

Exploring husband's contribution to toddler nutritional sufficiency: A socio-economic study from coastal and agromaritime communities

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Abstract. Stunting remains a chronic nutritional problem that affects the quality of human resources in Indonesia, especially in coastal areas with low economic conditions. This study aimed to analyze the relationships among household economic conditions, the household head's livelihood type, and parents' roles in the nutritional adequacy of toddlers in families at risk of stunting in the Sumur District, Pandeglang Regency, Banten Province. A mixed methods approach was used, involving 402 housewives through surveys, in-depth interviews, and group discussions. Quantitative analysis was performed using the Chi-square test and path analysis. The results showed that the father's occupation was not significantly related to the time allocated to childcare ($p = 0.176$), but was significantly related to total assets ($p = 0.012$) and per-capita income ($p = 0.000$). Economic pressure influenced mothers' time allocation for childcare ($p = 0.000$), and mothers' time was associated with their feeding practices ($p = 0.001$). However, the relationship between feeding practices and children's nutritional status was not significant, nor was the indirect pathway from mothers' time to nutritional status through feeding practices. These findings confirm that economic factors have a greater influence on children's nutritional status than parenting time. Efforts to reduce stunting must be comprehensive.

1 Introduction

Family well-being is significantly influenced by the household's economic condition. Income is a key determinant of the quality and quantity of food consumed, as well as a family's ability to meet basic needs. Previous research stated that income level is a crucial

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factor in determining food consumption patterns. Families with low incomes often have limited purchasing power, making it difficult to adopt healthy eating habits. Low family income is a major cause of nutritional problems in children. Income not only affects the fulfillment of physical needs but also influences the family's psychological well-being and happiness.

Variation in family income is closely related to the type and stability of the head of household's employment. Research by Anna and Pilarz (2022) shows that parental job instability is associated with increased economic pressure, parenting stress, and decreased child happiness [1]. High-risk jobs often negatively impact the well-being of workers and their families through mental health disorders, financial stress, and weakened social support. In addition to economic conditions and the head of household's employment, social changes also indicate that women's dual roles within the family are becoming stronger. Women now not only play a role in managing the household but also in earning a living to support the family economy [1-3]. However, this dual role often presents new challenges, particularly in childcare practices. Previous studies found that working mothers tend not to exclusively breastfeed due to time constraints, even though exclusive breastfeeding for the first six months is crucial for infant growth and development. This situation illustrates that economic pressure and limited time for working mothers can influence children's feeding patterns, ultimately impacting their nutritional status.

This phenomenon is also seen in Sumur District, Pandeglang Regency, Banten, a coastal area with low-lying geographical conditions between 0–1,778 meters above sea level. Most of the population earns a living as farmers and fishermen, who are highly dependent on natural factors. Uncertainty of work results and fluctuations in income make families in this area vulnerable to economic pressures. These conditions can affect time allocation within families, including the division of time between childcare and meeting nutritional needs. Based on this background, this study was conducted to examine the relationships among the head of household's occupational choice, time allocation for childcare, and family asset ownership among families at risk of stunting in Sumur District, Pandeglang Regency, Banten Province, Indonesia.

2 Method

2.1 Design, location, and sample of the research

This study used a quantitative, cross-sectional design. The study was conducted in the Sumur Subdistrict, Pandeglang Regency, Banten Province, covering seven villages. The research location was selected purposively based on the area's characteristics as a locus for families at risk of stunted growth. The respondents in this study were 402 housewives from families at risk of stunting. They were selected purposively based on having married at a young age (under 18 years) and having more than 3 children. In addition, 10 respondents were selected for in-depth interviews to supplement the research.

2.2 Variable and data collection

This study examined three main variables: economic pressure measured by per capita income and total asset ownership; mothers' time allocation, child feeding patterns, and nutritional status measured using WAZ and HAZ. The economic pressure variable was measured using Sunarti's (2021) instrument [2]. Maternal time allocation was measured using the Popkin (1980) instrument [3], feeding patterns were measured using the extended

version of the FPSQ-S questionnaire, and nutritional status was measured according to Permenkes No. 2 of 2020.

2.3 Data analysis

The data obtained through the questionnaires were processed using Microsoft Excel for data entry, coding, scoring, and index calculation. Furthermore, quantitative data analysis was performed using SPSS software. Data analysis was conducted using a descriptive approach to describe the distribution of the data and to calculate the mean and standard deviation for each research variable. Chi-square tests were used to examine the associations between family characteristics and the studied variables. Furthermore, Structural Equation Modeling (SEM) with a path analysis approach was employed to analyze the direction and strength of the relationships among variables in the proposed conceptual model. Qualitative data obtained through in-depth interviews were analyzed using a thematic analysis approach to identify, group, and interpret the main themes that emerged from the interview results.

