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Urban greenspace to support social integration of immigrants? Case studies across Sweden

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ABSTRACT

The successful integration of immigrants into European societies has become a crucial policy issue in the past decade. Urban greenspace (UGS) provides social spaces for people with different ethnic backgrounds; however, the relationships between the social integration of immigrants with the reciving society and UGS have attracted relatively little research interest. This study aims to explore the role of UGS in enhancing the social integration of first-generation immigrants in Sweden ("new- Swedes") by focusing on four forms of social integration: structural, interactive, cultural, and identificational. We draw on a sample of 280 interviews with new-Swedes from nine urban settlements in Sweden. Our results show that UGS in Sweden provides multiple opportunities for interactive integration among people from diverse cultures, including the receiving society, and that the accessibility, quality, and availability of UGS are crucial for structural integration. Although UGS do not primarily serve as venues for developing new relationships between new and native Swedes, they do facilitate social interactions within families and cultural communities. Additionally, UGS expose new Swedes to Swedish cultural norms regarding outdoor recreation. Our findings underscore the importance of critical infrastructure in promoting social interaction and integration. Active roles of immigrants in UGS planning and management will ensure that their needs and interests are considered in UGS design and offer important opportunities to be better connected to the receiving society. Finally, understanding the potential contribution of UGS also requires understanding the extent and depth of such integration.

1. Introduction

The successful integration of immigrants into European societies has become a pivotal policy concern over the past decade. Recent research has increasingly explored the potential role of urban greenspace (UGS) in supporting the social integration of immigrants (e.g., Dawson et al., 2024; Gentin et al., 2019; Hong et al., 2018). UGS provides opportunities for a wide variety of activities, offering many potential benefits to contemporary societies. These benefits include improvements to physical and psychological health and the facilitation of social interactions of immigrants across different cultural groups and with the receiving society (Charles-Rodriguez et al., 2023; Clarke et al., 2023; Jay and Schraml; 2009, Leikkila¨ et al., 2013; Stodolska et al., 2017). Several studies indicate that UGS is highly valued by immigrants, particularly for the numerous social benefits they provide (Leikkila¨ et al., 2013; Peters et al., 2010; Stodolska et al., 2017; Wilson et al., 2024). For instance, UGS is frequently utilized for social activities and gatherings, with research demonstrating a positive correlation between the availability of facilities (e.g., benches, tables, playgrounds) and social interactions (Cattell et al., 2008; Stodolska et al., 2017).

While studies have found that UGS can foster community connections and reduce social isolation for immigrants (Edge et al., 2023; Ward Thompson et al., 2016), the literature suggests that usage patterns of UGS among immigrants primarily involve gatherings within their own ethnic communities, often occurring in residential neighborhoods (Jay and Schraml, 2009; Kloek et al., 2016; Leikkilä et al., 2013; Peters et al., 2010,). Thus, while UGS can significantly enhance immigrants' social lives and foster positive sentiments toward their surroundings, their role in facilitating cross-cultural interactions remains uncertain. Several studies found that interactions between immigrants and members of the receiving country within UGS are typically superficial, often limited to greetings and small talk on light topics such as pets, children, foreign

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accents, or weather (Jay and Schraml, 2009; Peters et al., 2010; Stodolska et al., 2017).

Nonetheless, there are a few exceptions, such as allotment gardens, which have been observed to facilitate stronger connections (Leikkilä et al., 2013). Several studies recognize the valuable opportunities that UGS offers immigrants in observing cultural norms of the receiving society. These include attitudes toward nature, patterns of nature use and recreation, as well as learning about cultural traditions such as food preparation and holidays, all of which contribute to developing a sense of attachment to the receiving country (Jay and Schraml, 2009; Leikkilä et al., 2013; Peters et al., 2010; Stodolska et al., 2017). Moreover, UGS can facilitate the creation of bonds related to shared ecological values across cultures, particularly concerning the importance of biodiversity preservation and conservation efforts (Jay and Schraml, 2009).

However, the process of cultural identification through nature is nuanced and complex. While some individuals find spending time in UGS beneficial, perceiving it as a neutral space where feelings of exclusion or marginalization are minimized compared to other public areas (Jay and Schraml, 2009), for others it can evoke sentiments of loss and uprootedness, stemming from the contrasts to home environments or the lack of familiarity with outdoor recreation experiences (Curry et al., 2001; Risbeth and Finney, 2006). For others, the experience can create nostalgia for their home country and past ways of life, especially when there are strong resemblances in landscapes and vegetation (Leikkilä et al., 2013; Moren-Alegeret, 2008; Risbeth and Finney, 2006).

The literature connecting UGS and social integration in Europe remains limited, with relatively little empirical investigation of the diversity of perspectives among and within different groups of immigrants concerning UGS preferences (Calderón-Argelich et al., 2021; Gentin et al., 2019). While some studies have begun to explore the influence of various characteristics of UGS on social integration – for example perceived greenness (de Vries et al., 2013), perception of safety (Hong et al., 2018), frequency of visitation (Elbakidze et al., 2022), type of UGS (Dawson et al., 2024) and the spatial distribution of UGS (German-Chiari Seeland, 2004) – the overall portrait is far from complete, and many questions remain. With whom do immigrants socialize in UGS, and to what extent are UGS perceived to be spaces for cultural learning and interaction? What are the qualities of interactions taking place there, and to what extent do they facilitate the creation of new social connections? Does UGS enhance social integration in other ways, such as through the transmission of cultural norms or the fostering of a shared environmental ethic? These questions underscore the need for further research to better understand the role of UGS in promoting social integration among immigrant communities in Europe.

This study aims to explore the role of UGS in enhancing social integration of first-generation immigrants in Sweden (we call this group "new-Swedes"), through application of a multi-dimensional framework. This framework, proposed by Esser (1999), delineates four interrelated forms of social integration: structural, interactive, cultural, and identificational. These components enable a comprehensive analysis encompassing issues related to equitable access, cultural learning, relationship-building, and a sense of belonging. We draw on a sample of 280 interviews with new-Swedes from nine urban settlements in Sweden, an EU country which has experienced several large influxes of refugees during recent decades. In this study, UGS is conceptualized as a broad spectrum of vegetated (green areas) and water features (blue areas) of various sizes within urban and peri-urban areas. These green and blue areas exhibit diverse levels of human intervention and offer multiple benefits essential for human well-being and biodiversity (Elbakidze et al., 2023). Drawing on Asselin et al., (2006), we conceptualize social integration as a "process in which immigrants and their activities become intertwined in social life and form mutually interdependent relations with the receiving society". However, we also emphasize the territorial dimension of integration, signifying a sense of belonging developed through attachment to place. This study explores the following research questions: How does accessibility, availability, and quality of UGS influence the structural integration of new Swedes in Sweden? What types of social interactions take place between new Swedes and the receiving society in UGS, and how do these interactions contribute to social integration? In what ways do UGS function as spaces for cultural learning and exchange between new Swedes and the reseiving society? How does time spent in UGS shape new Swedes' sense of belonging to their local community and Swedish society?

