Journal for Educators, Teachers and Trainers
The PROFESIOLab electronic, peer-reviewed, open-access Magazine

ISSN 1989–9572

DOI:10.47750/jett.2024.15.03.004

The livelihood security of ethnic minorities in Gia Lai province, Viet Nam

Ky Nguyen Dinh [1] Hung Luu Manh: [2]
Bich Nguyen Thi Ngoc, My Nguyen
Anh Vu Phan Thuy, An HoangVu
Vy Nguyen Tran Thuy
,

Journal for Educators, Teachers and Trainers, Vol. 15 (3)

https://jett.labosfor.com/

Date of revision: 01 2024
Date of Published: 07 2024

Ky Nguyen Dinh [1] Hung Luu Manh: Bich Nguyen Thi Ngoc, My Nguyen Thi Thanh, Anh Vu Phan Thuy, An Hoang Vu, Vy Nguyen Tran Thuy **(2024). The livelihood security of ethnic minorities in Gia Lai province, Viet Nam.** ***Journal for Educators, Teachers and Trainers*****, Vol. 15(3).31-41.**

Journal for Educators, Teachers and Trainers
The LabOSfor electronic, peer-reviewed, open-access Magazine

The livelihood security of ethnic minorities in Gia Lai province, Viet Nam

Ky Nguyen Dinh [1] Hung Luu Manh: [2]
Bich Nguyen Thi Ngoc, My Nguyen Thi Thanh, Anh Vu Phan Thuy, An Hoang Vu, Vy Nguyen Tran Thuy

kynd@hcmue.edu.vn; hunglm@hcmue.edu.vn, bichntngoc@hcmue.edu.vn, 4701612046@student.hcmue.edu.vn, anhoang.lifeskills@gmail.com, nguyentranthuyvyy@gmail.com

Department of Psychology, Ho Chi Minh University of Education, Vietnam.

ABSTRACT
Research on the livelihood security of ethnic minorities in Gia Lai province has been limited. This article examines the livelihood security of ethnic minorities in the region, focusing on food and nutritional security, economic security, ecological security, social security, psychological security, and physical security. Data was collected from 207 ethnic minority families in K'Bang district, Gia Lai province, Vietnam. The findings indicate that food and nutrition security, psychological well-being, and physical infrastructure are satisfactory, while economic development and the local ecosystem are rated poorly.

Keyword: **livelihood security, ethnic minorities**

1. Introduction

Livelihood security encompasses income, employment, and a network of interrelated "assets" (Aisa O. Manlosa et al., 2019). Sustainable livelihoods are defined as the ability to withstand and recover from challenges and disruptions, while also preserving or improving resources for the future (Kandji, Serigne T., et al., 2006).

A study conducted by Aisa O. Manlosa et al. (2017) in rural Southwestern Ethiopia revealed that the livelihood strategies of farming households are closely linked to their capital assets, which in turn have a significant impact on household food security. Farming practices in these areas are primarily traditional, relying heavily on manual labor and draft animals. The research highlighted that access to credit was limited, leading some households to seek informal sources of credit, such as borrowing coffee or cash from neighbors, friends, or relatives to address financial challenges.

The study by Shanta Paudel Khatiwada and colleagues (2017) highlighted that factors such as education, training, land ownership, access to credit, proximity to roads, market centers, and agro-ecological location play a crucial role in the adoption of lucrative livelihood strategies for poverty reduction in rural areas of Central Nepal.

In 2018, Zhifel Liu and his team published a study on "The impact of livelihood sources on the livelihood strategies of farming households in the western mountainous region of China." The author noted that natural capital and physical capital have contrasting effects on the selection of semi-agricultural and non-agricultural livelihood strategies. This suggests that higher values of the natural capital and physical capital index are associated with an increased likelihood of households opting for an agricultural strategy.

The study conducted by Nani Maiya Sujakhu and colleagues (2018) titled "Factors influencing the vulnerability of farming households' livelihoods in the highlands of Asia" revealed that households in the research area primarily depend on agriculture, specifically crop and livestock farming. The key factors contributing to their vulnerability include the education level of the household head, the amount of arable land available, and income generated from non-agricultural livelihood activities and technology utilization.

