

Role of Household Economics in Health System Resilience: A Community-Based Case Study from Eastern Afghanistan

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ABSTRACT

Good health is both a precondition and result of economic development along with appropriate environment are among the fundamental goals of sustainable development. Due to prolonged conflict, economic fragility, and international aid-dependency, Afghanistan's health system faces mounting challenges. This study explores the role of the household economy particularly backyard-farming, home-poultry, animal rearing, dry-food and goods preparation practices as an essential component of public health resilience and strengthening. A mixed-methods case study conducted in 215 Households in Jalalabad city and 3 surrounding districts in Nangarhar province in early (Jan-Mar) 2025 and the findings indicate that over 65% of surveyed households engaged in household gardening, farming, animal rearing, small-scale food production, tailoring, handicrafts and other self-employed trades were contributing to nutrition improvement, clean water, vulnerable-groups empowerment, increased access and financing of essential health-services, psychosocial wellbeing, and improved environmental living conditions. The findings highlight the essential role that household economic practices play in supplementing health services, reducing disease burden and health care cost, particularly in underserved rural and women-led home enterprises. Furthermore, families with robust home-based economies demonstrated stronger cooperative support mechanism during humanitarian disasters and crises, enhancing traditional coping capacities. Despite these benefits, barriers such as limited market access, low-confidence, marginalization, urban-rural disparities, lack of microfinance options constrained the full potential of home-based economic-initiatives. Promoting income-generating and social-protection activities especially for women, integrating health to economic and household economic into health strategies, can enhance both the scope and sustainability of health-outcomes. The paper also proposes to leverage local knowledge, gender-inclusive, culture-sensitive household practices, health education and health literacy as pathways toward more resilient economic and health systems.

5. INTRODUCTION

5.1. Context and Problem

Health, as defined by the World Health Organization (WHO, 1948), is “a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity.” The United Nations’ Sustainable Development Goal 3 (SDG 3) emphasizes ensuring healthy lives and promoting well-being for all at all ages (United Nations, 2015). Despite this global commitment, Afghanistan continues to face critical health challenges, exacerbated by prolonged conflict, economic fragility, weak infrastructure, and dependence on international aid (World Bank, 2023).

The country’s health indicators remain among the lowest globally. As of 2021, the infant mortality rate was 45 deaths per 1,000 live births, the maternal mortality rate (MMR) stood at 620 deaths per 100,000 live births, and the under-five mortality rate (U5MR) was 58 deaths per 1,000 live births (UNICEF, 2021). Malnutrition has reached critical levels, with nearly 4 million children under five and mothers affected by hunger. Vaccine-preventable diseases such as measles and polio remain endemic, with over 51,000 measles cases, 231 deaths, and 18 polio cases reported in 2024 (UNICEF, 2024). These figures reflect a fragile and overstressed health system unable to meet the basic health needs of its population.

5.2. Importance of Household Economics

Health and well-being are not only outcomes of development but also critical enablers of economic growth. Better health contributes to improved productivity, investment, education, and quality of life (Bloom & Canning, 2000). At the household level, economic activities play a vital role in sustaining livelihoods, improving nutrition, and enabling access to healthcare.

The field of home economics, defined by the International Federation for Home Economics (IFHE, 2008), encompasses a multidisciplinary approach to achieving sustainable living for individuals and families. In Afghanistan, backyard farming, poultry rearing, food processing, tailoring, and handicrafts are common livelihood strategies among poor and landless families (MAIL, 2015). These activities involve low investment, are often women-led, and yield both nutritional and economic benefits.

Eggs, milk, vegetables, and home-prepared food items serve not only as sources of income but also enhance household-level food security and health.

5.3. Health System Resilience

Health system resilience is commonly understood as the capacity of health systems to absorb, adapt, and recover from shocks while continuing to deliver essential services (Kruk et al., 2015; Nuzzo et al., 2019). However, recent scholarship highlights that resilient systems also learn from crises and evolve, rather than merely resist disruption (Fridell et al., 2019; Woods, 2015).

In fragile and conflict-affected settings like Afghanistan, the role of communities and household economies becomes even more critical. Local livelihood strategies can extend the reach and functionality of the health system, especially in times of crisis. Community-driven economic activity not only improves nutrition and self-reliance but also helps maintain healthcare access when formal systems are under stress (Haldane, 2021).