3 Result and discussion

The findings indicate that the majority of families in this study were in lower-middle- income conditions, as evidenced by the dominance of informal-sector employment, low maternal economic participation, and limited family income and assets. The majority of heads of families in this study worked as fishermen (49.5%) and farmers (31.1%), in line with the characteristics of the study area, which is an agro-maritime region. This employment pattern indicates that most families rely on the informal sector for income, which is dependent on natural conditions.

Table 1. General characteristics of respondents

Characteristics	Percentage (%)
Job of Head of Family	
Formal Workers	4.2
Self-employed	12.2
Farmer	31.1
Fisherman	49.5
Other	3.0
Mother's Job	
Productive	14.9
Reproductive	85.1
Family Income (IDR)	
< 1,000,000	53.0
1,000,001 - 2,000,000	34.1
2,000,001 - 3,000,000	10.2
> 3,000,001	2.7
Total Family Assets (IDR)	
0 - 10,000,000	70.1
10,000,001 - 20,000,000	10.4
20,000,001 - 30,000,000	5.7

Note: IDR: Indonesian Rupiah

Meanwhile, almost all mothers (85.1%) were in reproductive roles, meaning they did not engage in income-generating activities and focused on domestic work. Economic dependence on informal sectors such as fisheries and agriculture tends to result in low,

unstable household incomes and minimal social protection [4]. This is reflected in more than half of families (53%) having an income below IDR 1,000,000 per month, and approximately 7 out of 10 families having total assets of less than IDR 10,000,000. Thus, the informal-sector-dominated employment structure and the limited economic contribution of housewives exacerbate families' economic vulnerability in the study area.

The Chi-square test results in Table 2 show no significant relationship between fathers' employment and childcare time allocation in families at risk of stunting in Sumur District, Pandeglang ($p > 0.05$). This indicates that fathers' involvement in childcare is relatively uniform across occupations, with the majority being in the low category. In-depth interviews revealed that many fathers struggle to manage their time because they work long hours to meet family needs. This finding aligns with research in agrarian and coastal countries that shows fathers are often absent from home for extended periods, limiting interaction with their children [5]. Fathers who work more than 50 hours per week or have a commute of more than 1.5 hours per day tend to be significantly less involved in childcare, regardless of their employment. Even among fathers working in the formal sector, involvement in childcare remains low because they often return home late at night and leave caregiving to their mothers.

Table 2. The relationship between the type of work of the head of the family and the allocation of time for childcare

Job of Head of Family	Time Allocation Category			
	Low (%)	Medium (%)	High (%)	Total (%)
Formal workers	82.4	11.8	5.9	100
Self-employed	69.4	12.2	18.4	100
Farmer	74.4	14.4	11.2	100
Fisherman	79.4	15.6	5.0	100
Other	66.7	25.0	8.3	100
Chi-square	0.176			

Note: Sig at $p < 0.05$

Furthermore, in-depth interviews revealed that local culture continues to place mothers as the primary caregivers. Consequently, many fathers focus solely on earning a living without participating in childcare. This traditional norm maintains that childcare remains the mother's responsibility, even when the father is present at home [6]. Cultural norms that place mothers as the primary caregivers remain strong in many societies, including in agromaritime and rural areas. Qualitative studies across various African and Asian countries indicate that fathers are primarily perceived as breadwinners, while childcare is considered the mother's responsibility. Fathers who attempt to become more involved in childcare sometimes face negative social stigma [7]. Furthermore, fathers' confidence in their parenting skills and egalitarian gender beliefs also influence their level of involvement.

Table 3. The relationship between the father's occupation and total assets owned by the family

Job of Head of Family	Total assets owned by the family			
	0 – 10 Million (%)	10 – 20 Million (%)	20-30 Million (%)	>30 Million (%)
Formal workers	58.8	5.9	5.9	29.4
Self-employed	77.6	6.1	0	16.3
Farmer	79.2	7.2	4	9.6
Fisherman	65.3	13.1	8.5	13.1
Other	41.7	25	0	33.3
Chi-square	0.012*			

Note: Sig at $p < 0.05$

In addition to its influence on time allocation for caregiving, the type of employment held by the head of the family is also linked to total assets. The analysis revealed that the type of employment held by the head of the family is related to total assets ($p=0.012^*$). Furthermore, the results also show that families with assets above IDR 30 million are dominated by heads of families working in the formal sector. Conversely, the proportion of families with total assets below IDR 10 million is higher among informal workers, such as farmers (79.2%) and the self-employed (77.6%). This finding indicates that formal sector employment provides more stable economic opportunities and access to greater assets, compared to informal sector employment, which tends to have fluctuating incomes and minimal social protection.

