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Wellbeing of Urban Space: Child-friendly Approaches Exploring the Contextual and Subjective Paradigm

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Abstract

The environment in which children grows up plays a crucial role in their development. While urban areas offer better educational facilities, extracurricular activities, and diverse experiences, rapid urbanization poses unforeseen challenges such as pollution, traffic, and loss of natural habitats. Adopting a child-friendly approach can redirect and alter the course of development in urban settlements. Solutions that benefit all stakeholders can be implemented by prioritizing the most vulnerable stakeholders. This paper is a systematic review of research literature that explores the relationship between the well-being of children, inhabitants and child-friendly approaches in the context of urban space. It also brings the children's perspective and their experiences into focus to understand the perception and reality of risks in urban childhood spaces.

Keywords: Child-friendly; Urban; Wellbeing; Gender; Diversity.

1. Introduction

Children are our future. With the advent of new societal systems and economic growth, their present is at best an experiment in progress. News of crimes against minors in the city is a concern for an inhabitant of the city. Cases of depression and anxiety too have been on the increase in the city. To understand the child's perspective in such an urban space, it is imperative to understand the reason for its structural and spatial manifestation. In contrast to the developed world, developing countries of the global south specifically have a unique urban reality. While their rural village settlements evolved organically, and have relatively harmonious socio-cultural and physical construct. The urban centres, a result of modern planning policies have become similar to global cities on the surface but have a unique fragmented reality on close inspection (Balbao, M 2008). The challenges faced in this situation such as traffic, lack of basic infrastructure, pollution etc take precedence and the child's perspective is pushed to the background. *"The urban paradox reminds us that cities are not always beneficial for all. Marginalized and vulnerable groups often tolerate services designed for the wealthy, have no form of citizenship or right of access to the city's benefits. Children are often placed in the most disadvantaged positions, as the built environments of a city are constructed by adults for their own use, to respond to their daily needs. The benefits of urban life bypass children, and the negative aspects can impact them hard."*

– Shaping Urbanization for Children: A Handbook on Child-responsive Urban Planning, (UNICEF, 2018) pg 21

New age concepts of urban planning such as densification, Transit-oriented Development (TOD), and mixed land use are being adopted in a bid to create a more equitable urban space, the residential and institutional (educational) development warrants a deeper understanding from the children's standpoint, as they are a key stakeholder. In the past decade, the voices for designing from the child's perspective, specifically for the different age groups of children, have been gaining momentum. The right of the child to participate in the way places and spaces are planned and designed for them, has also been experimented with around the globe. The merits of participatory planning for child-friendly spaces are acknowledged as an important tool in various literature discourses. The concept of Child-Friendly Environments brings attention to the possible disconnect between the promises made by governmental institutions and the actual fulfillment of those promises, especially when it comes to meeting the needs and desires of children. (Horelli, 2004)

This research reiterates that Child Friendly approaches are imperative for the well-being of urban space, as children can be considered as an indicator species for the quality of life experienced by the urban inhabitants. A systematic review of the existing global literature on CFSs and correlating with the local context of developing countries such as India. This paper explores whether the existing child friendly approaches to the Urban environment are universal or do they need to address context-specific and children type determinants. This research also emphasizes three key aspects of child friendly approaches: firstly, the importance of considering the well being of the non-generic child (based on the age and gender and socio-economic background); secondly, the necessity for understanding varied nature of the physical and cultural contexts urban childhoods and finally, the acute need for studies targeting specific children groups to inform and create local urban solutions specifically in the developing country such as India

