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CHILDREN'S SAFETY: THE COMMON SPACES IN PPR HOUSING IN KUALA LUMPUR

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Abstract

The People's Housing Program (PPR) is a low-cost and affordable housing programme introduced during the First Malaysia Plan as an initiative to address squatters' settlements and support the lower-income group in the country. While it is important to maintain realistic expectations regarding low-cost affordable residential housing, media and publications have reported concerns about the safety of children residing in public housing has been impacted. This paper aimed to explain the categories of architectural elements in low-cost housing that affected children's safety. A qualitative research method based on the non-participatory observation method was conducted to observe and identify behavioural patterns of children in the PPR context based on a selected case study. A notable discovery has unveiled a robust correlation between the dimensions of communal areas and the corresponding patterns of movement displayed by individuals. Children were found to be more actively engaged in activities within common spaces under adult supervision and near their residences. Furthermore, the study highlighted various safety concerns, including inadequate maintenance of buildings and infrastructure, environmental settings, and limited accessibility. This indicates the need for substantial improvements and modernisation in the CIS for PPR developments to address the challenges associated with common spaces. The study concludes with comprehensive recommendations and critical discussions to encourage further research and raise awareness within the industry about creating secure spaces in PPR settings.

Keywords: Behavioural pattern, Children safety, Common spaces, Interstitial spaces, Low-cost housing, Movement, Transitional spaces.

1. Introduction

Public housing was first introduced in Kuala Lumpur, Malaysia, during the First Malaysia Plan (1966-1970). It was constructed to relocate squatter settlements in urban sprawls and for rental purposes [1]. About 40,000 public houses were constructed to accommodate the squatter population in Kuala Lumpur in 1966. During the second stage of public housing development between 1969 and 1975, nearly 28,000 squatters had been evicted and rehoused in the 2,230 social public flats available. Acknowledging the rising demand for public housing in 1982, the government made it a policy that private developers must include at least 30 per cent of public houses in housing development projects to ensure that they were reasonably priced and standard (UNDP Malaysia, 2005).

Nevertheless, challenges were prevalent within the realm of public housing in Malaysia. The provision of compact units to residents necessitated families, regardless of size, to adapt and coexist, resulting in heightened tension and stress among household members [2]. Undesirable living circumstances, such as noise pollution and littered waste, were also observed within social housing communities, despite the occupants' acknowledgement of their low-income status and efforts to minimise such issues' impact [2]. While current studies have primarily focused on evaluating the quality of life in low-cost housing [3], further research must be conducted to examine these housing units' spatial attributes and qualities.

While there had been sufficient studies proving that social housing may not have been up to satisfactory standards, even though the occupants had learned how to live with such conditions, there seemed to be no solutions or discussions on the categories of architectural elements in PPR Housing that affected children's safety when children were the more vulnerable demographics in public housings. Environmental design, consideration of children's capabilities that differ from adults, and the unpredictable behaviour of children need to be considered when attempting to make an environment safe for them [4].

This study aimed to identify the categories of architectural elements of common spaces in low-cost housing that affect children's safety. This study embarked on the following objectives: a) to identify the roles of architecture that offer safety for behavioural patterns of children and b) to identify the patterns of children's behaviour in PPR Housing's Common Spaces.

2. Methodology and Methods

The study employed the empirical research method and thus kept the researcher as an external factor in data collection to conclude concrete evidence. The study had four foci. First, a literature review was conducted to obtain information from the previous research works that had been done on similar topics, which would then help in further developing observation criteria and preliminary behavioural patterns for the site observation visits. Second, the physical attributes of the PPR Muhibbah common spaces were identified and observed to understand the setting for the participants. Third, a theory of behavioural patterns by Lang [5] in the common spaces was executed for data collection for children's activities within the selected spaces for a specific time (5 pm to 6 pm on weekends and weekdays). This qualitative research method used photographic mapping to a diversified set of common spaces. Lastly,

the field notes and photographs were recorded. The collected data were then organised and categorised based on the different types of identified patterns.

3.Literature Review

A thorough literature review has been conducted to comprehensively comprehend the connection between children's safety and their surrounding environment within the Public Housing Projects (PPR) context. This review aims to enhance the understanding of both subjects and ultimately address Objective 1, thereby facilitating the progression of the subsequent chapter.

