., 2026). Recreation and relaxation are primary needs strongly emphasised in Participatory Budgets in many Polish cities. However, research on whether and to what extent the WPB supports residents' physical development has not yet been conducted.

Material and methods

The study aimed to determine whether the Warsaw Participatory Budget (WPB) supports the development of outdoor physical activity among city residents in urban public spaces. The study used quantitative data to identify and analyze completed outdoor physical activity projects selected through public voting across ten fully completed editions of the WPB conducted between 2015 and 2024. Projects from the 2025 edition were excluded because some are still not implemented. The data source was the official, open-access WPB database managed by the City of Warsaw (Projekty, 2026), providing standardized information on each project. In the first stage of selection, projects were

identified using three main keywords related to physical activities (leisure, recreation, and sport) in project titles and descriptions. This approach resulted from the database's structure and search limitations. All identified entries were individually verified to remove duplicate records and confirm their relevance to the study's topic. The selected projects were classified into seven categories based on the scale and scope of physical activities and/or their supporting elements. The categories are as follows: 1. Recreational and bicycle paths, 2. Parks (activities organized and introduced in large-scale green areas), 3. Squares and pocket green spaces (activities organized and introduced in small-scale green areas), 4. Children's playgrounds (separate area or part of the school garden), 5. Rest equipment (supporting physical activity, such as benches, lighting, roofing for playing fields, or retrofitting an existing facility), 6. Sport facility (sport field, outdoor gym, climbing wall, etc.), 7. Physical exercises and training courses (gymnastics, tai chi, and yoga, cycling training courses, etc.). The quantitative analysis compared the number of projects implemented within and between categories to identify the most popular among city residents. The analysis of projects implemented across the 10 studied editions also revealed a leading trend in the use of the WPB to support residents' physical activity, including before, during, and after the Covid-19 pandemic.

Results

Across the 10 studied WPB editions implemented between 2015 and 2024, a total of 496 projects related to outdoor physical activities were carried out (Table 1). The overall summary shows that projects supporting outdoor physical activities gained importance in the first years. The fewest projects were implemented in the first edition in 2015 (only 15). However, in the 2016 edition, 82 projects were implemented, and in 2017 and 2018, they exceeded 90. Their number decreased significantly during the Covid-19 pandemic due to restrictions on access to public spaces. In the 2019 edition, implementation remained stable at 66 projects. In the 2020 and 2021 editions, the number of projects did not even reach 30 in either. In 2022, after a small increase to 40 projects, a further decline was observed: in 2023, only 26 projects were implemented, and in 2024, only 23. The average percentage share of implemented outdoor physical activity projects across 10 studied editions of the WPB is 9.44%. In the editions from 2016 to 2018 and in 2022, it slightly exceeded 10%.

Tab. 1: Projects on outdoor physical activities implemented in the Warsaw Participatory Budget between 2015 and 2024

WPB edition	All projects implemented			Project category						
	In WPB	Supporting outdoor physical activities		Recreational and bicycle paths	Parks	Squares and pocket green space	Children's playgrounds	Rest equipment	Sport facility	Physical exercises and training courses
2015	336	15	4,46 %	1	3	1	2	1	7	-
2016	644	82	12,73 %	7	10	6	7	9	33	10
2017	770	97	12,60 %	12	6	6	14	10	36	13
2018	881	94	10,67 %	7	6	3	6	10	35	27
2019	850	66	7,76 %	10	8	2	10	11	13	12
2020	414	29	7,01 %	3	3	1	-	4	15	3
2021	359	24	6,69 %	3	2	2	-	8	5	4
2022	349	40	11,46 %	8	6	-	3	6	11	6
2023	326	26	7,98 %	2	8	-	1	1	8	6
2024	325	23	7,08 %	3	4	-	1	3	8	4
Total:	5254	496	9,44 %	56	56	21	44	63	171	85

The results show that most implemented outdoor physical activity projects (171) belonged to the sport facility category. They included mainly the construction of new facilities or the comprehensive renovation of existing ones, outdoor gyms, climbing walls, boules stations, pumptracks, as well as table games, durable, permanently installed concrete fixtures such as chess and checkers, table tennis (ping pong), and outdoor-rated foosball tables. Most of them were built as single facilities surrounded by greenery and located close to housing estates.

The second-largest group, comprising 86 projects, was the physical exercises and training courses category. These activities included a variety of outdoor activities and courses to improve physical health. The most popular were yoga, tai chi, and dance courses, one-day or weekend cycling courses for youth and adults, and gymnastics for people of all ages, especially older adults.

