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# **Empowering Families: The Village Hive Project's Effect on Economic Stability, Education, and Health in Vulnerable Communities**

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# ABSTRACT:

This study evaluates the impact of the Village Hive Project on family well-being in low-income households, specifically focusing on economic, educational, and health improvements. Single-parent and fractured households often face significant challenges such as economic instability, health issues, and limited educational opportunities. Despite these hardships, caregivers in these communities maintain strong aspirations for their children's education, requiring comprehensive support through community programs, healthcare services, and financial empowerment. The Village Hive Project addresses these needs through financial literacy, vocational training, nutritional support, and after-school care programs. This mixed-methods study combines quantitative analysis using F-tests and t-tests with qualitative insights gathered through grounded theory to explore the effects of the project. Findings indicate that the intervention significantly improved family income, nutritional standards, and educational access, contributing to overall family cohesion and stability. However, challenges remain, such as poor infrastructure, financial strain, and social barriers that hinder continued progress. Recommendations for further development include enhancing infrastructure, expanding social security services, and improving educational support. The study contributes valuable insights into the integrated approach to community development, highlighting the need for simultaneous interventions across economic, social, and healthcare sectors to foster long-term empowerment and sustainability.

Keywords: Family well-being, Economic empowerment, Health interventions, Poverty alleviation, Vocational training, Community engagement

## 1. Introduction

Family and caregiver struggles highlight the significant challenges faced by individuals in unstable environments, especially caregivers in single-parent or fractured households. These caregivers often manage health concerns, economic pressures, and the emotional and physical needs of family members, leading to stress and burnout. Economic hardships—such as income instability, unemployment, and debt—trap families in cycles of poverty, limiting access to basic needs like food, shelter, and education. This contributes to food insecurity and malnutrition, particularly among children, causing long-term health issues. Caregivers face further strain when dealing with chronic illnesses and mental health concerns, worsening vulnerabilities within the family. Despite these difficulties, caregivers maintain strong aspirations for their children's education, making significant sacrifices to overcome barriers such as financial struggles and lack of school access. Addressing these challenges requires comprehensive support through community programs, healthcare services, financial empowerment, and educational interventions to reduce burdens and promote family stability (Ngath, 2025a).

The Village Hive Project addresses these challenges by offering a holistic, community-driven approach to supporting vulnerable families. Through intervention services like financial literacy programs, vocational training, and crisis response, the project empowers caregivers to manage responsibilities and access essential services such as healthcare, childcare, and housing. Economic empowerment is promoted through micro-business opportunities and job creation initiatives, helping families overcome financial instability. By providing nutritional support and addressing food insecurity, the project ensures long-term self-sufficiency. Additionally, public health services, including health education and psychosocial support, alleviate health-related burdens on families. In education, the Village Hive focuses on improving school infrastructure, teacher training, and curriculum enhancements, ensuring children from low-income families have access to quality education. Overall, the Village Hive offers a comprehensive model that helps families break free from cycles of hardship and achieve long-term stability and independence (Ngath, 2025a).

The effectiveness of the Village Hive Project is evident in measurable improvements in family welfare, particularly in financial stability, nutrition, and safety. Before the intervention, households faced significant financial struggles, with an average income well below Cambodia's poverty line and expenses exceeding earnings. However, key welfare indicators have shown notable progress. Nutrition scores increased from 2.81 to 3.02, while safety perceptions improved from 3.83 to 4.00, both with statistical significance. Financially, household income per capita rose from \$1.65 to \$2.46, and total monthly income increased from \$223.19 to \$323.31. Although income inequality persists, these financial improvements have had a direct impact on household

well-being. A strong correlation between income and nutrition underscores the importance of economic empowerment in improving dietary quality. While advancements in education and healthcare have been more gradual, the project's focus on financial stability and family support has clearly contributed to positive change (Ngath, 2025b).

The after-school care program of the Village Hive Project is highly effective in promoting student success. Students benefit from academic support, particularly in subjects like math, Khmer, English, and computer education, with additional homework assistance helping bridge gaps caused by limited parental availability. The program also addresses food insecurity by providing snacks and meals, enhancing students' ability to focus during their studies. Moreover, the well-being and healthcare support offered through the program contribute to a safe and structured environment, further supporting students' overall success. Students value the opportunity to engage in extracurricular activities, such as football, dance, and gardening, which foster teamwork, discipline, and responsibility. The program plays a critical role in ensuring students thrive academically and personally, despite challenges at home (Ngath, S., Vang, S., & Hum, S., 2025).

## 1.1 Problem Statement

Despite the significant efforts of community-driven initiatives like the Village Hive Project, there remains a lack of comprehensive understanding of the challenges households face and how these challenges are addressed through such programs. Families in vulnerable communities, especially those with single or fractured parents, struggle with economic instability, inadequate healthcare, poor infrastructure, and limited educational opportunities. While these families often face emotional, financial, and health-related pressures, there is limited insight into how interventions—such as financial support, after-school care, healthcare services, and vocational training—directly influence their well-being and long-term stability.

The lack of detailed understanding, especially from the household perspective, prevents an accurate measurement of the true impact of these interventions on family cohesion, child education, and community development. Furthermore, gaps in knowledge about the effectiveness of the Village Hive Project in addressing infrastructure challenges, improving health management, and supporting youth and family engagement create barriers to improving the scope and reach of such initiatives.

# 1.2 Objectives of the Study

This study aims to evaluate the impact of the Village Hive Project on family well-being, focusing on its contributions to economic, educational, and health improvements, while also identifying areas that require further intervention to ensure sustained community development.

