

**Unveiling the Dynamics of Residential Outdoor Playgrounds:
Insights into Children's Play Activities
- Case Study of the 420 Collective Housing Units Neighborhood in Oum El Bouaghi -**

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Abstract: Playgrounds are widely recognized as vital spaces for children's outdoor play and development. However, in Algeria, urban development policies focused primarily on housing quantity have often neglected the quality of outdoor open spaces, particularly playgrounds. This research explores the hypothesis that claims a divergence between the entities of outdoor playgrounds in residential neighborhoods and the children's necessities. Therefore, the central research question of this paper investigates the ways children use their daily outdoor playgrounds. To address this multifaceted inquiry, a combined methodological approach was employed. Qualitative method, including direct observation, was employed to understand the structural composition of play spaces and children's interactions within them in nuanced and contextualized ways. Additionally, the quantitative method elaborated a self-administered questionnaire conducted with children to gather some personal insights and perspectives on the local public play spaces. As a result, initial assessments of the neighborhood playgrounds revealed several significant accessibility and usability challenges that restrict their effectiveness as recreational spaces for children. Moreover, the research paper underscores the necessity for urban design approaches that prioritize children's perspectives, ensuring environments that support their growth and well-being. This study advocates for a child-centered approach to urban planning, emphasizing the importance of designing playgrounds that facilitate children's agency, freedom and creativity in their play activities.

Keywords: Children; Playground; Residential Outdoors; Play Activities; Algeria.

Introduction:

The Children's Rights Convention stipulates that each and every child globally has the right to participate in play without exception (Office of the International Organization United Nations High Commissioner for Human Rights, 1989). Accordingly, studies have shown the pivotal significance of outdoor physical activity in a child's growth and development, fostering cognitive, physical, emotional, social, and motor development, while also enhancing overall wellness (Jeanes and Magee, 2012; Ripat and Becker, 2012; Moore and Lynch, 2015; Herrington and Brussoni, 2015; Fernelius and Christensen, 2017, Veiga et al., 2020, Bjerklund and Åmot, 2023; Fermin et al., 2024). However, due to various factors, numerous children globally are not sufficiently enjoying their entitlement to engage in outdoor physical activities. Instead, they face restricted chances for active outdoor play and are exposed to more sedentary forms of recreation (Fjørtoft and Sageie, 2000; Burdette and Whitaker, 2005; Ripat and Becker, 2012; Whitebread et al., 2012; Martínez-Andrés et al., 2020; Day, 2024).

Since the 1970s, the issue of children within urban settings has emerged as a crucial point of emphasis in the multidisciplinary exploration of environmental behavior (Chawla et al., 2012). Numerous scholars, including Lynch (1977), Roger (1979), Moore (1986), Frost (1998), and others, have delved into the correlation between residential areas and children's outdoor accessibility.

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Consequently, there has been a progression of studies examining children's perspectives on their outdoor play environments over recent decades (Jansson, 2008), gaining significant traction since the late 1990s (Ferreira et al., 2018). This increased attention is attributed to the realization that exploring children's preferences and listening to their voices aids in gaining a more profound comprehension of the myriad phenomena linked to them (Sant'Ana, 2010, as cited in Ferreira et al., 2018).

Playgrounds are seen as crucial spaces for children to engage in outdoor play (Cunningham and Jones, 1999; Moore and Lynch, 2015; Morgenthaler et al., 2023; Stanton-Chapman and Michael Malone, 2024). These areas, crafted by adults, aim to fulfill children's requirements, safeguard them, and cultivate an enriching environment for outdoor pursuits (Jansson, 2008; Korepanova-Kotliar and Sokolova, 2017; Morgenthaler et al., 2023). Despite this intention, playgrounds often face criticism for not adequately addressing children's needs (Jansson, 2010; Ripat and Becker, 2012; Moore and Lynch, 2015) and for posing potential dangers and risks to Children.

The mentioned phenomenon has been witnessed in Algeria as a result of the housing crisis and due to the policy of large housing projects (Mebirouk, Zeghiche, and Boukhemis, 2005; Madani, 2012; Merzag, 2015), where the importance was only given to the number of dwellings at the expense of the quality of outdoor open spaces (Mebirouk, Zeghiche, and Boukhemis, 2005; Madani and Tacherifte, 2010; Hima, Tacherift, and Abdellaoui, 2018; Zerouati and Bellal, 2020). Therefore, these areas become free, abandoned, and non-furnished spaces (Naceur and Farhi, 2003). As a consequence of this context of building that resulted in the production of some particular outdoor physical characteristics and quality, the outdoor spaces demonstrate several impacts on the children's outdoor daily use and play activity (Chibane and Hamouda, 2022).

Based on the hypothesis that claims the divergence between the the entities of outdoor playgrounds in residential neighborhoods and the children's needs, this study research aims to analyze and examine these areas to obtain responses to the following question: **How do children use their daily outdoor playgrounds?** To respond to the previous research question, both quantitative and qualitative methods are used together through direct observations and questionnaire surveys. Thus, this study analyzes the children's use and perspectives toward their local public play spaces.

By delving into the previously mentioned aspects, the research aims to uncover a range of factors that impact how they engage with these outdoor environments. Additionally, the study seeks to identify any environmental or infrastructural barriers that may hinder children's ability to fully utilize and enjoy these spaces. Through a comprehensive examination of these various aspects, the research aspires to provide a holistic understanding of the children's use of their play environments and offer insights for improving the quality and accessibility of public play spaces.

As per the Convention on the Rights of the Child (1989), a 'child' is defined simply as anyone under the age of eighteen, unless the individual's governing law establishes a lower age for adulthood. However, the intersection of "child" and "outdoor space" introduces a complex conceptual framework that can be examined through several interconnected themes, including children's diverse experiences in various settings, the establishment of place identity within neighborhoods, and how outdoor environments are utilized and adapted to individual needs.

