Jurnal KORIDOR
Journal homepage: https://talenta.usu.ac.id/koridor/

The Role of Architecture in the Nutrition House as a Stunting Prevention Strategy, Case Study: Gampong Lamlagang Nutrition House, Banda Aceh

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ARTICLE INFO

Article history:
Received 30 March 2025
Revised 21 November 2025
Accepted 01 December 2025
Available online 03 December 2025

E-ISSN: 2721-3463
P-ISSN: 2086-910X

How to cite:
Zahrah, A., Idawati, D. E., & Humaira, G. (2025). The Role of Architecture in the Nutrition House as a Stunting Prevention Strategy, Case Study: Gampong Lamlagang Nutrition House, Banda Aceh. Jurnal Koridor: 16(2), 088-103.

http://doi.org/10.26594/register.v6i1.idarticle

ABSTRACT

Stunting is a chronic problem of child growth and development due to lack of or poor nutrition for a certain period of time (Nur, Setyowati, & Rosemary, 2020). Children have the basic rights of citizens to fulfill their welfare. Therefore, this phenomenon must be considered because it affects the development of generations who will become the nation's successors (Nur, Setyowati, & Rosemary, 2020). Not only the role of the mother in the household, a joint effort to achieve stunting prevention is through the Village Nutrition House program. To create a Village Nutrition House for users, especially children, it is not only necessary to provide a building. The role of architecture is necessary and can influence child psychology. If the child's psychology is good, then the child gets adequate nutrition and nutrition into the body. The author uses qualitative research methods with data obtained through observational studies, interviews and literature studies. The data is processed to become criteria and material for consideration in the construction of ideas to obtain a design strategy for the Village Nutrition House, especially one that is child-friendly. The research location is at the Gampong Lamlagang Nutrition House which is a Pilot Project model for the implementation of the Nutrition Rumah in Banda Aceh City. With this design strategy it is hoped that it can add stimulation to children and children get a pleasant eating experience so that nutrition in children can be fulfilled.
Keyword: Architecture, Nutrition House, Pervention, Stunting

ABSTRAK

Stunting adalah masalah kronis tumbuh kembang anak akibat kurang atau buruknya asupan gizi dalam jangka waktu tertentu (Nur, Setyowati, & Rosemary, 2020). Anak memiliki hak dasar warga negara untuk dapat terpenuhi kesejahteraannya. Maka dari itu, fenomena ini harus diperhatikan karena mempengaruhi perkembangan generasi yang akan menjadi penerus bangsa (Nur, Setyowati, & Rosemary, 2020). Tidak hanya peran ibu dalam rumah tangga, salah satu upaya bersama untuk dapat merealisasikan pencegahan stunting yaitu melalui program Rumah Gizi Gampong. Untuk mewujudkan sebuah Rumah Gizi Gampong bagi pengguna khususnya anak tidak hanya dengan menyediakan bangunan saja. Peran arsitektur diperlukan dan dapat mempengaruhi psikologi anak. Apabila psikologi anak baik, maka anak mendapat asupan gizi dan nutrisi yang cukup ke dalam tubuh. Penulis menggunakan metode penelitian kualitatif dengan data yang diperoleh melalui studi observasi, wawancara, dan studi literatur. Data tersebut diolah untuk menjadi kriteria dan bahan pertimbangan dalam konstruksi gagasan untuk mendapatkan strategi desain Rumah Gizi Gampong khususnya yang ramah anak. Lokasi penelitian berada di Rumah Gizi Gampong Lamlagang yang merupakan Pilot Project model implementasi Rumah Gizi Gampong di

Kota Banda Aceh. Dengan adanya strategi desain ini diharapkan dapat menambah stimulasi kepada anak dan anak mendapatkan pengalaman makan yang menyenangkan sehingga nutrisi pada anak dapat terpenuhi.
Kata Kunci: Arsitektur, Rumah Gizi, Pencegahan, Stunting

1. Introduction

Children's development is an important process for the growth and development of children to reach the future. However, health problems often interfere with the process of child growth and development, one of which is stunting. Indonesia is a country that still cannot overcome stunting. Stunting is a chronic problem of child growth and development due to lack or poor nutritional intake for a certain period of time (Nur, Setyowati, & Rosemary, 2020).