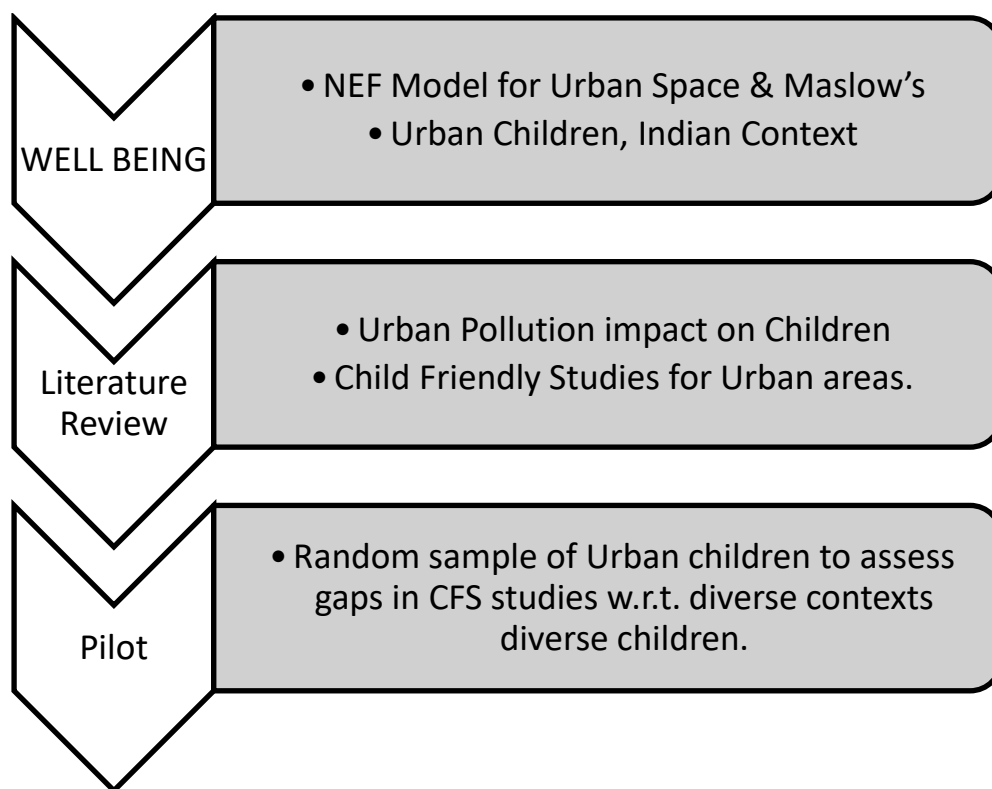


Figure 1. Structure of the Study (Developed by Author).

1.1 Children and Rights of the Child

United Nations Convention on the Rights of the Child, defines children as people aged 0 to 17 years. As the world's most widely-ratified international treaty, made a promise to protect and fulfil the rights of children. This was a historic moment as for the first time children were acknowledged separate from adults, as individuals and not as properties of the parents or adults in training. Childhood is a special, protected time, in which children must be allowed to grow, learn, play, develop and flourish with dignity. (UNICEF, n.d.-b) The UNCRC outlines children's fundamental human rights in 54 articles, with 41 substantive articles addressing nearly every aspect of child's life and experience.

Specifically in conflict and natural disasters, it started creating child-friendly schools and environments, fulfilling its commitment to "Every child has the right to grow up in a safe and inclusive environment". UNICEF launched "Child Friendly Spaces Initiative" in April 1999 as an effective means of providing large numbers of Kosovar refugee children and women basic social services. The child protection elements of CFS/E also stem partially from the "Protective Environment Framework" developed by UNICEF's Child Protection Sector, which identifies systems and areas of activities at all levels – national, societal, and familial – most relevant to securing child protection. Since then it has implemented CFS/E in various countries affected by armed conflict or natural disasters. (UNICEF, 2004). The academic discourse on child-friendly urban environments has been exhaustive and extensive and has gained momentum globally. Studies have confirmed the importance of creating child-friendly urban spaces to make environments more humane and sustainable. (Amoly, et al., 2014)

2. Wellbeing of the Urban Space

The term well-being describes the state of being happy, healthy or prosperous. ("Merriam-Webster Dictionary"). The New Economic Fund (NEF) was commissioned by the Worldwide Fund for Nature (WWF) to create a model for well-being for the urban space, in light of the increasing need to identify a holistic framework that helps both people and nature thrive. The NEF model for Wellbeing posits that while overall happiness and life satisfaction are important, they are only one component of Wellbeing. The other crucial aspect is individuals' engagement in improving their skills and realizing their potential, leading to enriched and fulfilling lives. Translating this idea for urban space means that the built environment should not only be of good quality, facilitating good health, both physical and mental but should provide opportunities for human development and growth. What constitutes quality in an urban context is rather subjective, but children act as effective indicator species of the built and unbuilt ecological system.

