



Measuring child mortality from mobile phone surveys in countries facing security challenges: an assessment in Burkina Faso

Presented by

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R_aMMPS



Context

Burkina Faso faces significant challenges in data collection due to security issues

This situation affects access to :

- Healthcare
- Nutrition,
- Creates disparities in mortality rates

Assessing the true extent of these impacts is difficult

Surprisingly, child mortality trends in Burkina Faso

In this context, there is an urgent need for faster, more cost-effective, and flexible data collection methods to bridge the gap between major household surveys and situations where face-to-face methods are impractical.

Mobile Phone Survey (MPS)

Advantages:

- ❖ Low cost
- ❖ Potentially broader
- ❖ geographical coverage
- ❖ Faster operationalization
- ❖ Greater anonymity

Some concerns:

- ❖ Low response rate?
- ❖ Data quality challenges
- ❖ Selection bias
- ❖ Inability to capture certain indicators
- ❖ Network quality

MPS in SSA

Africa has seen a rise in MPS :

- Assessing health interventions and monitoring demographic events
- Evaluate impacts on household living conditions
- Preventive behaviors
- Child nutrition indicators

Few MPS have been conducted in areas affected by both security and health crises, and even fewer have focused on collecting mortality data

Most studies conducted during conflicts rely on face-to-face data collection, with very few utilizing phone surveys.

This study aims to assess the feasibility of using MPS to estimate child mortality and identify the advantages of this approach over traditional face-to-face surveys in contexts of health and security crises

Data and methods : RaMMPS data collection in Burkina Faso

Two sampling strategies :

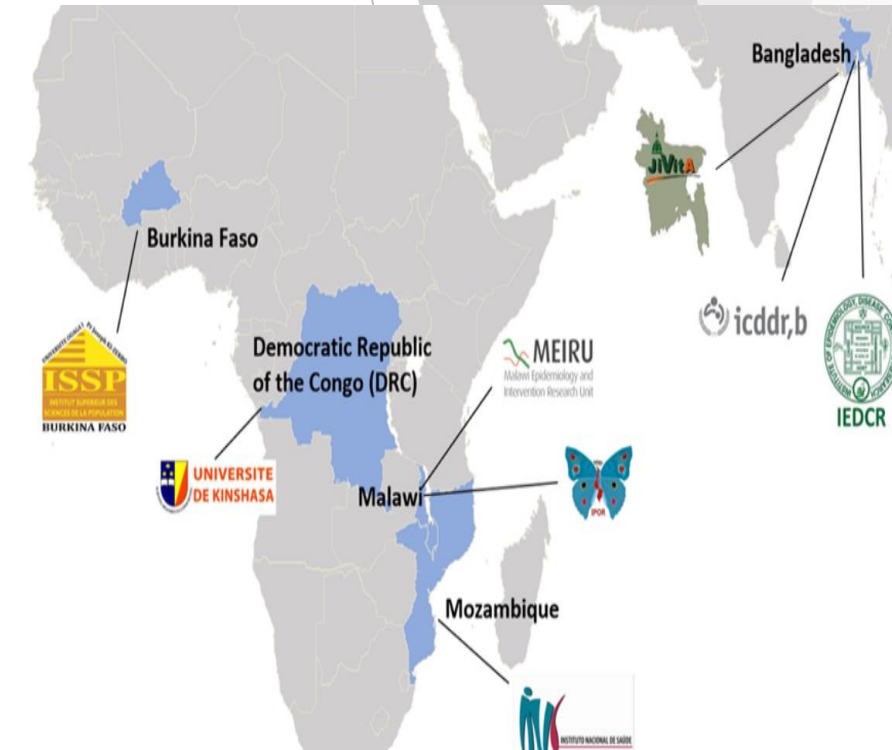
- (1) Use of pre-existing telephone numbers (EHCVM pour *Enquête Harmonisée sur les Conditions de Vie des Ménages*)
- (2) RDD filtered with the support of Viamo (RDD)

Data collection period : 09/2021-10/2022

Target population : 15-64 years old, residing in Burkina Faso

Prior to their interview each respondent gave their verbal informed consent to participate.

Standard procedures were followed, including comprehensive training, consistent supervision, and refresher courses for enumerators to maintain data quality.



