EXPLORING NEIGHBORHOOD BONDS AND BUILT-ENVIRONMENT ON PARENTS' PERCEIVED SAFETY

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ABSTRACT

This study investigates parents' perceived safety on neighborhood bonds and built-environment factors in letting their children roam outside unaccompanied using a qualitative lens. Based on interviews with parents in the Jakarta Greater Area, the research reveals that strong community cohesion and a perceived safe built-environment significantly enhance parents' sense of safety, thereby promoting children's independent mobility. Conversely, neighborhoods with weaker neighborhood cohesion adding unmaintained built-environments such as and lack of playing field and pedestrian infrastructure heighten parents' fears about allowing unsupervised outdoor activities, thus limiting children's independence. Qualitative insights underscore that parents' primary concerns revolve around perceived risks from traffic and strangers when considering allowing their children to venture out alone. This research underscores the urgency for parents' education and policy intervention planning that prioritizes walkable, safe routes, and safe parks and fosters strong community ties to promote children's independent mobility.

INTRODUCTION

Children's independent mobility (CIM), which refers to their capacity to move and explore their neighborhood without adult supervision, is a vital factor in their physical, social, and cognitive development (Dodd et al., 2021; Foster et al., 2014; Mesman & Groeneveld, 2018; Oliver et al., 2014). It encourages physical exercise, facilitates social connections, and improves spatial perception (Dodd et al., 2021; Mesman & Groeneveld, 2018). Notwithstanding these advantages, recent patterns

indicate a decrease in CIM, prompting concerns regarding its effects on their general welfare (Truong et al., 2022; Witten et al., 2013).

In Indonesia, parents restrict children from actively traveling to school increase particularly in urban spaces due to a perceived rise in fear (Yossa, 2023a). This tendency indicates a decrease in the chances for children to participate in independent mobility (Witten et al., 2013).

The decrease in CIM is primarily ascribed to parental apprehensions over safety, which have been widespread in numerous countries (Brussoni et al., 2020; Yossa, 2023b). Research indicates that concerns about traffic accidents and the possibility of strangers abducting children are significant factors that contribute to parents perceiving public settings as more dangerous (Lin et al., 2017).

Multiple hypotheses have been proposed to account explain the decline in CIM. Prior studies have repeatedly found that parental safety concerns are the primary factor contributing to decreases in CIM (Brussoni et al., 2020). Many countries now commonly practice safety-conscious parenting (Lin et al., 2017). Children are accompanied by parents/ adults to school and other nearby places, and they are closely supervised at all times, even when they are playing outside with their friends. The portrayal of crime in the media heightens parents' fear and their feeling that their children are at risk in all public spaces (Foster et al., 2015; Warren & Peterson, 2014).

Research has shown that having strong community ties can protect people from real and perceived dangers (Pitner et al., 2012) and influence health-related behaviours, such as physical activity levels (Lin et al., 2012). When people in a certain area get to know one another and are willing to lend each other a hand, they form neighbourhood connections (Lin et al., 2017). It can work as a form of natural surveillance by providing an informal way to keep an eye on kids when they play outside (Witten et al., 2013). Aside from providing social support and information to parents, this relationship also allows for informal social control over children (Lin et al., 2017).

More recent research has looked at how the built-environment affects CIM (Foster et al., 2015; Giles-Corti et al., 2011; Lee et al., 2017). Inadequate land use mix, low street connection, and low housing density are factors that negatively impact adults' physical activity levels; these same factors may have a comparable effect on children's levels of activity outside of their homes (Giles-Corti et al., 2011; Oliver et al., 2014).

Nevertheless, there is a lack of consensus on the effects of these factors on parental perception of safety and how they may influence parenting practices in the context of CIM. Therefore, additional research is needed, employing measures specifically designed for children, to shed light on this matter (Brussoni et al., 2020). For example, certain studies have discovered that there are positive connections between the density of residential areas and/or the connectivity of streets with physical activity or independent mobility outside of school (Villanueva et al., 2014). However, other studies have found negative connections or no connections at all (Mitra et al., 2014; Oliver et al., 2014).