A compelling body of international evidence links our happiness with longer and more fulfilling lives, better mental and physical health, stronger relationships and a range of other psychological, social and economic benefits. (Wow Strategy, n.d.) These relationships include the political, and ethnic community perspective as well. From the perspective of an individual's wellbeing, Maslow's "hierarchy of needs" is a commonly referenced framework. He identifies the five basic human needs to be fulfilled for a human being's pursuit of happiness, and good psychological health. He envisioned the needs as a pyramid starting from the base to the top ; Physiological, Safety, Social, Self Esteem and finally Self- Actualization. Maslow referred to the bottom four levels as "deficiency needs," such as the need for food, safety, love, and esteem, and termed them essential for humans. Post the fulfilment of these four needs only he argued that an individual could reach her/his full potential and achieve self actualization.

Self-actualizing people enjoy life in general and practically all its aspects, while most other people enjoy only stray moments of triumph ... (Maslow, 1999, p. 37)

For this study, parameters from existing child-friendly literature are connected with Maslow's hierarchy of needs and data for the pilot study is analysed to assess gaps in academic discourse in this subject. As regards space, current housing is not designed for working from home and alterations would be needed (Gurstein, 2001; Magee, 2000). With the COVID-19 lockdown, many workers were forced into a work-from-home (WFH) using any available space at their home (bedrooms, living rooms, kitchen or terraces), such as pop-up offices (Nanda et al., 2021). A minimum of 60 m² surface area per housing unit (Amerio et al., 2020) and the importance of housing overlooking green areas (Amerio et al., 2020; Mirza & Byrd, 2018) also have to be added in that regard. With respect to the indoor quality indicators, natural lighting and thermal and acoustic insulation (Cuerdo-Vilches et al., 2020) are included, along with using windows to ensure well-aired homes (Porrit & Campbell, 2020).

2.1. Role of Quality of Urban Space : Impact of varied Pollution on children

Extensive research has emphasized the negative impacts of unregulated urbanization on the physical, mental, and social well-being of children. Urban pollution has significant and multifaceted effects on children's health and development. This research has identified issues such as increased air pollution, lack of green spaces, limited access to healthcare, and inadequate educational opportunities as significant challenges faced by children in urban areas. These factors have been found to contribute to higher rates of respiratory illnesses, mental health issues, and developmental delays among urban children. These effects can vary depending on the type of pollution and the level of exposure. Gardiner Harris in the New York Times, described his move to Delhi as a horrific experience with respect to his children's health in the article 'Did I jeopardise my kids health by moving to Delhi', wherein he raises the red flag to a situation that has definitely gone out of control. "We gradually learned that Delhi's true menace came from its air, water, food and flies. These perils sicken, disable and kill millions in India annually, making for one of the worst public health disasters in the world. Delhi, we discovered, is quietly suffering from a dire pediatric respiratory crisis." He cited a study by the Kolkata-based Chittaranjan National Cancer Institute (CNCI) that identified more than half (4.4 million) of the city's schoolchildren were suffering from irreversible lung damage due to Delhi's poisonous air. (Harris, 2015). WHO air quality guideline specifies ideal PM_{2.5} to be below 5 µg/m³ though interim PM_{2.5} could be 75 µg/m³ (Ambient (Outdoor) Air Pollution, 2022). In developing country like India, children experience poor air quality with local PM_{2.5} levels up rising to 400 µg/m³ (Selokar et al., 2020) Several strategic initiatives have been implemented at the national and city levels to enhance air quality. However, the effectiveness of these programs has been inconsistent (Chatterji, 2020), and there is a growing concern that efforts to reduce harm may not be implemented soon enough to protect future generations (Saxena, 2021). (Gemmell et al., 2023)