High-Frequency Phone Survey (HFPS) 2020-2024

The High-Frequency Phone Survey (HFPS) in Burkina Faso, conducted from June 2020 to July 2024

The survey is a follow-up to the 2018/19 Harmonized Survey on Household Living Conditions (EHCVM)

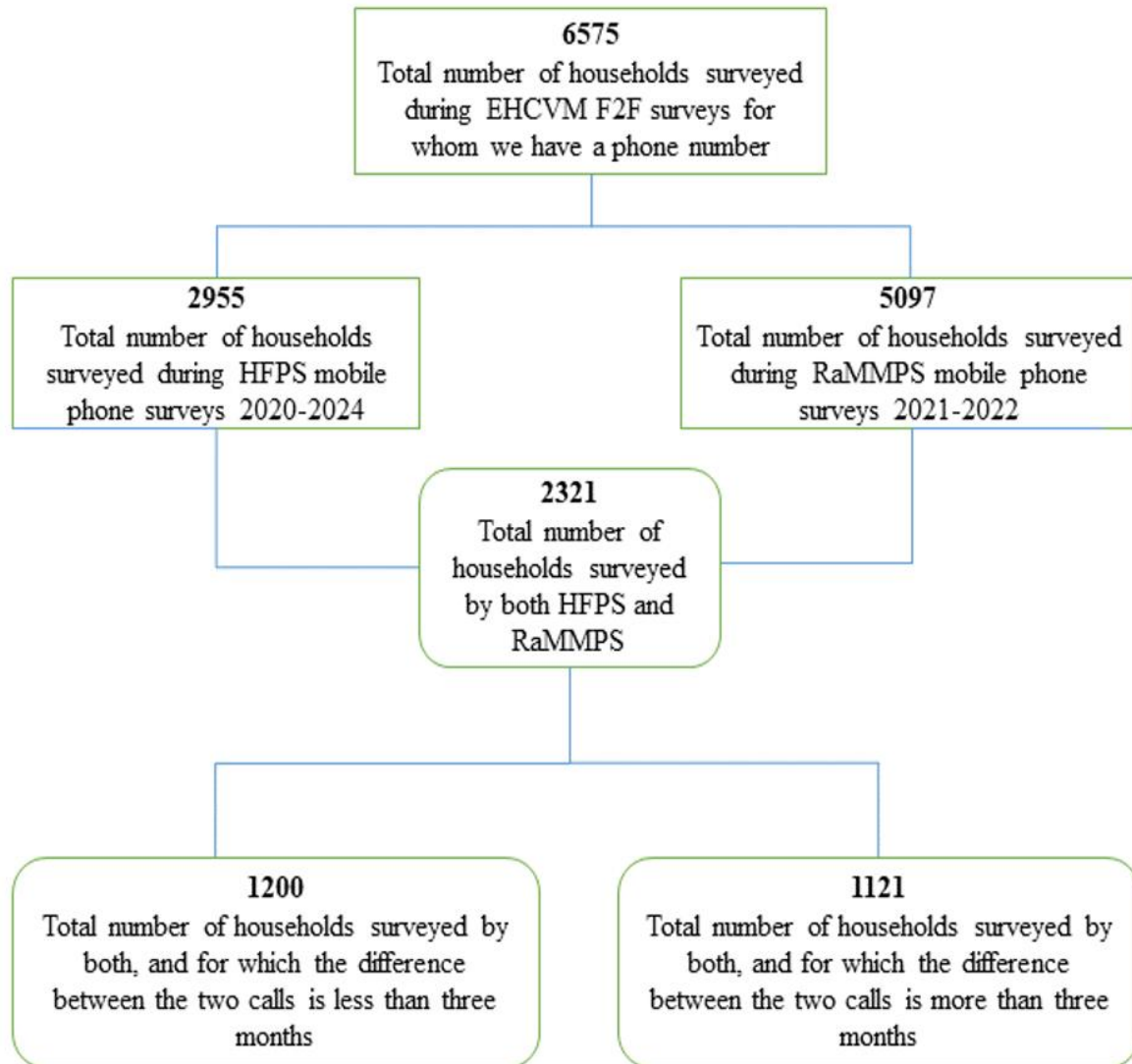
It targeted 1,800 households, eventually contacting 2,500, with 1,968 households interviewed in the first phase.