In the study "Livelihood Transformation among Local Ethnic Minorities in the West Central Coast Region - Current Situation and Raised Issues" by Nong Bang Nguyen (2020), the author acknowledges the positive impact of new conditions on livelihood transformation among ethnic minorities in the region. However, despite some progress, the lives of ethnic minorities remain impoverished due to slow, challenging, and complex transformation processes. The author proposes various implementation solutions to enhance and sustainably develop livelihoods for ethnic minorities in the area.

In "Developing Sustainable Livelihoods for Ethnic Minorities in Kon Plong District, Kon Tum Province" by Le Tan Hien (2017), the study aims to assess the current status of livelihood activities and access to resources among ethnic minorities in Kon Tum province. The author evaluates the successes, limitations, and causes of these limitations, providing specific solutions to improve and sustainably develop livelihoods for ethnic minorities in Kon Plong district.

Wenjia Peng and colleagues' study "The Limits of Livelihood Diversification and Sustainable Household Well-being: Evidence from China" (2022) explores the relationship between livelihood diversification and household well-being in China. The authors emphasize the importance of tailored policies and management options to promote sustainable livelihoods, based on households' access and participation in market-based activities.

In "Improving Rural Livelihoods within the Context of Sustainable Development" by Kwaku Aduse-Poku and colleagues (2003), the authors highlight the impact of resource availability on livelihoods in different communities, emphasizing the need for tailored approaches to enhance sustainable development.

Hypothesis

There is a correlation between ecological security, economic security, and the livelihoods of ethnic minorities in Gia Lai province.

2. Method

2.1. Data and sample

Table 1: Demographic characteristics of ethnic minorities in Gia Lai province (N=207)

Criteria	Classification	N (%
Sex/Gender	Male	108 (52.8%)
	Female	99 (47.8%)
Age	<18 years old	20 (9.7%)
	18-30 years old	76 (36.7%)
	30-40 years old	58 (28.0%)
	40-50 years old	35 (19.5%)
	>50 years old	18 (8.7%)
Total Income	< 1 million VND	147 (71.0%)
	1-3 million VND	50 (24,2)
	3-5 million VND	7 (3.4%)
	5-7 million VND	0 (0.0%)
	> 7 million VND	3 (1.4%)
Educational Level	Illitrate	46 (22,2)
	Primary School	85 (41,1)
	Secondary School	44 (21,3)
	High School	26 (12.6%)
	Vocational School	3 (1.4%)
	College/University	3 (1.4%)
Religion	Protestant	2(1.0%)
	Buddhism	2(1.0%)
	Hoa Hao Buddhism	1(0/5%)
	None	202 (96.7%)

This study analyzed data from 207 participants in Gia Lai province, Vietnam. Participants were informed of the voluntary nature of participation and assured of the confidentiality of their personal information. The gender distribution was 108 females (52.2%) and 99 males (47.8%). Regarding age, there were 20 participants aged 18 (9.7%), 76 aged between 18 and 30 (36.7%), 58 aged between 30 and 40 (28.0%), 35 aged between 40 and 50 (19.5%), and 18 aged over 50 (8.7%). In terms of income, 147 participants (71.0%) had income under 1 million VND, 50 (24.2%) had income between 1 million and 3 million, 7 (3.4%) had income between 3 million and 5 million, and 3 (1.4%) had income over 7 million. Education levels included 46 (22.2%) illiterate, 85 (41.1%) completed primary school, 44 (21.3%) completed secondary school, 26 (12.6%) completed high school, 3 (1.4%) completed vocational courses, and 3 (1.4%) completed college or university. In terms of religion, 2 (1.0%) were Protestants, 2 (1.0%) were Buddhists, 1 (0.5%) identified as peaceful, and 202 (96.7%) were non-religious.

2.2. Measurement

2.2.1. Food and nutritional security

This research examined food and nutritional security, including the availability of food year-round, good quality food for my family, affordable balanced meals, insufficient food quantity, reliance on public distribution system for

food grains, diverse farming systems providing a variety of food items, and availability of a balanced diet. The study found a high level of internal consistency with a Cronbach's alpha of 0.91. Responses were measured on a 5-point Likert scale from 1 (very greater extent response) to 5 (very greater extent response). (Lucas A. Garibaldi et al., 2016; N.V. Shwetha and Y.N. Shivalingaiah, 2019)

2.2.2. Economic security

In a study by N.V. Shwetha and Y.N. Shivalingaiah (2019), economic security was assessed using twelve items related to farming practices. These items included optimizing resource utilization, maximizing farm productivity and income, enhancing overall productivity through diversified farming, minimizing production costs, producing a variety of products, efficient land utilization, higher benefit-cost ratio, risk protection, income stability, savings potential, income generation through marketing, and stress reduction through livestock rearing. A Likert-type scale was used for assessment, with a high reliability score of 0.91 for Cronbach's alpha.