- 1. To assess the impact of the village hive project on economic empowerment: This objective demonstrate how the Village Hive project has improved family and community well-being through better income, education, health, and support services, leading to greater resilience and improved children's education.
- To identify the remaining barriers despite the Village Hive intervention: This objective evaluates the residual socio-economic and educational challenges experienced by families in the target community following the implementation of the Village Hive project, in order to inform strategic adjustments and enhance the sustainability and impact of future interventions.
- 3. To analyze the health and social benefits of village hive interventions: This objective focuses on the health and well-being of families, assessing how healthcare services, nutritional support, and mental health programs have contributed to the overall stability and social cohesion of families within the community.
- 4. To evaluate the impact of infrastructure improvements on community development: This objective examines the role of infrastructure improvements—such as electricity, school renovations, and road maintenance—in enhancing the accessibility and effectiveness of services, education, and community engagement within the project areas.
- 5. To investigate the effectiveness of after-school care programs in supporting student success: This objective explores how after-school care programs have supported children's academic, social, and emotional development, with a focus on the benefits of academic assistance, structured activities, and providing a safe environment for children.
- 6. To identify ongoing challenges and recommendations for future village hive development: This objective seeks to identify key challenges that persist despite the intervention, such as issues with infrastructure, social barriers, and school management, and to propose recommendations for further improvements based on community feedback.
- 7. To measure the statistical impact of the village hive project on family well-being: This objective evaluates the effectiveness of the Village Hive Project using statistical methods, such as F-tests and t-tests, to assess improvements in family well-being. Specifically, the objective is to measure changes in family self-reliance resulting from the project's interventions. The analysis will focus on understanding how families have progressed from dependence on external support to greater independence.

# 2. Literature Review

#### 2.1 Understanding Family Resilience and Holistic Child Development

The Theory of Family Resilience and Socio-Economic Strain: The theory explains how economic instability, caregiver health, educational barriers, and child labor interact to shape family resilience and influence long-term goals such as education and economic mobility. Families facing financial strain, housing insecurity, and multiple stressors often struggle to provide stable caregiving, leading to compromised health, reduced educational opportunities, and persistent poverty cycles. Economic hardship frequently forces children into labor, limiting their academic success and reinforcing intergenerational disadvantages. Overcrowded living conditions contribute to psychosocial stress, weakening family functioning and caregiving capacity. Additionally, financial strain and debt push families to prioritize immediate survival over long-term aspirations like education. Breaking these cycles requires strengthening family resilience through targeted interventions that address economic, housing, healthcare, and educational challenges, ensuring greater stability and opportunity for children (Ngath, 2025a).

The Holistic Child Development Theory: The theory emphasizes the interconnected nature of a child's cognitive, emotional, social, and physical growth. It posits that child development is shaped by multiple factors, including family stability, educational support, environmental conditions, and social interactions. A well-structured school environment, complemented by after-school programs, plays a crucial role in fostering academic success, emotional well-being, and behavioral development. Additionally, economic challenges, parental conflicts, food insecurity, and child labor can significantly hinder a child's ability to thrive. To promote holistic development, an integrated approach combining quality education, structured after-school care, community-driven financial support, and stable home environments is essential. This theory underscores the importance of a supportive ecosystem that nurtures all aspects of a child's growth, ensuring their long-term success and well-being (Ngath, S., Vang, S., & Hum, S., 2025).

#### 2.2 Alignment of the Village Hive Project with the Theory of Family Resilience, National Strategies, and Educational Goals

The Village Hive Model aligns with the Theory of Family Resilience and Socio-Economic Strain by addressing interconnected factors that influence family stability and resilience in the face of economic challenges. Emphasizing early intervention, caregiver health, and community resilience, the model works to prevent crises before they escalate, reducing the need for costly recovery services. By empowering local leaders through co-creation, the model fosters trust, community investment, and a supportive environment—critical elements for resilience. Additionally, it incorporates conscientisation, helping families develop critical awareness of their circumstances and potential solutions. Through these strategies, the Village Hive strengthens family resilience, enabling families to navigate economic pressures while maintaining long-term goals such as education and socio-economic mobility (Ngath, 2025b).

The Village Hive project also aligns with the Royal Government of Cambodia's Pentagonal Strategy – Phase 1, which prioritizes poverty reduction, human capital development, and economic growth. The project contributes to economic diversification and improved welfare by addressing household income disparities and supporting families below the poverty line (Ngath, 2025b). Furthermore, the Village Hive supports Cambodia's Education Strategic Plan (ESP) 2024-2028 in several key areas. Both initiatives share the goal of providing equitable, high-quality education for all children. The Village Hive's efforts to improve school infrastructure, classroom environments, and curricula directly support ESP's objective of inclusive education. In addition, its after-school care program, which offers nutritious meals and clean water, complements ESP's focus on promoting physical activities and overall wellbeing. The Village Hive's support for teacher training and resources further aligns with ESP's emphasis on performance-based management and professional development. Lastly, the project's community-driven, income-generating initiatives support ESP's focus on capacity development and decentralization, strengthening local education systems and improving educational standards (Ngath, S., Vang, S., & Hum, S., 2025).

# 3. Methodology

#### 3.1 Research Design

The study employed a mixed-methods research design, which incorporated both a quantitative and qualitative approach to provide a comprehensive understanding of familial experiences with the Village Hive Project. While the quantitative component primarily focused on a single scaling question, it served as an important reflection of participant perceptions regarding their family's well-being.

The qualitative component of the study was structured using an exploratory and descriptive design within a grounded theory framework. This allowed the researchers to gather deeper insights into the lived experiences of families, uncovering emerging themes, challenges, and unexpected outcomes. While the quantitative data provided a numerical measure of well-being, the qualitative data enriched the study by revealing the subtleties behind those numbers, highlighting the specific ways in which the Village Hive Project impacted family life.

## 3.2 Population and Sampling Method

This study targeted heads of households who had participated in the *Village Hive Project* in two of the four communes where the initiative was implemented. The first commune *had* 26 participants, *including* 22 women, whose occupations included housewife, cook, vendor, and cleaner. Similarly, the second commune *also had* 26 participants, *22 of whom were women*, working as housewives, vendors, and a motor repairer. These communes were selected due to their direct experience with the program, ensuring that the study captured insights from those most affected by the initiative. Some of the families enrolled their children in the embedded Village Hive schools, while others did not, reflecting diverse levels of engagement with the educational component of the project.