To ensure national representation, especially in rural areas, additional households were included in later phases

Each month, the same households were re-contacted via mobile phones

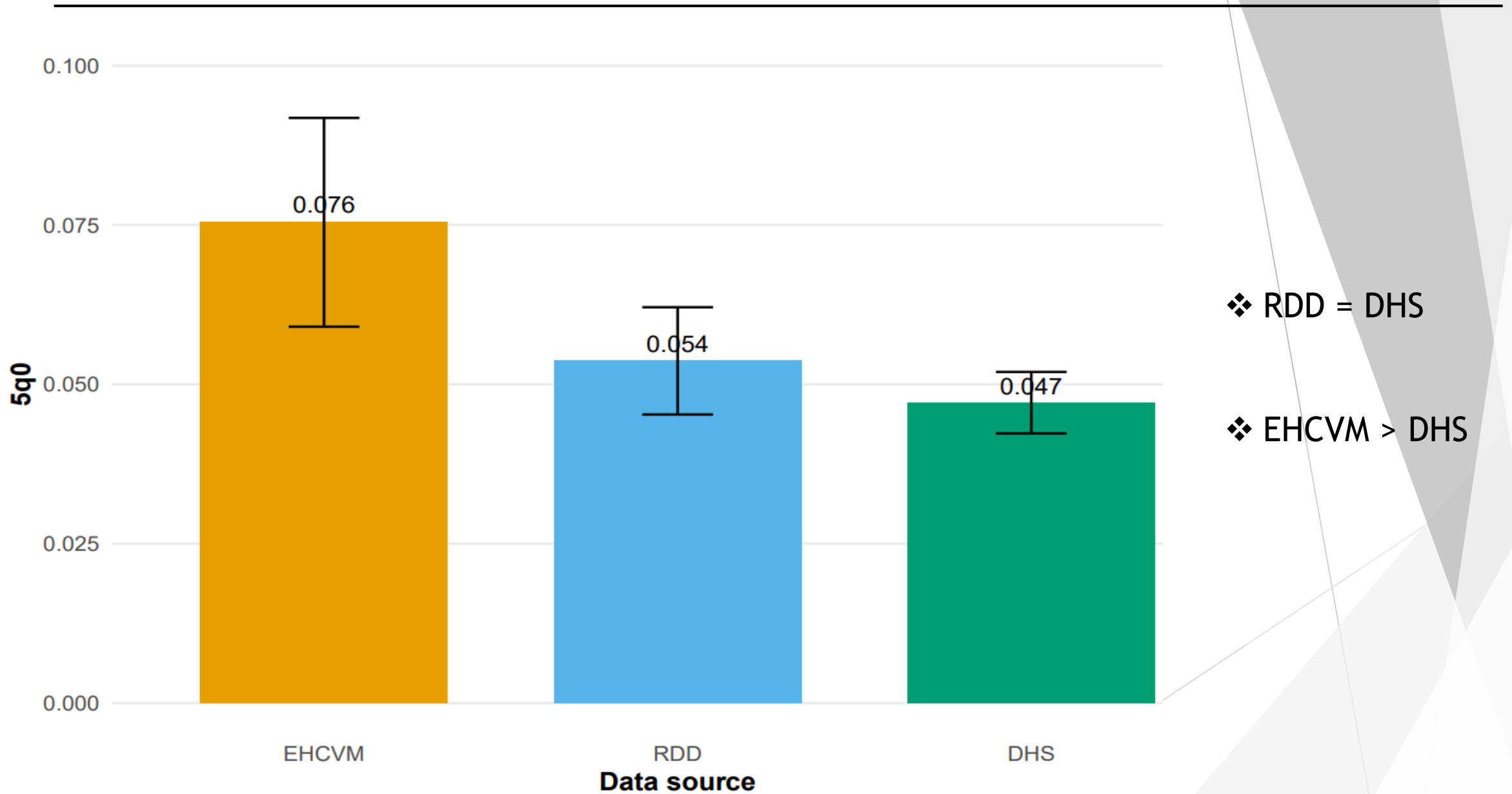
Pre-loaded household data helped interviewers accurately identify and track households across survey rounds, maintaining the integrity and continuity of the panel.