2.2.3. Ecological security

Ecological security was assessed using five items (N.V. Shwetha and Y.N. Shivalingaiah, 2019). These items included: farming diversification improving water use efficiency, diversified farming systems promoting recycling of farm waste, diversified farming reducing vulnerability to adverse climatic conditions, different farming systems promoting complimentary interactions of farm components, and maintaining sustainable soil fertility and health. Respondents indicated their agreement on a Likert-type scale. The Cronbach's alpha for the ecological security scale was 0.781.

2.2.4. Social security

The social security measurement in this study utilized a scale developed by authors

N.V. Shwetha and Y.N. Shivalingaiah (2019). The scale includes items such as

- Practicing various farming systems enhances recognition in society

- Adopting diversified farming strengthens connections with extension agencies like DOA and DOH

- Diversified farming promotes cosmopolitanism among farmers

- Diversified farming provides year-round employment for farm family members

- Diversified farming integrates all land-based activities

The scale demonstrated a high reliability with a Cronbach's alpha of 0.827.

2.2.5. Psychological security
The psychological securityscale, developed by N.V. Shwetha and Y.N. Shivalingaiah in 2019, includes the following items:

1. Practicing diversified farming improves my knowledge and skills.

2. Experience in diversified farming boosts my confidence to try new ideas.

3. Diversified farming enhances my confidence for better social interactions.

4. Farmers visit my farm for advice due to my success in diversified farming.

5. Leading in society due to practicing diversified farming in the area.

6. Higher satisfaction from diversified farming systems.

The scale has a high reliability score with a Cronbach's alpha of 0.916.

2.2.6. Physical security

The physical security measures in this study included owning a diversified farm, which increases the likelihood of owning a new house, owning land for social prestige, owning farm machinery for security, and having a bore well for irrigation to grow commercial crops. The scale had a Cronbach's alpha of 0.625.

2.3. Data analysis

This study utilized SPSS software version 22.0 to analyze data on various security aspects among ethnic families in K'bang district, Gia Lai province, Vietnam. The study calculated means and standard deviations for variables such as food and nutritional security, economic security, ecological security, social security, psychological security, and physical security. Descriptive statistics, including means and proportions, were also conducted. The study examined correlations among these
security factors and performed a simple regression analysis to explore the relationships between them among ethnic families in the study area.

3.1. Relationships between food security and various other forms of security, including economic, ecological, social, psychological, and physical security.

Table 2 shows the following mean scores and standard deviations for different types of security: Psychological security (M = 2.975, SD = 0.786), Social security (M = 2.888, SD = 0.96), Physical security (M = 2.792, SD = 1.194), Food and Nutritional security (M = 2.789, SD = 0.969), Ecological security (M = 2.577, SD = 0.855), and Economic security (M = 2.538, SD = 1.060).

Table 2: Mean and standard deviation of food and nutritional security, economic security, ecological security, social security, psychological security, and physical security.

Variables	N	M	SD
Nutritional Security	207	2.789	0.969
Economic Security	*207*	*2.538*	1.060
Ecological Security	207	2.577	0.855
Social Security	207	2.888	0.960
Psychological Security	207	2.975	0.786
Physical Security	207	2.792	1.194

Legend: N:sample size; M: Mean; SD: Std. Deviation

3.2. Correlation analysis

Table 3 presents the Pearson correlations among nutritional security, economic security, ecological security, social security, psychological security, and physical security.

The study found a positive correlation between food nutritional security and economic security ($r = .731$, $p < 0.01$), psychological security ($r = .649$, $p < 0.01$), social security ($r = .547$, $p < 0.01$), physical security ($r = .417$, $p < 0.01$), and ecological security ($r = .381$, $p < 0.01$).

Table 3: Correlation among nutritional security, economic security, ecological security, social security, psychological security, and physical security.