Projects in the rest equipment category accounted for a moderate share in WPB – 63 were implemented across the 10 studied editions. Many public spaces gained new equipment, such as benches and hammocks. Some sports facilities received new lighting or had their spectator areas

roofed to extend their availability and improve safety. Selected sports fields were partially or fully modernized.

Another 56 projects were implemented in the recreational and bicycle paths category. Selected urban forests received new recreational and educational paths, but this category was dominated by the development of existing bicycle path systems in public spaces – new sections with supporting infrastructure were constructed. The same number of projects were implemented in the parks category – selected parts of large urban green spaces were developed to create new recreation zones.

Projects implemented from the children's playgrounds category had a smaller share – 44 of them were identified, involving the construction of new playgrounds and the modernization of existing ones. Squares and pocket green spaces category accounted for only 21 projects. Most of them included minor initiatives supporting recreation in small green spaces and residential areas. Only a few involved the construction of new squares with a limited recreational program.

Discussion

Warsaw Participatory Budget is typically a good indicator of social processes that demonstrate citizen engagement, and the number of submitted and implemented projects refers to social needs. The Covid-19 pandemic also affected the development limitations of this tool during the period from 2019 to 2021. At the same time, the social needs for outdoor recreation are changing. In that context, the popularity of small or individual recreational and sports facilities in the analyzed WPB projects is understandable, as their costs are low and implementation time is short. Increasing attractiveness of public spaces, especially in green areas, through improved recreational and sports infrastructure also promotes a sense of safety (Polko, Kimic, 2021; Polko, Kimic, 2022; Šerý et al., 2024). It is also easy to organize one-time or recurring outdoor exercise and training courses that help people of all ages improve their health through physical activity (Pharr et al., 2019), especially for older people (Van Puyvelde et al., 2025). Group activities also provide contact with others, which is another positive aspect of safety (Kimic, Polko, 2022; Kimic, Polko, 2023).

The share of almost 10% of outdoor physical activity projects implemented in the 10 studied WPB editions is significant. The general trend shows an increase in the urban community's interest in outdoor physical activity before the COVID-19 pandemic. Much research confirms that participation in sport and recreation in the post-COVID-19 period is critical for re-engaging people in health-enhancing behaviours (Ainsworth, Li, 2020; Sallis et al., 2020; Hasson et al., 2021). However, the trends observed in the WPB do not support this approach. At the same time, many new recreational facilities were created, and existing ones were modernized in the first editions of WPB, but these were mainly small-scale projects. The downward trend after 2022 indicates that public interest in outdoor physical activity projects has waned, despite the consistently high need for expanding multifunctional recreational infrastructure in the city. Residents' expectations are also changing – they are seeking functionally diverse public spaces, while complex projects require larger funds that are beyond the participatory budget. The current situation may also suggest that this placemaking tool has reached its limit. Warsaw scores high on the civic-oriented ranking but has low voter turnout in the WPB (Szczepańska et al., 2022).

Conclusion

The research demonstrates the importance of creating and maintaining recreational and sports facilities in urban public spaces, including green spaces, through the residents' involvement. Despite a recent decline in the popularity of outdoor physical activity projects in the WPB, investing in public spaces for recreation and sport remains an important part of this participatory tool in supporting the physical and mental health and well-being of Warsaw residents.

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Souhrn

Rostoucí význam rekreace, která přispívá ke zdraví a pohodě obyvatel měst, je hnací silou změn ve veřejných prostranstvích: ta se stávají přístupnějšími pro širší škálu venkovních fyzických aktivit, včetně těch, které podporují sociální iniciativy. Abychom zjistili, do jaké míry je tato otázka důležitá pro obyvatele Varšavy (Polsko), byly analyzovány projekty realizované v rámci Varšavského participativního rozpočtu (WBP) v letech 2015 až 2024 z hlediska jejich role při podpoře fyzické aktivity venku v následujících kategoriích: rekreační a cyklistické stezky, parky, náměstí a malé zelené plochy, dětská hřiště, sportovní zařízení, odpočinkové vybavení, cvičení a tréninkové kurzy. Výsledky ukazují, že v rámci 10 zkoumaných ročníků WBP bylo realizováno 496 projektů souvisejících s fyzickou aktivitou venku. Jejich význam rostl v prvních letech fungování WBP, ale počet realizovaných projektů během pandemie Covid-19 výrazně poklesl. Navzdory zjištěnému poklesu však přibližně 10% podíl projektů v oblasti fyzické aktivity venku na všech projektech dokončených v rámci WBP v letech 2015 až 2024 podtrhuje jejich význam pro obyvatele a poskytuje vodítko pro směřování rozvoje veřejných prostor.

Contact:

Kinga Kimic, PhD

E-mail: kinga_kimic@sggw.edu.pl

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