The environmental attributes directly and indirectly influence individuals' spatial conduct and perceptions (Özgece, Edgü, and Taluğ, 2015), thus, individuals' spatial conduct is in part contingent upon the environmental perception they hold (Lang, 1987 as cited in Özgece, Edgü, and Taluğ, 2015). According to Lynch, "this image is the product of both immediate sensation and of memory of the past experience, and it's used to interpret information and guide to action" (1964, p. 4). Therefore, knowledge about spatial perception and cognition is crucial for exploring the spatial

experiences of people from all age groups. The interest here is in the connection between the use of space and the symbolic meanings that children get in their experience of places. According to Min, Heo, and Lee (2006), "these meanings stem from children's behavioral domain and conceived domain respectively as they develop one form of meaning to the other in their everyday use of neighborhood spaces" (p. 83).

Children gain knowledge of the complex physical world through experiences (Cantor et al., 2021) like crossing streets, recognizing stores, and encountering various sensory stimuli (Proshansky and Fabian, 1983). These activities expose them to a myriad of new sights, sounds, and textures that contribute to their growing understanding of their surroundings. This process enables children to become aware of a larger and more distinctly defined world while simultaneously incorporating the enormous complexity of the neighborhood setting (Rapoport, 1977). As they navigate through these environments, they must make sense of diverse and often intricate elements within their community. To gain environmental comprehension, control, and competence over the neighborhood's space, cognitive function is required through perception and cognitive assimilation (Downs and Stea, 1973). This involves not just a passive reception of sensory information but an active engagement with the environment. Children learn to interpret and make sense of the spatial and social dynamics they observe, which fosters a deeper understanding of their local area.

Through repeated interactions and experiences, their cognitive maps of these spaces become more detailed and accurate. Furthermore, according to Proshansky and Fabian (1983), the child's perceptions and conceptualizations of the physical environment build up slowly to becoming progressively more complete and refined. This gradual development allows them to better navigate and utilize their surroundings effectively. Over time, as children continue to interact with their environment, their understanding becomes more nuanced and sophisticated, reflecting their growing cognitive and perceptual abilities. The integration of these experiences into their mental framework is crucial for their overall development and ability to function independently within their community.

Within residential housing neighborhoods, open spaces play a crucial role in shaping the community dynamics (Barton, Grant, and Guise, 2021) by not only providing physical connections between dwellings but also fostering social interactions among inhabitants (Mouratidis and Poortinga, 2020). These open spaces serve as vibrant hubs where children engage in a variety of active and imaginative activities, using them as canvases for their creative expressions and places to establish their own domains for uninterrupted play and exploration (Oscilowicz et al., 2020). Lieberg (1994) highlights that children emerge as integral participants in these accessible areas, significantly influencing their social and developmental experiences. Despite their potential benefits, these open spaces often present challenges in mass housing communities, particularly in developing nations (Jephcott and Robinson, 2023). Issues such as inadequate maintenance, safety concerns, and limited amenities can undermine their potential as enriching environments for children and families. Moreover, the perception of these spaces as problematic areas can lead to neglect and underutilization, further exacerbating community issues and inhibiting the spaces' positive impact on residents' quality of life (Mouratidis, 2021).

1. Research Methodology

1.1. Design

Due to the multifaceted nature of this research, a combination of two methodological approaches (Molina-Azorin, 2016; Guetterman and Feters, 2018) has been applied to this study. The qualitative method comprises direct observations, one of the oldest and foundational research techniques (Smit and Onwuegbuzie, 2018). The aim of the qualitative method of direct observation in this research work is to gain a nuanced and contextualized understanding of the structural composition of the play space and the nature of the children's interactions within it. By directly observing children in their natural play environments, the research seeks to capture authentic behaviors, social dynamics,

and patterns of use that may not be fully revealed through other methods such as surveys or interviews. This approach allows for the identification of subtle, real-time interactions and environmental influences that shape children's play experiences.

Moreover, the quantitative method entails a self-administered questionnaire conducted in person with the participants (children). This questionnaire is used as a tool for getting different useful statistics and data by asking both types of questions; closed and open-ended questions concerning attendance, activities, places, structures, interactions, and others. Therefore, the results will be interpreted quantitatively. The aim of the qualitative method of the self-administered questionnaire in this research work is to gather in-depth, personal insights and perspectives directly from the children about their local public play spaces by allowing them to express their thoughts and feelings. This method seeks to capture the subjective experiences and the nuanced understandings that might be missed through direct observation only.

The questionnaire was structured to cover several key areas to gather comprehensive data on children's outdoor activities. The detailed structure of the questionnaire was designed to ensure a thorough understanding of various factors affecting children's outdoor play. This structure was elaborated as follows (details regarding the questions posed in the self-administered questionnaire are appended):

- **General Information:** This section collected basic information about the child, including age, gender, and living address. These details helped in understanding the composition of the sample.
- **Time Frame:** this section focused on the frequency and duration of outdoor activities. It included questions about how often children play outside, and the average time spent outdoors daily.
- **Play Activities:** this section focused on the types of outdoor activities. It included questions about the play activities children engage in outdoors daily.
- **Play Spaces and Place Preferences:** this part of the questionnaire identified the outdoor spaces mostly frequented by children as well as the potential barriers to outdoor play, such as lack of safe play areas, traffic and road safety concerns, environmental pollution, and lack of recreational facilities.
- **Others:** this section invited suggestions for improving outdoor play opportunities and provided space for any other comments or suggestions from the respondents.