The results of this study align with research across countries showing that household heads who work in professional, managerial, or skilled sectors tend to have higher assets and net worth than those who work in the informal sector, have casual jobs, or lack specialized skills [7]. For example, a study in Vietnam found that households with self-employed or regular workers had greater assets, although they also tended to have higher debt, while households with casual workers or unemployed heads had lower assets and less economic stability [8]. Furthermore, research in South Africa also showed that jobs with rare skills significantly increased household net worth [9]. Therefore, increasing access to more stable, high-paying jobs can be an important strategy for strengthening family economic resilience.

These findings are reinforced by the results of in-depth interviews, several informants stated that much of the income received was allocated for daily life, such as:

"My husband works on a project in the city, but he doesn't come home every day. He divides his money between food and house repairs." (N, 24 years old, housewife).

This quote illustrates that the income of families with precarious employment tends to be spent on daily needs, making it difficult to accumulate assets. This is supported by previous research in Germany, which found that workers in temporary or mini-jobs accumulated fewer financial assets than permanent workers. This occurs because unstable and often lower incomes make them more vulnerable to "asset poverty," a condition in which financial assets are insufficient to sustain living expenses for several months without income [10]. Furthermore, precarious employment is often punctuated by periods of unemployment or underemployment, further impairing a family's ability to save or invest. Other research also confirms that low-income families with precarious employment focus more on daily consumption and have fewer opportunities to increase long-term savings or assets [11]. Thus, the depletion of income for daily needs among families with precarious employment is a major obstacle to asset accumulation and exacerbates the family's economic vulnerability.

Table 4. Relationship between father's occupation and family per capita income

Father's occupation	Family Per Capita Income	
	Income Below the Poverty Line (< IDR 719,799)	Income Above the Poverty Line (> IDR 719,799)
Formal workers	52.9%	47.1%
Self-employed	71.4%	28.6%
Farmer	86.4%	13.6%
Fisherman	92.5%	7.5%
Other	91.7%	8.3%
Chi-square	0.000	

Note: Sig at $p < 0.05$; IDR: Indonesian Rupiah

The poverty line for Pandeglang Regency in 2024 (1.5 x IDR479.866.00) is IDR719.799.00-, (BPS Pandeglang 2024).

The Chi-square test results in Table 4 indicate a significant relationship between the head of household's occupation and the family's per capita income ($p = 0.000$). In general, families with heads of household working in the informal sector, such as fishermen and farmers, dominate the group with incomes below the poverty line (<IDR 719.799 per capita per month). Ninety-two percent of fishermen and 86.4 percent of farmers fall into the below-poverty income category. Conversely, families with fathers working in the formal sector show a more balanced income distribution, with 47.1% already above the poverty line. This finding indicates that the type of employment strongly influences household economic capacity. Formal employment generally provides a more stable income and has the potential to improve family welfare, while informal sector employment, such as fishing and farming, is dependent on weather, seasonal factors, and fluctuating market prices.

Table 5. The relationship between maternal employment and maternal time allocation in childcare

Mother's Employment	Maternal Time Allocation In Childcare			
	Low (%)	Medium (%)	High (%)	Total (%)
Productive	46 (76.7%)	8 (13.3%)	6 (10.0%)	60 (100%)
Reproductive (Does not make money)	261 (76.3%)	52 (15.2%)	29 (8.5%)	342 (100%)
Chi-square	0.880			

Note: Sig at $p < 0.05$

The Chi-square test results in Table 5 indicate that there is no significant relationship between a mother's employment type and time allocation for childcare. This means that whether a mother works does not affect the time she allocates to childcare. Both mothers who play a productive role (working and earning money) and those who play a reproductive role (not working, focusing on the home) show similar patterns of time allocation for parenting. This finding suggests that mothers prioritize childcare regardless of their employment status. This finding aligns with the findings of those who stated that many mothers in developing countries continue to fulfill domestic roles despite working outside the home [12]. Thus, differences in employment status are not a dominant factor in allocating time to children.

Table 6. Test of the relationship between total assets, per capita income, economic pressure, time allocation, parenting patterns, and children's nutritional status.