According to the World Health Organization (WHO) also said that according to the Child Growth Standard, stunting is based on an index of body length for age or height for age with a z-score less than -2 standard deviations (SD). The impact of stunting is long-term, namely the disruption of physical, mental, intellectual and cognitive development. In addition, stunting sufferers also have a risk of offspring with low birth weight (Apriluana & Fikawati, 2018).

From a global perspective, the prevalence of stunting in children under five has declined over the past two decades, but progress has been uneven. (UNICEF, 2021) reported that in 2020, 22% of children worldwide—approximately 149 million—experienced stunting. For comparison, the stunting thresholds in Southeast Asian countries include Myanmar, Malaysia, Vietnam, the Philippines, and Cambodia, all at the High threshold, Thailand at the Medium threshold, and even Singapore at the Low threshold. These countries have made greater progress in tackling stunting than Indonesia, which remains at the Very High threshold. This difference also reflects differences in public health strategies, maternal education levels, and food security systems. Countries like Peru have successfully reduced stunting rates from 28% in 2008 to 13% in 2016 through an integrated approach combining nutrition-specific interventions, social protection programs, and community-based health services (Marini et al., 2017). This comparison suggests that Indonesia can accelerate progress by adopting a similar multisectoral strategy while adapting it to the local context.

Serious attention to stunting is also shown by the Sustainable Development Goals (SDGs). In The 2030 Agenda for Sustainable Development, there are goals to end hunger, achieve food security and better nutrition and promote sustainable agriculture (United Nations, n.d.).

"Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture".

This is indicated by the target to be achieved, namely eliminating all forms of malnutrition by 2030, including by 2025, namely achieving the international target of reducing stunting in children under five years of age, and meeting the nutritional needs of adolescents, women, pregnant women and breastfeeding, and the elderly.

"By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons".

Based on data from the Study of Indonesia's Nutritional Status in 2021, the three provinces with the highest stunting rates are Nusa Tenggara Timur (NTT), namely 37.8%, then Sulawesi Barat, 33.8%, and Aceh, 33.2%. However, the total number of stunting cases has decreased compared to 2019, namely NTT at 43.8%, Sulawesi Barat at 40.4% and Aceh at 34.2% (Litbangkes, 2021).

Stunting, which is a problem of child growth and development, is influenced by several factors (Siahaan, 2017), namely:

1. Maternal:
   Poor nutrition during pre-conception, pregnancy and lactation.
2. Nutritional:
   Poor nutritional quality and lack of hygiene.
3. Environmental:
   Lack of stimulation and activity.
   Lack of clean water supply.

Nutrition is an important discussion in stunting and is considered to be one of the determining factors. This has been proven by various previous studies which found that the most common nutritional deficiency is iron deficiency. Iron deficiency is related to impaired physical growth. Apart from iron, there are several nutritional deficiencies that cause stunting, namely energy, protein, zinc, copper, iodine and vitamin A (Daunwati, 2009).

Seeing this fact, as children they also have the basic rights of citizens to have their welfare fulfilled. Therefore, this phenomenon must be considered because it affects the development of generations that will become the nation's successors (Nur, Setyowati, & Rosemary, 2020). According to Nila Farid Moeloek, there are three things that must be considered in preventing stunting, namely improving diet, parenting, and improving sanitation and access to clean water. (Rokom, 2018).

Looking at efforts to prevent stunting through improving diet and parenting, mothers have an important role. Mothers are the key to supporting and overcoming the problem of stunting. Mothers must know how to provide nutritional intake in the family, starting from selecting food menus, food ingredients, to preparing food. In fact, the role of the mother has started since the time she was pregnant, namely at the time of maternity. Mothers who have good nutrition during pregnancy will give birth to well-nourished children. This is also influenced by the family's ability to meet food needs both in quantity and nutritional quality for children's nutritional status (Apriluana & Fikawati, 2018). However, maternal characteristics such as education and employment status have no effect on stunting. What becomes an important influence is how to live a Clean and Healthy Behavior at home. The implementation of Clean and Healthy Behavior should be applied to all family members, especially mothers. The mother holds the role of head of the household who makes decisions on behavior in the home (Aprizah, 2021). So the hope is that if mother apply the Clean and Healthy Behavior at home, then family members will also apply it.