1.2. Protocol and Participants

The direct observation protocol in this study involves a systematic approach to document children's behaviors, interactions, and activities in their neighborhood's outdoor play spaces. First, objectives are defined clearly, specifying the behaviors and interactions of interest (dynamic behaviors such as playing, walking, or running, and static behaviors such as sitting or standing). Observation sites are selected within the neighborhood (the neighborhood outdoor spaces are divided into small zones to control the observation operation) and times are established to capture various activities (the evening timeframe is selected based on the assessment that it represents an optimal period for engaging in outdoor play activities during the summer season). Non-participant observations will be conducted using several tools like checklists, note-taking, photography, and videography. The direct observation protocol is preceded by some initial sessions of in-site observations in order to familiarize ourselves with the environment before systematic observations begin.

For the self-administered questionnaire, it was especially crucial to verify that children fall within the 7 to 12-year-old bracket. This age group (school-aged children) was chosen due to their capacity to comprehend questions and furnish valuable responses effectively. Children in this developmental stage possess the cognitive abilities required to understand and answer survey questions with a reasonable degree of accuracy and insight. This ensures the reliability and validity of the data collected, as younger children may struggle with the comprehension and articulation necessary for such surveys, while older children might not be as representative of typical play behaviors in outdoor environments. Consequently, an in-person survey was carried out on location (in the outdoor play areas) with 80 children involved in the study. Conducting the survey in the actual play areas where children spend their time ensured that the responses were contextually grounded and reflective of their real experiences. This method also helped to minimize any potential biases that might arise from conducting the survey in a more formal or unfamiliar setting. In total, there were 39 girls and 41 boys, with an average age of 9.81 years. This balanced gender distribution allowed for a comprehensive analysis of any potential differences in how boys and girls interact with and perceive their outdoor environments.

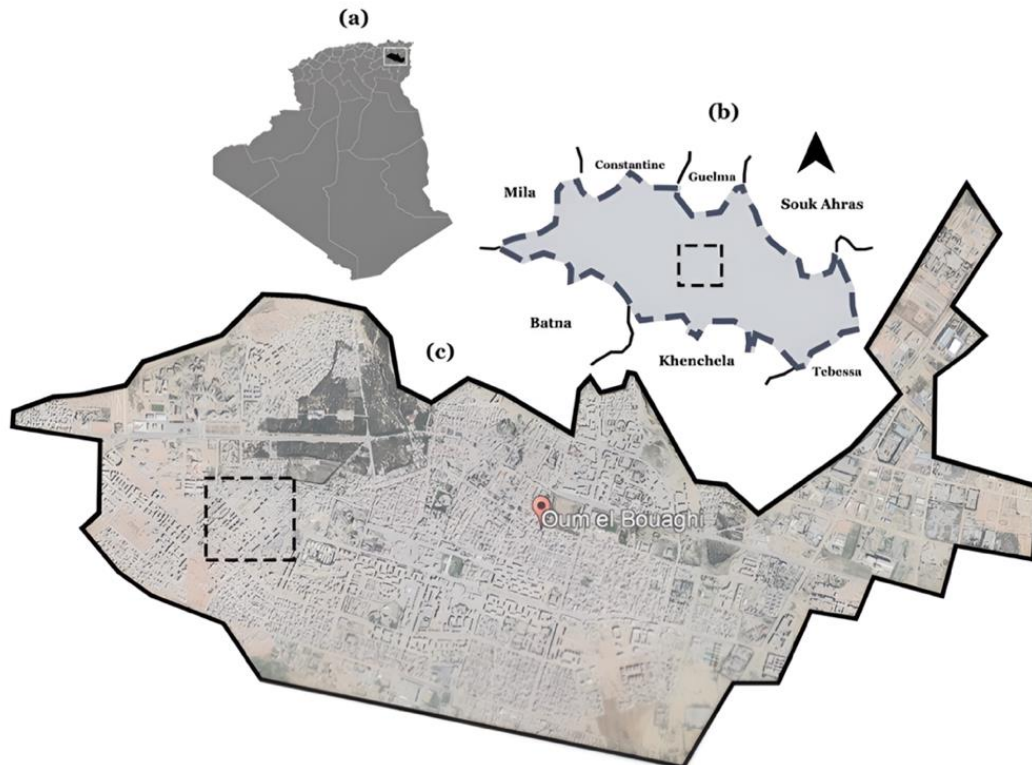
1.3. Data analysis

In the quantitative approach, the initial stage involved transcribing the responses for input into a computer system for data analysis. This process was meticulous and required careful attention to detail to ensure the accuracy and integrity of the data. Initially, each potential response to closed-ended questions required the assignment of a numerical code, a step that facilitated streamlined data entry and subsequent statistical analysis. Coding for open-ended questions occurred after receiving the responses, allowing for a more nuanced categorization of qualitative data. Therefore, the SPSS (Statistical Package for the Social Sciences) software was chosen for data analysis because of its extensive adoption and prominence in this area (Arkkelin, 2014; Ong and Puteh, 2017). SPSS is renowned for its user-friendly interface and powerful analytical capabilities, making it an ideal tool for handling large datasets and performing complex statistical procedures. Its comprehensive range of functions enables researchers to conduct a variety of analyses, from basic descriptive statistics to advanced inferential techniques, ensuring a thorough examination of the data. However, data management in the qualitative approach includes organizing the collected records and data. Findings will be integrated with other research data, and interpreted to draw conclusions about children's play behaviors and experiences.

1.4. Study Context

Oum El Bouaghi, a small city in Eastern Algeria, is where the investigated neighborhood is located. The urban situation of the city can be traced back to the colonial period and has since progressed, reflecting various phases of development and modernization. Like almost all Algerian cities, Oum El Bouaghi has its own mass housing neighborhood extension area situated in the southwestern part of the town (Fig.1). This extension area represents a significant aspect of the city's urban landscape, providing housing solutions to accommodate the growing population.

Fig.1. The localization of the study area. (a) The localization of the state of Oum El Bouaghi to the country (Algeria); (b) The localization of the town (c) The localization of the study neighborhood.