The impact of rapid urbanization and lifestyle changes is also causing a serious health hazard due to the constant loud sound levels, indoors and outdoors. Gupta et al. (2018) in their paper on Noise Pollution and Impact on Children Health, found increasing adverse effects of noise on fetuses, infants, children, adolescents and even adults. Traffic sound is a major contributor to noise pollution in a city such as Delhi (Chauhan, et al., 2023) and the reliance on private modes of transportation is an acknowledged reason. The project, "Impacts of Contaminated Water on Children (ICWC)" conducted in 2022 by a joint interdisciplinary team working across UCL, refers to the National Research Council finding that children are most vulnerable because they drink more water each day than adults on a per kg-body weight basis. Also, millions of children in low-to-middle-income countries (LMICs) are exposed to chemicals that could impact their life chances and affect their physical health, development and wellbeing in the long-term (Grandjean & Landrigan, 2014). UNICEF acknowledges the severe issue of urban pollutions on the health of children by collaborating with agencies across the globe to mitigate its impact. As per its policy brief, air pollution is a major environmental health risk for children. In 2019, 5,801 children and teenagers in 52 countries in Europe and Central Asia died from causes linked to air pollution (UNICEF, 2023). The NGO Pure Earth and UNICEF conducted a sensitization workshop Wednesday on the problem of pollution and its impact on children in Madagascar. Focussing on low and middle income countries is considered paramount as not only for issues for air and water pollution due to the lack of adequate infrastructure. Specifically in the case of contamination of water on urban

areas of LMICs, most of the wastewater gets discharged directly to water sources without adequate treatment (UN Water, 2022).

2.1. SPATIAL CONSTRUCTS NATURAL & BUILD IMPACT ON CHILDREN: Direction for Child friendly Approaches

There is a very strong association between the children development and their interaction with nature. Nature translates to the natural environment, fauna and flora. The benefits of time spent in the green environments by children translates into pro natural environment attitudes as adults, being connected to nature and a strong sense of place, in an individual. (Wright, Hargrave, Williams, & Dohna, 2017) Proximity to green spaces translates into a healthier human being by creating opportunity for more physical activity. More time spent in natural surroundings leads to better mental health and creates coping mechanism in specifically children with ADHD besides being beneficial for normal children (Gill, 2014). In a study of 250 primary school children correlating the impact of air pollution on the cognitive development of children, established a strong relationship between the presence of white and grey matter in certain areas of the brains and large presence of greens open spaces around the children's residences. (Amoly,et.all 2014)

This in turn not only was associated with beneficial effects on cognitive functioning of the brain but also helped develop cohesive social relationships within the community. Julia Zvobgo (2018) in an article "Childhood exposure to green space may help brain development" infers that a person's feelings of attachment to their homes, naturally morph into responsibility towards their place of residence. This responsible behaviour encourages participation in the community activities, voicing concerns about issues that pertain to the neighbourhood, social engagement with the neighbours and community at large. Proactive concern for the larger civic issues is ideally cultivated in the developing period of an individual, in the childhood. Channelizing teenage energies into productive community engagements also combats the evil of addictive substance abuse.

Another study, BREATHE, on school going children aged 7 to 10 for 12 months, showed an increase in working memory and reduction in inattentiveness in children that attended schools surrounded with higher green areas as compared with ones with lesser. This study suggests that by exposure to nature in the early years, beneficial structural changes are triggered in the brain. Noticeably this study is the first that evaluates the association between long term exposure to greenspace and brain structure (Dadvand, 2018). The usage of non-motorized journey modes including strolling and biking is one such behaviour that could yield a myriad of fitness blessings, inclusive of reduced danger of cardiovascular and lung sicknesses and untimely death, as per the study.

Children's freedom to navigate public space on their own in the absence of adults, also referred to as the independent mobility of children is an indicator of child friendliness of the city. Studies done on the mode of going to school of British children of ages 7 to 8 years (Hillman, et al., 1990) record a drop of 71% in the number children that were allowed to travel on their own to school. Parental perceptions about unsafe streets because of traffic and concerns about possibility of crimes against children results in providing for perceived safe transportation from the residence to the school.