For this study, a *quota sampling* method was used to select participants. The sample was divided into specific subgroups based on characteristics such as gender, occupation, and location, ensuring that each subgroup was adequately represented in the study. The quotas were set to reflect the population's demographic composition, with a target of 26 participants from each commune, 22 of whom were women. Participants were then selected based on these predetermined quotas until each group had reached the required number. While this method did not involve random selection, it allowed the study to focus on particular groups of interest—heads of households with direct experience with the *Village Hive Project*—and ensured that these subgroups were adequately represented within the sample.

Two separate commune forums were conducted as part of the study: *CFFO*, representing the first group from the first commune, and *CFFS*, representing the second group from the second commune. These forums provided a platform to gather insights from participants, offering a deeper understanding of their experiences with the *Village Hive Project*.

#### 3.3 Data Collection Method

The data for this study were gathered through face-to-face discussions with two commune forums, incorporating both participatory and non-participatory observation methods. In the participatory approach, an observer actively engaged with participants by conducting semi-structured interviews, while the non-participatory observer remained detached, focusing on recording responses. This dual-observation strategy provided a comprehensive understanding of participants' experiences and perspectives, balancing direct interaction with objective documentation. By combining these methods, the study ensured a thorough collection of qualitative and observational data.

To structure the data collection process, the study utilized the Signs of Safety Framework and the Appreciative Inquiry approach. Developed by Andrew Turnell and Steve Edwards, the Signs of Safety Framework guided discussions using three key questions (Ngath, S., Vang, S., & Hum, S., 2025):

- "What are we worried about?"
- "What is working well?"
- "What needs to happen?"

These questions were further expanded through the EARS process of Appreciative Inquiry, which involve (Ngath, S., Vang, S., & Hum, S., 2025):

- Eliciting questions
- Amplifying questions
- Reflecting questions
- Starting-over questions

Integrating these tools provided a structured yet flexible approach, fostering meaningful discussions and capturing the complexities of the Village Hive Project (Ngath, S., Vang, S., & Hum, S., 2025).

While the quantitative component consisted of a single scaling question, it complemented the qualitative findings by providing a measurable indicator of family well-being. The question—"On a scale from 0 to 10, how would you rate your family's well-being?"—allowed participants to express their perceptions of self-reliance, with 0 representing "extremely vulnerable, unable to survive without external support" and 10 indicating "completely self-reliant, needing no external support." This question served as a concise yet valuable reflection of participant perceptions, offering insights into perceived progress and changes in their situation since engaging with the Village Hive Project.

#### 3.4 Data Analysis

Given the study's qualitative research design, grounded theory was employed as the primary analytical approach. This systematic methodology facilitates theory development based on data collected from participants (Ngath, 2025a). The multi-step analysis process began with:

- Open Coding Identifying individual pieces of meaningful data within participant responses.
- Axial Coding Grouping open codes into broader categories, organizing similar concepts based on underlying meanings.
- Selective Coding Establishing connections between axial codes to identify overarching themes and patterns.

The final phase of the qualitative analysis focused on theory generation, wherein a theoretical framework was developed based on emerging themes and clustered data. This framework was then compared with existing theories and literature to ensure its validity and relevance (Ngath, 2025a).

For the quantitative analysis, a comparison of variance in family well-being before and after the intervention was conducted using an F-test to determine whether the variances between the two groups were significantly different. Following this, a t-test for two samples assuming equal variances was employed to assess whether the mean family well-being scores differed significantly between the pre- and post-intervention periods. This statistical approach provided insights into the effectiveness of the Village Hive Project in improving self-reliance and overall family stability, complementing the qualitative findings with empirical evidence.

# 4. Presentation of the Results

# 4.1. Family and Community Development

# 4.1.1 Economic Stability and Income Generation

The Village Hive project has contributed to notable economic improvements for families and communities. One major advancement has been the introduction of electricity, which has enabled families to develop small businesses, secure steady incomes, and support their children's education. As one participant shared, *"There is now electricity available, and we have income to send [our] children to school on our own"* (CFFO).

Many families have progressed in their livelihoods. One respondent noted, "*The commune has made significant improvements in various services within the community, and families are progressing in their businesses*" (CFFO). These changes have strengthened financial stability and reduced reliance on external assistance. Another participant shared, "*Our family can earn a living locally and send children to school, allowing us to stay together*" (CFFO). By supporting business growth and household income, the project has helped improve children's school attendance and provided essential resources. A family stated, "*Our family has income after receiving support to start a small business, and children go to school regularly*" (CFFS). The availability of income has also ensured access to study materials and daily necessities: "*Families receive food and study materials for children*" (CFFS).

#### 4.1.2 Education and Child Well-being

The project's support for education has been instrumental in improving children's access to learning and family well-being. Children have benefited from regular school attendance due to the provision of study materials, food, and transportation. As participants stated, "*Children attend school daily*" and "*Children receive study materials*" (CFFS).

In addition, the after-school care program has created a safe space for children while enabling parents to work without worry. One respondent remarked, "The after-school care program allows parents to work comfortably" (CFFO). These efforts contribute to holistic child development by combining academic support with improved nutrition and a stable learning environment.

Families that once struggled with basic needs have transitioned to a level of economic security that allows their children to continue schooling and graduate. One parent reflected, "Our family moved from struggling for food to having income that supports us and allows my child to graduate from grade 12" (CFFO).

#### 4.1.3 Health and Social Support

Beyond economic and educational support, the Village Hive project has enhanced the health and social welfare of families. Health services have improved family well-being, with one participant noting, "Families receive health support, improving well-being" (CFFS). Community initiatives have also contributed to recovery and better healthcare access: "Commune projects [Village Hive] contribute to family recovery and healthcare" (CFFS).