Not only the role of the mother in the household, one of the joint efforts to realize stunting prevention is also being carried out by the government through the Nutrition House program. Nutrition House is a form of health facility in settlements. Health facilities are one of the factors to use to measure spatial inclusivity (Zahrah, 2018). Inclusivity is one of the principles of the implementation of the Sustainable Development Goals (SDGs) to be achieved in order to embrace vulnerable groups. So that the Nutrition House is also in line with the goals of the Sustainable Development Goals (SDGs). In general, there are six activities at Nutrition House, namely nutrition education, nutrition garden management, local nutritious food processing practices, breastfeeding counseling, nutritional counseling and supplementary feeding, and sanitation (Nur, Setyowati, & Rosemary, 2020). The Nutrition House has started to be developed by the government and other parties in Indonesia.

The Government of Aceh, in this case the Aceh TP PKK inaugurated the Village Nutrition House through a Pilot Project model for the implementation of the Nutrition House located in Gampong Lubuk Sukon, Ingin Jaya District, Aceh Besar and the Nutrition House in Gampong Lamlagang, Banda Raya District, Banda Aceh City. The Village Nutrition House is the first line in dealing with and preventing stunting which is currently being intensively implemented. In addition, the Village Nutrition House is a place for service and provision of nutritious food for toddlers and pregnant women in every village throughout Aceh (Bakri, 2021).

While research in Indonesia has primarily focused on maternal roles, parenting practices, and nutrition education, there is a notable research gap in integrating spatial and environmental design into stunting prevention strategies. This is particularly evident in community-based initiatives such as the Rumah Gizi Desa (Village Nutrition House). Although the program addresses nutritional education, food preparation, breastfeeding counseling, and sanitation, it often lacks spatial planning guidelines that consider children's psychological well-being.

However, the Village Nutrition House program currently does not have a reference in spatial planning. In fact, to create a Village Nutrition House that is comfortable for users, especially children, it is not only necessary to provide a building. Architecture has an important role in this. In addition to spatial planning, the role of architecture such as the selection and use of color can also help influence child psychology. If the child's psychology is good, then the child will easily get enough nutrition and nutrients into the body.

Color is an architectural element that has an important role in child development, namely in the process of stimulation. We often encounter the use of various colors in buildings and spaces related to children. This is because color can also affect a person's psychological condition, including children. The body, mind, emotions and even the balance of the three that exist in humans can be affected by the use of color. In architecture, color is the main aspect that can affect visual appearance and psychological impressions for the characteristic appearance of a space (Julianto, Cahyadi, & Artawan, 2019).

Survival is also affected by the ability to see colors and continues to grow. Through color humans can distinguish between edible and not. Color helps to describe what is in the environment. The presence of color also plays a role in biological functions because color stimulation carried by the nerves to the brain produces certain hormones (Rahayu, 2012). At the Village Nutrition House, the application of color in spatial planning is also needed to support children's psychology in the experience of eating and playing so that it can eliminate environmental factors which are one of the causes of stunting in children.

In Indonesia, however, the integration of architectural psychology into health facilities for stunting prevention remains minimal. The application of color in architecture, for instance, is often overlooked despite evidence showing that it can stimulate children's senses, influence mood, and indirectly promote better nutritional intake (Rahayu, 2012; Julianto, Cahyadi, & Artawan, 2019). This indicates a critical gap in both policy and practice: while nutrition education is emphasized, the physical and sensory environment in which children receive these interventions is rarely optimized.

Evidence from international studies suggests that built environments and spatial design can directly influence child nutrition and eating behaviors. For example, warm colors and child-friendly layouts can increase appetite, improve mood, and encourage social interaction during meals (Smyth, 2025). Similar approaches (Frerichs, et al., 2015) where architectural design elements, such as color schemes, natural lighting, and dedicated play areas are incorporated to enhance children's engagement with food and learning activities.

