

APPLICATION OF BEHAVIORAL ARCHITECTURE IN A HALFWAY HOUSE AND COACHING CENTER FOR STREET CHILDREN IN MEDAN

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Abstract

The significant population of street children in Medan City underscores pressing child welfare issues, predominantly driven by economic factors. In response, this study examines the application of behavioural architecture in designing halfway houses and coaching center for street children in Medan. The concept of behavioural architecture seeks to create environments that align with street children's unique behaviours and needs, ensuring both physical and psychological comfort through strategic architectural design, interior spaces, outdoor areas, and circulation plans. This research employs qualitative methods, including data collection through observation, and literature reviews. The findings reveal that incorporating behavioural architecture principles into these facilities' design can significantly enhance street children's living and developmental conditions, providing them with a supportive and nurturing environment.

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Key Words

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1. Introduction

Street children are one of the vulnerable groups in society who often face various challenges and risks in everyday life. Amid fluctuating economic conditions and the still relevant issue of poverty, many street children in various cities in Indonesia, including Medan City, are forced to live on the streets to fulfill their basic needs [1]. These children often end up on the streets due to a range of socio-economic challenges, such as extreme poverty, domestic instability, and insufficient access to essential services like education and healthcare [2]. Street children get exposed to numerous risks, such as exploitation, abuse, and neglect, which severely impact their physical and psychological well-being [3].

In addressing the needs of street children, halfway house and coaching centers are essential. These facilities provide not only immediate necessities like food and shelter but also educational opportunities and psychological support aimed at fostering their reintegration into society [4]. However, the success of these initiatives is highly contingent upon the design and functionality of the spaces provided.

Behavioural architecture is an approach that considers the specific behaviours and needs of the users in the design process. When applied to halfway house and coaching centers for street children, behavioural architecture aims to create spaces that are not only safe and functional but also conducive to the children's development and well-being [5]. This involves thoughtful design of the physical space, including interior layouts, outdoor areas, and circulation paths, to ensure comfort and support for the children.

The principles of behavioral architecture encompass several vital aspects, including environmental psychology, user-centered design, cognitive architecture, social interaction, behavioral economics, health and well-being, sustainability, and cultural and contextual factors. Environmental psychology studies how physical settings affect emotions, thoughts, and actions, exploring elements such as natural light, color schemes, and spatial layouts to influence mood and productivity [6]. User-centered design prioritizes the needs, preferences, and behaviors of end-users, ensuring comfort, functionality, and accessibility [7]

This research focuses on applying behavioural architecture principles to designing halfway houses and coaching centers for street children in Medan. By utilizing qualitative methods such as observations, interviews, and literature reviews, this study aims to understand

how architectural design can address the unique needs of street children and improve their quality of life.

The findings from this research are expected to provide valuable insights into the development of facilities for street children. By incorporating behavioural architecture into the design process, more effective and supportive environments that promote the well-being and development of street children in Medan City can be created.

2. Method

The method involves collecting primary and secondary sources using a descriptive approach. Information about the project's background, objectives, and challenges is gathered during the data collection stage. Additionally, design analysis is carried out by conducting direct field observations to produce research results. The process concludes with formulating a design concept, which is shaped by examining user needs, the surrounding environment, research findings, identified challenges, and the resulting solutions .

3. Result and Discussion

3.1 Behavioral Architecture

Behavioral architecture combines principles from psychology, behavioral science, and architecture to create environments that positively impact human behavior. The field recognizes that the physical environment can significantly affect people's actions, emotions, and overall well-being [8]. Behavioral architecture is a holistic approach to design that leverages psychological and behavioral insights to create environments that positively influence human behavior. Integrating behavioral insights into architectural design requires a deep understanding of human psychology and behavior patterns [9]. Through thoughtful design, it seeks to foster healthier, more engaging, and sustainable spaces for individuals and communities [10].

Central to this methodology is the concept of user-centered design, emphasizing the significance of comprehending the diverse requirements, behaviors, and experiences of individuals interacting with the environment [10]. It is important to incorporating design flexibility and adaptability in behavioral architecture. Features such as movable walls, modular furniture, and multi-purpose areas facilitate dynamic use of space. Additionally, ensuring the safety and security of space occupants is a priority. Clear sight lines, controlled access points, and appropriate lighting can make spaces safe and secure, thus significantly impacting the mental and emotional well-being of their occupants [11].