Depending on the affordability, either the children are dropped in private vehicles by the parents or they travel by buses. This results in a limited view of the city by the child restricted to only the traffic and the roads that they pass through. Specifically, in India, the lack of good education, sports facilities and opportunity for cultural engagement uniformly available at every neighbourhood has added to this issue, increasingly resulting in children being chauffeured back and forth from these activities. This not only discourages the future adults from choosing public transport for travelling around the city but also results in an overall decrease in levels of physical activity of the children. Today a large number of ailments that children face is directly related to the amount of physical activity undertaken by children. (Voss, 2018) Independent mobility also helps in building mental resilience and encourages cognitive development of the child. (Larouche, 2019) A focus on community psychology (and concepts of children's power and control) can offer a useful frame of reference for child-friendly cities, as explained various researches. This invariable result in neighbourhoods with strong community ties. Degraded urban spaces restricts the child's social and psychological abilities develop in a healthy way. The merits of participatory planning for child friendly spaces is acknowledged as an important tool in various literature discourses. Pillai (2023)

The importance of play and recreation in the life of every child has long been acknowledged by the international community, as evidenced by the proclamation in the 1959 Declaration of the Rights of the Child: "The child shall have full opportunity for play and recreation [...]; society and the public authorities shall endeavour to promote the enjoyment of this right" (art. 7). Convention on the Rights of the Child explicitly states in article 31 that "States Parties recognize the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts." Blinkert and Weaver hypothesise that children unable to play freely may suffer limitations in their physical, social and cognitive development. This can be dangerous if it becomes the norm leading to adults of future generations lacking essential social and personal skills. Natural surroundings allow children to probe their environments, experience new things, engage in challenges, and

take risks. Playing in unstructured and nature-based spaces is accompanied by an increase in the prevalence of physical movement and the growth of cognitive development and critical social skills. Hence, actively designing and creating nature schools or forest schools and promoting natural play opportunities (Balbo, 2008) It is imperative that children everyday lives actively incorporate opportunities for free play, access to natural settings and exposure to moderate risks, within their neighbourhoods and the places of development.

3. SAFETY : Different contexts & different children

Safety is a key attribute of Wellbeing of the Urban Space. It is the overarching factor that is an enabler for most if not all child friendly aspect of any space and place. It is the variable that impacts experience and access to different children development opportunities. Be it access to general public space such as the neighbourhood street, market places (commercial areas) parks and recreational areas or to children specific built-use such as schools, play areas, sports centers and even natural green areas. Assessment of parental perceptions of the neighbourhood environment in Kenya revealed that more than 50% of the parents believed that people helped each other in their neighbourhood and in general, they trusted their neighbours. With regards to movement within their neighbourhood, over 80% agreed that shopping areas were within walking distance, and approximately 25 % were unsure with regards to last mile connectivity of transit stops. (Muthuri, et al., 2016). Despite high security and landscaped features of higher income residential compounds, the deserted streets are a hindrance to parents allowing their children to venturing out alone. (Bhardwaj, et al., 2017) Concerns for children's safety transcends economic barriers, with parents of children from both affluent backgrounds as well as mid & lower economic backgrounds voicing concerns regarding child safety.

In complete contrast to popular perception, the resilience and risk taking ability inherited by children in Indian urban villages is very robust. Their lack of opportunities, poor facilities and basic infrastructure can also be understood as an gain, as the children are more prone to rising in adversities and making the best of the least that is available to them. (Bhardwaj, Bhatt, 2019) While their mental health does suffer due to lack of social equity, they acceptance of their physical environment and societal status, translates into a pragmatic outlook and a strong will-power to improve their condition. The children of urban village, if provided with a small fraction of opportunity, showed clarity about their future prospects, building their aspirations on well-informed decisions. (Bhardwaj, Bhatt, 2022) Another myth that children growing in poverty are deficient individuals in terms of their psychological makeup and besides facing harsh physical challenges. A study done on urban poor street children identified the stressful situations related to the workplace, earnings, home, school, peers, and siblings that they dealt with on a regular basis. It suggested a strong stress coping mechanism that street children relied on to combat difficult situations. Children's choice for social support was first a foremost themselves, making them self-reliant. But the connecting with their peers and family too were effective survival and coping strategies. (Gupta; Verma, 1995)

3.1. GENDER : Different contexts and different children

Similar to adults, children of different genders perceive and experience safety in different ways, subconsciously subscribing to existing societal gender biases. A poignant visual depiction of gendered urban space in modern day Kerala, India, by Artist Devi Seetharam, in her series titled 'Brothers, Fathers and Uncles' captures in vivid detail the dominance of men in public space, at different times of the day, even in a matriarchal society. The National Crime Report Bureau (NCRB) report found Delhi to be the most unsafe metropolitan city for women across India. In 2021, Delhi saw a significant rise in crimes against women, recording 13,892 cases, which is a 41% increase compared to 2020 when the figure was 9,782. According to the NCRB report, two minor girls were raped every day in 2021. (Deb, 2021)