2. RESEARCH GAP AND OBJECTIVES

While considerable attention has been paid to the structural weaknesses of Afghanistan's health system, limited research exists on the intersection between household economics and health system resilience particularly from a community-based perspective. Understanding this relationship is essential for crafting integrated, sustainable interventions that target both economic empowerment and health outcomes.

This study aims to explore the role of household economic practices particularly backyard farming, poultry rearing, small-scale food processing, and other income-generating activities in strengthening the resilience of the health system in Eastern Afghanistan. It seeks to examine how these local practices influence access to care, nutritional well-being, and community coping capacity in the face of health system shocks.

3. METHODS

This study adopted a mixed-methods case study approach to explore the relationship between household economics and health system resilience within a localized, real-world context. Both quantitative and qualitative data were collected to capture a

multidimensional understanding of household practices and their influence on health outcomes (Auf, 2006).

Importantly, this is a community-based, localized case study, not a nationally representative survey. Therefore, findings are intended to generate context-specific insights relevant to Eastern Afghanistan rather than general conclusions about the national health system.

The sample included 215 households from Jalalabad city and three adjacent districts- Behsood, Rodat, and Surkhroad-in Nangarhar Province, located in Eastern Afghanistan.

These districts were purposively selected based on the following criteria:

- Relative accessibility and security conditions that allowed for safe fieldwork;
- Population density and urban–rural diversity, offering varied socio-economic and livelihood profiles;
- Presence of household-based economic practices such as backyard farming, poultry-keeping, and food processing.

While the selected districts are not representative of all Afghan regions, they offer a meaningful case for exploring the intersection of household economics and health resilience in a fragile context.

Participants were selected using a purposive sampling strategy, drawing from a household list maintained under the Expanded Program on Immunization (EPI). Eligible households included those:

- With adult residents (18+) who had lived in the household for the past three years;
- Capable of providing informed consent;
- Actively involved in home-based economic activities (e.g., gardening, poultry, animal rearing, food preparation, tailoring).

Special focus was given to women who manage household economic tasks, as they often play a central role in both income generation and health-related decisions.

Data were collected through multiple sources and methods to ensure triangulation:

- Structured household interviews to collect demographic, economic, and health-related data;
- Focus group discussions (FGDs) with community members to explore collective perceptions and coping strategies;
- Key informant interviews with local governmental and non-governmental organization representatives;
- Direct observations by the research team of household environments and economic practices;
- Individual interviews with the main individuals responsible for economic activities in each household.

Data analysis followed an iterative process, combining deductive and inductive thematic analysis techniques (Bradbury-Jones et al., 2017). Quantitative data were used to identify correlations between household economic initiatives and health indicators, including:

- Access to healthcare services
- Out-of-pocket expenditures
- Nutritional and vaccination status
- Incidence of catastrophic health conditions

Qualitative data were coded thematically to capture deeper community-level insights and local perceptions of health system resilience and household strategies.

The study is confined to Eastern Afghanistan and does not include comparisons with other regions such as the southern, northern, or central provinces. As such, the findings should be interpreted as context-specific insights, and not generalized to the national level. Future research could expand this framework to multiple provinces to assess regional variations in household economic resilience and healthcare access.

4. RESULTS

Table 1. Demographic Characteristics of Surveyed Households (N = 300)

Variable	Category	Percentage (%)
District	Jalalabad	37.4
	Behsood	24.3
	Rodat	17.8
	Surkhroad	20.5
Age Category	18–30 years	31.9
	31–45 years	37.3
	46+ years	30.8
Sex	Female	50.4
	Male	49.6

Table 2. Household Engagement in Economic Activities

Economic Activity Type	Percentage of Households (%)	Key Associated Benefits
Agriculture & Traditional Livestock Rearing	41%	Reduced food insecurity, improved nutrition, income stability
Handicrafts, Weaving, Tailoring, Sewing	16%	Empowerment of women, access to clean water, improved healthcare access
Home-based Education (Teaching, Tutoring)	9%	Backup income, improved health-seeking behavior
Small-Scale Trade or Retail (Shops, Food Sales)	3%	Supplementary income, daily food availability

Note: 69% of all surveyed households reported engagement in at least one of the above economic activities.

Quantitative analysis showed statistically meaningful patterns, though inferential tests were limited due to the case study scope.