This study aimed to fill research gaps by examining parental perceptions of between built-environment characteristics and community bonds on parental

perceptions of safety, and their parenting methods on children's active transportation, physical activity, and independent mobility. The study uses a qualitative approach to delve into factors that influence parental decisions regarding CIM, focusing on the interplay between parents' perceived fear, natural surveillance of communities, and built-environment characteristics.

RESEARCH METHOD

The study employed a qualitative approach to investigate how parents facilitate their children's use of and interaction with neighbourhood environments, encompassing public spaces such as streets, pedestrian ways, and nearby playing fields. Data were gathered from twenty parents residing in the Jakarta Greater Area, each with children aged around 6–13 years attending elementary school, during the period from 2019 to 2022.

In-depth interviews were conducted to delve deeply into the perspectives and experiences of the parents. Respondents were selected using snowball purposive sampling, ensuring a diverse range of insights and experiences related to neighbourhood dynamics and child mobility. The interviews were recorded, transcribed, and analyzed thematically. The thematic analysis allowed for the identification of recurring patterns and themes pertinent to the research questions, providing nuanced insights into how neighbourhood factors influence parental decisions regarding CIM and safety.

The study employed reflexive thematic analysis to examine the interview data (Braun & Clarke, 2020). First, all interviews were transcribed verbatim, and these transcriptions were systematically coded using qualitative data analysis software. This process allowed for the identification of recurring patterns and themes pertinent to the research questions. Several key themes emerged as shown in Table 1.

Table 1. Various Themes Emerging From Thematic Analysis

Theme	Description
Community Vigilance	How community members watch over and protect each other's children.
Perceived Safety	Parents' sense of how safe their neighbourhood is for their children.
Built-Environment .	The physical layout and infrastructure of the neighbourhood
Children's Safety	Concerns and measures related to keeping children safe in public spaces.
Children's Independence	Encouraging or restricting children's independent activities.

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Traffic Safety	The impact of traffic and road safety on children's mobility.
Strangers	Concerns about unfamiliar individuals in the neighborhood.
Community Bonding	The role of social connections and interactions within the community in shaping parental decisions

RESULT AND DISCUSSION

Parents' Perception of Built-Environment Around Their Neighborhood

Parental concerns about neighborhood safety are pivotal in shaping their willingness to allow children independent mobility. These concerns encompass various aspects such as the availability of safe play and traffic areas, general safety after dark, graffiti, crimes, and the presence of strangers and police officers. By delving into specific parental quotes, we can better understand how the built-environment influences perceived safety and, consequently, parental decisions regarding their children's independence to roam outside homes.

Parent 1 remarked, "There is an empty field nearby, but I don't feel they are very safe for my children to play there especially alone because I've seen lots of graffiti and vandalism near it."

Vandalism and graffiti are often viewed as indicators of disorder and neglect, which can amplify feelings of insecurity and contribute to an increased perception of crime and potential danger (Azevedo et al., 2021). Maintaining public spaces can reduce fear and promote community use, ultimately encouraging parents to allow their children more freedom to play independently lee 2017(Lee et al., 2017).

In line with Parent 1, Parent 2 stated how the number of crimes and the presence of strangers increases their fear of letting children play outside.

"I feel uneasy about the number of crimes around here, especially when my kids are out playing. Many strangers here and there. If you listen to many criminal reports, children are the target of crimes, so I constantly worry about them being harmed. Maybe I would feel less worried if there were many security officers around here."

The fear of crime increases when children unsupervised meet suspicious individuals. It becomes a concern for parents to discourage children's freedom from playing outside. However, this fear is not always proportional to actual crime rates but can be partly influenced by media coverage. Media reports on child abductions and crime can amplify safety concerns, impacting parental decisions even in areas they feel are safe (Foster et al., 2015; Warren & Peterson, 2014). Despite feeling safe themselves, parents may restrict their children's activities due to heightened fears fueled by sensationalized media reports. This discrepancy highlights the powerful role of media in shaping public perceptions of safety and risk.