Methods



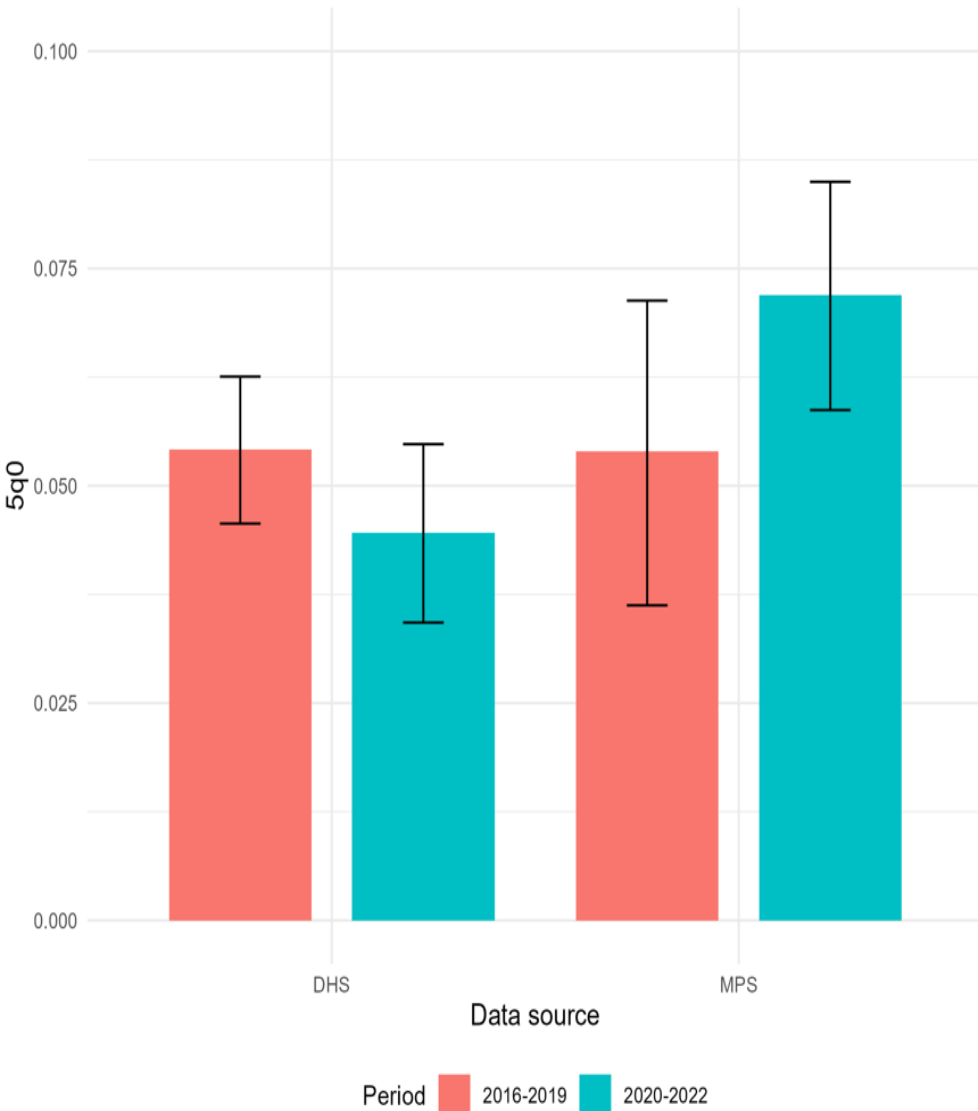
- Compare the characteristics of the HFPS and RaMMPS survey samples, with a focus on the EHCVM branch
- Under-Five mortality indicators
- Poisson regression models: analyze the relationship between mortality and food security status.
- Post-stratification weighting