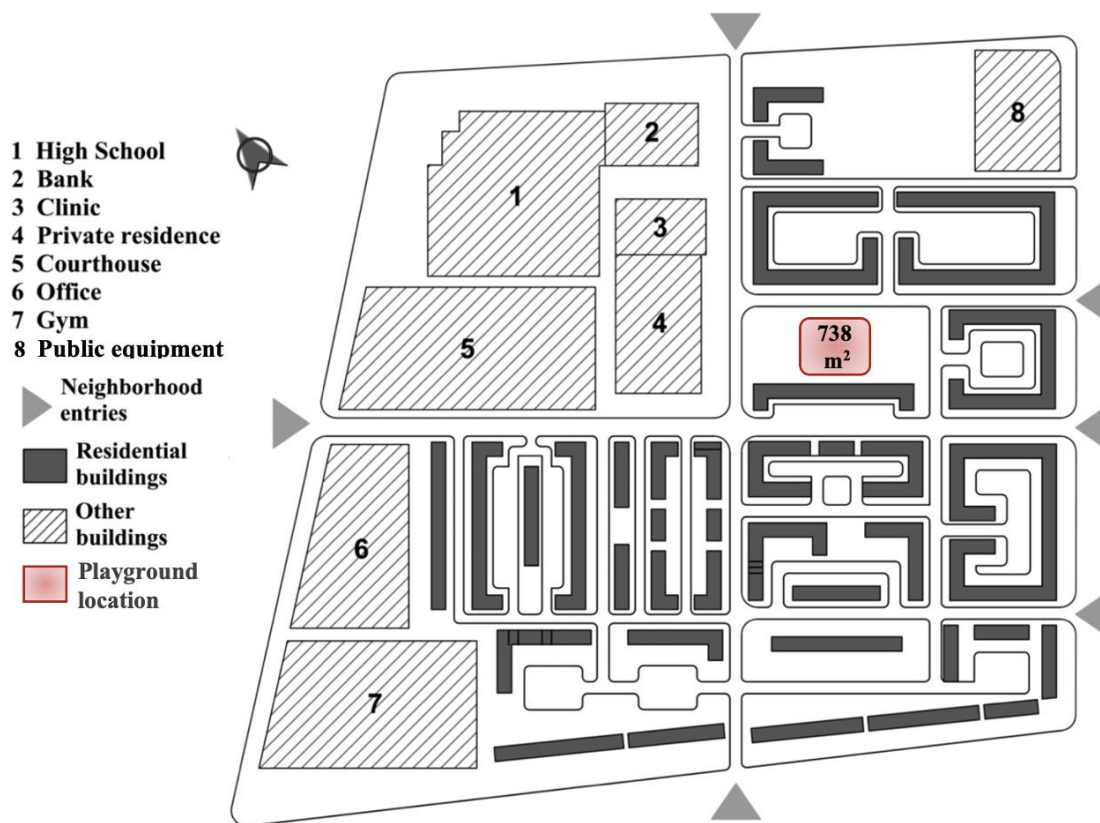
Source: Authors, 2022

The neighborhood in question contains 420 residential units (Fig.2), including more than 2000 inhabitants. These residents belong to an intermediate socio-economic category, which is indicative of the mixed-income nature of the community. Moreover, the total number of children in the neighborhood is approximately 1250, highlighting the significant proportion of young residents and underscoring the importance of understanding their interactions with their environment. The presence of such a large number of children justifies the choice of this case study. Therefore, the demographic composition of the neighborhood, with its substantial child population, provides a rich context for studying how these young residents use and appropriate the outdoor environments.

In addition to residential buildings, the neighborhood likely includes various amenities and public spaces that contribute to the quality of life of its inhabitants. These include parks, playgrounds, schools, and community centers, all of which play a crucial role in fostering a sense of community and providing children with opportunities for social interaction, play, and learning. However, focusing on one case study of the mass housing neighborhood of 420 residential units in Oum El Bouaghi allows for an in-depth, contextually rich, and methodologically precise investigation, considering it representative of urban products in Algeria. Insights gained from this case can offer valuable perspectives on similar neighborhoods across the country, making the findings relevant beyond the immediate study area. Moreover, conducting a detailed study across multiple locations can be logistically challenging and resource-intensive. By focusing on a single

case, the research can allocate more resources and time to gather comprehensive data, ensuring a high-quality and thorough analysis.

Fig.2. The spatial composition of the neighborhood of 420 housing units.



Source: Authors, 2022

2. Results

Drawing upon detailed on-site observations and direct feedback from the children, this part of the study comprehensively examines and investigates the characteristics of the neighborhood's outdoor spaces. These characteristics are analyzed according to various aspects, including the physical layout, accessibility, safety, and adaptability for children's play and activities. The qualitative and quantitative analysis results will be introduced in succession.