Support with food and housing has strengthened stability for vulnerable households. As shared by a participant, "Food and rent assistance provide security" (CFFS). Children's health has also improved, with one respondent stating, "Ill children recover due to healthcare support" (CFFS).

These health and social supports complement the project's economic efforts, enabling children to attend school consistently and families to build more secure futures. The integration of health, income, and education support has created a foundation for lasting family and community resilience.

#### 4.2. Challenges Facing Families and Communities

The community continues to face challenges despite progress made through the Village Hive project. A major issue is deteriorating road conditions, especially during the rainy season, which hinders access to essential services. One respondent noted, *"Road conditions worsen during the rainy season"* (CFFO). Additionally, *"improvements in rainwater drainage and road maintenance are urgently needed"* (CFFO).

Economic and social barriers continue to hinder progress for many families. Managing debt is a persistent challenge, as one participant shared, "Debt management is difficult for low-income families" (CFFO). This financial burden affects their ability to meet basic needs and support their children's education. Additionally, families with young children fear exclusion from programs, with concerns that children under three may not be accepted in programs" (CFFS). Addressing these financial and social obstacles is essential to improving access to necessary support systems.

Barriers to education access and engagement remain significant. A lack of interest in vocational skills among children impacts their engagement: "Children show little interest in vocational skills or work" (CFFO). Declining student attendance is another pressing concern: "Declining student attendance needs to be addressed" (CFFO). Financial burdens persist, with teachers collecting unofficial fees and charging additional costs like bicycle parking: "Teachers still collect money from students" and "Teachers still charge for bicycle parking" (CFFO). Despite these challenges, improved family income and infrastructure have enabled more children to attend school regularly, with support from initiatives like the Village Hive project. While these improvements contribute to a more stable educational environment, financial and attendance barriers still need to be addressed for sustained student engagement.

Excessive mobile phone use among young children presents growing concerns. It has been observed that "children overuse mobile phones, especially at age 3" (CFFS), potentially affecting social and cognitive development. Additionally, "children show little interest in vocational skills or work" (CFFO), suggesting that digital distractions may contribute to disengagement from other learning opportunities. The lack of effective screen time management further disrupts daily routines and academic involvement. Addressing these issues by promoting balanced digital use and encouraging parent-child activities is essential to fostering a healthier learning environment.

#### 4.3 Interventions and Services for Families

The Village Hive project has significantly enhanced families' financial stability by providing training in income and expense management, vocational skills, and startup capital. One participant shared, "Families receive training on income and expense management" (CFFO), underscoring the importance of financial literacy programs. Access to ID cards for economically disadvantaged individuals, along with business funding, has enabled families to establish and expand their enterprises, fostering self-sufficiency. As another participant noted, "Poor ID cards, business startup capital, and vocational training are available" (CFFO).

These economic opportunities have allowed families to earn stable incomes locally, reducing the need for migration and enabling children to attend school regularly. One respondent emphasized, *"Families can earn a living locally and stay together"* (CFFO). This support has not only improved livelihoods but also strengthened family cohesion, contributing to long-term community development.

The Village Hive project also enhances children's access to education through after-school care, scholarships, and essential resources. The after-school program provides a safe and supportive environment for children, which helps promote their academic success. As one participant explained, "Parents feel comfortable working due to the after-school care program" (CFFO). Additionally, the initiative supplies "study materials, meals, and transportation, easing the financial burden on families" (CFFS). Beyond academics, the program includes "meditation sessions that support children's mental well-being" (CFFO), fostering a holistic approach to their development.

Improvements in health services within the Village Hive project have also positively impacted community well-being. Enhanced health center services now provide essential care more effectively, as one respondent noted: *"Health center services have improved significantly"* (CFFO). Furthermore, the food program in the after-school care program, aligned with World Food Program (WFP) standards, has strengthened children's nutrition and overall health, with one participant stating, *"The food program in the after-school care improves children's health"* (CFFS).

#### 4.4 Community Satisfaction and School Progress

#### 4.4.1 Positive Changes in Schools

The Village Hive project has made significant strides in enhancing school infrastructure and the quality of education provided. One notable improvement is the installation of a national flag and the renovation of school fences. As the report mentions, "*National flag installed and school fences renovated*" (CFFO). This not only improves the aesthetic and security of the school but also fosters a sense of national pride and unity among students. In addition, a new bicycle parking space was added, which significantly enhances the school's accessibility and facilitates easier transportation for students. This improvement is highlighted by the statement, "*New bicycle parking space added*" (CFFO), ensuring that students have a safe and convenient place to park their bicycles, thereby supporting their daily commute and encouraging higher attendance rates.

Moreover, the quality of education has seen noticeable improvements, with teachers consistently providing quality instruction to students. As noted in the report, "*Teachers provide quality education*" (CFFO), emphasizing the direct connection between teacher performance and student engagement. This focus on quality education has had a tangible impact on student attendance, as better teaching motivates students to attend school regularly. Additionally, these efforts have contributed to an overall improved school environment, creating a more conducive atmosphere for learning. The improvement in the school environment is captured in the phrase "*Improved school environment*" (CFFO), signaling a positive shift in both the physical and educational aspects of the school. Together, these initiatives not only enhance the school's infrastructure but also create an environment where students can thrive academically and personally.

#### 4.4.2 Ongoing Concerns and Areas for Improvement

The school management and organization face challenges that require attention to enhance overall effectiveness. One concern is the efficiency of school management, which has been noted as an area for improvement: "Inefficient school management" (CFFO). This impacts various aspects of operations, including student enrollment, which has seen a decline compared to previous years: "Fewer students enrolled compared to before" (CFFO). Additionally, organizational challenges continue to affect the institution's functioning: "Poor school organization" (CFFO). Addressing these areas can help create a more supportive and effective educational environment.

Furthermore, there are ongoing issues with school facilities, particularly the restroom facilities, which require further improvements to meet basic hygiene and comfort standards: "*Restroom facilities need further improvement*" (CFFO). The lack of adequate facilities affects students' overall well-being and contributes to the perception of the school as inadequately equipped.