3.1. Children's active nature

The Director of Pusat Kajian Alam Bina Dunia Melayu (KALAM), Faculty of Built Environment, Universiti Teknologi Malaysia (UTM), Assoc. Mohamad Tajuddin Mohamad Rasdi stated that it is normal for children to participate in vigorous activities. It was the instinct of children with a desire to learn and do something that may be harmful to them [6]. Children aged 2 to 11 years old required more physical activity than teenagers and adults; all young people possessed higher physical activity levels than adults [7]. Low physical activity levels among children were often associated with parental satisfaction and perceived neighbourhood safety [8].

Research showed that boys had more independent mobility than girls, allowing them greater access to physical activity in their neighbourhood [9, 10]. A higher percentage of male children (62.9%) were seen around the areas than female children [11]. When an environment becomes a child's place of psychological importance, it would be an essential space for activities frequented by children having behavioural goals [12]. Outdoor spaces in housing areas were an essential environment for children's developmental process as children needed to adapt to the limited spaces in the low-cost housing designs [1]. Ginsberg & Churchman (1985) also stated that the higher the floor level, the lower children's physical activity levels.

3.2. Spaces for children's activity in PPR

Children were only allowed to play within their homes or in visual supervision proximity by their parents [13, 14]. These children appeared to understand that the unwritten rules that dictated the affordances for play were limited to certain places preferred by adults or parents [15]. Children often used circulation space as their social and playing area as they were limited to nearby areas even when allowed to play [1]. Activities that took place mainly in the corridors and parking areas often had the advantage of allowing visual supervision by the residents [1]. Children living in low-cost housing were more likely to utilise the corridors as a play area where surveillance was enabled by adults living nearby [16].

Overcrowding also forced children to efficiently utilise the surrounding accessibility by using outdoor neighbourhood environments as a medium for social interaction, exploration, and development [1]. Many children mentioned places in designated play areas and parks as play areas, whereas neighbourhood open spaces such as streets, courtyards, rest spaces, and parking lots were the least mentioned [12]. Outdoor spaces near home were essential for social interaction, and social withdrawal was not readily apparent in low-cost housing environments [17]. Open corridors with sufficient light, good views of streets and surroundings, and ample

surveillance opportunities are connected to the safety of children being alone outside [1]. Children chose wider corridors when allowed to choose between having wider corridors and providing a covered ground common court as it was closer to home [1]. Transitional spaces, including corridors, the main hall/entrance, and lift/lobbies (see Fig. 1), were the most popular spaces for social interactions, and findings showed that 46% of the social interactions took place in these spaces [18]. In another discussion about resilience in the built environment, Castona-Rosa et al. [19] discussed the visual and physical connection to green spaces as a notion and possibility for wellbeing, safety, and resilience.

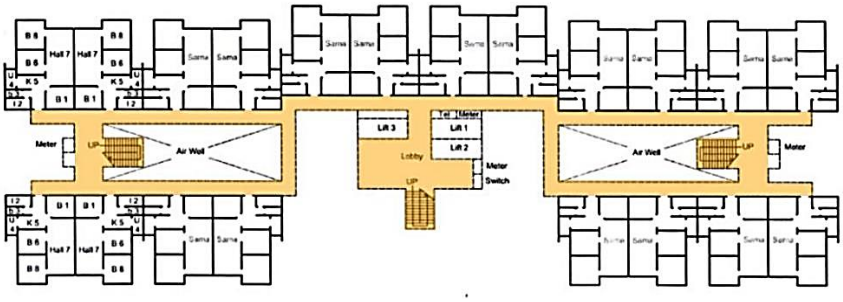

Fig. 1. Typical plan for an 18-storey low-cost flat with yellow highlights indicating the transitional spaces.

A set of common spaces summarises the key to children's safety in high-rise apartment buildings as follows:

i. Transitional spaces such as corridors, lift lobbies and the likewise
ii. Outdoor spaces include play areas, green spaces, and recreational spaces on the common floor.
iii. Interstitial spaces such as balconies, courtyards, and verandas.
iv. Indoor spaces such as multipurpose rooms and vendor shops.

3.3. Children's safety factors in PPR

A significant oversight in low-cost housing was observed in terms of comprehensive security measures, particularly concerning the wellbeing of children [20]. Despite design revisions being implemented since the 1960s, the housing units continued to fall short of meeting fundamental humanistic standards [21]. Furthermore, inadequate consideration was given to the needs of younger residents within the context of high-rise housing [21]. Statistical data revealed that approximately 30% of childhood accidents occurred within school premises and public playgrounds [22, 23].