Future interventions, especially within the Village Nutrition House model, should adopt a holistic approach that combines nutrition-specific strategies with environmental design principles. This would align Indonesia's efforts more closely with successful international practices and contribute to achieving the SDGs' targets on stunting reduction.

2. Method

The author uses qualitative research methods with data obtained through observational studies, interviews and literature studies. The data is processed to become criteria and material for consideration in the construction of ideas to obtain a design strategy for the Village Nutrition House, especially one that is child-friendly. The location of this research is at the Gampong Lamlagang Nutrition House which is a Pilot Project model for the implementation of the Village Nutrition House in Banda Aceh City.

The first data collection is an observation study to the location. Observational studies aim to obtain activity

patterns and space requirements based on user needs. This observational study was strengthened by interviews as shown in figure 1. The selection of research informants was carried out using a purposive sampling technique, namely choosing with certain criteria, in this case the management at the location of the Village Nutrition House.

Figure 1. Collecting Data With Informants

Source: Author's Documentation, 2022

The next data collection is the study of literature related to child development psychology, child health, and architectural theory for children. Literature study aims to obtain material considerations, criteria and design principles to complement field data.

Data analysis in this study follows a descriptive-interpretative approach. First, the collected data from observation, interviews, and literature review undergoes data reduction, where relevant information is selected, categorized, and refined to identify key patterns, such as interactions within the community, inclusivity, and space for children. The data is then organized into design criteria which serve as parameters in formulating design strategies. Subsequently, the researcher interprets the relationship between field findings and theoretical frameworks to develop construction ideas that align with the child-friendly concept. Finally, these interpretations are translated into a design strategy for the Village Nutrition House.

Table 1. Validation Process

Finding	Process
1. Method	Combining several data collection methods to examine the problem from various angles: **1. Direct on-site observation** Observing actual activities at the Village Nutrition House, such as training, weight measurements, feeding, nutrition counseling, and children's play. These observations also recorded patterns of space use and interactions between users. **2. Key informant interviews** Conducted with managers (TP PKK), staff, and parties directly involved in operations to gather in-depth information regarding facility needs, children's eating habits, and challenges in nutrition services. **3. Literature and regulatory review** Referring to child-friendly architecture theory, child development psychology, nutrition service standards, and previous research references.
2. Sources	Data comes from various complementary sources: 1. **Managers and staff** → Provide operational information, challenges, and service strategies.

	2. **Users** (pregnant women, mothers with children aged 0–5 years) → Convey children's needs, experiences, and preferences regarding eating and play activities. 3. **Official documents and standards** → Serve as formal references to ensure design compliance with regulations and nutritional principles.
3. Data Validation and Comparison	1. **Observation findings were compared with interview results**. For example, the varying eating behaviors of children in the field. 2. **Field information was linked to architectural theory for children**, such as the use of child-friendly scales, colors, and materials that stimulate development. 3. **Nutrition service standards stipulated by government regulations** were verified against the existing facility conditions.
4. Integration of Findings for Design Formulation	1. **Validated data was used to formulate spatial zones** that combine nutritional services and child development stimulation. **2. Design principles from the literature were adapted into spatial recommendations** to align with user needs identified through triangulation.

Source: Author's, 2023

To ensure the validity of the findings, the study employs triangulation of methods and sources (table 1). Method triangulation is achieved by integrating observations (to capture real user behavior and spatial use), interviews (to gain the perspectives of key stakeholders), and literature studies (to strengthen theoretical grounding). Source triangulation is done by comparing data from multiple sources, including site managers, direct observations, and documentary references. Data validation is also reinforced through comparative analysis, where field results are matched against relevant theories, and any discrepancies are clarified through rechecking in the field. Moreover, the use of purposive sampling ensures that the information obtained is relevant, reliable, and aligned with the research objectives. All data is then processed in order to get a construction idea to become a design strategy for the Village Nutrition House, especially one that is child-friendly (Parmaningsih, Hardiyati, & Mustaqimah, 2019).