Variables	Nutritional security	Economic security	Ecological security	Social security	Psychological security	Physical security
Food and Nutritional security	1					
Economic Security	.731**	.544**				
Ecological Security	.381**	.667**	.638**			
Social Security	.547**	.782**	.637**	.785**		
Physical Security	.649**		.724**	.620**	.591**	
**.p < 0.01						

3.3. Hypothesis testing

A multiple linear regression analysis was conducted to examine the relationship between various aspects of security (Food and Nutritional, Economic, Ecological, Social, Psychological, and Physical) among ethnic minorities in Gia Lai province, Vietnam. The results showed that Physical security was positively correlated with Economic security ($\beta = .390$, $p < .001$), Psychological security ($\beta = .217$, $p < .001$), and Social security ($\beta = .153$, $p < .001$), as well as with Economic security ($\beta = .129$, $p < .001$). Conversely, Ecological security was negatively associated with Food and Nutritional security ($\beta = -.145$, $p < .001$).

4. Discussion

The study aimed to assess the needs and responses of ethnic minorities in K'bang district, Gia Lai province, Vietnam in areas including food and nutritional security, economic security, ecological security, social security, psychological security, and physical security.

4.1. Food and nutritional security

Food and nutritional security levels are generally rated as normal (M=2.789; SD=0.969), in line with previous studies showing a positive trend in food and nutritional security (Michael N.I. Lokuruka, 2020). Our research indicates that ethnic minority families have access to sufficient quality and quantity of food through diverse farming methods, ensuring food security throughout the year (N.V. Shwetha and Y.N. Shivalingaiah, 2019). The current state of food and nutrition security reflects government initiatives to support the new rural program.

4.2. Economic security

The study indicates that economic security remains low, consistent with previous research (Shwetha et al., 2021; Nong Bang Nguyen, 2020; Le Tan Hien, 2017). Our findings suggest that engaging in dairy/sheep/goat rearing can help alleviate stress and increase income through seasonal product marketing, contributing to improved livelihoods.

4.3. Ecological security

The study has revealed that maintaining a low level of ecological security can have negative consequences. Previous research has investigated strategies to enhance ecological security, which supports the results of this study (Shwetha et al., 2021; N.V. Shwetha and Y.N. Shivalingaiah, 2019). One key finding is that implementing diversified farming practices on a farm can help mitigate the impact of adverse climatic conditions and enhance water use efficiency.

4.4. Social security

In this study, social security is generally evaluated at a standard level, consistent with previous research (N.V. Shwetha and Y.N. Shivalingaiah, 2019; Nong Bang Nguyen, 2020; Le Tan Hien, 2017). According to Kandji et al. (2006), diversifying trees on farms promotes sustainable crop production. Our findings indicate that the most highly rated criterion is that diversified farming systems provide year-round employment for farm family members, albeit only at a standard level. Additionally, diversification on farms enhances cultural diversity among farmers, fosters strong connections with extension agencies, and integrates all land-based activities.

4.5. Psychological security

Our study found that Psychological security was rated at a normal level, consistent with previous research (Shwetha et al., 2021; N.V. Shwetha and Y.N. Shivalingaiah, 2019, 2021). The factor that received the highest rating was satisfaction derived from diversified farming systems. Factors rated lower included the belief that practicing diversified farming enhances knowledge and skills, facilitates easy interaction with others, boosts confidence to try new ideas on the farm, increases demand for farm visits and advice, and elevates one's status as a leader in societ

4.6. Physical security

The data shows that physical security was assessed at a normal or standard level, consistent with prior research (Shwetha et al., 2021; Nong Bang Nguyen, 2020; Le Tan Hien, 2017). This contrasts with the results of Marzieh Keshavarz et al. (2017) who found low physical security. The study found that owning land was the most important factor in increasing the likelihood of owning a new house and also offered the highest social prestige, in contrast to the findings of Marzieh Keshavarz et al. (2017).

5. Strengths and limitations`

This study examines the livelihood security of ethnic minorities, focusing on food and nutrition, economic/financial, ecological, social, psychological, and physical security. It builds on previous research highlighting the importance of livelihood security for ethnic minority families. The anonymous data collection process ensured accurate responses without security concerns, enhancing the credibility of our findings. This study contributes to evidence-based practices in community development in Gia Lai province, providing insights into the livelihoods of ethnic minorities. These strengths underscore the value of our study, informing future research and supporting effective interventions and policies in community development.