Child Nutrition: Households engaged in income-generating economic activities showed lower child malnutrition rates:

Wasting: 25% in economically active households vs. 39% in non-active households

Stunting: 50% in economically active households vs. 68% in non-active households. Reported by 21% of economically active households vs. 42% of non-active households. 27% higher likelihood of timely healthcare access among income-generating households, especially for women and children.

Using a composite household wellbeing index (self-rated stress levels, confidence in coping, food security perception), psychosocial wellbeing scores were 52% higher (mean score 6.1 vs. 4.0 on a 10-point scale) in economically active households.

Families involved in home-based economies reported stronger community support networks and greater ability to cope during shocks like food shortages or illness.

4. 1 Barriers to Economic Participation and Health Access

Despite these positive outcomes, key barriers limited the impact and scalability of home-based economic practices:

Table 3. Barriers to Economic Participation and Health Access

Barrier	Reported Impact
Limited market access	Reduced profitability and sustainability
Lack of microfinance	Inhibited business expansion and self-reliance
Social marginalization	Especially affected widows, conservative women
Urban-rural disparity	Rural areas showed weaker health outcomes
Low education levels	Linked to poor health literacy and access gaps
Exclusion from national planning	Lack of institutional support for household initiatives
Unemployment	Persistent in households not engaged in economic tasks

Data were analyzed using descriptive statistics and cross-tabulations. correlations were explored using Pearson's r and Chi-square tests where applicable; however, full regression modeling was not conducted due to the exploratory nature of the case study. all data reflect self-reported household conditions and observations recorded during field visits.

5. DISCUSSION

The findings highlight the integral role of household economics in shaping health system resilience. Economic empowerment through backyard agriculture, household livestock rearing, home-based education, and small-scale income-generating activities not only improves individual and household health outcomes but also strengthens the overall

healthcare system by reducing demand pressures, enhancing community engagement and social support. Findings also suggest that households' economic activities show reduced vulnerability and improved health indicators, such as reduction in disease burden (anemia and stunted growth in children under 5), child and mother vaccination status, good cost-saving effects on local public health clinics. Addressing economic disparities is thus crucial for building a resilient health system capable of withstanding shocks and ensuring equitable access to care.

Similarly, in low-income countries (LICs), household income generation is closely linked to both physical and psychological well-being. Recent studies provide quantitative evidence highlighting disparities between income-generating and non-income-generating households. For instance, a systematic review across 20 countries found that lower income levels are consistently associated with higher risks of depression, emphasizing the global nature of this issue (Lund et al., 2010). In a Korean study, those in the lowest income bracket had a 73% higher likelihood of experiencing depression compared to those in the highest bracket (Adjusted Odds Ratio [AOR] = 1.73). Also, women in low-income households reported higher levels of stress and depression than men, with the disparity widening during the COVID-19 pandemic (Moon & Choi, 2024). In Chile, Health-Related Quality of Life (HRQoL) in individuals from no or low income-generating households reported higher prevalence rates of chronic diseases such as hypertension, diabetes, worst physical health status, often due to limited access to healthcare services and nutritious food (Barrera-Osorio & Filmer, 2022).

Promoting income-generating and social-protection activities especially for women, integrating health to economic and household economic into health strategies, can enhance both the scope and sustainability of health-outcomes. The paper also proposes to leverage local knowledge, gender-inclusive, culture-sensitive household practices, health education and health literacy as pathways toward more resilient economic and health systems. A practical bridge between economy, health access and community survival, encouragement for policy and donor focus on grassroots resilience.

These will contribute to achieving several sustainable development goals (SDGs);SDG-1 (No poverty), SDG3 (Good health and wellbeing, SFG5 (Gender equity) and SDG 8 (Decent work and economic growth) (Pendergast, 2017).

6. CONCLUSION

This study highlights the critical role of household economic activities such as backyard farming, poultry rearing, home-based education, and traditional crafts in enhancing the resilience of the health system in Eastern Afghanistan. By improving income stability, food security, and healthcare access, these practices directly contribute to better health outcomes and reduced financial vulnerability.

Increases access to healthcare services, positively influences nutritional and vaccination status, reduces catastrophic health expenditures, strengthens coping mechanisms during crises, empowers marginalized groups, especially women.

By strengthening economic self-reliance at the household level, these approaches will build a more equitable and shock-resilient health system, tailored to Afghanistan's local realities and sustainable development priorities.