Additionally, transportation services are an essential area of concern. Families using social enterprises face challenges in accessing reliable transportation services, which is crucial for ensuring that students can attend school regularly: *"Transportation services needed for families using social enterprises"* (CFFS). This lack of adequate transportation further isolates families and can lead to higher absenteeism.

Finally, there is a growing need for teachers to become more involved in fostering environmental responsibility among students. This includes actively helping children manage food waste, as highlighted in the report: *"Teachers should help children manage food waste"* (CFFS). Teachers play a vital role in teaching students about sustainability and environmental consciousness, and this responsibility must be emphasized as part of the broader educational framework.

# 4.5 Social Enterprise and After-School Programs

After-school care programs provide substantial benefits to families by addressing financial, academic, social, and developmental needs. One of the most significant advantages is the reduction of financial burdens on working parents. As stated, "*After-school care reduces family financial burdens*" (CFFS), allowing parents to focus on their jobs without the added stress of childcare costs. These programs also ensure a safe and reliable environment for children. According to the data, "*Programs provide safe and reliable child care*" (CFFS), giving parents peace of mind knowing their children are well cared for after school.

Beyond financial and safety benefits, after-school programs promote healthier lifestyles by reducing children's screen time. As highlighted, "*Children spend less time on screens*" (CFFS), as structured activities encourage physical movement, intellectual engagement, and social interaction. These interactions play a key role in enhancing children's communication skills. Through peer engagement, children develop better language and communication skills" (CFFS), which contributes to both academic and personal growth. Additionally, these programs foster positive relationships among families, as noted in the data: "*Families share positive experiences with other families*" (CFFS), strengthening community bonds and peer networking.

Academic development is another core benefit of after-school care. Children engage in educational activities that enhance their learning, while highperforming students are recognized for their achievements, boosting motivation. As stated, *"High-performing students receive awards after program participation"* (CFFS), reinforcing a culture of encouragement and success. Beyond academics, these programs equip children with essential life skills. As noted, *"Children gain skills in computers, language, and life skills in one place"* (CFFS), offering a well-rounded learning experience that prepares them for future challenges.

Lastly, after-school programs prioritize children's well-being through a thoughtfully designed physical environment. Clean and spacious nap areas ensure children receive adequate rest, emphasizing the importance of a supportive space. As documented, *"Nap spaces are clean and spacious"* (CFFS), creating a nurturing atmosphere that enhances overall child development.

# 4.5.2 Dissatisfaction and Areas for Change

An issue that arose within the after-school program involves student dissatisfaction, particularly when a child was unhappy with a teacher and chose to go home. As one incident was reported, "A child was unhappy with a teacher and went home" (CFFS). This situation highlights the importance of ensuring positive teacher-student interactions, as a lack of connection or a negative experience can lead to disengagement and emotional distress for the child. It is crucial to address these concerns by improving the quality of teacher interactions with children, ensuring a supportive and nurturing atmosphere that encourages students to remain in the program and benefit from its resources.

A key recommendation is to guide families with younger children, especially those with 3-year-olds, to enroll in after-school programs. "Guide families with 3-year-olds to enroll in after-school programs" (CFFS) is a crucial step in fostering early childhood development through structured activities that enhance social, emotional, and cognitive growth. Providing families with the right information and assistance in navigating the program enrollment process can ensure that younger children receive the necessary support and development from an early age, promoting their overall well-being.

Additionally, it is important to support children in overcoming emotional challenges, such as fear, and help them adjust to new environments. As the recommendation suggests, "Support children in overcoming fear and adjusting to new environments" (CFFS). When children experience fear or

uncertainty about new spaces or activities, it can hinder their engagement and development. Therefore, offering emotional support and strategies to help children feel more comfortable and confident in these environments is vital. Encouraging parents and caregivers to be proactive in supporting their children during transitions can foster a sense of security and promote long-term success in the program.

# 4.6 Family Recommendations for Future Development

# 4.6.1 Infrastructure and Social Policies

There is a significant need for social security services and a stronger village protection system. Families in the community have voiced concerns about their safety, emphasizing the importance of establishing reliable security services. *"Need for social security services and a village protection system"* (CFFO) reflects the growing demand for protection and safety mechanisms to safeguard the well-being of families, particularly where resources may be limited. Strengthening social protection would not only help families in times of crisis but also provide a foundation for long-term stability.

Another important issue raised by families is the request for school gardens. The desire to integrate environmental education within the school system is evident, as school gardens can offer students valuable hands-on learning experiences while promoting sustainability. *"Requests for school gardens"* (CFFO) highlight the need for educational programs that support ecological awareness and healthy eating. School gardens could serve as an effective tool for environmental education, benefitting both students and the broader community.

Additionally, there are calls to ban sugary drinks and instant noodles in schools. "*Calls to ban sugary drinks and instant noodles in schools*" (CFFO) reflect growing concerns about the negative health impacts of poor dietary choices on children's overall well-being and their academic performance. Implementing dietary restrictions to promote healthier food options in schools could contribute to improving children's health, reducing health risks, and supporting a more conducive learning environment.

#### 4.6.2 Community Engagement and Services

Increasing community involvement is essential for the successful implementation of local projects. "*Electricity is now available, and families have income to send their children to school on their own*" (CFFO). This empowerment allows families to contribute to the project's success while reaping the benefits of its initiatives. The engagement of families in this process supports their children's education, as "*increased income allows children to attend school regularly*" (CFFO). Additionally, "*the Village Hive project supports education, business, and family income*" (CFFO), which further encourages active participation and investment in community-driven change.

Expanding family access to scholarships plays a pivotal role in increasing community involvement. With financial support for education, families can better manage the costs associated with schooling, contributing to their overall development. "*Children attend school daily*" (CFFS), benefiting from the provision of "*study materials*" (CFFS) and regular attendance.