Playgrounds are designed to provide children with a safe playing environment [24]. However, it is crucial to recognise that playgrounds can also become settings where injuries, hospitalisations, and even fatalities occur among children's primary users [25-28]. Despite the presence of these potential risks, children continued to utilise these playgrounds without adequate parental supervision. Furthermore, these issues associated with playground safety were often concealed from parents, leading to a lack of awareness and precautionary measures. Consequently, the

ignorance displayed by parents, who believed that playground equipment posed minimal or no harm to their children, further exacerbated the problem [29].

Furthermore, the presence of unknown and suspicious visitors in the apartment complexes added to the vulnerability and potential disturbance faced by children residing there [30]. The transitional spaces within apartment buildings have the potential to enhance the satisfaction and comfort of occupants [18]. A recent study focused on social interactions within high-rise apartment buildings, and the findings revealed that a significant portion (46%) of social interactions among residents occurred in circulation areas. These interactions encompassed greetings, conversations, and gatherings, including accompanying children during playtime. However, it is important to note that circulation areas were initially designed for different purposes, highlighting a discrepancy between their intended function and the social activities that take place in these spaces.

Using these spaces for children to play and gather informally created social annoyance among residents, as these activities created noise and negatively impacted people's privacy, feelings of safety, and cleanliness of these shared spaces. Therefore, the research recommended that the future designs of high-rise apartment buildings provide appropriate opportunities and spaces to accommodate actual social interaction between residents. The design should encourage social interaction and offer residents a certain level of privacy and safety.

3.4. Physical forms of PPR & design standards

Low-cost housing has been found to fall short of meeting the established standards for residential dwellings, with the houses being constructed following office design principles [20]. Most building guidelines primarily focus on specifying minimum and maximum requirements without sufficiently emphasising the significance of design purpose and its impact, as long as they comply with legal standards. For instance, safety railing height guidelines typically stipulate a measurement of 900mm. However, this standard could pose a risk to children, as horizontally constructed bars safe for adults may inadvertently provide opportunities for climbing over [16]. In a study on collective action for safety within low-cost housing in Malaysia, it was discovered that there exists a positive correlation between the quality of physical characteristics in common areas and the level of collective action achieved [31].

The study's findings underscored that enhancing the quality standards of high-rise, low-cost units, including the common properties, improving the crime rate in the neighbourhood, and maintaining well-functioning lift systems in transitional spaces, were all significant positive predictors of achieving collective action. The paper reinforced the importance of improving low-cost units' spatial quality, properties, and associated common areas. Such efforts would greatly contribute to the effective management of collective action in the future.

The current design of low-cost housing was considered as lacking in privacy due to the old concept adapted from the Industrial and Communist Revolution in the late 20th century [32]. With very limited living space, these houses (low-cost apartments) were designed using all rudimentary architectural and engineering skills [33]. In the Construction Industry Standard (CIS) 2:1998 and CIS 4:2005 by the Construction Industry Development Board (CIDB) Malaysia, there needed to

be more details regarding children's safety. In both versions of the standard, the only relevant standard referring to children's safety was the railing height of a minimum of 1200 mm required at open corridors and balconies.

There were no further details elaborated. In CIS 26:2019, there was an additional statement in the standard compared to the previous editions. "Anti-climb" design was the additional criteria for barriers or railings at open corridors and balconies. However, the 14-year gap between 2004 and 2019 meant that countless PPR projects were constructed with the older editions, lacking the additional "anti-climb" design standard. This reinforced what past authors had criticised regarding the absence of children's safety requirements in the standards.

3.5. Summary

Through a comprehensive understanding of children's behavioural tendencies and the underlying principles driving the design of PPR, the researcher successfully established a relationship between these two subjects and presented a thematic summary (refer to Table 1). The Literature Review revealed the pressing need for updates and revisions to the CIS) in PPR housing developments, aiming to create a secure environment for young residents. Additionally, the researcher identified key areas within PPR contexts where children frequently engaged in activities. Recognising the essentiality of accommodating children's active nature for their overall healthy development, architectural designs must provide suitable settings that cater to their needs, irrespective of their income group.

Table 1. Thematic summary of the literature review.