2.1. Outdoor Features and Overall Physical Characteristics of the Playground

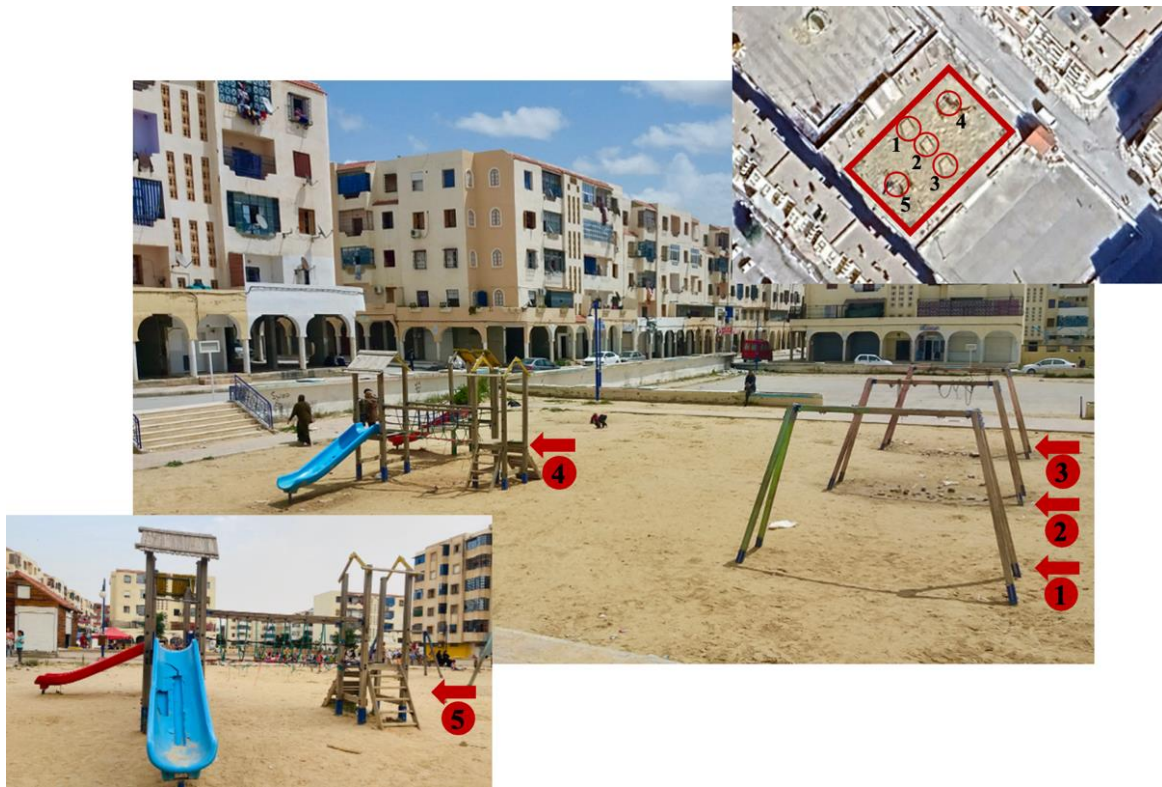
Based on direct on-site observations, both the structural composition of the play space and the nature of the children's interactions within it are systematically examined.

At the outset, the neighborhood has only one equipped playground, and due to its location (see Fig.2), it is accessible only to a small group of children. This playground incorporates a minimal number and types of play structures (two composite play structures that combine climbers and slides, and three swings) that are extremely vandalized and damaged (Fig.3). In addition to vandalism, the condition of the playground has deteriorated due to the absence of regular and proper maintenance. This neglect is evident in the waterlogged floors, graffiti-covered walls, and trash (Fig. 4). As a result, the outdoor playground has become less functional and unsafe for children.

In addition, the play area excludes the existence of any natural elements like trees, green spaces, water features and others. Moreover, the playground lacks unique features that provide children with diversity, aesthetics, flexibility, and opportunities for change. Elements such as varied colors, textures, and shapes, which generate attraction, excitement, and positive energy, are missing.

Consequently, the play area is monotonous and it might fails to engage children, leading to feelings of discouragement, boredom, and negativity.

Fig.3. The status of the play structures within the playground of the study neighborhood.



Source: Authors, 2021.

Fig.4. The deteriorated condition of the playground.



Source: Authors, 2021.

2.2. Outdoor Activities and Playground Use

As a result of direct on-site observations, it was found that the playground offers limited opportunities for diverse play activities and fails to provide a safe environment for children. The lack of engaging and secure play structures leads to the underutilization of these spaces, as they do not attract children. Consequently, the playground remains largely unoccupied, missing the potential to serve as a vibrant community resource. However, the small groups of children who continue to use the playground demonstrate a remarkable adaptability. Despite the deteriorating conditions and damaged structures, children exhibit remarkable creativity and resourcefulness in adapting the existing equipment to their play. For instance, they ingeniously use ropes to create makeshift swings and place cardboard on the slides to enhance their functionality. Additionally, they establish a system of taking turns, demonstrating their ability to self-organize and cooperate effectively (Fig. 5).

Fig.5. Forms of adaptation to the deteriorated condition of the playground.



Source: Authors, 2021.

2.3. Children's Perspectives on Outdoor Activities and Space Use

According to data collected from the self-administered questionnaire, the findings aim to offer in-depth personal insights and perspectives directly from the children regarding their outdoor play spaces, allowing them to express their thoughts and feelings. Based on the results of the questionnaire, the following insights were gathered regarding the frequency, timing, and duration of children's outdoor play activities in the neighborhood of 420 residential units (Table 1):

Frequency of Outdoor Play : the data indicates that the majority of children in the outdoor spaces of the neighborhood of 420 residential units engage in outdoor play on a daily basis. Specifically:

- **Daily:** 76.3% of children
- **Weekends:** 11.3% of children
- **Holidays:** 11.3% of children
- **Rarely:** 1.3% of children

These results highlight that a substantial majority of children regularly utilize outdoor spaces for recreation, emphasizing the importance of these areas in their daily lives.

Timing of Outdoor Play : regarding the time of day when children usually play outdoors, the overwhelming majority prefer the evening:

- **All Day:** 5% of children
- **Morning:** 2.5% of children
- **Evening:** 92.5% of children

This data suggests that evening is the most popular time for outdoor activities, likely due to more favorable weather conditions and the availability of peers to play with during this period.