1.1. Analytical framework

Esser's four-dimensional framework of social integration (1999) has been widely applied to examine how individuals and groups integrate into societies, particularly in the contexts of migration (Penninx and Garcés-Mascareñas, 2016), professional integration, and digital interactions (Mittelstädt et al., 2016). While, Esser's framework does not fully capture the socio-political contexts and cultural specificities of different communities in rapidly changing contexts (Spencer and Charsley, 2021), it nonetheless provides a multidimensional approach to studying social integration. As highlighted by Gentin et al., (2019), the framework allows for an examination of UGS not only as a means towards social integration, but also looks at equity in access to UGS. By systematically breaking down integration into four dimensions, this approach enables a more nuanced analysis of UGS's role beyond simplistic social cohesion narratives.

Structural integration draws on a social-environmental justice approach, emphasizing both distributional and procedural aspects related to access to UGS. At its core, structural integration affirms the right of all citizens to equitable access to nature and the benefits it provides – whether individual, such as improved health, psychological well-being, and socio-cultural enrichment, or collective, including ecosystem services like clean air and water.

From this perspective, UGS can be regarded as essential public services, on par with healthcare and education (Gentin et al., 2019). Assessing structural integration therefore requires consideration of both distributional factors – how UGS are physically and socially distributed – and procedural factors, such as the extent to which diverse groups are involved in planning and decision-making processes concerning UGS and outdoor recreation (Leikkilä et al., 2013). In this study, we examine structural integration by analysing key distributional dimensions of access – specifically, the availability, accessibility, and quality of UGS. Following Biernacka and Kronenberg (2018), we define availability as the presence and distribution of UGS within an urban area, accessibility as the ease with which different groups can reach and use these UGS, and quality as the perceived and actual condition, safety, and maintenance of the spaces. Recent studies highlight the significance of these three characteristics in shaping how frequently UGS are used (Dawson et al., 2024; Elbakidze et al., 2022), underscoring the importance of understanding access through this multidimensional lens.

1.1.1. Interactive integration

describes the role that UGS play in facilitating cross-cultural communication and exchange between immigrants and other groups in society. These types of interactions, both brief and in-depth, are seen as building blocks towards establishing new relationships within the receiving society, the broader goal being a more permanent inclusion in the primary networks of society (Gentin et al., 2019; Jay and Schraml, 2009). This can take many forms, both positive and negative emotive content, intra versus intergroup character, individual or collective exchanges, and contacts across or within generations.

1.1.2. Cultural integration

refers to the process by which immigrants acquire new knowledge and competences concerning customs, meanings and practices associated with UGS. Whether directly, through interaction with individuals in the receiving society, or indirectly, through observation, UGS is seen to provide unique opportunities to learn the cultural values and customs of

the receiving society. The associated skills and knowledge are valuable in navigating within the broader society. Furthermore, as an open arena for cultural expression, UGS may support the receiving society in learning about the cultures of immigrant groups.

1.1.3. Identificational integration

speaks to the role of UGS in enhancing a sense of belonging and place attachment to the receiving country (Konijnendijk, 2005; Lewis et al., 2005). It has both individual and collective aspects. Spending time in natural areas is seen to foster the development of affective bonds and emotional attachments to these places, which may or may not resonate with immigrant experiences from their home countries (Peters et al., 2010).

2. Methods

2.1. Study context

Approximately 87 % of Sweden's population lives in urban areas (SCB 2019a). On average, 94 % of the urban population has access to at least one UGS within 200 m of their home. The population in the smallest settlements (200–499 inhabitants) had an average of 1980 sq m of UGS per person, while people in the largest settlements (100,000 inhabitants or more) have an average of 183 sq m per person (Statistics Sweden, 2019).

At the national level, the Swedish National Board of Housing, Building, and Planning. is the national agency that provides recommendations for UGS planning. One of the recommendations is that "areas suitable for play, exercise, and other outdoor activities" should be located within 200 m from people's homes. The 290 municipalities in Sweden have the primary responsibility for planning and maintaining UGS following the national laws and regulations (Statistics Sweden, 2019).

In 2022, approximately 20 % of Sweden's population was born outside the country, marking a notable increase from 11 % in 2000 (SCB 2019b). While roughly 40 % of Sweden's immigrants originate from other European countries, another 39 % are from Asia, notably from Syria, Iraq, Iran, Afghanistan, and India. Additionally, 12 % were born in Africa, with significant representation from Somalia and Eritrea. About 6 % of new Swedes came from Latin America, North America, the Caribbean, or Oceania (SCB 2019a).

Data was collected between August 2021 and January 2022 in nine urban settlements in Sweden (Fig. 1) – Malmö, Arlöv, Karlskrona, Växjö, Örebro, Västerås, Hällefors, Fagersta, and Umeå. Selected settlements each had a sizeable proportion of new-Swedes amongst permanent residents, and broadly reflected the country's south-north geographical disposition, variations in climate, and vegetation types (Table 1). Malmö and Arlöv were later amalgamated into a single study area due to their close geographical proximity and overlapping UGS surrounding these areas, which were frequently visited by respondents from both settlements. Respondent codes in Results sections refer to the study area where interviewees resided.