Themes	Arguments & attributes
Children's Active Nature	● Vigorous activity was regular for children. It is an instinct of children who are always active or desire to learn and do something that may be harmful to them [8]. ● Young people naturally display higher physical activity levels [7]. ● Physical activity among children is associated with parental satisfaction & perceived level of neighbourhood safety [6]. ● Boys have more independent mobility than girls [9, 10]. ● Housing outdoor spaces are essential for children's developmental process [1].
Spaces for Children Activity in Low-Cost Apartments	● Children's play is limited to certain places, typically near or within their home or under visual supervision (of parents) [13, 14, 16]. ● Children living in low-cost housing are more likely to use circulation space as their social and playing area due to overcrowding and residents' surveillance [1]. ● Open corridor, with abundant light, views of the streets and surrounding, and opportunity for surveillance seems to relate to more children being alone outside [1]. ● Children still chose to be close to [1]

Children's Safety Factors in Low-Cost Apartments	● Lack of comprehensive security action in terms of occupancy, especially for the children [20] ● Highrise housing with open corridors was poorly designed without consideration for its young occupants [21]. ● Playgrounds can cause host injury, hospitalisation, and death [25-28]. ● Children are vulnerable to being disturbed by strangers [30].
Physical Forms & Design Guideline	● Green spaces significantly offer to quality of life [31] ● Most building guidelines only specify minimum and maximum requirements; being safe for adults may cause danger to children [16]. ● Designed within a limited space applying all rudimentary architectural and engineering skills [33]. ● PPR design guideline (CIS) mentions briefly "railing height" in CIS 4:2005 and "anti-climb" design in CIS26:2019

4. Data Collection

The selected case study for this research was PPR Kampung Muhibbah in the Federal Territory of Kuala Lumpur. This housing complex comprised nine blocks and provided two common outdoor spaces: a playground, a community area, and a futsal court. In line with the standardised approach, all low-cost housing apartments constructed under the PPR scheme in Kuala Lumpur adopted an 18-storey high-rise flat design, each floor accommodating 20 units [34]. Based on critical assumptions of an average of five occupants per unit, PPR Kampung Muhibbah was estimated to house approximately 16,000 individuals (20 units per floor × 5 occupants per unit × 18 storeys × 9 blocks). Due to the implementation of the Movement Control Order (MCO), interstate travel was restricted, but a 10km travel radius was permitted. Considering the size of PPR Kampung Muhibbah and its accessibility within the allowable distance, it emerged as the most viable location for conducting observations in this research.

Data collection took place within the common interstitial spaces of PPR Kampung Muhibbah, where children were most frequently engaged and exposed to potential safety risks. The researchers systematically recorded and observed the behavioural patterns of the children within these areas. The observations of children's behaviour were conducted during after-school hours, when participants were more active in public and transitional spaces, specifically from 5 pm to 6 pm, Monday to Sunday. This time frame ensured a higher presence of adults compared to business or school hours. The primary areas of observation encompassed transitional spaces such as corridors, lift lobbies, staircase areas, and public spaces, including the playground, open car parks, and the ground floor common area. These spaces were classified as Common Spaces within low-cost housing, following the Construction Industry Standard (CIS) 2:1998 guidelines. The collected data was documented through photographic mapping techniques for 7 weeks.

In the case study, 94 children were observed as participants in the photographic mapping of behavioural settings. The data obtained from the site observations were systematically organised and categorised, taking into account factors such as the specific spaces, frequency of activities, types of activity, gender, race, and the presence or absence of adult supervision. The researchers initially classified the observed and recorded behavioural patterns into themes based on the insights gained from the Literature Review. Subsequently, new patterns and themes emerged by analysing the collected data. Prominent patterns were given priority and highlighted in Table 2, while a thematic categorisation of these patterns was conducted and presented in Table 3.

Table 2. Behavioural patterns.

No.	Behavioural Patterns
1	Children chased each other in the corridor without adult surveillance.
2	Children played on mobile phones and sat together by the house's front entrance in the corridor.
3	Children were running along a corridor with adult supervision.
4	Children cycled along the corridor with adult supervision.
5	Children walked and played in the playground area without adult supervision.
6	Children were walking in the playground area with adult supervision.
7	Children were walking along the corridor without adult supervision.
8	Children were playing with playground equipment with adult supervision.
9	Children were playing with playground equipment without adult supervision.
10	Children played in the playground area with adult supervision.
11	Children sat at vendor shops with adult supervision and played on mobile phones.
12	Children were standing/sitting along the corridor, observing, and gazing into the void without adult supervision.
13	Male children were primarily involved in running, cycling, and social playing activities.
14	Most of the male children carried out the activities.
15	Female children were involved in playing alone or with adult supervision mostly.
16	Children in transitional spaces played in larger groups.
17	Children in common ground spaces played in smaller groups.
18	Children's activities in transitional spaces were mostly without adult supervision.
19	Children's activities in common ground areas accompanied by adults
20	Children at vendor shops were more passive, sitting and playing with mobile phones and toys.
21	Malay children were mostly seen playing in larger groups.