Path	P-Value
Total Assets → Economic Pressure	0.021
Per Capita Income → Economic Pressure	0.044
Economic Pressure → Mother's Time Allocation	0.000
Mother's Time Allocation → Childcare patterns	0.001
Child feeding patterns → Child nutritional status	0.688

Note: Sig at $p < 0.05$

The analysis results in Table 6 indicate significant relationships between total family assets, per capita income, and economic pressure ($p = 0.021$ and $p = 0.044$, respectively). This finding indicates that the lower a family's assets and income, the higher its perceived economic pressure. This condition indicates that household economic stability is significantly influenced by asset ownership and income levels. This finding aligns with

research by Joyce *et al.* (2022), which explains that economic hardship is a direct consequence of low household income and assets, which ultimately affects psychological well-being and family decision-making [13].

Furthermore, the test results also showed that economic pressure was significantly related to mothers' time allocation in childcare ($p = 0.000$). This suggests that when economic pressure increases, mothers tend to have less time for childcare because they must contribute to productive activities to increase family income. This finding supports the Family Stress Model, which posits that economic pressure affects not only parents' psychological well-being but also household interaction patterns and childcare practices.

Furthermore, the results showed that maternal time allocation was significantly related to child feeding practices ($p = 0.001$). This means that the more time a mother can allocate to her child, the better her child's feeding practices will be. Mothers with sufficient time tend to be better able to organize meal schedules, pay attention to food types, and ensure their children receive a balanced nutritional intake. However, the relationship between child feeding practices and children's nutritional status was not significant ($p = 0.688$). These results indicate that although feeding practices are an important part of parenting, they do not directly determine children's nutritional status in families at risk of stunting. Economic constraints and limited access to nutritious food are likely the main barriers to families maintaining their children's nutritional quality, even if their dietary practices are relatively good.

Overall, the results in Table 6 illustrate that the family's economic dimension plays a key role in determining the quality of parenting, but its impact on children's nutritional status is indirect. This means that economic pressures act as a trigger for changes in parenting behavior, while parenting patterns alone are not strong enough to improve child nutrition without adequate economic support. Therefore, efforts to improve children's nutritional status cannot be separated from strategies to improve family economic well-being.

Table 7. Indirect influence test

Path	T-Value
Mother's Time Allocation → Eating Parenting Patterns →Child Nutritional Status	0.334

Note: Sig at $p < 0.05$

The analysis results in Table 7 show that the indirect effect of maternal time allocation on children's nutritional status through parenting patterns is not significant, with a t-value of 0.334 (< 1.96). This result indicates that although maternal time allocation has a significant relationship with parenting patterns, and parenting patterns are considered important in child-rearing theory, this indirect pathway does not significantly improve children's nutritional status. In other words, parenting patterns do not act as a mediating variable between maternal time allocation and children's nutritional status in families at risk of stunting in Sumur District.

This phenomenon suggests that the quantity of time mothers have available does not automatically translate to improvements in children's nutritional status. Many other factors influence children's nutritional outcomes, including mothers' nutritional knowledge, the availability of nutritious foods, age-appropriate feeding practices, and economic and environmental conditions. Research by Muluye *et al.* (2020) confirms that improving knowledge and proper feeding practices is far more effective in improving children's nutritional status than simply increasing mothers' time [14]. Which show that economic pressures and job instability often hinder families' ability to optimize parenting practices, including meeting children's nutritional needs.

Furthermore, these findings reinforce the argument of Han and Hart (2022), who suggested that unstable economic conditions impact parents' emotional well-being and indirectly the quality of parenting [15]. In the context of this study, even though mothers have time to care for their children, high economic pressure can reduce the effectiveness of that time in quality parenting practices, including feeding. Women's dual roles in the household often reduce mothers' capacity to provide optimal care, especially amidst economic constraints and work pressures.

Thus, the test results in Table 7 confirm that parenting and feeding patterns have not acted as significant mediators in improving children's nutritional status, as economic factors and family pressure remain the primary determinants. This situation emphasizes the importance of a multidimensional approach to stunting management, focusing not only on parenting behavior and maternal time allocation but also on strengthening family economic support and nutritional literacy. Interventions that combine improved economic well-being with effective parenting and feeding education are considered more likely to sustainably improve children's nutritional status.

4 Conclusion

This study shows that differences in the household head's livelihood type influence the family's economic situation, which, in turn, shapes childcare patterns. Economic pressure has been shown to influence the time mothers have available for caregiving, while caregiving time is associated with parenting patterns. However, parenting patterns do not significantly impact children's nutritional status, so an indirect pathway is also not proven.