2.2. Data collection

We employed an interview method to gather data across Sweden. The interview manual was designed to capture the preferences and perceptions of new-Swedes regarding UGS. The manual consisted of two blocks of questions. The first block included closed questions about: (i) respondents' socio-demographic profile (e.g., age, gender, education level, employment status, self-reported health, and economic status, etc.); (ii) UGS characteristics, encompassing general preferences for different types of UGS; (iii) activity preferences in UGS, including frequency of use; (iv) perceptions, covering functions, constraints, and issues related to UGS in and around towns where respondents lived, along with their satisfaction regarding quality, availability, and accessibility of

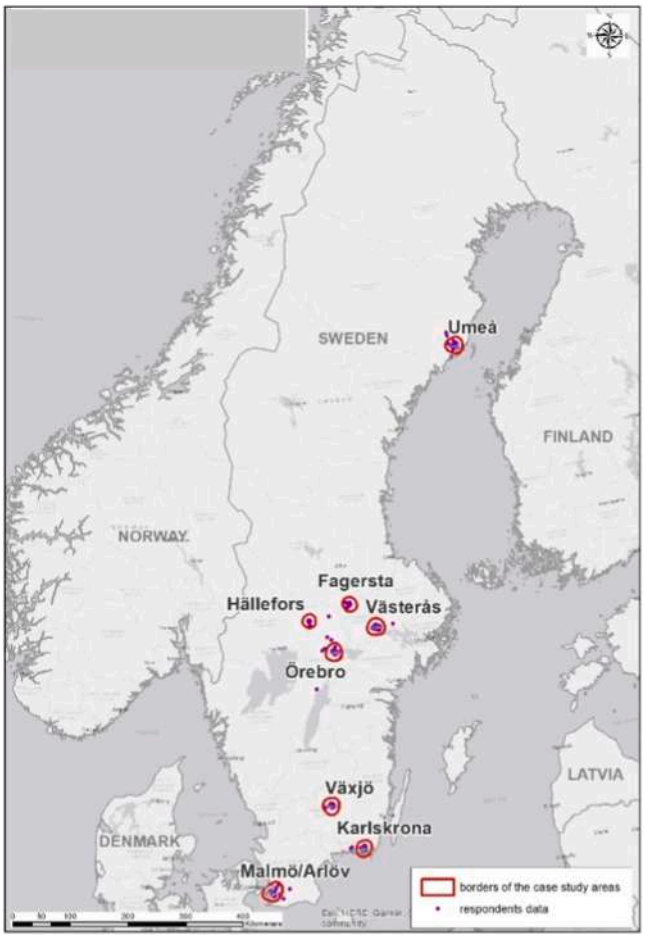

Fig. 1. New-Swedes were interviewed in nine settlements along a south-north gradient in Sweden.

Table 1
Characteristics of the selected settlements as case studies. Population statistics concerning foreign-born residents (new-Swedes) were not available at settlement scale, and therefore here are taken from statistics for the municipalities in which they are situated (SCB 2019, 2023, 2024). Statistics provided for UGS per total area at settlement scale does not include waterbodies.

	Inhabitants (N)	New-Swedes (%)	% UGS per total area	Interviews per study area
Malmö/ Arlöv	359,481	36.0	43.3*	34
Karlskrona	36,423	13.3	61.2	55
Växjö	74,052	20.4	56.4	15
Örebro	128,658	19.9	54.3	40
Västerås	131,643	25.1	56.9	46
Hällefors	4124	18.7	64.4	7
Fagersta	11,771	27.4	59.8	41
Umeå	94,243	13.7	49.2	42

* No information available at settlement scale for Arlöv. This number is based on Malmö.

UGS in these areas. The second block of the interview manual contained a series of open-ended questions which were designed to address different dimensions of social integration. For the structural dimension, the interview manual included questions on the perceived distance to UGS most frequently visited by respondents, the availability of such spaces, and their quality. To capture the interactive dimension, we asked respondents how they use UGS, including their interactions with other visitors, the frequency of their visits, and with whom they spend time in

these spaces. For the cultural dimension, respondents were asked whether their use of UGS changed after moving to Sweden, and if so, how and why. They were also asked about their perceptions of nature's role in fostering understanding between different groups. To explore the identificational dimension, questions focused on whether using UGS helped respondents feel a sense of belonging to the community and society.

Between August 2021 and January 2022, we conducted a total of 280 face-to-face interviews with new-Swedes across nine urban settlements in Sweden. The primary method of data collection was pre-arranged interviews, complemented by a smaller number of intercept interviews to enhance diversity and reach. Respondents for pre-arranged interviews were recruited through various channels, including ethnic associations, adult education centers (e.g., Swedish language programs for immigrants), private networks, and social media. Interview times and locations were agreed upon in advance to ensure convenience and comfort for participants.

To supplement this main approach, a number of intercept interviews were conducted using a systematic random sampling strategy – every third person passing by in selected public locations was invited to participate. If a selected individual declined, the next available person was approached. However, we found that this tended to overrepresent ethnic European participants. We therefore included non-random sampling strategies based on audible and – in some cases – visual cues in order to ensure a more representative sample of participants. For instance, we approached groups of individuals (2 + people) who were conversing in non-Swedish languages in public spaces. We explained the purpose of the study and the profile of the target group for the interviews. If someone from the group expressed interest in participating, we proposed conducting the interview in a separate location to ensure it remained an individual rather than a group interview. If there was no interest to participate, we simply approached another group. These intercept interviews were conducted on the spot in neutral public settings – such as shopping centers, libraries, and streets – but intentionally excluded UGS to avoid over-representing individuals already engaged with such environments and to ensure the inclusion of potential non-users. No major discrepancies in data collection procedures were observed across the different study areas. However, pre-arranged interviews tended to yield somewhat longer, more detailed responses compared to intercept interviews.

We iteratively adjusted our selection over time to achieve a balanced sample in terms of gender representation (42 % men, 58 % women), age (18–80+ years), and ethnic diversity. Concerning the latter, we aimed to broadly reflect the regional distribution of foreign-born immigrants in Sweden, with the final sample including respondents from diverse regions: Western Asia & North Africa (n = 118), Sub-Saharan Africa (n = 55), Europe (n = 44), Southern & Eastern Asia (n = 39), and others (including Latin America, North America, the Caribbean, and Oceania) (n = 24). Participants had lived in Sweden for periods ranging from one year to over 20 years, with a broad spectrum of educational levels and employment categories.

Prior to the interview, respondents received a brief project description and had the opportunity to ask questions. They were informed that they could skip any question or withdraw from participation at any time, even after giving consent. Respondents' names were not collected, and all gathered data were pseudonymized before processing and transfer to secure storage, with each interview assigned a reference number. During the interviews, respondents first answered closed questions using Survey Monkey software on iPads. Following this, they were asked open-ended questions concerning their most visited UGS and all questions from the second block. The interviews were conducted in Swedish, Arabic (with an interpreter), English, Ukrainian, and Russian. They lasted between 50 and 90 minutes, were recorded, transcribed, and translated into English.

2.3. Data analysis

The quantitative data summarized the frequency of UGS use, satisfaction with accessibility, quality, and availability of UGS as perceived by new-Swedes. It also detailed the types of activities in UGS and the perceived importance of UGS functions by new-Swedes. These summaries support the analysis of qualitative data by offering an overview of characteristics related to different dimensions of social integration.