It is also necessary to balance communal and private areas, providing users with social interaction and solitude. Granting personal control over environmental variables such as lighting and features that allow personal space customization can enhance the overall sense of privacy and personal space [12]. Encouraging community interaction in space is another vital objective of behavioral architecture. The aesthetic appeal of a space, including elements such as colour, texture, lighting, and art, plays a crucial role in shaping the mood and feelings of its occupants. By creating a visually pleasing environment, designers can cultivate a positive atmosphere that promotes well-being [13].

By adhering to these principles, behavioral architecture endeavours to fabricate environments that are not only functional but also enhance the quality of life, promote well-being, and support the desired behavior of its users. By creating environments that align with human nature and needs, behavioral architecture has the potential to address various social issues, including public health, sustainability, and social equity [14].

3.2 Halfway House

Street children's halfway house are temporary facilities that provide secure housing and a variety of support services to children who do not have permanent residence or live on the streets . According to the Indonesian Ministry of Social Affairs [15], halfway houses are transitional spaces that offer protection and prepare children for social reintegration or reunification with their families.

A halfway house for street children is expected to adhere to specific standards outlined. These standards encompass providing safe and comfortable facilities, including sleeping and study rooms, kitchens, and playrooms. Moreover, a stringent security system is imperative to safeguard children from external and internal threats. Educational services are also paramount, with tailored programs that encompass tutoring and skills training to meet the individualized needs of the children [16]. Furthermore, access to basic health services and mental health support is essential within a halfway house, in addition to psychosocial support, such as counseling services and programs designed to assist children in overcoming trauma [17]. Lastly, there should be a structured program to facilitate social reintegration, assist children in reintegrating into society, or reunite with their families.

3.3 Project Description

The proposed project is titled "Application of Behavioral Architecture in a Halfway House and Coaching Center for Street Children in Medan." It is located on Jl. KL. Yo. Sudarso, Silalás, District. Medan Baru, Medan City, North Sumatra, covering an area of approximately 1 hectare. The objective of this facility is to serve as a refuge for accommodating, protecting, and providing access to education and healthcare for street children.

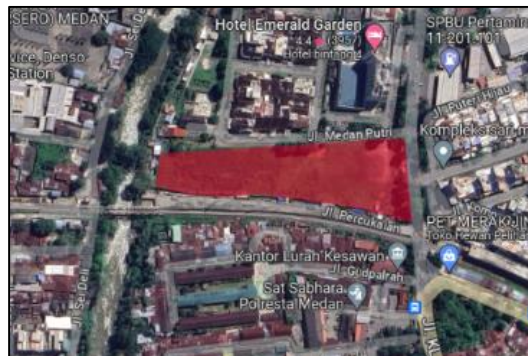


Figure 1. Project Location
Source: Google earth [18]

3.4 Mass Concept

The building is structured into three primary divisions: public, semi-public, and private, each with specific functions. The public division includes educational, administrative, mentoring, support, and training facilities. Semi-public areas are allocated for dining and similar activities, while private areas are designated as residential spaces for the facility's resident street children.



Figure 2. Mass Zoning

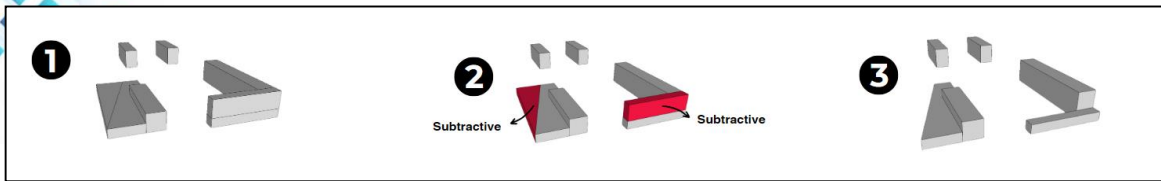


Figure 3. Massing

3.5 Basic Concept

The primary objective of this halfway house facility is to provide comprehensive support for street children, encompassing safeguarding, nurturing, education, skills development, and leisure activities. The facility is carefully planned to address the specific behavioral patterns of street children while prioritizing creating a supportive environment for their well-being.