Improving infrastructure, particularly roads, is another critical factor. "Road conditions worsen during the rainy season" (CFFO), making transportation difficult and limiting access to essential services. "Families can earn a living locally and stay together" (CFFO), but only if roads are properly maintained, especially during adverse weather conditions. Ensuring reliable infrastructure, such as improved roads, will facilitate participation in community programs and access to vital resources, further enhancing the success of local projects.

# 4.7 Comparison of Variability and Improvement in Family Well-Being: Results from the F-Test and t-Test

# 4.7.1 Comparison of Variance in Family Well-Being "Before and After Intervention": F-Test Results

The F-Test for Two-Sample Variances was conducted to compare the variability in family well-being ratings before and after the intervention, where scores range from 0 (extremely vulnerable) to 10 (completely self-reliant). The average well-being score increased significantly from 3.32 before the intervention to 8.56 after. However, the variance in ratings before the intervention (2.23) and after (2.33) remained similar, indicating that while well-being improved, the spread of responses did not change substantially. The degrees of freedom for the "Before" and "After" groups were 27 and 26, respectively.

The calculated F-statistic (0.954) was very close to 1, suggesting that the variances of the two groups were nearly identical. The p-value (0.451, onetailed) was greater than the typical significance level of 0.05, meaning there was insufficient evidence to reject the null hypothesis. This indicates that the variance in family well-being scores did not change significantly after the intervention. Furthermore, since the calculated F-statistic (0.954) was greater than the critical F-value (0.523), the results confirm that the differences in variances between the two groups were not statistically significant. In summary, while the intervention led to a substantial improvement in the average well-being score, the variability in responses remained stable.

# Table 1: F-Test Two-Sample for Variances

On a scale from 0 to 10, how would you rate your family's well-being? 0 = Extremely vulnerable, unable			
to survive without external support; 10 = Completely self-reliant, needing no external support.			
Before the Interv	ention After the Intervention		

Mean	3.321429	8.555556
Variance	2.22619	2.333333
Observations	28	27
df	27	26
F	0.954082	
P(F<=f) one-tail	0.45133	
F Critical one-tail	0.522842	

#### 4.7.2 Impact of the Intervention on Family Well-Being: Results of the t-Test for Two-Sample Assuming Equal Variances

The t-Test for Two-Sample Assuming Equal Variances was performed to assess whether the improvement in family well-being was statistically significant. The mean well-being score before the intervention was 3.32, while the after score increased to 8.56, indicating a substantial improvement. The variances were 2.23 for the "Before" group and 2.33 for the "After" group, resulting in a pooled variance of 2.28. The degrees of freedom (df) for the test were 53, and the calculated t-statistic (-12.86) confirmed a strong difference between the two groups. The negative t-value reflects that the "Before" group's mean score was much lower than the "After" group's, reinforcing the conclusion that family well-being significantly improved post-intervention.

The p-value (6.40E-18, two-tailed) was extremely small, well below 0.05, confirming the observed difference was statistically significant. Since the absolute t-statistic exceeded the critical t-value (2.01), the null hypothesis—stating that there was no difference between the two groups—was rejected. These results confirm that the intervention had a statistically significant positive impact on family well-being.

 Table 2: t-Test: Two-Sample Assuming Equal Variances

On a scale from 0 to 10, how would you rate your family's well-being? 0 = Extremely vulnerable, unable to survive without external support; 10 = Completely self-reliant, needing no external support

	Before the Intervention	After the Intervention
Mean	3.321429	8.555556
Variance	2.22619	2.333333
Observations	28	27
Pooled Variance	2.278751	
Hypothesized Mean Difference	0	
df	53	
t Stat	-12.8551	
P(T<=t) one-tail	3.2E-18***	
t Critical one-tail	1.674116	
P(T<=t) two-tail	6.4E-18***	
t Critical two-tail	2.005746	

#### The Integrated Development Theory for Family and Community Empowerment

This theory posits that family and community empowerment is an interdependent process that thrives when social, economic, educational, and healthcare interventions are simultaneously implemented. These interventions must work in an integrated manner to promote sustained improvements in family well-being, community growth, and individual success, particularly in low-income or rural settings.

#### 5.1 Economic Empowerment through Income Generation

Families' financial stability is the cornerstone of empowerment, as it enables individuals to invest in their children's education and well-being, which in turn contributes to the overall improvement of the community. When families have reliable sources of income, they are more likely to prioritize education, ensuring that children attend school regularly and receive necessary study materials. Economic support can be provided through various means, including micro-enterprises, vocational training, and access to business startup capital. By enhancing economic stability, families are better positioned to support their children's future and maintain cohesion within the household.

Several theories support the connection between financial stability, education, and community development. Human Capital Theory (Becker, 1964) suggests that investments in education and skills lead to increased economic productivity and an improved quality of life, reinforcing the idea that financial

stability enables families to invest in their children's education for long-term benefits. Maslow's Hierarchy of Needs (Maslow, 1943) highlights that financial stability helps families meet basic needs, allowing them to focus on higher-order goals such as education and social development. Similarly, Bronfenbrenner's Ecological Systems Theory (1979) underscores the significant impact of a family's financial stability on a child's access to essential resources such as education, healthcare, and overall well-being. Within the framework of the theory, the family's economic situation is a key factor in shaping the child's immediate environment, which includes the microsystem, influencing their development and life outcomes.

Additionally, Social Capital Theory (Putnam, 1993) suggests that economically secure families are more likely to engage in social networks and community-driven initiatives, strengthening social ties and fostering collective action. The Sustainable Livelihoods Framework (Chambers & Conway, 1992) further highlights the importance of economic assets, such as micro-enterprises and vocational training, in creating resilient communities. Stable income sources empower families to sustain education and participate in development efforts, reinforcing the broader impact of financial stability on both family cohesion and community growth.