The analysis of the qualitative part of interviews was conducted in three stages, following the methodological procedure outlined in Deterding and Waters (2018) and utilizing Nvivo 12 software. In Stage 1, the collected interview data was systematically indexed. First, all transcripts were carefully read to identify key themes and narratives. Textual coding was then applied using predefined index codes aligned with the interview questions. For example, the index code *'Access to UGS'* corresponded to the question *'How do you reach the urban greenspace you visit most frequently?'* A total of 15 index codes were applied, and the coded texts were organized in NVivo 12.

In Stage 2, analytical codes were developed based on the indexed data. One researcher conducted the initial coding, categorizing the data into 15 analytical codes aligned with four key themes from the theoretical framework. Structural integration included five analytical codes: *'perceived accessibility of UGS,' 'perceived availability of UGS,' 'perceived quality of UGS,' 'frequency of UGS use,'* and *'UGS use.'* Interactive integration comprised four codes: *'being in UGS alone,' 'spending time with family and friends,' 'interaction with own cultural group,'* and *'interaction with other people.'* Cultural integration encompassed two codes: *'cross-cultural understanding'* and *'learning Swedish societal rules and norms.'* Finally, identification integration included three codes: *'emotional bond to a place,' 'sense of belonging,'* and *'emotional bond to society.'*

In Stage 3, coding validation was conducted through collaborative discussions with the co-authors. The coded data was reviewed collectively, and any ambiguities or potential refinements were discussed to ensure coherence and alignment with the research objectives. Discrepancies or alternative interpretations were resolved through consensus among the authors. This iterative validation process helped refine the coding framework and ensured analytical rigor.

3. Results

3.1. Structural dimension

Approximately 98 % of interviewed new-Swedes used UGS in the towns where they resided, though the frequency of usage varied (Table 2). Most new-Swedes preferred UGS in warmer months, citing barriers to winter use, including lack of skills or knowledge, inadequate winter clothing, and discomfort with cold and darkness.

Many new-Swedes reported higher UGS usage in Sweden compared to their home countries. Barriers to UGS use in their home countries included: (i) limited accessibility (long travel distances); (ii) overcrowding and perceived safety concerns, (iii) lack of infrastructure (e.g., playgrounds, bike paths, barbecue areas); and (iv) poor air quality and extreme heat limiting outdoor activities. For instance, a respondent from Colombia (FAG27) explained, *'I visited the park in my hometown in Colombia only once or twice a month, usually for special events. In Sweden, I*

Table 2
Frequency of UGS use by 280 new-Swedes in and around the settlements where they lived.

	Respondents (%)
Every day	21
Several times per week	44
Once a week	26
Once a month	7
Almost never	1
Never	1

visit green areas several times per week.' A respondent from Lithuania (VAX14) elaborated, *'I used green areas in Lithuania as often as in Sweden. However, here the city is smaller, and the accessibility of the forest is better. In Lithuania, I had to use a car to drive to the forest.'*

New-Swedes generally expressed high satisfaction with UGS accessibility, quality, and availability in Sweden (Table 3). In relation to accessibility, they traveled on foot to UGS close to their homes, which they used more frequently – either daily or several times per week. In contrast, UGS located farther away were visited less often, ranging from once per week to once a month, with respondents reaching them by foot, car, or public transport. No new-Swedes reported lacking access to UGS.

In relation to quality, new-Swedes appreciated a variety of UGS characteristics, including both more modified and natural features. Many respondents valued amenity infrastructure (e.g., walking paths, toilets, street lighting, and cafes/restaurants), including facilities for different age groups (e.g, playgrounds for children, skate parks and football fields for youths, outdoor gyms for adults etc.). As a respondent from Kurdistan (UME20) remarked, '*The park is a nice place for kids and adults. I am going there with my friends and our kids to spend a few hours there. There is an outdoor gym, so we can work out a little bit, and a good playground for the kids. So it's perfect.'*

Many respondents emphasized that UGS provided a sensory-rich environment, characterised by fresh air, wildlife, and natural beauty. A key aspect of their appreciation was biodiversity, with respondents highlighting the variety of plants and animals, from flowering gardens to wild species such as foxes. Tranquility and fresh air were frequently mentioned as major benefits, while collecting berries and mushrooms were particularly valued by those familiar with these practices in their home countries. Most respondents viewed UGS as a harmonious blend of natural beauty and recreational amenities, supporting activities such as walking, playing, and dining in green spaces. One respondent from Poland (MAL04) noted that the variety of features, including water elements, gardens, and pathways, made certain UGS particularly appealing.

Despite high overall satisfaction with UGS quality, many new-Swedes raised concerns about excessive litter and the impact of urban infrastructure development, which they felt was reducing the size and quality of green spaces. One respondent from Iran (UME09) expressed frustration, stating, *"They started road construction and cut down the nicest forests that I grew up visiting every day. I don't like that.'* Key quality improvement suggestions included installing more garbage cans, toilets, benches, and streetlights, as well as expanding parking spaces, swimming areas, and playgrounds for teenagers and adults. For instance, a respondent from Iraq (VAS36) commented, *min or one hour. There are no benches, no toilets or a cafeteria, it's just nature. There is no place to rest.'*

Some respondents also noted that infrastructure was old and deteriorated, making green spaces less inviting. A few respondents mentioned concerns about safety, such as dense forests limiting visibility, trees being too close to walking paths, and the presence of bees and snakes. Others expressed a desire for more broadleaf trees, additional grassy areas, and fragrant flowers to enhance the sensory experience of UGS.

In terms of the availability of UGS, 68 % of new-Swedes expressed satisfaction, while 14 % reported dissatisfaction with the availability of UGS in and around the towns where they lived (Table 3). However, all new-Swedes were able to identify UGS that they liked to visit the most, particularly those located relatively close to their homes.

Table 3
Respondent satisfaction with accessibility, quality, and availability of UGS in towns/cities where they lived (N = 280).

	Satisfaction with UGS (% of total respondents)		
	accessibility	quality	availability
Very satisfied	22	23	18
Satisfied	52	52	50
Neither satisfied nor dissatisfied	17	16	18
Dissatisfied	7	7	12
Very dissatisfied	2	2	2

3.2. Interactive dimension

Most new-Swedes found the social environment in UGS to be enriching, appreciating aspects such as safety, tranquility, and opportunities for social interaction. They also noted that the natural beauty of the surroundings enhanced the social environment, making it a more comfortable space for relaxation and well-being. However, some new-Swedes expressed concerns regarding the social environment in UGS. Specific issues included the presence of individuals consuming alcohol or drugs, which made certain areas feel unsafe, particularly at night. For example, a respondent from Kosovo (VAS39) stated, *'I hear that people are getting robbed and so on, and it feels unsafe when people are using drugs and drinking alcohol there during the nights.'* Overcrowding in some UGS was also perceived to limit the ability to fully enjoy these spaces.