Duration of Outdoor Play : the questionnaire also revealed the typical duration of outdoor play time among children:

- **1 hour:** 3.8% of children
- **1 to 2 hours:** 11.3% of children
- **2 to 3 hours:** 33.8% of children
- **More than 3 hours:** 51.3% of children

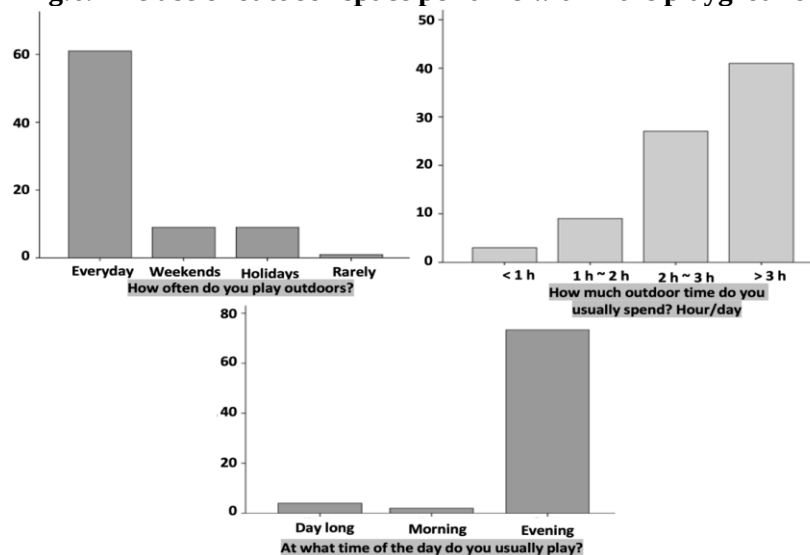
A significant proportion of children, over 50%, spend more than three hours playing outdoors each day, indicating a strong engagement with outdoor play activities. According to the children's feedback, over 75% of the children utilize the outdoor areas of the neighborhood daily for recreation, with more than 90% visiting these areas at the and evening. Additionally, over 50% spend more than three hours outdoors per day (Fig.6).

Table 1. The attendance and use of the open spaces per time.

How often do you play outdoors?					
Area	Daily	Weekends	Holidays	Rarely	Total
420 H.U	76.3%	11.3%	11.3%	1.3%	100%
At what time of the day do you usually play?					
Area	All Day	Morning	Evening	Total	
420 H.U	5%	2.5%	92.5%	100%	
How much outdoor play time do you usually spend?					
Area	1 h	1 h to 2 h	2 h to 3 h	> 3 h	Total
420 H.U	3.8%	11.3%	33.8%	51.3%	100%

Source: Authors.

Fig.6. The use of outdoor space per time within the playground.



Source: Authors, 2021

On the other hand, on the results of the self-administered questionnaire, show the following insights regarding where children play in the 420 H.U area:

Locations of Outdoor Play

Data reveals the various locations where children typically engage in outdoor activities (Table 2):

- **Around the buildings:** 36.3%
- **Street:** 5%
- **Playground:** 21.3%
- **Leftover Spaces:** 25%
- **Multiple Locations:** 12.5%

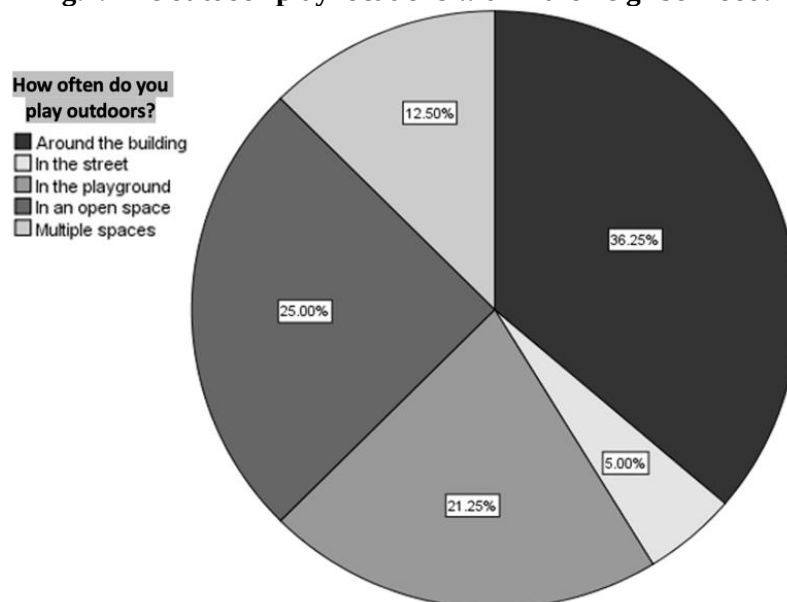
The findings indicate that a significant portion of children, 36.3%, play around the buildings in the 420 H.U neighborhood. This might be due to the proximity and convenience these areas offer. Additionally, 25% of children use leftover spaces, which are likely informal or unstructured play areas within the neighborhood. The playgrounds, specifically designed for children's play, attract 21.3% of the children, showing their importance, but also highlighting that they are not the primary play area for most children. Only 5% of children play in the streets, possibly reflecting safety concerns or parental preferences. Lastly, 12.5% of children utilize multiple locations for play, indicating a flexibility and variety in their play preferences and behaviors (Fig.7 and Fig 8).

Table 2. The outdoor play locations.

Where do you play?						
Area	Around the buildings	Street	Playground	Leftover Spaces	Multiple	Total
420 H.U	36.3%	5%	21.3%	25%	12.5%	100%

Source: Authors.

Fig.7. The outdoor play locations within the neighborhood.



Source: Authors, 2021

Fig.8. The children play in different spaces within the neighborhood.