3. Discussion

The Village Nutrition House as a forum for the treatment and prevention of stunting has activities in it. The head of the Aceh Besar TP PKK Hj Rahmah Abdullah, SH explained that there were four main activities at the village nutrition house in terms of preventing stunting, firstly nutrition education and growth monitoring, nutrition services, food security and family economic empowerment. Users consist of managers, in this case TP PKK and staff, as well as the surrounding community, such as pregnant women and children aged 0-5 years as shown in the figure 2.

Figure 2. Village Nutrition House Users
Source: Author's Illustrations, 2023

The activities at the Village Nutrition House include training, measuring body weight, nutritional counseling for mothers, feeding toddlers, and evaluation, as shown in the following illustration:

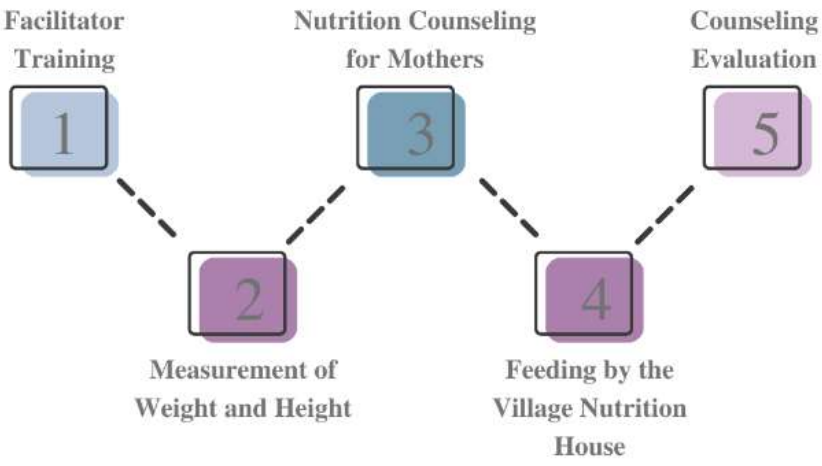

Figure 3. Village Nutrition House Activities
Source: Author's Illustrations, 2023

Activities at the Village Nutrition House, especially providing counseling to mothers, are carried out so that mothers understand their roles so that they can carry out their roles while at home to reduce the risk of malnutrition or stunting independently. If the mother does not understand her role at home, it is feared that the mother will actually be the obstacle to implementing the nutrition home (Agustina & Farisni, 2021).

The existence of activities carried out at the Village Nutrition House raises the need for space. Moreover, spaces with activities with children should include the role of architecture for children while also considering psychological aspects. Children's architecture is a form of architecture that provides an early learning environment for children. The role of architecture in creating space prioritizes the needs and comfort of children. Children become unique space users with high sensory or sensory needs requiring a special scale, and have very different activity styles from adults in moving and feeling space. (Scott, 2010).

There are design criteria and principles based on architectural theory for children (Parmaningsih, Hardiyati, & Mustaqimah, 2019), namely:

1. Application of the principles of community, inclusion and the spaces in between and space in space.
2. Application of the principles of detail, texture, color and ceilings, scale, interaction, furniture and transparency and nature to the elements of space.

When considering the psychological aspect of the child, the child's comfort is the main thing that must be considered. To be able to meet the comfort of the child, it is necessary to understand its characteristics. The characteristics of children are different in each phase of their development so that they require a different approach. It is in this phase of child development that stimulation is needed. According to the Ministry of Health, stimulation is an activity to stimulate the basic abilities of children aged 0-6 years so that children grow and develop optimally. Mothers, fathers, surrogate mothers/caregivers, other family members in everyday life have an important role in providing stimulation to children because they are the closest people to children.

According to informants, the feeding activities at the Village Nutrition Center still involve parents who are

the closest people to children. This is good for stimulating the growth and development of children as shown in the figure 4.