The data showed that new-Swedes engaged in various activities in UGS, including walking, spending time with family and friends, swimming, enjoying nature, playing with children, picnicking, and attending social gatherings (Fig. 2). The duration of visits ranged from 30 minutes to six hours. Most respondents viewed UGS as a space for family activities, often involving multiple generations, and for socializing with friends from similar cultural backgrounds. Some appreciated UGS as a distraction-free environment that encouraged quality time with loved ones. A respondent from Armenia (KAR49) noted that green spaces allowed families to spend time together without the interruptions of television or social media.

While many respondents used UGS for social activities, some preferred solitude. A respondent from Syria (FAG17) described daily visits as a personal routine, emphasizing the importance of walking alone. Similarly, a respondent from Nigeria (UME39) expressed a sense of happiness and connection to nature when visiting forests alone. Others used UGS for personal training, preferring to exercise without social interactions.

New-Swedes had varied perspectives on using UGS for cross-cultural interactions, including socializing with Swedes. Many found it easier to interact with strangers in these spaces, as they were free, safe, and offered a relaxed atmosphere that encouraged casual conversations. A respondent from Germany (KAR33) noted that people are more open to socializing when they feel comfortable and happy. Certain types of UGS were seen as particularly conducive to cross-cultural interactions. Playgrounds, sports areas, outdoor gyms, dog parks, and community gardens provided opportunities for people with shared interests to connect. For example, a respondent from Syria (ORE35) explained that interactions often started naturally when children played together, leading parents to engage in conversations. Similarly, a respondent from Iran (UME41) described community gardens as welcoming spaces where they formed friendships with both Swedes and people from other backgrounds and emphasized how this interaction helped them overcome loneliness and provided a sense of belonging. '*I go to our community garden every Sunday. I started to visit the garden and learn new things about cultivation. I found many friends - Swedish and from other countries. It was a great gift for me because at that time I was depressed - I was alone at the house and I didn't have any special things to do. So, I go there, and I know that there is a place for me and there are people I can chat with' (UME41).*

However, many new-Swedes noted that social interactions in UGS were often limited to brief exchanges, such as greeting strangers in passing. They felt that simply sharing a common space was not enough to build meaningful relationships and emphasized the need for organized activities that bring people with shared interests together. A respondent from the USA (UME26) explained that while UGS provided opportunities for casual interactions, deeper connections were more likely to form through structured activities. They also observed that parents found it easier to socialize since their children naturally engaged

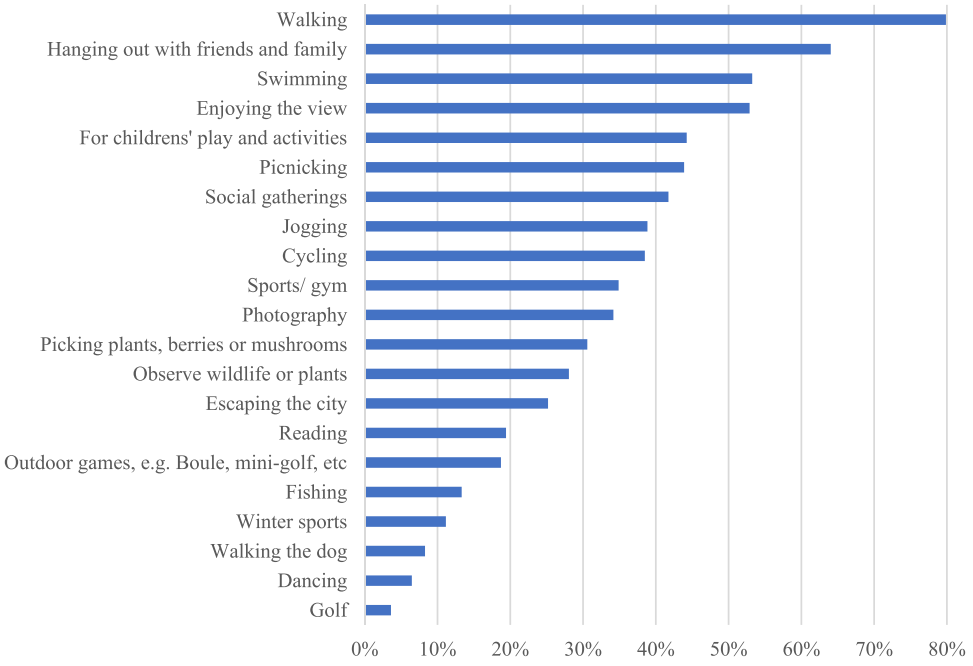

Fig. 2. New-Swedes' selections of activities, which they performed in UGS in and around the towns where they lived (multiple choices were allowed, with % representing the proportion of respondents selecting each activity from the total number surveyed).

with others, while those without children faced more challenges in initiating conversations.

Some new-Swedes felt that UGS did not facilitate social interactions with native Swedes, expressing disappointment that Swedes were often reluctant to engage in conversation. For example, a respondent from Kurdistan (VAS38) described feeling lonely, perceiving Swedish people as distant and unresponsive beyond a simple greeting. "*when I say 'hi,' they just respond with a 'hi' back, but they don't talk about anything.*"

3.3. Cultural dimension

A recurring theme in the interviews was the strong Swedish environmental ethos, characterised by a high degree of stewardship and respect for nature. Many respondents cited this cultural attitude as a fundamental factor contributing to the accessibility, functionality, and aesthetic quality of UGS. This environmental awareness was frequently contrasted with UGS management in their home countries, where public green areas were perceived as less integrated into urban planning and often inadequately maintained. For example, respondents from Ethiopia (KAR46) and Armenia (KAR49) specifically highlighted these disparities, emphasizing the importance of Sweden's structured approach to UGS planning. They underscored that the strategic incorporation of UGS into residential areas enhances environmental consciousness and community well-being, reinforcing the role of green infrastructure in shaping sustainable urban environments.

The interview data indicates that UGS serve as arenas for cross-cultural interaction, enabling new-Swedes to observe and engage with diverse leisure practices. Respondents consistently identified UGS as central to physical activity and recreation, with running, biking, and winter sports being among the most commonly observed activities. Participation in these and other UGS-based activities provided new-Swedes with direct exposure to Swedish leisure traditions, fostering cultural adaptation through engagement with local outdoor practices.