Source: Authors, 2021

2.4. Children's Outdoor Aspirations and Preferences

Based on the results of the self-administered questionnaire, the following insights were gathered regarding the aspirations of children aged 7 to 12 years in terms of desired play equipment, natural elements, urban elements, playgrounds, football fields, safety, and other preferences (Table 3):

The aspirations across different age groups show a consistent desire for play equipment, with the highest interest among 12-year-olds (12) and 10-year-olds (8). Playgrounds are also a common aspiration, particularly among 7-year-olds (5) and 10-year-olds (4). Natural elements are notably less desired, with only a few mentions among 9-year-olds (1) and 11-year-olds (1). Urban elements show a modest interest, particularly among 10-year-olds (2). Football fields are a specific aspiration for some children, especially 9-year-olds (2) and 12-year-olds (2). Safety becomes a consideration only among the 12-year-olds (2). The "Other" category shows varied interests, with some aspirations among 8-year-olds (2), 9-year-olds (1), 10-year-olds (3), 11-year-olds (1), and 12-year-olds (1).

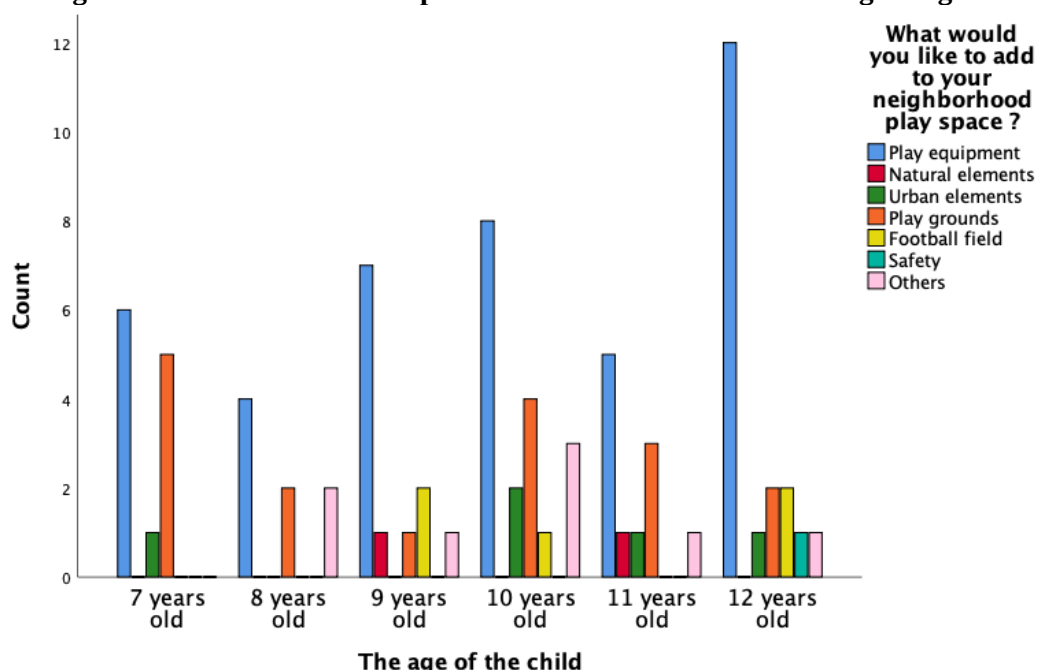
Table 3. The outdoor play aspirations

Age / Aspirations	Play Equipement	Natural Elements	Urban Elements	Playgrounds	Football Fields	Safety	Other
7 years old	6	0	1	5	0	0	0
8 years old	4	0	0	2	0	0	2
9 years old	7	1	0	1	2	0	1
10 years old	8	0	2	4	1	0	3
11 years old	5	1	1	3	0	0	1
12 years old	12	0	1	2	2	2	1

Source: Authors.

Children of varying ages exhibited a specific desire for playgrounds and suitable play structures within their neighborhood as the primary essential play components. Nevertheless, due to the open ended question (what would you like to add to your neighborhood), they indicated a desire for different elements such as organic features like vegetation and water features; urban amenities such as benches and trash receptacles; a football field; safety features including boundaries, secure flooring, and car barriers (with only older children being cognizant of safety parameters); as well as various other elements such as larger surface areas, educational play structures, colorful components, and more (Fig.9).

Fig.9. Correlation between Aspirations and children's different age ranges.



Source: Authors, 2021

3. Discussion

The research aimed to explore how children utilize their daily outdoor play environments to meet their diverse needs and to investigate the factors influencing their engagement with these spaces. It sought to identify environmental and infrastructural barriers that may prevent children from fully enjoying and making use of these areas. By thoroughly examining these aspects, the study strived to provide a comprehensive understanding of children's interactions with their play environments and to offer insights for improving the quality and accessibility of outdoor playgrounds.

The initial examination of the neighborhood's playground reveals significant accessibility and usability challenges that limit its effectiveness as a recreational space for children. The playground's location restricts access to a small group of children, highlighting a critical issue in urban planning and equitable distribution of recreational facilities. This limited accessibility underscores the need for strategic placement of playgrounds to ensure that a broader population of children can benefit from such spaces.

The playground is equipped with only two composite play structures (which combine climbers and slides) and three swings. These minimalistic offerings fail to cater to the diverse play needs of children, which is further exacerbated by the extreme vandalism and as well as the lack of inadequate maintenance. The compromised state of the play equipment not only reduces the variety of play activities but also raises significant safety concerns. This scenario highlights a critical issue in the management and maintenance of public play spaces. Regular maintenance is essential for ensuring the safety and usability of playgrounds. Without it, even well-designed play spaces can

quickly become hazardous and unattractive, leading to underutilization. Moreover, the current state of the playgrounds not only limits the physical activities available to children but also negatively impacts their cognitive and social development.

Consequently, this underlines the critical need for community and policy interventions aimed at enhancing the quality and accessibility of play areas. Implementing regular maintenance routines, introducing diverse and safe play structures, and integrating natural elements can significantly improve the playground's usability and appeal, thereby fostering a more positive and enriching environment for children's outdoor activities and development.