Figure 4. Site Plan

The layout of the halfway house is centered around an open field, fostering an interactive setting for street children. The facility consists of buildings A and B, each spanning two floors, and buildings C and D, each comprising three floors. Buildings D and E are designed with semi-open structures. These distinct building configurations fulfill the shelter's diverse requirements, ensuring efficiency and functionality across the facility.

3.6 Theme Application

3.6.1 Participatory Approach

The application of the theme to be considered pertains to addressing the requirements of street children. This halfway house encompasses designated rooms tailored to cater to the specific needs of street children, including living quarters, study and mentoring spaces, and healthcare and counseling facilities. The construction of this halfway house has duly considered the comprehensive needs of street children.

3.6.2 Child Friendly Design

The halfway house has established a secure, inviting, and enriching setting for children. Various components contribute to this, such as recreational play areas designed to cater to the leisure needs of street children and study rooms that are adaptable to their requirements.



Figure 5. Playing Area

3.6.3 Communal Space

The design includes a multi-purpose room, field, and dining room to facilitate social interaction and community building. These spaces are intended to provide street children with an environment where they can engage with one another.



Figure 6. (a) Multipurpose Room; (b) Field Area

3.6.4 Use of Local and Environmentally Friendly Materials

The halfway house has been meticulously crafted using locally sourced wood, brick roofing, and exposed brick on the walls. The selection of environmentally sustainable materials was made with great care to ensure accessibility and to consider economic factors for cost reduction.

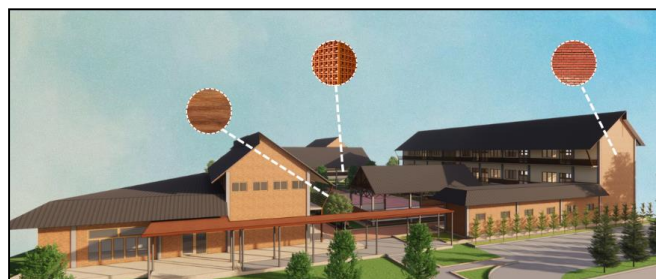


Figure 7. Building Material

3.6.5 Privacy and Personal Space

The shelter facility should prioritize safeguarding the residents' privacy, particularly given the residential structure's location in a remote area. This shelter caters specifically to the housing requirements of homeless youth, with segregated residential accommodations for males and females. Each unit is designed to house three individuals and is equipped with a private bathroom for added convenience.

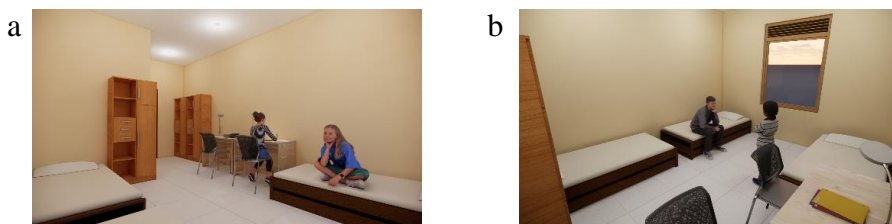


Figure 8. (a) Girl Room; (b) Boy Room

4. Conclusion

The "Application of Behavioral Architecture in a Halfway House and Coaching Center for Street Children in Medan" project adeptly integrates principles from psychology, behavioral science, and architecture to establish a conducive environment for street children. It is situated on Jl. KL. Yo. Sudarso, Silalas, Medan Baru, Medan City, the facility covers an area of 1 hectare and offers lodging, education, and healthcare services.

Key attributes encompass user-centric design, adaptability, safety, confidentiality, and communal areas. Utilization of local, sustainable materials and an inclusive approach ensure a safe, welcoming, and enriching setting. The facility's layout emphasizes both collective engagement and individual space, fostering the holistic well-being and progress of street children. This project showcases how behavioral architecture can improve the quality of life and encourage desired conduct, setting a precedent for spaces tailored to vulnerable demographics.

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