Studies have shown that fear of crime can lead to restrictive parenting practices, limiting children's opportunities for independent play and exploration, which are crucial for their development (Fleckman et al., 2022) because parents often prioritize safety over the developmental benefits of independent mobility (Foster et al., 2014).

Parents were also concerned about specific places they felt were unsafe for their children. Many parents accompany their children to school even though they can walk or cycle to the school unaccompanied. Parent 3 expressed, "I worry about letting my kids go to big streets alone because of the traffic and lack of safe crossings and pedestrians. I'd feel more comfortable letting my children walk to school by themselves if we had safe traffic and public transport, but the current situation is just too dangerous."

Proximity to schools and safe infrastructure are critical enablers of independent travel for children. When safe routes and pedestrian-friendly features are in place, parents tend to allow their children to walk or bike to school (Medeiros et al., 2021). Allowing children to do active transport such as walking and cycling independently has numerous benefits, including increased physical activity, better social skills, and greater autonomy.

Concerns about traffic and road infrastructure are prevalent among parents. Safe crossings, pedestrians, and traffic are essential to ensure the safety of pedestrians, particularly children. Improved pedestrian infrastructure can reduce accidents and increase parental confidence in their children's safety(Lin et al., 2017) In contrast, areas with high traffic volumes and inadequate pedestrian infrastructure pose significant safety risks, discouraging walking and cycling (Yossa et al., 2023).

Additionally, Parent 4 remarked, "There are some parts of the neighborhood that I just don't feel are safe for kids to be alone. Better lighting and more police presence might help." Enhancing lighting and increasing police presence can improve perceptions of safety. Well-lit areas and visible security measures can deter criminal activities and reduce fear of crime (Yossa et al., 2023). Increased police presence, particularly community policing, can build trust and a sense of security among residents.

Parents' Perception of Neighborhood Bonds

Neighborhood bonds play a vital role in shaping parental perceptions of safety and community support, which in turn influences CIM. By examining parents' views on their sense of community and mutual support, we can gain insights into how neighborhood dynamics affect parental decision-making.

Parent 5 remarked, "Our neighbors are always willing to help out, and we watch out for each other's kids. It really feels like we're a community."

This illustrates the strong sense of mutual support and vigilance among neighbors, which can create a safer environment for children. Collective efficacy refers to the ability of social members to monitor and control individuals and groups' behaviors in the neighborhood, which can considerably reduce crime and enhance social bonds (Foster et al., 2014; Villanueva et al., 2014). In this context, community vigilance acts as a deterrent to potential dangers, promoting a secure environment for children.

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Parent 6 reflected, "It feels like a close-knit community where you can rely on each other, but there are still some trust issues with a few neighbors. Not everyone is as friendly or involved. I mean in today's world we can heavily trust other people. You know crimes sometimes are conducted by close relatives"

This mixed perception highlights the variability in social bonding within neighborhoods. While there is a general sense of community, inconsistencies in relationships with certain neighbors can impact the overall feeling of safety. Social ties and trust among neighbors are crucial for creating a cohesive community (Fleckman et al., 2022). However, when trust issues arise, they can undermine the collective sense of security, affecting parental comfort in allowing children independent mobility.

Parent 7 who felt positively about their neighborhood said, "If there is a problem with neighbors, it would be good if we can settle it amicably." The ability to resolve conflicts is a key aspect of social bonding. Effective conflict resolution among neighbors fosters a supportive environment, which is essential for raising children (Fleckman et al., 2022; Foster et al., 2015). This sense of reliability and cooperation among neighbors reinforces the community's overall stability and safety.

The level of social connection within the neighborhood was assessed by asking parents about their familiarity with other parents and local children. Parent 8 shared, "Most parents here know each other and each other's children, which makes me feel safer letting my kids play outside because there's always someone watching out." It suggests that a high level of familiarity can enhance perceived safety, as parents feel there is a network of eyes on their children. Neighbors can help to monitor the children's activities, communicate with other parents, and set norms. Such connections provide social support for children, offer information to parents, and enable informal social control.