These findings confirm that economic factors play a more dominant role than parenting time in determining a child's nutritional status. Therefore, efforts to improve nutrition need to be implemented through a multidimensional approach that integrates family economic empowerment, nutrition education, and father involvement in parenting.

References

1. A. Sugiharto, Hartoyo, I. Muflikhati, Strategi nafkah dan kesejahteraan keluarga pada keluarga petani tadah hujan. *J. Ilmu Kel. Konsum.* **9**, 1 (2016). <https://doi.org/10.24156/jikk.2016.9.1.33>
2. E. Sunarti, N. Fatwa, Z. Rahmawati, W. Faramuli, D. Ramadhany, Spatial environment of home, stress management, and welfare of family living in two-level marginal regions. *J. Fam. Sci.* **6**, 1 (2021). <https://doi.org/10.29244/jfs.v6i1.35795>
3. M. Popkin, Time allocation of the mother and child nutrition. *Ecol. Food Nutr.* **9**, 1–13 (1980). <https://doi.org/10.1080/03670244.1980.9990579>
4. T. Herawati, M. Simanjuntak, B. Kumalasari, Investigating the quality of life on farmer family: Roles of gender relations, economic pressure, financial management, and livelihood strategies. *J. Fam. Sci.* **6**, 37–52 (2021). <https://doi.org/10.29244/jfs.v6i1.35796>
5. Y.E. Lee, Childcare sharing and family happiness: analyzing parental and child well-being in the actor-partner interdependence model. *Front. Public Health.* **12**, 1361998 (2024). <https://doi.org/10.3389/fpubh.2024.1361998>
6. L.H. Foglabenchi, H. Stöckl, T. Marchant, I am a father but not pregnant: a qualitative analysis of the perspectives of pregnant couples on male partner role during pregnancy care in Bamenda, Cameroon. *Reprod. Health.* **21**, 195 (2024). <https://doi.org/10.1186/s12978-024-01928-5>

7. H. Rakotomanana, C.N. Walters, J.J. Komakech, D. Hildebrand, G.E. Gates, D.G. Thomas, Fathers' involvement in child care activities: Qualitative findings from the highlands of Madagascar. *PLoS One*. **16**, e0247112 (2021). <https://doi.org/10.1371/journal.pone.0247112>
8. R.S. da Silva, C.B. Coppo, E.M. Zani, A.V. Zani, Father participation in the care of a critically ill child: a scoping review. *Rev. Esc. Enferm.* **59**, e20240278 (2025). <https://doi.org/10.1590/1980-220x-reeusp-2024-0278en>
9. H. Vo, A.T. Vo, C.M. Ho, Does gender and education of the households' heads matter for wealth accumulation in Vietnam? Evidence from a recent decade. *Heliyon*. **9**, e22836 (2023). <https://doi.org/10.1016/j.heliyon.2023.e22836>
10. H. Combrink, J. Venter, The influence of employment and occupation on a household's net equity. *J. Econ. Financ. Sci.* **9**, 730–748 (2016). <https://doi.org/10.4102/jef.v9i3.68>
11. M.R. Despard, T. Friedline, S. Martin-West, Why do households lack emergency savings? The role of financial capability. *J. Fam. Econ.* **41**, 542–557 (2020). <https://doi.org/10.1007/s10834-020-09679-8>
12. A. Bhardwaj, S. Mukherjee, Government investment stimulus and household balance sheet externalities. *J. Financ. Quant. Anal.* **60**, 1457–1499 (2025). <https://doi.org/10.1017/S0022109024000449>
13. H. Tamsah, G.B. Ilyas, J. Nurung, Y. Yusriadi, Model testing and contribution of antecedent variable to absolute poverty: Low income family perspective in Indonesia. *Sustainability*. **15**, 6894 (2023). <https://doi.org/10.3390/su15086894>
14. S.D. Muluye, T.B. Lemma, T.Z. Diddana, Effects of nutrition education on improving knowledge and practice of complementary feeding of mothers with 6- to 23-month- old children in daycare centers in Hawassa Town, Southern Ethiopia: An institutional-based randomized control trial. *J. Nutr. Metab.* **2020**, 6571583 (2020). <https://doi.org/10.1155/2020/6571583>
15. W.J. Han, J. Hart, Precarious parental employment, economic hardship, and parenting and child happiness amidst a pandemic. *Child Youth Serv. Rev.* **133**, 106343 (2022). <https://doi.org/10.1016/j.childyouth.2021.106343>