“involving parents in the process of feeding children”
"the one who feeds his own mother"

Figure 4. Feeding Children by Mother
Source: Author's Documentation, 2022

However, the Village Nutrition House does not have a provision for where to eat and in what way. This is because the manager of the Village Nutrition House believes that the characteristics of children are different, so they adjust to each child as shown in the figure 5.

"assisted while playing (giving toys) so they want to eat"
"You don't have to sit down, you can eat while playing"
"Each child is different, some like to eat indoors, some want to eat outside"
In addition, playing activities after eating also supports this stimulation.
"When someone finishes eating, sometimes they don't go straight home, they play with the other kids first"

Figure 5. Children Playing After Eating
Source: Author's Documentation, 2022

Seeing these activities, it is true that the Village Nutrition House indirectly becomes a place for providing stimulation for children's development outside each child's home.

There are 5 aspects of child development that require stimulation, namely, language, physical-motor, religious, moral, cognitive, and social-emotional as shown in the figure 6. These five aspects are stimulated in different ways based on the age group of the child, namely the age group 1-2 years, 2-3 years, 3-4 years, and 4-5 years (Rantina, Hasmalena, & Nengsih, 2021).

Figure 6. Aspect of Child Development
Source: Author's Illustrations, 2023

To be able to accommodate children's development, the Village Nutrition House is expected to have a broader function for children. Having play activities after eating is part of giving stimulation to children. Providing stimulation to early childhood development can still be carried out effectively and efficiently using a variety of media as learning tools with the principle that children's main activity is playing while learning (Rantina, Hasmalena, & Nengsih, 2021). Appropriate stimulation will stimulate the child's brain so that the development of movement, speech and language abilities, socialization and independence in children takes place optimally according to the child's age (Rantina, Hasmalena, & Nengsih, 2021). So that the Village Nutrition House should have facilities to support children's activities. The children's activities at the Village Nutrition House are eating and playing as shown in the figure 7.

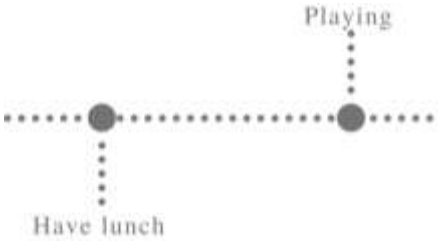

Figure 7. Children's Activities at the Village Nutrition House
Source: Author's Illustrations, 2023

Based on the picture above, playing as a form of activity in considering child psychology. The Village Nutrition House also needs to consider the basic pattern of nutritional installation service standards to fulfill children's eating activities at the Village Nutrition House. This is because the Village Nutrition House was created to treat and prevent stunting.

Table 2. Nutrition Service Standard

Activity	Nutrition Consultation to Patients
Facility	Nutrition Services

	1. Office Equipment 2. Equipment for Consultation and Counseling 3. Anthropometric Equipment
	Nutrition Services 1. Office Equipment 2. Equipment for Consultation and Counseling 3. Anthropometric Equipment 1. Food Management 1. The place where food is received 2. Place/room for storing wet food ingredients 3. Place/room for storage of dry foodstuffs 4. Food preparation place 5. Food Cooking Place 6. Place of distribution of food 7. Milk kitchen 8. Place for washing kitchen utensils 9. Storage area for kitchen tools 10. Changing room for personal protective equipment (PPE) 11. Supervisor's room 12. Garbage dump
Expert Competency	4. Head of Nutrition Installation 5. Nutritionist 6. Food Processing Power 7. Waiter

Source: Author's Summary, 2022

The summary of nutrition installation service standards refers to the legal basis Peraturan Pemerintah Republik Indonesia Nomor 28 Tahun 2004 tentang Keamanan, Mutu dan Gizi Makanan and Peraturan Presiden Republik Indonesia Nomor 42 Tahun 2013 tentang Gerakan Nasional Perbaikan Gizi, as shown in the table 2.