Source of Funding

This research is supported by the Ho Chi Minh City University of Education Foundation for Science and Technology, grant number CS.2023.19.48.

Declaration of Conflicting Interest

The authors have disclosed no financial or other conflicts of interest. Additionally, the funding organization did not participate in the study design, data collection, analysis, administration, documentation, or decision to submit the manuscript for publication.

Authors' Contribution

All authors contributed to the study design, data collection, and writing of the essay. They collaborated on logistics, drafts, and final approval of the content and plagiarism check. The authors share responsibility for the completion of the research.

References

1. Manlosa, A. O., Hanspach, J., Schultner, J., Dorresteijn, I., & Fischer, J. (2019). Livelihood strategies, capital assets, and food security in rural Southwest Ethiopia. *Food security*, *11*, 167-181.

2. Kandji, S. T., Verchot, L. V., Mackensen, J., Boye, A., Van Noordwijk, M., Tomich, T. P., ... & Garrity, D. P. (2006). Opportunities for linking climate change adaptation and mitigation through agroforestry systems. *World Agroforestry into the Future. World Agroforesty Centre, Nairobi*, 113-122.

3. Keshavarz, M., Maleksaeidi, H., & Karami, E. (2017). Livelihood vulnerability to drought: A case of rural Iran. *International Journal of Disaster Risk Reduction*, *21*, 223-230.

4. Garrity, D. P. (2006). *World agroforestry into the future*. World Agroforestry Centre.

5.ADUSE-POKU, K. W. A. K. U., NYINAKU, F., ATIASE, V. Y., AWUAH, R., MENSAH, E. O., NYANTAKYI, D., ... & AGYENIM-BOATENG, B. E. T. T. Y. (2003). Improving rural livelihoods within the context of sustainable development. *Case Study of Goaso District*, 1-6.

6. Le Tan Hien. (2017). Developing sustainable livelihoods for ethnic minorities in Kon Plong district, Kon Tum province.

7.Lucas A. Garibaldi, Barbaraa Gemmil - Herren, Raffaele D' Annolfo, Benjamin E. Graeub, Saul A. Cunningham, & Tom D. Breeze. (2016).

8. Garibaldi, L. A., Gemmill-Herren, B., D'Annolfo, R., Graeub, B. E., Cunningham, S. A., & Breeze, T. D. (2017). Farming approaches for greater biodiversity, livelihoods, and food security. *Trends in ecology & evolution*, *32*(1), 68-80.

9. Shwetha, N. V., & Shivalingaiah, Y. N. (2019). Development of scale to measure livelihood security of farmers practicing different farming systems in southern Karnataka, India. *Int. J. Curr. Microbiol. App. Sci*, *8*(11), 521-527.

10. Nani Maiya Sujakhu et al. (2018). Factors affecting the livelihood vulnerability of farming households in the highlands of Asia.

11. Nông, B. N. (2020). Livelihood transformation among the local ethnic minorities in the central West coast region-Current situation and issues.

12. Chambers, R., Conway, G., & Brighton Institute of Development Studies. (1992). *Sustainable rural livelihoods: practical concepts for the 21st century* (Vol. 296). Brighton: Institute of development studies.

13. Paudel Khatiwada, S., Deng, W., Paudel, B., Khatiwada, J. R., Zhang, J., & Su, Y. (2017). Household livelihood strategies and implication for poverty reduction in rural areas of central Nepal. *Sustainability*, *9*(4), 612.

14. Shwetha, N. V., Sachan, S., & Shivalingaiah, Y. N. (2021). Comparative analysis of livelihood security of the farmers practicing different farming systems in Mandya district of Karnataka. *Plant Archives (09725210)*, *21*(1).

15. Peng, W., Robinson, B. E., Zheng, H., Li, C., Wang, F., & Li, R. (2022). The limits of livelihood diversification and sustainable household well-being, evidence from China. *Environmental Development*, *43*, 100736.

16. Liu, Z., Chen, Q., & Xie, H. (2018). Influence of the farmer's livelihood assets on livelihood strategies in the western mountainous area, China. *Sustainability*, *10*(3), 875.