#### 5.2 Educational Support and Child Development:

Educational interventions are essential in ensuring that children can attend school consistently and achieve academic success. Access to quality education, study materials, after-school care, and transportation helps eliminate obstacles that may otherwise hinder students from continuing their education. Removing barriers such as high fees, inadequate facilities, and limited transportation plays a crucial role in expanding educational opportunities. Addressing these challenges enables communities to foster long-term development, as education serves as both a catalyst and a consequence of family and community growth.

Several theories support the importance of educational interventions in promoting individual and societal progress. Human Capital Theory (Becker, 1964) emphasizes education as an investment that enhances skills and productivity, ultimately improving economic outcomes. Similarly, the Capability Approach (Sen, 1999; Nussbaum, 2000) argues that individuals must have access to essential resources like education and transportation to reach their full potential. Ecological Systems Theory (Bronfenbrenner, 1979) highlights how family, school, and community environments influence a child's development, reinforcing the need for educational support systems such as better facilities and after-school programs to ensure long-term academic success.

In addition to these perspectives, other theories emphasize the role of education in breaking cycles of inequality and poverty. Social Reproduction Theory (Bourdieu & Passeron, 1977) explains how structural barriers perpetuate educational disadvantages across generations, stressing the need for targeted interventions to provide equitable opportunities for all children. Likewise, The Cycle of Poverty Theory (Lewis, 1959) suggests that poverty is continuously transmitted unless external efforts, such as access to education, disrupt the cycle. By implementing educational interventions, communities can empower individuals, promote upward mobility, and strengthen social and economic stability, ultimately creating a self-sustaining cycle where education fuels development, and development enhances educational opportunities.

#### 5.3 Health and Social Security Programs:

A healthy population is a productive one, and the integration of health services such as healthcare access, nutrition support, and mental health programs plays a vital role in ensuring families can thrive. Public health interventions that provide both preventive and therapeutic healthcare services reduce the burden on families and communities, enabling them to focus on other critical aspects of life, such as education and income generation. These health services are essential not only for preventing illness but also for managing existing conditions, ensuring individuals can fully participate in community and economic activities.

The significance of healthcare access in overall well-being is supported by several theoretical frameworks. Maslow's Hierarchy of Needs (1943) emphasizes that physiological and safety needs, such as healthcare and nutrition, must be met before individuals can focus on higher-level goals like education and employment. The Social Determinants of Health Theory (World Health Organization, 2008) further highlights how economic stability, education, and healthcare shape health outcomes, underscoring the importance of integrating health services to reduce disparities. Similarly, the Ecological Systems Theory (Bronfenbrenner, 1979) explains how environmental factors, including access to healthcare, influence individual and community wellbeing, fostering resilience and stability.

Other theories also reinforce the role of healthcare in societal development. The Health Belief Model (Rosenstock, 1974) suggests that individuals' perceptions of health risks and benefits impact their engagement in preventive and therapeutic services, emphasizing the need for accessible healthcare to encourage proactive health behaviors. The Capability Approach (Sen, 1999; Nussbaum, 2000) further argues that access to healthcare is essential for individuals to reach their full potential, allowing them to pursue education, employment, and active participation in community life. Together, these theories highlight the critical role of healthcare in reducing financial stress, improving family dynamics, and strengthening communities.

#### 5.4 Community and Infrastructure Development:

Community development is deeply rooted in the presence of robust infrastructure and supportive social policies that ensure equitable access to essential resources. Infrastructure, such as roads, electricity, water, and sanitation, plays a fundamental role in facilitating economic activities, improving living conditions, and fostering social cohesion within communities. When these basic services are available, families are better positioned to engage in productive work, attend school, and participate fully in community life. This aligns with Structural Functionalism (Parsons, 1951), which views society as a system where different structures (such as infrastructure and policies) function together to maintain stability. According to this theory, the availability of these resources contributes to social order by enabling individuals and families to meet their needs and participate fully in society.

Social policies, including social security and family protection services, provide a safety net that allows families to focus on long-term development without the fear of financial instability. Such policies not only protect families from unexpected challenges but also contribute to the overall stability and growth of the community (Putnam, 1993). According to Social Capital Theory (Putnam, 1993), well-developed infrastructure and strong social policies foster an environment where networks, trust, and shared values can flourish, which in turn promotes cooperation and economic growth. This combined effect of policies and infrastructure encourages collective participation in societal development, strengthening the community.

The improvement of infrastructure and the implementation of effective social protection policies are essential for sustaining the progress made through economic and educational interventions. By enhancing both daily living conditions and access to resources, these factors create a solid foundation for lasting family and community development (Rostow, 1960). Modernization Theory (Rostow, 1960) emphasizes that investment in infrastructure and social policies plays a crucial role in transitioning societies from traditional to industrialized economies, promoting economic growth and improved living standards. Similarly, the Capability Approach (Sen, 1999; Nussbaum, 2000) argues that access to infrastructure and social policies broadens individuals' opportunities to lead fulfilling lives, while the Basic Needs Theory (Streeten, 1981) asserts that fulfilling essential human needs is critical for sustainable development.

# 5.5 Social and Behavioral Change:

Behavioral change within families and communities is essential for maximizing the effectiveness of development interventions. Adapting to new economic models, adopting healthier lifestyles, and changing attitudes toward education and community participation are key components of this transformation. Additionally, addressing behavioral issues such as the overuse of technology and the mismanagement of resources is crucial for fostering a sustainable and thriving community. Programs aimed at facilitating these changes should be designed to encourage individuals and families to embrace new ways of thinking and acting that align with long-term development goals. By shifting behaviors, communities can better capitalize on the improvements made in infrastructure, education, and economic opportunities. A focus on behavioral interventions, alongside structural changes, ensures that the progress achieved is not only maintained but also deepened, supporting holistic community development and fostering a more resilient and empowered population.