Further, respondents highlighted that UGS functions as a shared public space where individuals from different cultural backgrounds congregate for social activities such as conversations, music, dance, and communal cooking. This exposure facilitated a deeper understanding of various cultural expressions of leisure and contributed to broader social integration.

Moreover, several new-Swedes reported that their experiences in UGS enabled them to critically reassess and, in some cases, challenge pre-existing biases or stereotypes about other cultural groups. By directly witnessing diverse social interactions, they developed a more nuanced appreciation of cultural diversity. Respondents recounted experiences where observing unfamiliar recreational practices led to moments of recognition and empathy, reinforcing the notion of UGS as inclusive spaces that transcend social and cultural barriers. For instance, a respondent from Lithuania (KAR04) shared, *'I was alone at Dragsö one night, and a family arrived who had rented canoes. They were speaking Arabic, but they were having a lot of fun. I could see that they weren't used to using canoes, but they felt happy. They started to sing, and everyone got involved. I thought "there aren't any borders"; it was an incredible experience. I didn't know what they were singing; I could just see that they were happy.'*

While new-Swedes actively engage with UGS, respondents suggested that their patterns of use differed from those of native Swedes. New-Swedes commonly utilized UGS as social hubs, often gathering in larger groups for communal activities such as extended barbecuing and group interactions. In contrast, native Swedes were perceived to use UGS more individually or in smaller groups, engaging in activities such as walking, jogging, or spending time with a partner. A new-Swede from Turkey (VAS11) commented, *'Immigrants typically use it as a place to rest or take a break, to sit and eat, more in that manner, spending time with their loved ones. In contrast, Swedish people use it more personally with their partners for walks.'*

Several respondents reported that their engagement with Swedish outdoor culture influenced their perceptions and behaviors toward nature. Exposure to social norms emphasizing outdoor recreation led some new-Swedes to develop a stronger appreciation for nature, even if they initially had limited experience with such activities in their home countries. The socialization process played a significant role in this transition, as participation in outdoor activities was often facilitated by Swedish friends or acquaintances. A respondent from France (UME16) elaborated, '*When I came to Sweden, I was not a nature person, but all my friends here go to green areas. It's like a part of their life. At the beginning I had to force myself going there, otherwise I couldn't be with my friends. And*

then I started to like it and now I'm doing it because I love it'.

3.4. Identificational dimension

A total of 34 % of respondents expressed that UGS were places where they felt themselves part of the local community, and 38 % felt part of Swedish society while spending time in UGS, highlighting the broader societal integration facilitated by these spaces (Fig. 3). The majority of respondents considered that UGS were crucial for their health (82 %), leisure activities, and relaxation (71 %), as well as for children's activities (66 %).

At the same time, many new-Swedes in the study had favorite UGS that they preferred to visit, and many of them expressed deep emotional connections to specific UGS. These sentiments were connected to enjoying the view, experiencing calmness and harmony, feeling solitude with nature, appreciating various sensory aspects such as smells, forests, birds, and historical elements, as well as enjoying moments alone with nature. For instance, a new-Swede from Turkey (VAS11) conveyed emotional attachment by describing the unique features of his favorite UGS, mentioning the presence of stones and rocks that evoked a sense of history. *'This area is particularly special because of the stones and rocks; I believe you can almost smell the history there. You can feel the presence of culture and life, and its central location adds to its charm'.*

Several new-Swedes emphasized that nature in UGS triggered feelings of nostalgia, serving as the primary factor behind their attachment to specific UGS. For them, the specific natural surroundings evoked memories and emotions back to their past experiences in their home countries. These deep emotions reinforced their bond with a particular UGS, as it provided a sense of comfort, and belonging. These new-Swedes used these UGS not only for leisure or recreation but also as a means of connecting with their culture and identity. A new-Swede from Jordan (KAR29) expressed, *'I live here with my children and my husband. I don't have any other family and friends here. I miss my family. I feel I have to go out for walks, it reminds me of my home, and so it helps.*'

Few respondents acknowledged that their attachment to Swedish nature made them feel more attached to society. This connection was often framed in contrast to their experiences in their home countries, where different landscapes evoked distinct emotional responses. A respondent from Spain (UME43) explained, *'I think I feel more connected to society through [Swedish] nature. When I go to Spain, I see my Spanish nature. I feel a different type of happiness and connection. But when I see the serene nature in Sweden, I understand why Swedes value their nature so much and why they are the way they are. I think the way they respect nature is amazing.'*

A few respondents also reported that their appreciation of UGS motivated them to engage in activities aimed at preserving and enhancing these spaces. While limited in number, these individuals exhibited a sense of stewardship, demonstrating responsibility toward maintaining the quality of UGS. Such engagement included efforts to keep these areas clean, introduce newcomers to significant green spaces, and promote environmental awareness within their communities. For example, a person from Iran (UME05) explained, *'I usually visit the green places with my friends, relatives, or someone new in town. I usually take them to the nice places in Umeå and show them around. I think that it can lead to participation in this community. When you move to somewhere it becomes your home, and you want to contribute, like maybe cleaning and not throwing garbage around and making the town your home. In that way, I feel compelled to participate.'*

4. Discussion

4.1. Accessibility, quality and availability of UGS matter for structural integration

Our study, based on 280 interviews across nine settlements, highlights the potential utility of UGS in supporting the structural integration of immigrants in Sweden. The findings indicate that UGS are not only widely accessible but also perceived as high-quality environments that meet the diverse needs of new-Swedes. The majority of respondents expressed satisfaction with the accessibility, availability, and quality of the UGS they used. Indeed, numerous respondents described themselves as having improved access to high quality UGS as compared to their country of origin.

While many studies emphasize the importance of free and easy access to UGS (e.g., Wan et al., 2021), our findings demonstrate that the perceived quality and availability of UGS are equally crucial factors in shaping immigrants' engagement with these spaces. This aligns with Dawson et al., (2024), who illustrate that new-Swedes appreciate and utilize a wide range of UGS, including urban and peri-urban, natural and modified, terrestrial and aquatic spaces.

Our study further demonstrates that UGS in Sweden satisfy diverse quality preferences among new-Swedes. Most respondents valued the integration of perceived high-quality natural elements with high-quality recreational infrastructure and effective management. The natural qualities of UGS make them attractive for new-Swedes to visit, while the quality of infrastructure and proper management enhance the comfort, diversity, and safety of UGS use. Importantly, although respondents expressed different preferences concerning natural qualities, these were largely satisfied by the diversity of existing UGS in their towns.