Based on the literature and informant data, the author can conclude that there are special activities from the kitchen manager as shown in the following illustration:

Figure 8. Kitchen Management Activities
Source: Author's Illustration, 2023

Based on the discussion above, it can be seen that the activities that exist at the Village Nutrition House such as merging health care activities with child care so that the existing space requirements are a combination of these two aspects. Therefore the zoning is formed as shown in the image below:

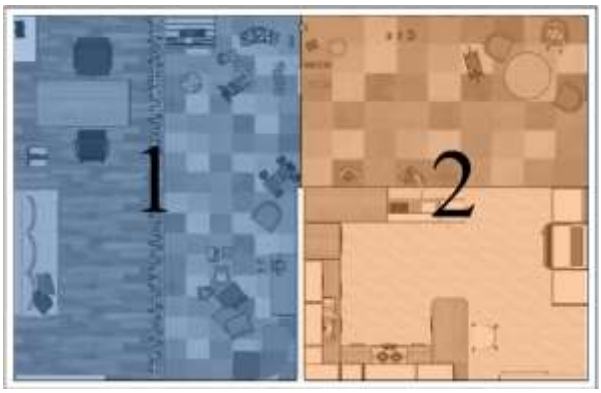

Figure 9. Space Zoning: Design Recommendations
Source: Author's Illustration, 2023

In the existing Gampong Lamlagang Nutrition House, there are two zones in which zone 1 functions as a common room (as shown in the figure 10) and zone 2 as a kitchen. In Zone 1, it is dynamic and can be assigned functions according to needs. The activities that can be accommodated are training, measuring body weight, nutritional counseling for mothers, giving and evaluating.

Figure 10. Existing: Zone 1
Source: Author's Documentation, 2022

In the design recommendations, the shared room in zone 1 is still functioning as before, except that there is a more emphasized room divider. However, the shape of the room divider is not in the form of massive walls but using curtains as shown in the figure 11. The use of curtains is also to emphasize the function of some common rooms in zone 1 for measurement activities and nutritional counseling. The difference in the function of space apart from using curtains is also distinguished by the use of floor materials. In the children's playroom, use carpets or mats whose materials are more child-friendly with colorful colors that can affect stimulation. Provision of toys in this room is also carried out to support the stimulation process in growth and development. In this design recommendation, the use of curtains was also chosen to maintain privacy and because curtains are more flexible and can be opened and closed. This makes it easier if managers need wider space such as the use of space for training. This shared space is also a form of design implementation of the principles of Community, Inclusion and the Spaces in Between which is a forum for user socialization.

Figure 11. Design Recommendation
Source: Author's Illustration, 2023

Meanwhile, the existing zone 2 is designated as a child feeding and cooking area as shown in the figure 12. In the design recommendations, the kitchen space is made more accessible and child-friendly to support the development of children's skills and create a warm, home-like atmosphere as shown in the figure 11.

Figure 12. Existing Zone 2
Source: Author's Documentation, 2022

Architectural principles for children that are applied to rooms are a form of solving space problems.(Parmaningsih, Hardiyati, & Mustaqimah, 2019). In solving space problems, there are several things to consider, namely space requirements, spatial relationship patterns and circulation in buildings. Space requirements are adjusted to the activities and needs of users. On the other hand, there are several spaces that are important aspects of architecture for children. These spaces are art rooms, storage, offices, eat-in kitchens and outreach (Scott, 2010).

Based on architectural theory for children these spaces have an important role in a child service center to support the development process. As seen in the design recommendations, in some zones 1 and 2 there are also spaces that are art rooms or art spaces, in this case playrooms which have an important role in developing children's creativity.

In addition, in some zones there is also a storage room which has an important role in the Village Nutrition House, to store a variety of various children's toys. Offices or offices function as a place for adults, in this case the manager of the Village Nutrition House manages and carries out activities. Eat-in kitchens are designed to be child-friendly with a furniture scale that adapts to the child's scale. This

will be an experience for children and can stimulate children to increase their independence as shown in the figure 13.

Figure 13. Children's Scale Furniture
Source: Author's Illustration, 2023

Outreach is an additional facility for the Village Nutrition House to support the child's growth and development process. This facility is in the form of nutrition measurement and counseling to the experts concerned, such as nutritionists and psychologists as well as therapy facilities for children who have disorders in the process of growth and development.