REFERENCES

- Auf der Heide, E. (2006). The Importance of Evidence-Based Disaster Planning. *Annals of Emergency Medicine*, 47(1), 34–49.
<https://doi.org/10.1016/j.annemergmed.2005.05.009>
- Barrera-Osorio, F., & Filmer, D. (2022). Health-related quality of life by household income in Chile: a concentration index decomposition analysis. *International Journal for Equity in Health*, 21(1), 1–10. <https://doi.org/10.1186/s12939-022-01770-w>
- Bradbury-Jones, C., Breckenridge, J., Clark, M. T., Herber, O. R., Wagstaff, C., & Taylor, J. (2017). The state of qualitative research in health and social science literature: a focused mapping review and synthesis. *International Journal of Social Research Methodology*, 20(6), 627–645.
<https://doi.org/10.1080/13645579.2016.1270583>
- Bloom, D. E., & Canning, D. (2000). The health and wealth of nations. *Science*, 287(5456), 1207–1209. <https://doi.org/10.1126/science.287.5456.1207>
- Fridell, M., Edwin, S., Von Schreeb, J., & Saulnier, D. D. (2019). Health system resilience: what are we talking about? A scoping review mapping characteristics and keywords. *International journal of health policy and management*, 9(1), 6.
- International Federation for Home Economics. (2008). Home economics in the 21st century: Position statement. <https://www.ifhe.org/>
- Haldane, V., De Foo, C., Abdalla, S. M., Jung, A. S., Tan, M., Wu, S., ... & Legido-Quigley, H. (2021). Health systems resilience in managing the COVID-19 pandemic: lessons from 28 countries. *Nature medicine*, 27(6), 964-980.
<https://pubmed.ncbi.nlm.nih.gov/34002090/>
- Kruk, M. E., Myers, M., Varpilah, S. T., & Dahn, B. T. (2015). What is a resilient health system? Lessons from Ebola. *The Lancet*, 385(9980), 1910-1912.

- Lund, C., Breen, A., Flisher, A. J., Kakuma, R., Corrigall, J., Joska, J. A., Swartz, L., & Patel, V. (2010). Poverty and common mental disorders in low and middle-income countries: A systematic review. *The Lancet*, 378(9801), 1502–1514.
[https://doi.org/10.1016/S0140-6736\(10\)60679-2](https://doi.org/10.1016/S0140-6736(10)60679-2)
- Ministry of Agriculture, Irrigation and Livestock. (2015). Food Security and Nutrition (FSN) Strategy 2015–2019. <https://www.fao.org/faolex/results/details/en/c/LEX-FAOC151336/>
- Moon, J., & Choi, S. (2024). Association between household income and mental health among adults during the COVID-19 pandemic in Korea: Insights from a community health survey. *PLOS ONE*, 19(4), e0287654.
<https://doi.org/10.1371/journal.pone.0287654>
- Nuzzo, J. B., Meyer, D., Snyder, M., Ravi, S. J., Lapascu, A., Souleles, J., ... & Bishai, D. (2019). What makes health systems resilient against infectious disease outbreaks and natural hazards? Results from a scoping review. *BMC Public Health*, 19, 1-9.
- Pendergast, D. (2017). SDGs and Home Economics: Global Priorities, Local Solutions. *Advances in Social Science, Education and Humanities Research*, 112.
<https://doi.org/10.2991/iconhomecs-17.2018.1>
- United Nations. (2015). Transforming our world: The 2030 agenda for sustainable development. <https://sdgs.un.org/2030agenda>
- UNICEF. (2021). Afghanistan - Demographics, Health & Infant Mortality.
<https://data.unicef.org/country/afg/>
- UNICEF. (2024). Afghanistan Humanitarian Situation Report No. 12: 31 December 2024. <https://www.unicef.org/media/167251/file/Afghanistan-Humanitarian-SitRep-No-12-31-December-2024.pdf>
- United Nations Development Programme. (2023). Afghanistan Socio-Economic Outlook 2023. https://www.undp.org/sites/g/files/zskgke326/files/2023-05/SEO%202023_full%20report.pdf
- Woods, D. D. (2015). Four concepts for resilience and the implications for the future of resilience engineering. *Reliability engineering & system safety*, 141, 5-9.
- World Bank. (2023). Afghanistan development update: Navigating uncertainty. World Bank Group.
<https://www.worldbank.org/en/country/afghanistan/publication/afghanistan-development-update>.
- World Health Organization. (1948). Constitution of the World Health Organization.
<https://www.who.int/about/governance/constitution>.