A key finding is that most respondents used UGS more frequently in Sweden compared to their home countries, stating that UGS in their home countries was too distant, poorly managed, lacked recreational

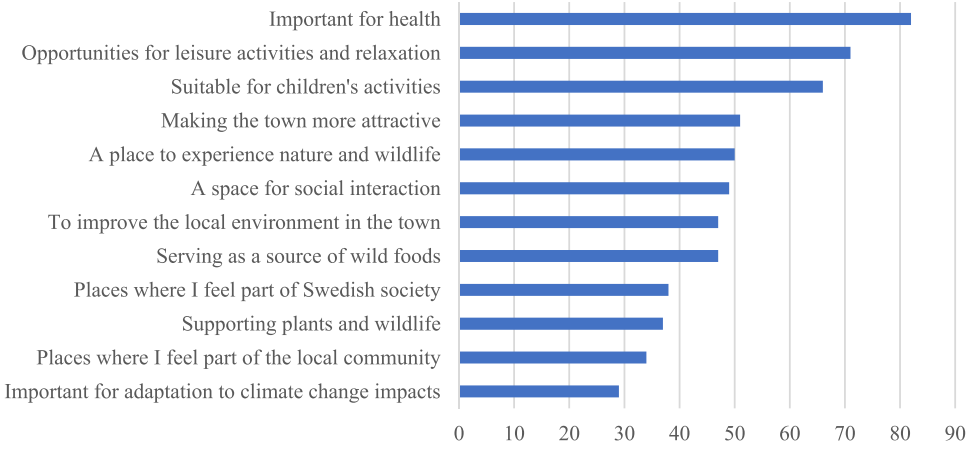

Fig. 3. Respondents' selections of the most important functions of UGS in and around the towns where they lived (multiple choices were allowed) (in % from the total number of respondents).

infrastructure, and/or was unsafe. Even those who did not use UGS in their home countries began doing so in Sweden. From a planning perspective, this points to the importance of ensuring that UGS provides both quality infrastructures, which facilitate social activities, but also a physical and social environment which is perceived as safe by new immigrants. These findings align with other studies that demonstrate how well-maintained UGS are frequently visited and that infrastructures that facilitate social gatherings and group activities hold particularly high value for new-immigrants (Cattell et al., 2008; Kemperman and Timmermans, 2014; Krellenberg et al., 2014; Stodolska et al., 2017).

This study also reveals that while most new-Swedes actively engaged with UGS, a very small subset of respondents avoided these areas due to perceived insecurity, often stemming from poorly managed recreational infrastructure (e.g., deteriorated benches), specific natural features (e.g., overly dense forests), or an unsecured social environment (e.g., presence of intoxicated individuals). In our interviews, these responses were more prevalent amongst middle-aged and older females, particularly those from Western Asia and North Africa. These findings suggest that the current capacity of UGS in Sweden to serve as inclusive social spaces may be more limited for some groups of new-Swedes. This highlights the need to move beyond one-size-fits-all approaches to UGS management and underscores the importance of understanding perceptions of safety, particularly among marginalized groups within society. Addressing these concerns through targeted interventions, such as improved infrastructure maintenance, increased security measures, or participatory urban planning, could enhance the inclusivity of UGS.

Additionally, we found that although most new-Swedes used UGS frequently – several times per week or daily – usage occurred mainly during the warm season. This implies that for approximately three to six months per year, depending on the region, many new-Swedes use UGS infrequently or never. Those who maintained their frequency of use throughout the colder months were primarily parents with young children and people with dogs. Cold and dark weather, lack of appropriate clothing, and insufficient knowledge and skills to use UGS in winter were the main reasons for not using UGS in the cold season. Although some previous studies have also reported lower use of UGS by ethnic minority groups in Northern Europe during winter months (Cronin-de-Chavez et al., 2019; McEachan et al., 2018), the seasonal frequency of UGS use by immigrants is yet to be properly studied. Our findings emphasize the need to address climatic barriers to use of UGS as a measure to improve the structural integration of immigrants. This may be especially relevant in countries with long, cold winters and large groups of immigrants with little experience with such conditions. Potential strategies to encourage year-round UGS use among immigrants include educational programs and outreach initiatives to inform immigrants about the benefits of using UGS in winter and provide guidance on appropriate clothing and activities for cold weather or to provide materials and equipment at a low-cost or free. For example, in Sweden an increasing number of non-profit associations provide low-cost rental of recreational equipment, especially of winter sports gear. Additionally, organizing winter-specific events and activities in UGS, such as winter sports, cultural celebrations, and guided nature walks, could attract greater participation and foster a stronger connection between immigrants and their local environment. These targeted efforts could help reduce seasonal disparities in UGS use, ensuring that immigrants fully benefit from these spaces throughout the year.

4.2. *Interactive integration requires tailored design of UGS and collective activities*

Our study demonstrates that UGS in Sweden provides multiple opportunities for interactive integration among people from diverse cultural backgrounds, including the receiving society. The findings indicate that UGS facilitated social integration by providing a comfortable social environment, where the majority of interviewed new-Swedes reported feeling relaxed and safe. This was also facilitated by the presence of a variety of outdoor activities, ranging from individual to group activities, such as outdoor training, cultural events etc. These findings support previous findings concerning the role of UGS to facilitate social interactions involving immigrants (Leikkila et al., 2013; Peters et al., 2010; Stodolska et al., 2017).

Further, our results indicate that immigrants' usage patterns are highly diverse, ranging from social (e.g., spending time with family and friends) to more individual (e.g., jogging, walking, or simply enjoying the view). This pattern largely mirrors that of native Swedes (e.g., Elbakidze et al., 2022), suggesting that immigrants and local community members share similar ways of interacting with urban nature. However, we argue that the potential of UGS to support interactive integration cannot be fully realized without special efforts. Like other studies, we found that interactions between new-Swedes and native Swedes were limited, often restricted to exchanging greetings with strangers. This finding suggests that although UGS enables cultural coexistence, it does not automatically foster deeper social interactions. One suggestion is to design UGS for activities that foster more social interactions (Leikkilä et al., 2013). We found that certain types of UGS provided more favorable opportunities for interactions, such as playgrounds for children, outdoor gyms, barbeque places, dog parks, and allotments. For example, allotment gardens have been shown to create opportunities for engaging in garden-related activities, exchanging information, and sharing advice about gardening practices, all of which contribute to the development of social ties among participants (e.g., Bonow and Normark, 2018; Whatley et al., 2015; Veen et al., 2016). Moreover, facilities in UGS such as benches, tables, and stages facilitate easier contact between people with different ethnic backgrounds (e.g., Peters et al., 2010).