The principle of community, inclusion and the spaces in between is applied to circulation in buildings and shared spaces, such as open communal areas. Circulation can act as a link between spaces and shared spaces. On the other hand, circulation that connects between spaces can be an aspect of applying the interaction principle from architectural theory to children. In space, architectural principles for children are applied in the form of spatial elements such as detail, texture, color and ceilings, scale, interaction, furniture and transparency and nature.

The principles of detail, texture, color and ceilings are applied to the processing of space elements as shown by the use of room details that are familiar to children, textures to support sensory processes, dynamic color and ceiling selection and application to the building mass appearance which includes color selection, selection material for the texture of the building and the details you want to display to support the image of the building (Parmaningsih, Hardiyati, & Mustaqimah, 2019).

The following is a summary table of principles, criteria, application in designs that have been processed based on the literature and design recommendations that have been designed:

Table 3. Principles, Criteria, and Application in the Design of Village Nutrition Houses

Principles	Criteria	Application in the Design	
Community, Inclusion and the Spaces in Between	• Common room • Connecting room as a common room	• Providing an activity room with children which is also a forum for user socialization. • Providing toys that support the stimulation process in child development.	
Space	• Space according to the needs and activities accommodated. • Dimensions and proportions in accordance with accommodated users, especially children.	• Providing a storage area for toys and goods in the children's activity room. • Providing an accessible and child-friendly kitchen space to support children's skills development and create a warm, homely atmosphere. • Providing a nutrition consultation room at the Village Nutrition House. • Providing a place or storage space for managers.	
Transparency and Nature	Space inclusiveness: Transparency between indoor and outdoor spaces through spatial extension.	• Applying glass windows and sliding doors in the room.	
Detail, Texture, Colour and Ceilings	Processing of space elements starting from color, lighting, texture and pattern, aroma, sound and dynamic ceiling.	• Applying a drop ceiling in the children's activity room to create a dynamic ceiling.	
Scale	Using a child's scale in the design so that children blend in and do not feel alienated from their environment.	• Applying furniture that fits the scale, especially for children so that they are comfortable doing activities.	
Interaction	Creating interaction with the environment through	• Connecting spaces openly by reducing massive walls	

	relationships between spaces that are mutually sustainable.		

Source: Author's, 2023

Thus, it is hoped that this design recommendation will allow children who come to the village nutrition house to feel a different atmosphere so that children can develop and get nutrition according to their age (Anggia Natasya & Mayang Sari, 2018). Adjustment or adaptation of buildings is very necessary in accordance with the substance of the object of the adaptability research being carried out (Handoko, Kusumawanto, & Dharoko, 2022).

4. Conclusion

The Village Nutrition House is designed to answer the problem of stunting in children when they are in their growth phase. With the design recommendations for the Village Nutrition House, it is hoped that children and parents will become increasingly aware of the importance of nutrition from an early age, supported by spatial architecture that can add stimulation to children. Such as implementing the principles of Community; Inclusion and the Spaces in Between; Space; Transparency and Nature; Detail; Texture, Colour and Ceilings; Scale; and Interaction.

For example,efforts to add stimulation can be seen from the existence of a food serving table with a child's scale so that children get stimulation in increasing their independence. In addition, the colors used in furniture, children's toys and other ornaments are in the form of primary colors and other bright colors so as to enhance the mood in activities. It doesn't always have to be the walls of the room that are given a touch of color.

By being in the right environment, it is hoped that children will have a pleasant eating experience so that nutrition in children can be fulfilled, one of which is iron which is one of the keys to nutrition for child development. Avoiding children from external factors that cause stunting, namely nutrition and the environment with the village nutrition house media is expected to be a solution to the high cases of child stunting in Indonesia.

However, this study has several limitations, including the lack of direct empirical testing on the long-term impact of the Village Nutrition House design on reducing stunting rates, as well as limited contextual assessment in diverse regional and cultural settings. Future research is needed to validate these recommendations through field implementation and broader stakeholder involvement. This recommendation does not rule out the possibility of being developed.

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