Taking a historical route, the perceptions of both women and children have been significantly impacted by the fact that references to a 'human' have traditionally been perceived as references to a grown man. Gendered inequalities impact childhoods in subtle ways Ethnographic studies (Blazek 2011) point to the significance of children's neighbourhood as a pivotal spatial domain for the constitution of children's friendships affected by gender identities. Making spaces for Girls campaign in Britain (2023) has identified that young pre and adolescent girls will often avoid using play and neighbourhood spaces when boys are present, only going to some spaces at times of day when they know they will be empty. In contrast, Delhi Government is all set to establish women-only parks for the women in the city in an attempt to make a safer recreational space for them after the success of women only coaches in the metro.

4. STUDY AND ANALYSIS: Different contexts and different children

A total of 12 children, 6 male & 6 female, in three types of contexts, were studied as a pilot study. Data was collected through unstructured interviews to understand the children's activities, schedule, play, active transport and level of

social engagement with their peers and neighbours. The scope of enquiry is limited to the urban Indian residential context as children are one of the key stakeholders of this space.

The urban space has to be looked at and addressed for the child at different scales. As specified by UNICEF in its publication "Shaping Urbanization for Children: A Handbook on Child-responsive Urban Planning" (UNICEF Publications, May 2018), the relationship between space and scale of urban childhood depicts the different spaces that children inhabit. The scales of urban childhood identify the type of urban facilities and services on a hierarchical childhood scale, based on the age bracket namely 0 to 2 years, 2 to 12 years and 12 to 18 years, that address the needs of children of different ages in a city.

For this research study, 0-2 years is out of scope, as the child needs constant supervision, safeguarded and nurtured. The house and the private spaces are the predominant places of occupation of the child hence 0-2 years age bracket is omitted for understanding the nature of public urban space.

In the age bracket 6 to 12 years, the children start to assert their independence. The school, friends, medical facilities and structured sports become crucial to their development and growth. The community convenience stores and social including recreational facilities all need to be sensitive to the presence of children. The nature of the residential garden, the immediate street outside the house, parks and natural greens. Refer Table 1.

For the 12-18 year old, is a crucial age in which children or young adults push boundaries and experiment beyond their limits. An adolescent's neighbourhood is their field of learning, which they should be able to access freely. Children are not licensed to drive and ideally should be able to travel independently by walking, cycling and using public transportation. For them, urban areas should have adequate infrastructure and opportunities for skill, extracurricular activities and social engagement. Refer Table 2.

In Indian planning, several categories are used to describe the type of residential area. While 'planned' is a term that should include structure and legality, there are many types such as resettlement/JJ clusters and urban slums that might be planned but illegal or vice versa. (Bahn, G. nd). Hence, the children's residential for the pilot study were categorised into the following headings:

- (a) Context 1- Legal, Planned, Plotted. Single Dwelling Unit/G+2/3 DU per level (Floors)
- (b) Context 2 Legal, Planned, Multi-Dwelling, More than G+4 floors (Society housing/Hi-Rise apartments)
- (c) Context 3- Illegal, Planned Clusters/Un-Planned,/Organic/ G. G+1/, temporary settlements.

4. Results

As regards WFM, in housing units of under 60 m² with maximum resident occupancy, they were forced to use the living room as a pop-up office (Table 1). However, in homes over 60 m², or where there were the same or higher number of residents, the bedrooms were used as pop-up offices, in the same way as before the pandemic. In the case of housing units with only 1 bedroom for 2 users who worked, the living-dining room had to be shared, which limited its use for video conferences, leisure activities (watching television) or meals. It can be concluded that small flats are more appropriate for remote workers who live alone, or where only one of them is working from home. The same situation occurs in the case of the 2-bed housing, which is more appropriate for 2 residents. As regards exercise, the lack of an appropriately sized terrace (A, B, C) meant the dining room or a bedroom had to be converted into a gymnasium. However, in Case of D, if they did have a large enough terrace, the users also used the dining room to exercise, as it was larger.