5. Results and Discussion

The study revealed two prominent findings domains: spaces and movement within those spaces. The behavioural patterns observed in the transitional and public spaces of PPR Kampung Muhibbah exhibited notable similarities. However, variations were observed based on the distinct characteristics and nature of these spaces, which were influenced by factors such as the proximity of adult surveillance and the mobility options available. Notably, the size limitations of transitional spaces played a crucial role in providing different opportunities for diverse behavioural patterns.

Furthermore, the study highlighted a direct correlation between the notion of movement and the scale of the architectural environment. In spaces where children had more autonomy and limited adult supervision, their freedom of movement was more pronounced. However, it was noted that transitional spaces needed to be designed with larger dimensions to facilitate a broader range of mobility and vice versa.

These findings emphasise the significant interplay between space, movement, and the presence of adult surveillance in shaping the behavioural dynamics of children within the context of low-cost housing. They provide valuable insights for designing and planning future housing developments to accommodate children's needs better and promote their wellbeing.

5.1. Role of the spaces

The spaces mentioned in this study pertain to the specific areas where the children engaged in various activities. These spaces were identified through a comprehensive literature review in Section 3.2, and subsequent analysis was conducted to categorise them into different types of Common Spaces to gain a deeper understanding of their safety characteristics. The findings presented in Table 3 further support the inference that safety issues encompassed concerns such as inadequate maintenance of buildings and infrastructure, suboptimal settings, and limited accessibility. These observations shed light on the importance of addressing these safety issues to create more secure and suitable environments for the residents.

Table 3. Thematic findings on common spaces.

	Themes	Spaces / Elements	Safety Characteristics	Behavioural Patterns Recorded (Children)
1.	**Enclosed Transitional Space**	Lift Lobbies	Slippery Floors, Dimly Lit, poor connection to nature	• Cycling • Playing with toys • Running • Chasing • Playfighting • Strolling • Walking • Yelling • Talking
2.	**Vertical Transitional Spaces**	Staircase		
3.	**Horizontal Transitional Spaces**	Corridors	Narrow Corridor, Loose Furniture, Slippery Floors	
4.	**Visually connected Interstitial Spaces**	Vertical floors' visual connection	Privatisation, Loose Furniture	
5.	**Junction Transitional Spaces**	L Junction (corridors), T Junction (lift lobbies), C Junction (corridors & stairs)	Dimly Lit without sunlight.	

6.	**Ground Common Spaces**	Ground Floor, Vendor Stalls, Vehicular Parking, Veranda	Motorcycles travel in the ground floor area (non-road) Poor pedestrian walkability Veranda is not well protected from vehicular traffic. Vendor Stalls located by the roadside	• Cycling • Running • Chasing • Playfighting • Strolling • Walking • Sitting down (vendor stalls) • Running • Chasing • Playfighting • Playing on the swing
7.	**Playground Spaces**	Playground Facilities, Veranda	Poorly maintained facilities & Infrastructure Not well protected from vehicular traffic	• Climbing on the playground structure • Sitting down (benches) • Strolling • Walking

Common spaces from the data collected are subdivided into multiple themes.

1. Enclosed transitional spaces, such as lift lobbies and motorcycle car parks, refer to transitional areas that lack vertical, visual, or horizontal connections. These spaces are characterised by dim lighting and a floor texture unsuitable for children to engage in activities other than typical traversal actions. However, observations indicate that children can be seen running and cycling in these stagnant transitional spaces. This particular theme appears to encompass centralised activities where the range of children's movement is limited.

2. Vertical transitional spaces, such as fire safety staircases, refer to the vertically connected transitional areas in PPR Kampung Muhibbah. These spaces are constructed with cement and are dimly lit, lacking natural daylight. The observed behavioural patterns of children in these spaces tend to be more reserved, with activities primarily focused on traversing, sitting, and talking.

3. Horizontal transitional spaces pertain to the corridor spaces found on each floor. Children engage in horizontal movement in these areas as they carry out their activities. The safety hazards present in this space include a cement-finished floor unsuitable for active activities and loose furniture that can pose risks. Notably, this theme accounted for a significant portion of the observed activities in the data collection chapter, making it a prominent aspect of the study.