U5MR by data source

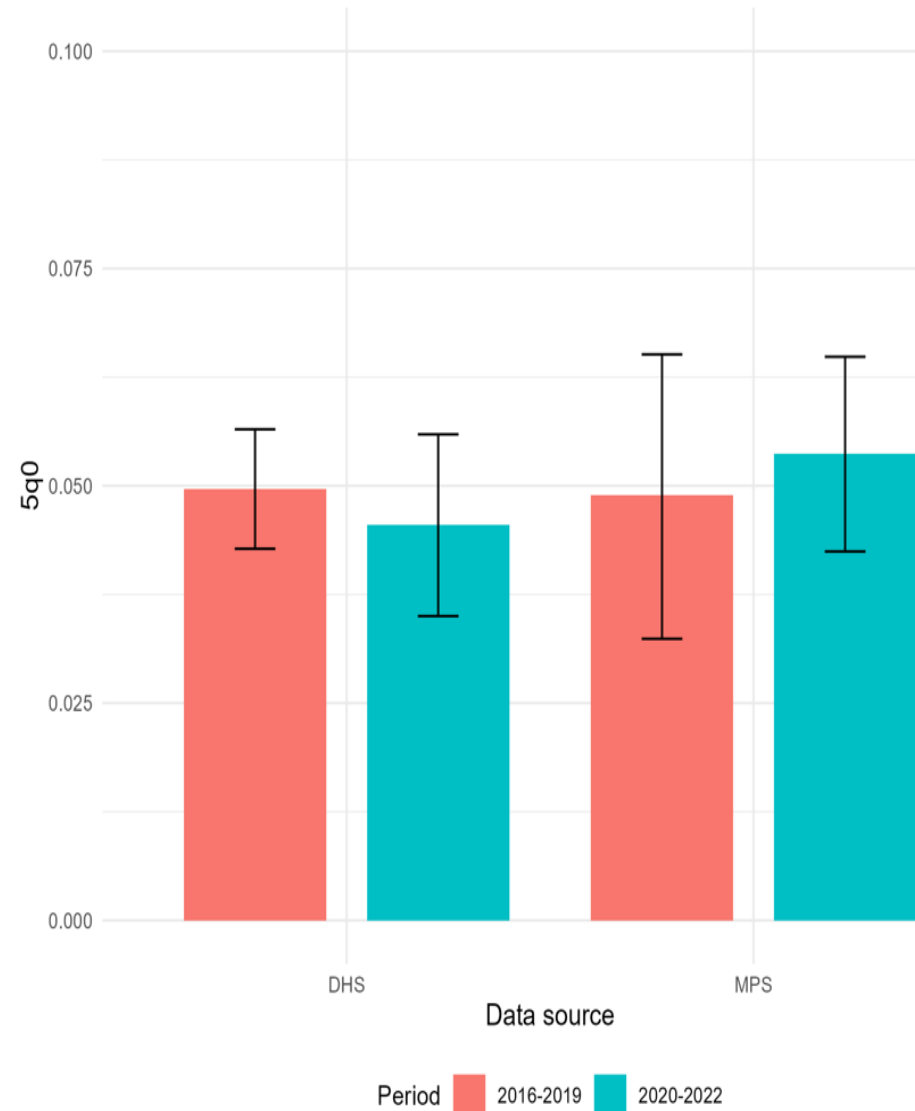


U5MR according to data source and health crisis context

Conflict



Non conflict



Effects of household and mother characteristics on mortality differentials

Table 1 Poisson regressions on under-five mortality, adjusted and unadjusted coefficients

Variables	<u>Unadjusted coefficients</u>	<u>Adjusted coefficients</u>
<u>Under-five mortality</u>		
<u>Food security</u>		
Secure (ref)	1 (.)	1 (.)
Moderate	1.864*** (2.67)	1.768** (2.40)
Severe	2.126*** (2.58)	2.012** (2.25)
<u>Migration</u>		
No migrant (ref)	1 (.)	1 (.)
Not due to <u>insecurity</u>	0.335*** (-2.59)	0.295** (-2.44)
Due to <u>insecurity</u>	3.266*** (3.37)	4.862*** (2.85)
<u>Education</u>		
None (ref)	1 (.)	1 (.)
Primary	0.777 (-0.88)	0.861 (-0.43)
Secondary or more	0.387** (-2.53)	0.402** (-2.23)

Factors significantly influencing mortality levels

- Regional security context,
- Mother education level,
- Migration status

Discussions and conclusion

MPS offer a viable alternative to traditional surveys for estimating child mortality, particularly in insecure regions where conventional methods are impractical.

MPS can capture critical mortality trends, especially in high-risk areas, that face-to-face surveys might miss.

The findings underscore the heightened vulnerability of households in insecure regions to food insecurity and its link to elevated child mortality rates.

Policymakers should consider integrating MPS into national data collection strategies to ensure comprehensive and timely information, especially during health and security crises.



Thanks for your attention

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