Parent 9 noted, "My children can look up to and rely on some residents here if they need help. It's comforting to know that there are trustworthy adults around." This sense of having role models and supportive adults in the community contributes to a secure environment for children. They explained, "Parents living here know each other, and we often talk about our kids and any concerns we have. It helps build a sense of trust." This regular communication among parents can reinforce social connections and collective responsibility for child safety.

Parental concerns about safety and family dynamics significantly influence decisions about CIM. These concerns are shaped by cultural differences, family structure, and the level of social cohesion within the neighborhood.

Parents often highlighted the importance of social cohesion within their neighborhoods. Parent 10 from a high-density urban area remarked, "I feel comfortable letting my child walk to school because I know my neighbors and we look out for each other's kids." This underscores the importance of strong social connections and mutual support among residents significantly reducing parental fears and encouraging CIM (Medeiros et al., 2021). Trust and cooperation within neighborhoods create a safe and supportive environment for children to have activities in the urban space with or without parents' supervision.

However, Parent 11 from a suburban neighborhood with lower social cohesion expressed a contrasting view: "I hardly know anyone on our street, and that makes me anxious about letting my child go out alone." Conversely, a lack of familiarity and trust within the community can be a significant barrier to CIM. Weak social ties can lead to increased parental anxiety and restrictive child-rearing practices (Medeiros et al., 2021). Fostering strong social connections among residents is crucial for alleviating these concerns.

Main Ideas to Improve CIM through Creating a Safer Environment

The study reveals a nuanced interplay of factors influencing CIM, emphasizing the complex dynamics between neighborhood bonds built-environment characteristics, and parental concerns. Policy interventions through urban planning can significantly improve the safety and independence of children in navigating their environments. Thoughtful urban design and supportive policies can create conditions conducive to CIM. This study highlights various strategies to achieve this goal, including improving infrastructure, fostering community engagement, providing parental education, advocating for supportive policies, and leveraging technology. To enhance CIM, several strategies and interventions can be implemented as shown in Figure 1.
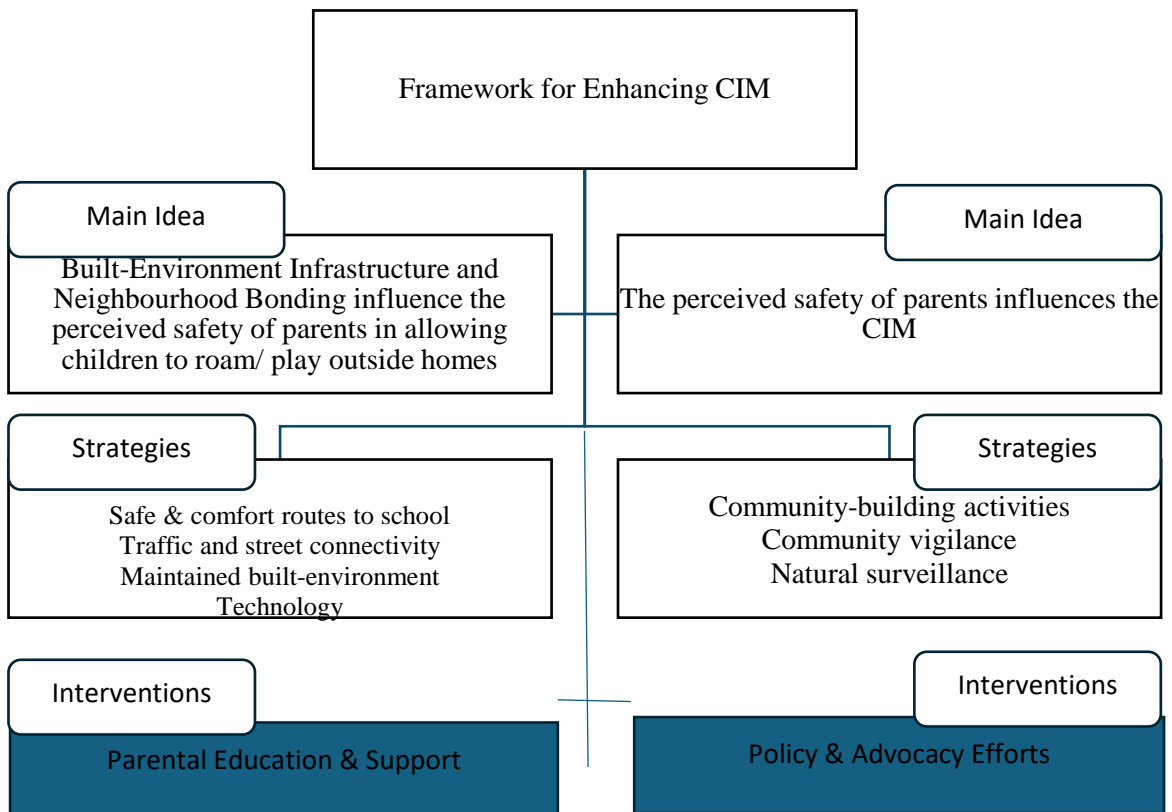