Table 1. Child- Friendly indicators with Maslow's Hierarchy of Needs for Urban Residential Area- Ages 6- 12 years

MASLOW'S HIERARCHY OF NEEDS	PILOT STUDY AGES 6 TO 12 YEARS		CONTEXT 1	CONTEXT 2	CONTEXT 3
	Factors that directly /indirectly impact Child-friendly indicators	Child Detail, Residence Locality	8 years Male G+1/G+2 Gated Society, Saraswati Vihar,Gurugram	Male 9 years, Multi-dwelling, DDA, Delhi	Male, 11 years, EWS House, Govind Puri, Delhi
12 years, Independent house Sec-10, Gurugram.			Female 7 years of age,Hi-Rise Appts, DSR Woodwinds Bangalore	Female 7 years, Moti Bagh, Sabzi Mandi, New Delhi	
Physiologic	Income Group		Middle-Upper middle	Middle-Upper middle	Lower
	Residence area		800-2500 Sq ft	800-2500 Sq ft	less than 300 sqft
	Land Use		Residential	Residential	Mixed/Urban Village/NA
	Residential/Community Infrastructure	Potable Water/Sanitation	Good	Good	Poor
		Electricity Connection	Adequate	Adequate	Poor
	Presence of Nature	Male	Good	Adequate	Adequate
		Female	Good	Poor	Poor
	Presence of Roads	Male	Good	Good	Poor
Female		Good	Good	Poor	
Safety	A T - Walking/Cycling independently	Male	Poor	Poor	Good
		Female	Poor	Poor	Good
	Peer Interaction	Male	Poor	Adequate	Good
		Female	Good	Poor	Good
	Physical Activity-	Male	Adequate	Adequate	Good
		Female	Adequate	Poor	Good
	Free Play- Number of Hours EveryWeek	Male	Adequate	Good	Good
		Female	Good	Poor	Good
Esteem/Safety	Education/Schooling	Male	Good	Good	Good
		Female	Good	Good	Poor
	Skilling (other than formal education)	Male	Poor	Poor	Good
		Female	Adequate	Poor	Adequate
	Extra Curricular Activities	Male	Good	Adequate	Good
		Female	Good	Good	Poor
Love Belonging	Community Association	Male	Poor	Poor	Good
		Female	Good	Poor	Good
	Nature Engagement	Male	Poor	Poor	Good
		Female	Adequate	Poor	Poor

For the ages 6-12 years, the Physiological requirements are met adequately, the children under Context 1 & 2 show poor results for Active Transportation, social engagement and physical activity. This reflects their safety concerns, that is reiterated by the parents and general systems, such as automobiles with GPS, cell phones and constant monitoring of children. Context 3 shows an overall good result for the parameters of physical and mental well-being such as Active Transport, Peer and community interaction, and exposure to nature. Opportunity for growth, self-esteem is highly dependent on education levels and children under the category of Context 3 experience difficulty in overcoming this

because of their low economic backgrounds. Parents and children of the middle-income to upper middle income group category express fear of the built environment that they live in, despite living in planned, well designed contemporary neighbourhoods. Planned residential seems to hinder free play, active transport, community and nature engagement. The male child shows a higher rate of good result in comparison to the female gender child.

Table 2. Child- Friendly indicators with Maslow's Hierarchy of Needs for Urban Residential Area- Ages 12-18 years