Theories such as Bandura's Social Learning Theory (1977) provide a foundation for understanding how behavior can be influenced within a community. This theory emphasizes that individuals learn through observation, imitation, and modeling. When community members witness others successfully adopting new behaviors, especially when these behaviors lead to positive outcomes, they are more likely to follow suit. Programs that encourage behavior change through role models and peer influences can be highly effective in shifting attitudes toward education, resource management, and community participation. Similarly, Ajzen's Theory of Planned Behavior (1991) suggests that individual behavior is driven by intentions, which are shaped by attitudes, subjective norms, and perceived control over behavior. Understanding these factors can help guide programs that address community attitudes and perceptions, particularly about new economic models, healthier lifestyles, and technology use.

Furthermore, Rogers' Diffusion of Innovations Theory (1962) highlights the process through which new ideas and behaviors spread within a society. For behaviors to be adopted, they must be seen as advantageous, compatible with existing values, and easy to understand. Development interventions that emphasize these benefits are more likely to encourage widespread adoption. Bronfenbrenner's Ecological Systems Theory (1979) further underscores the importance of the environment in shaping individual and community behavior. This theory suggests that behavioral change interventions must consider various systems (such as local policies and community norms) to be successful. Additionally, the Health Belief Model (Rosenstock, 1974) suggests that individuals are more likely to adopt healthier behaviors if they perceive a significant threat and believe that the benefits of change outweigh the costs. Leveraging this model can motivate individuals and families to shift their actions in support of sustainable community development.

#### **Conclusion and Recommendation**

#### 6.1 Conclusion

The Village Hive project has significantly improved economic stability, education, and health for families and communities. The introduction of electricity has enabled families to start small businesses, generate steady incomes, and support their children's education. This has reduced reliance on external aid, allowing families to stay together and thrive locally. The project also improved children's school attendance by providing study materials, food, and transportation, while after-school care programs supported both academic and social development. Additionally, health and social services have enhanced well-being, with improved healthcare, food, and housing support. Together, these efforts have fostered family resilience, enabling children to attend school regularly and families to achieve economic security and better health.

Despite progress achieved through the Village Hive project, the community continues to face several persistent challenges. Poor road conditions, particularly during the rainy season, limit access to essential services and highlight the urgent need for improved drainage and maintenance. Economic hardships, including debt management struggles among low-income families, hinder their ability to meet basic needs and support their children's education. Social concerns persist, such as fears of exclusion from programs for families with children under three. Educational barriers remain significant, with declining student attendance, limited interest in vocational skills, and ongoing financial burdens from unofficial school fees. Additionally, the overuse of mobile phones among young children raises concerns about developmental and academic engagement. While the project has contributed to improved family income and school attendance, sustained support is needed to overcome financial, infrastructural, and social barriers for long-term community development.

The Village Hive project has significantly improved families' financial stability by offering training in income and expense management, vocational skills, and startup capital, enabling them to establish and grow businesses. This support has helped families earn stable incomes locally, reducing the need for migration and allowing children to attend school regularly, while fostering family cohesion. The project also enhances children's education through after-school care, scholarships, study materials, and transportation, easing financial burdens on families and promoting academic success. Additionally, meditation sessions support children's mental well-being. Furthermore, the project's health initiatives, including improved health center services and a food program aligned with World Food Program standards, have strengthened children's nutrition and overall health, contributing to the community's long-term well-being.

The Village Hive project has brought about significant improvements in school infrastructure and education quality, such as the installation of a national flag, renovation of school fences, and the addition of a new bicycle parking space, all of which enhance accessibility and foster national pride. Furthermore, the quality of education has improved, with teachers providing better instruction, which has positively impacted student attendance and engagement. However, challenges remain, including inefficient school management, poor organization, and inadequate restroom facilities. Transportation services for families using social enterprises are also lacking, and there is a need for teachers to play a greater role in promoting environmental responsibility, particularly in managing food waste. Addressing these concerns will help sustain the progress made and improve the overall school environment.

The Village Hive project's after-school care programs offer significant benefits to families by reducing financial burdens, providing safe spaces for children, and promoting healthier habits through structured activities. These programs help children develop academic, social, and practical life skills, such as language, communication, and computer skills, while also offering a supportive environment for rest. However, challenges such as student dissatisfaction with teachers and the need for better teacher-student interactions have been noted. Recommendations include guiding families with younger children, particularly those with 3-year-olds, to enroll in after-school programs and providing emotional support to help children overcome fear and adjust to new environments. Addressing these concerns will improve the effectiveness of the programs.

Families in the community have highlighted several recommendations for future development, including the need for improved social security services and a stronger village protection system to enhance safety. They also advocate for the creation of school gardens to promote environmental education and healthy eating, and for banning sugary drinks and instant noodles in schools to improve children's health and academic performance. Community engagement is seen as essential, with increased family income and access to scholarships supporting children's education. Additionally, improving infrastructure, particularly roads, is critical to ensure access to services and the success of local projects. These changes would foster a more supportive and sustainable community environment.

#### 6.2 Recommendation

• Financial and Social Support: Offer additional financial education and support programs to help families manage debt and improve their financial stability. Encouraging the use of business startup capital and vocational training could foster local economic growth and reduce financial strain.

- Social and Emotional Support for Children: Address emotional challenges faced by younger children, particularly those with fear or
  resistance to attending after-school programs. Providing emotional guidance and support for both children and parents could improve
  engagement and help children adjust to new environments, especially those under 3 years old.
- **Promoting Healthy Habits**: Implement educational programs that encourage healthy eating, such as creating school gardens and banning sugary drinks and instant noodles in schools, to improve children's physical well-being and academic performance.
- Strengthen Teacher-Student Relationships: Ensure positive teacher-student interactions by offering professional development programs focused on improving communication and conflict resolution skills for teachers. This would reduce instances of student dissatisfaction and create a more supportive learning environment.
- **Community Engagement**: Enhance community involvement through increased access to scholarships, family engagement in local projects, and promoting awareness of the benefits of community-driven change. Increased involvement will ensure the sustainability and long-term success of the Village Hive project.

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