Figure 1. Framework for Enhancing CIM

Improving built-environment infrastructure

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Improving built-environment infrastructure is paramount, involving initiatives to provide safe routes to schools, implementing pedestrian-priority zones, and enhancing street connectivity to create safer paths between key destinations. Technological solutions, such as safety apps, can provide real-time information and reassurance to parents, bridging the gap between parental concerns and children's need for independence. Innovative apps have the potential to enhance safety and autonomy (Konok et al., 2020) discuss, for instance, a safety app that updates on their child's location and suggests safe routes, allowing more freedom for their child.

Community Engagement

Community-building activities and neighbourhood watch programs play a vital role in enhancing social cohesion and reducing parental fears (Fleckman et al., 2022; Lin et al., 2017). Strong social connections among residents promote a sense of collective responsibility for child safety. For instance, one parent emphasized the importance of community-building activities, stating that knowing neighbours and having a robust neighbourhood watch program would alleviate safety concerns when their child is out alone.

Concurrently, fostering neighbourhood social cohesion through community-building activities like neighbourhood events and watch programs can significantly increase safety awareness and community engagement, creating supportive environments for children's mobility.

Parental Education and Support

Educational programs for parents are crucial for balancing safety concerns with fostering children's independence (Medeiros et al., 2021; Staunton et al., 2003).Equipping parents with the knowledge and confidence to make informed decisions about their children's mobility is crucial. Any form of dissemination helps parents understand the benefits of promoting children's autonomy while managing risks effectively is essential.

Policy and Advocacy

Policy advocacy for walkable neighborhoods and safe routes is another critical aspect. Creating supportive environments through policy interventions can significantly impact CIM.

Policy and advocacy efforts should prioritize walkable neighborhoods through collaborative initiatives between schools and local governments, utilizing technology such as safety apps and community platforms to enhance safety and accessibility. Inclusive planning and design considerations ensure accessibility for all children, including those with disabilities, fostering environments that promote independent travel.

CONCLUSION

This study sheds light on how parents' perception of neighborhood bonds and the built-environment influence their parenting methods in shaping CIM in urban contexts. The research underscores that strong neighborhood bonds and perceptions of a safe built-environment are crucial determinants in fostering parents' confidence

to allow their children to play and roam in public spaces. Factors such as weak community ties, high traffic volumes, and inadequate safety measures exacerbate parental concerns about risks, thereby restricting children's opportunities for independent exploration.

This study emphasizes the importance of urban planning strategies that prioritize pedestrian-friendly infrastructure, safe crossings, and initiatives to strengthen community cohesion. By addressing these factors, cities can better support children's development of independence and resilience, ultimately contributing to healthier and more inclusive urban environments.

Future research could further explore how these findings generalize across different urban settings and cultures, and how policy interventions can effectively promote CIM while addressing parental safety concerns.

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