Despite these challenges, the small groups of children who continue to use the playground display remarkable adaptability and creativity. Their ability to repurpose the limited and damaged equipment into functional play items, such as using ropes for makeshift swings and cardboard on slides, showcases their ingenuity. These actions underscore children's inherent resilience and their capacity to innovate in the face of adversity. This adaptability is commendable but also highlights a significant gap in the provision of suitable play environments. Moreover, the children's ability to establish a system of taking turns indicates a high level of social cooperation and self-organization. These behaviors are essential life skills, fostered through interactive play. However, relying on children's resourcefulness to make up for the deficiencies in their play environment is not a sustainable or acceptable solution. It places an undue burden on them to adapt to conditions that should be proactively addressed by urban planners and community leaders.

This situation calls for immediate and sustained interventions to rehabilitate and upgrade the playground. Efforts should focus on not only repairing and enhancing the current structures but also incorporating a variety of engaging and safe play equipment that caters to a broader range of activities and age groups. Additionally, ensuring regular maintenance and involving the community in these efforts can foster a sense of ownership and responsibility, further protecting the playground from future neglect and vandalism.

On the other hand, the children's expressed desires and the elements they wish to see added to their neighborhood underscore the importance of considering their perspectives in urban planning and design. By addressing these preferences, planners and community leaders can create environments that support children's developmental needs, foster a strong place identity, and encourage active and safe use of outdoor spaces. The integration of natural features, urban amenities, and safety measures can transform playgrounds into vibrant, multifunctional spaces that cater to the holistic needs of children, enhancing their overall experience and connection to their neighborhood.

Ultimately, children's feedback provides valuable insights into their experiences and aspirations for their play environments. By recognizing and incorporating these elements, we can create inclusive, engaging, and safe outdoor spaces that not only support children's play but also contribute to a stronger, more cohesive community identity. This discussion emphasizes the need for a child-centered approach in urban design, where children's voices are integral to the planning and development process, ensuring that their environments are responsive to their needs and conducive to their growth and well-being.

Conclusion

This study yields a vision of how children use the outdoor play environment. Notably, the planned and structured play area was the most used for active play by the children, in addition to the empty lots, undeveloped natural areas, and other open or unplanned play spaces as well as streets and parking lots. On the other hand, it becomes clear that the playground space lacking the needed infrastructure could not always fulfill its purpose as a functional and safe play space. However, children demonstrate a strong ability to adapt and integrate within the playground space's conditions to fulfill their daily needs, often they invent new ways of interacting with the space in order to balance its incapacity to accommodate the play requirements.

As a low-income community, this locality presents limited opportunities, particularly for children. It is remarked that neighborhoods with low-income demographics, often frequented by children, typically lack high-quality environments. These areas are characterized by more hazardous play spaces, fewer natural features, inadequate services, heightened levels of traffic and crime, and greater physical deterioration compared to wealthier areas. Hence, the usage and visitation of these spaces, characterized by neglected facilities, poorly kept structures, and a lack of natural features and variety are portrayed as some of the difficulties regularly encountered by children in underdeveloped regions.

The primary kind of outdoor environment for urban kids encompasses outdoor spaces adjacent to their residences, like playgrounds, that foster diverse types of stimulation and enable movement, exploration, and play. Therefore, these bordering spaces around the home are expected to reflect certain aspects of the child-outdoor relationship, especially in terms of freedom, physical abilities, and personal growth. Consequently, the playground, as a child's rightful space with a prescriptive nature, its conditions and qualities may encourage extended freedom for children's actions or vice versa.

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Appendix 1

I. General Information

Name:

Age	7 years old	☐	8 years old	☐	9 years old	☐
	10 years old	☐	11 years old	☐	12 years old	☐

Gender	Male	☐	Female	☐
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Residence	Neighborhood of 420 housing unit	☐	Neighborhood of 1500 housing unit	☐
	Other neighborhood	☐		

II. Time Frame

How often do you play outdoors?	Everyday	☐	Holydays	☐
	Week-ends	☐	Rarely	☐

At what time of the day do you usually play?	Morning	☐	After noon	☐
	Evening	☐	Night	☐

How much outdoor play time do you usually spend? (Hour/Day)	Less than 1 hour	☐	Between 1 and 2 hours	☐
	Between 2 and 3 hours	☐	More than 3 hours	☐

III. Play Activities

What are the exercised activities during play?

Football	☐	Building things	☐
Hide and seek	☐	Pretending	☐
Bike/Rollers	☐	Cooking	☐
Running/Jumping	☐	Small Balls	☐
Swinging	☐	Electronics	☐

IV. Play Spaces and Place Preferences

Where do you play?

Inside the building	☐	At the entrance of the building	☐
Next to the building	☐	In the street	☐
In the playground	☐	In the garden	☐
In an open space	☐	In the grass	☐

Is the play space?

Very far	☐	Far	☐
Near	☐	Very near	☐

Is the play space?

very tight	☐	Tight	☐
Large	☐	Very large	☐

How is the playground bordered?

Fenced	☐	Opened	☐
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What type the playground floor is?

Clay	☐	Sand	☐
Grass	☐	Paved	☐

Is the play space?

very dangerous	☐	Dangerous	☐
Safe	☐	Very safe	☐

Where do you play during adverse weather conditions? (Too hot, too cold, too wet)

Indoor ☐

Outdoor ☐

If outdoor, where?

.....
.....

What encourages you to play outside?

Group playing ☐

Open spaces ☐

Play equipment ☐

Nature elements ☐

Other:

.....
.....

V. Others

Do you participate in the cleanup and reforestation initiative in your neighborhood?

Yes ☐

No ☐

What would you like to add to your neighborhood play space?

.....
.....
.....
.....

If you had the opportunity to change your place of residence and move away from your neighborhood, would you accept?

Yes ☐

No ☐

If you answered yes, why?

.....
.....
.....