MASLOW'S HIERARCHY OF NEEDS	PILOT STUDY AGES 6 TO 12 YEARS		CONTEXT 1	CONTEXT 2	CONTEXT 3	
	Factors that directly /indirectly impact Child-friendly indicators	Child Detail, Residence Locality	Male 16 years Independent House, Viaspuri, Delhi.	Male 14 years, Multi-dwelling, Society Housing, Janakpuri, Delhi	Male, 16 years, Shared Rental, Sec 45,gurugram	
Physiologic	Income Group		Middle-Upper middle	Middle-Upper middle	Lower	
	Residence area		800-2500 Sq ft	800-2500 Sq ft	less than 300 sqft	
	Land Use		Residential	Residential	Mixed/Urban Village/NA	
	Residential/Community Infrastructure	Potable Water/Sanitation		Good	Good	Poor
		Electricity Connection		Adequate	Adequate	Poor
	Presence of Nature	Male		Poor	Adequate	Adequate
		Female		Good	Adequate	Good
	Presence of Roads	Male		Good	Good	Poor
		Female		Good	Good	Poor
	Safety	A T - Walking/Cycling independently	Male		Poor	Poor
Female				Poor	Poor	Adequate
Peer Interaction		Male		Adequate	Good	Poor
		Female		Poor	Poor	Good
Physical Activity-		Male		Adequate	Adequate	Good
		Female		Poor	Poor	Poor
Free Play- Unstructured Recreation		Male		Poor	Good	Poor
		Female		Adequate	Poor	Poor
Esteem/Safety	Education/Schooling	Male		Good	Good	Poor
		Female		Good	Good	Adequate
	Skilling (other than formal education)	Male		Poor	Adequate	Good
		Female		Adequate	Poor	Adequate
	Extra Curricular Activities	Male		Good	Good	Good
		Female		Good	Adequate	Poor
Love Belonging	Community Association	Male		Poor	Poor	Good
		Female		Poor	Poor	Adequate
	Nature Engagement	Male		Poor	Adequate	Adequate
		Female		Adequate	Poor	Adequate

For the ages 12-18 years, the result reflects a similar trend as expressed by the 6 - 12 years study. Contexts 1 & 2 fulfil the Physiological category as the urban residential area has a good level of basic facilities and planned housing. Higher income background facilitates access to a higher level of opportunities, preparing for higher education and better professional life. Specifically, the female adolescent child has a higher number of poor results. The female child shows reduced active transport and independent access to different activities.

4. Discussion & Conclusion

Abraham Maslow's concept of the hierarchy of needs illustrates that higher-level needs, such as self-esteem and social connection, rest upon the fulfillment of basic physiological needs. The term "hierarchy" was used by Maslow to demonstrate how the fulfillment of lower-level needs supports higher levels of needs, resembling the structure of a pyramid. However, he emphasized that this hierarchy is flexible rather than strict. (Maslow, 1987, pp. 57-59). Individuals do not need to completely satisfy one level before addressing needs at the next level. For example, someone might still be working on fulfilling their basic physical needs but also seek stability, love, and esteem at the same time. Additionally, the order of needs can vary among individuals; for some, love may take precedence over esteem, but both are important in different ways and degrees. This is also reflected in result of the pilot study of children in this research. Applying Maslow's model of well being to child-friendly studies, the current emphasis on creating high-quality built environments parallels the focus on fulfilling basic physiological needs, like safety and physical comfort. However, this approach may overlook the complexity and diversity of children's needs across different economic and social contexts.

Children from middle and upper-class backgrounds, living in well-planned urban neighbourhoods, typically have their basic physiological needs met. Despite this, they may still struggle to reach their full potential. According to Maslow, needs such as social connection, love, and esteem are crucial for personal development. These children may find it challenging to achieve these higher-level needs within their environments. For instance, the structured and often isolated nature of urban residential areas might limit opportunities for meaningful social interactions and the development of self-esteem through peer relationships.

Research illuminates the direct impact of the environment, safeguarding structured and unstructured play and the development of children. The focus of academic research is on Urban Children in India has also focused on urban children of low-income groups (NIUA, 2016) or infants/ children from ages 2 to 6. There is an acknowledgement that children do not represent a homogeneous child. Diverse environments both affect and are affected by the child, and have distinctive narratives, where children's lives are lived both interconnected and diverse. (Grindheim, L. T. 2021). This interconnectedness provides novel insights, which at times may seem paradoxical concerning the action required for the betterment of children. Thus, there is a need for research on specific children's cultures, backgrounds and environments.

Thus, while a quality built environment is essential, it is not sufficient on its own. Children need environments that also foster social connectivity, love, and esteem. This underscores the importance of creating holistic child-friendly spaces that address the full spectrum of needs as outlined by Maslow, ensuring that children from all backgrounds can truly thrive.

5. Conclusions

The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.

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Conflict of Interests

The authors declare no conflict of interest.

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