4. Visually connected interstitial spaces refer to transitional areas that are visually connected across different floors. These spaces facilitate children's activities involving gazing and observing, where they stand or sit still while looking at and observing others from a distance. These areas predominantly encourage behavioural patterns characterised by lower levels of activity.

5. Junction transitional spaces encompass corners and junctions within transitional areas. These spaces can be classified into three categories: L Junction (corridor corners), T Junction (corridor to lift lobbies), and C Junction (mainly near fire exit staircase areas). Typically, these spaces have limited visual connections to other areas. Observations indicate that children show little to no engagement in these spaces, with minimal activities observed apart from simply passing through them.

6. Ground common areas encompass the public spaces situated at ground level, including the ground floor, vendor stalls, verandas, and open public car parks. These areas serve as venues for various activities such as cycling, running, playing, sitting, and walking. A wide range of activities can be observed in this expansive space. However, it is important to note that these areas present different safety hazards, particularly from vehicular traffic, as they are not adequately protected from vehicles, particularly motorcycles.

7. Playground spaces specifically denote the areas designated for playground activities. These spaces serve as locations for children to interact with playground facilities, engaging in activities such as chasing, playing on swings, riding see-saws, climbing on playground structures, and sitting on benches. This particular theme encompasses behavioural patterns characterised by a broader range of movement. However, it is important to note that safety hazards within this space primarily arise from poorly maintained and broken facilities. Also, playground spaces may be exposed to vehicular threats, similar to Theme 6.

5.2. Movement in Architecture

The architectural elements that impacted children's safety were primarily associated with the types of transitional spaces, which in turn influenced their movement. The movement was classified into four distinct categories based on the distance between individuals: Intimate Distance (0 meters to 0.45 meters), Personal Distance (0.45 meters to 1.2 meters), Social Distance (1.2 meters to 3.6 meters), and Public Distance (3.6 meters and beyond, up to 25 meters). While similar movement categories were observed across multiple transitional space themes, they were found to be associated with different safety architectural elements, as discussed in detail below.

1. Intimate distance encompassed activities such as playing mobile phones together, playfighting, walking, and holding hands. These behavioural patterns were grouped into this category and observed in limited or tight spaces within Transitional Space themes 2, 3, and 5. In these spaces, children were more inclined or able to engage in nearby activities.

2. The personal distance was observed in Transitional Space themes 2, 3, 5, 6, and 7. This category was prevalent in most spaces, serving as a middle ground for the four activity categories, with a distance suitable for various activities. Behavioural patterns such as running, cycling, sitting on swings, walking, and conversing were included in this category.

3. Social Distance: Activities in this category were observed in Transitional Space themes 2, 4, 6, and 7. These activities required a larger space or closer proximity to enable interactions among children. In this category, the behavioural patterns observed involved transitioning from a large group of children to individual interactions, where limited interactions occurred between individual children.

4. Public Distance was observed in Transitional Space themes 6 and 7, as it was impossible to observe this category in tight or limited spaces. Behavioural patterns in this category consisted of individual or isolated activities, which were predominantly low intensity compared to the other listed categories. Examples of activities in this category include sitting on benches or near vendor shops, cycling alone, and walking.

Movement is an inherent aspect of the built environment, providing vitality and life to architectural spaces. Given children's active nature, movement is a natural and crucial component for their healthy development. Consequently, ensuring safety measures for children, particularly those residing in low-cost, high-rise buildings, becomes paramount. Despite considering construction costs, prioritising safety, and protecting lives should remain a fundamental concern.

6. Conclusions

Low-cost housing developments play a crucial role in addressing the housing needs of marginalised populations. While there is increasing attention towards the wellbeing of occupants, certain important details often get overlooked in the process. This study examined children's safety factors from an architectural perspective. However, during the research journey, it became apparent that a multi-disciplinary approach was necessary to understand the topic thoroughly. The literature review revealed gaps that could be filled by incorporating social studies, neurology, and children's healthcare perspectives. However, due to the author's architectural training and background, exploring those areas exceeded their expertise.

Among the four common spaces mentioned in the literature review, transitional spaces emerged as the most engaging for children. The findings were categorised into two significant domains: the role of spaces and the movement within them. The static and dynamic aspects of architecture were crucial for ensuring children's safety in high-rise housing. The triangulation of these domains emphasised the importance of scale in architecture, highlighting the need for recommendations sensitive to this aspect. In conclusion, it is evident that common spaces of intimate and public scales must consider children's activities in smaller groups, while spaces of social scale should accommodate activities involving larger groups.

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