Respondents suggested that UGS could host social activities such as joint walking and training groups, gardening sessions, and winter group events. These types of gatherings are seen as effective ways to encourage social interaction, community building and intercultural exchange (e.g., Hordyk et al., 2015). Urban planners and policymakers could therefore consider incorporating regular community-driven initiatives – such as guided nature walks, cultural festivals, and intergenerational outdoor activities – to encourage meaningful interactions and enhance the integrative function of UGS.

4.3. *UGS offers opportunities for cultural and identificational integration*

Our study indicates that UGS offers a platform for the cultural and identificational integration of new-Swedes. However, the extent and depth of such integration is not yet clear. Regarding cultural integration, new-Swedes acknowledged that UGS served as a space where they could observe Swedish outdoor culture and the cultural traditions of people from other ethnic groups, while also understanding the importance of UGS for Swedish society. These findings indicate that UGS can act as a bridge between different ethnic groups and native Swedes.

However, our findings indicate that only a small number of respondents reported actively changing their outdoor culture based on how they observed Swedes using these spaces

Dawson et al., (2024) highlight that more natural types such as urban forests may be more suitable to support learning about Nordic cultural perspectives compared to more social types of UGS such as parks.

While our research revealed that UGS helped forge a connection to place, we did not delve into the particular ways in which it fostered belonging. Many new-Swedes felt an emotional attachment to UGS, which they enjoyed visiting. Through these emotions and feelings of nostalgia, UGS helped them to connect their past with the present, providing them with a sense of belonging – not necessarily to the community or society at large, but rather to the specific place. Only some respondents expressed attachment to society as a consequence of what was perceived to be a more respectful attitude toward nature in Sweden. These findings suggest that while UGS functions as an arena for cultural learning, deeper shifts in social integration may require more intentional engagement strategies, such as structured activities, guided outdoor

experiences, and targeted outreach efforts to introduce new-Swedes to Swedish recreational customs and vice versa.

Finally, it is crucial to challenge any implied end-goal of cultural assimilation associated with the cultural and identificational dimensions of social integration in UGS planning and management (e.g., Dawson et al., 2024; Singleton, 2021). If social integration is to be truly understood as a two-way process involving change from both immigrants and receiving societies (e.g., European Commission, 2020), then the role of UGS in integration should not be evaluated solely in terms of immigrants' adaptation to Swedish outdoor culture. Future research and urban planning should also focus on how UGS can embrace the cultural perspectives of immigrants. Our findings suggest this is already happening to some extent. UGS are increasingly popular venues for cultural expressions among various immigrant groups, such as long barbecuing sessions and large family gatherings. Providing suitable, well-maintained facilities for these activities can support two-way cultural learning. Further opportunities to explore include using UGS to showcase the cultural traditions of different groups through food festivals, dance performances, musical concerts, and art exhibitions.

Beyond facilitating cultural interactions, engaging immigrants in the design, planning, and management of UGS can ensure that their needs and preferences are more effectively integrated into urban green space strategies. This approach also challenges the common perception of immigrants as passive recipients of support (Albertini and Semprebon, 2018). At the community level, immigrants often hold passive roles in community-based activities (Bessho et al., 2020; Khazaei et al., 2017). Encouraging active participation in community gardening, greening projects, and participatory planning of UGS can enable immigrants to undergo a role shift – from being perceived as recipients to becoming active hosts within their local communities (Bessho et al., 2020). Such engagement fosters not only environmental stewardship but also empowers immigrant communities by positioning them as key stakeholders in shaping the shared public spaces they inhabit.

4.4. Limitations of the study

The reliance on face-to-face interviews conducted in public spaces may have led to the exclusion of individuals who are less socially active, who perceive themselves to have too little time or are otherwise hesitant to participate in public discussions. This could introduce a selection bias, limiting the diversity of perspectives captured. However, we attempted to compensate for this, by using a multi-method selection approach employing both intercept and pre-arranged interviews. Second, the study groups immigrants under the broad category of "new-Swedes" but does not extensively differentiate between ethnic, religious, or socio-economic groups. Different immigrant communities may experience and use UGS in distinct ways, influenced by cultural backgrounds, previous experiences with green spaces, and varying levels of socio-economic integration (e.g., Kloek et al., 2016). However, Dawson et al. (2024) showed that ethnocultural background had relatively little influence over the UGS preferences of new-Swedes. Additionally, while the study focuses on first-generation immigrants, it does not examine how second-generation immigrants – who may have different relationships with both Swedish society and UGS – engage with these spaces. Finally, integration is a complex, multi-dimensional process influenced by broader socio-political factors such as national immigration policies, labor market conditions, housing policies, and public discourse on migration. These external factors shape how immigrants engage with UGS but fall beyond the scope of this study. We argue that a interdisciplinary approach is crucial to examine how these structural conditions interact with UGS accessibility and use in shaping immigrant integration outcomes.

5. Conclusion

Our research shows that UGS is highly valued by new-Swedes and are perceived to significantly enhance their quality of life. New-Swedes appreciate the availability, quality, and accessibility of these spaces, which offer aesthetic and social experiences similar to those enjoyed by native Swedes. Although UGS do not primarily serve as venues for developing new relationships between new and native Swedes, they do facilitate social interactions within families and cultural communities. Additionally, UGS expose new Swedes to Swedish cultural norms regarding outdoor recreation. Our findings underscore the importance of critical infrastructure, such as playgrounds, soccer fields, and allotment gardens, and outdoor group activities in promoting social interaction and integration. Our research also found that UGS provide opportunities for supporting cultural and identificational dimensions of integration; however, the extent of such integration remains a question.

We argue that it is essential to explore the interdependencies between structural, interactive, cultural, and identificational dimensions of social integration to improve UGS planning and management. Additionally, more inclusive UGS planning and design, with active involvement from immigrants, is crucial for enhancing the role of UGS in facilitating the social integration of diverse groups within society. Finally, social integration is a complex, multilevel, and multidimensional process (Asselin et al., 2006). Understanding the potential contribution of UGS therefore requires understanding how it is situated within the influence of broader national and global social and political dynamics.

CRediT authorship contribution statement

Marine Elbakidze: Writing – review & editing, Writing – original draft, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Sara Teitelbaum:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Conceptualization. **Lucas Dawson:** Writing – review & editing, Writing – original draft, Investigation, Data curation, Conceptualization.

Declaration of Competing Interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Marine Elbakidze reports financial support was provided by Swedish Research Council Formas. Marine Elbakidze reports a relationship with Swedish University of Agricultural Sciences that includes: employment. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper

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