



Food and Agriculture Organization
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Voices of the Hungry

**Eight licences
for eight brilliant minds**

One metric for the world.

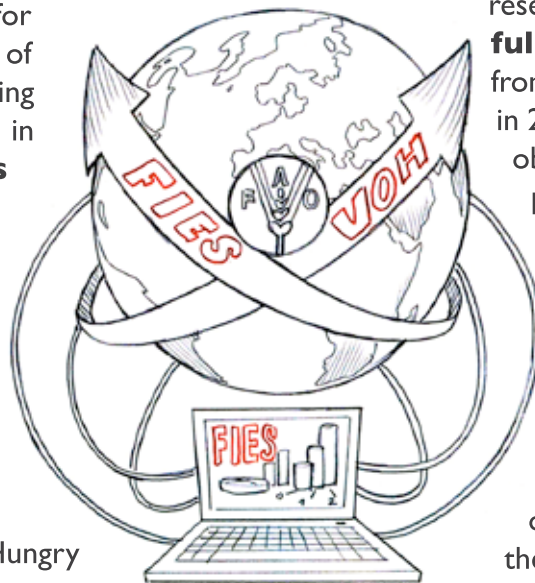
FAO's Voices of the Hungry (VoH) project is developing a new global standard for estimating the number of people experiencing food insecurity, called the Food Insecurity Experience Scale (FIES). This global food security measure will make it possible to provide **annual information** regarding levels of severity of food insecurity based on people's self-reported experiences, with great potential to inform international and national policy making as well as global monitoring of the Sustainable Development Goals (SDGs).

The FIES builds upon established tools such as the

USDA Household Food Security Survey Module and the Latin American and Caribbean Food Security Scale, which have been tested and validated in developed and developing countries. The FIES is an experience-based metric of severity of food insecurity that relies on **people's direct responses to eight questions** regarding their economic access to adequate food. Since this measurement tool is not specific to any particular sector such as nutrition, agriculture or economics, the FIES can contribute to a multidisciplinary understanding of the phenomenon of food insecurity.

The Gallup World Poll licenses.

The VoH project is using the Gallup® World Poll (GWP) as a vehicle for data collection. GWP is a branch of Gallup, Inc. that has been conducting nationally representative surveys in **more than 150 countries** annually since 2005. The FIES was incorporated into the GWP questionnaire in January 2014, making it possible for FAO to provide annual country-level estimates of the prevalence of food insecurity at different levels of severity. Through a competitive selection process, the Voices of the Hungry



project has granted eight licenses to researchers to obtain **access to the full archive of GWP datasets** from 2005 forward, including the FIES in 2014. This serves one of the primary objectives of the Voices of the Hungry project, which is to promote innovative high-level research that will contribute to deepening our understanding of food insecurity in the world through exploration of the data generated by the GWP.

We are pleased to present briefs on each of the eight researchers and their proposed studies.



Alisha Coleman-Jensen

Ph.D. is a social science analyst with the Food Assistance Branch at the Economic Research Service of the U.S. Department of Agriculture. Her research focuses on the measurement and determinants of U.S. food insecurity using an experiential food security measure. She is the lead researcher on USDA's annual report Household Food Security in the United States. Recent published research examined the linkages between food insecurity and disabilities, the relationship between food insecurity and the national unemployment rate, inflation, and the price of food relative to other goods and services, geographic variation in food costs and food security, food security measurement in households with children, and the relationship between food insecurity and cost-related-medication-underuse of prescription drugs.

Key points of the proposed research

New Frontiers in understanding Global Food Insecurity.

We propose to use FAO's Food Insecurity Experience Scale (FIES) in the Gallup World Poll (GWP) data to investigate factors related to the level and severity of food insecurity within and across all 150 countries in the GWP. Our team will utilize the person-level detail and common measures of food security available across countries in the FAO's FIES/GWP data to systematically expand our understanding of individual perceptions and personal characteristics associated with food security as well as examine how these new data integrate with other measures of food security analysis to provide a more complete picture. Building on our expertise and the innovations in research made possible with these data, the goal of our proposal is to improve our

understanding of how household and individual factors, gender, and national conditions affect the prevalence and severity of food insecurity within and across countries.

Our proposed research has three objectives: (1) examine person and household-level correlates of experiential food insecurity within and across individual countries with a focus on the gender gap in food insecurity and other measures of well-being; (2) examine the relationship between macro indicators of food insecurity, especially the U.S. Department of Agriculture (USDA) Economic Research Service's (ERS) International Food Security Assessment, and the FIES; (3) examine the relationship of the FIES to weather and production shocks. As we move into an era of increasing climate change and volatility, understanding the latter element will be of growing importance.



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Alessio Farcomeni

Associate professor in the Department of Public Health and Infectious Diseases at the University of Rome La Sapienza.

His work focuses on robust statistics, longitudinal models, categorical data analysis, cluster analysis, and multiple testing. He also is involved in clinical, ecological, and econometric research.

Key points of the proposed research

The main research questions and objectives are:

1. Estimation of the effects of current and lagged GWP indexes on FIES scale low quantiles.

2. Exploration of small-area estimation methods to reliably evaluate area-level relationships.

3. Exploration of causal discovery methods to estimate a causal graph among GWP indexes and FIES scale.

4. Robustly cluster countries on the basis of GWP and FIES.

5. Multidimensional Rasch analysis to evaluate relationships among all the indexes and validate index separation. Correction of memory effects due to different time horizons used in different questions.





Katie Fiorella

Postdoctoral fellow at Cornell University's Atkinson Center for a Sustainable Future. She received a Ph.D. in Environmental Science, Policy & Management and a Masters of Public Health from the University of California, Berkeley. Katie has studied the intersection between human and environmental health since 2009. Katie's work focuses on links between environmental change, livelihoods, food security and nutrition.

In studying these dynamics around the Lake Victoria fishery, her work has focused on fishing livelihoods and food security, HIV and morbidity, and transactional sex and access to fish.

Key points of the proposed research

Environmental degradation critically threatens our ability to produce sufficient food and distribute food resources equitably. My research with the Gallup World Poll and Food Insecurity Experience Scale data will analyze associations between food insecurity and the natural environment.

The natural environment is intricately connected to achieving global food security, now and in the future. Understanding the complex links between food security and the environment can be bolstered by the integration of this understanding at global scales. I will analyze the

links between food insecurity and perceptions of environmental quality – air quality, water quality, and broad community satisfaction. Perceptions of the environment potentially serve both as a harbinger of future food insecurity and an assessment of environmental adequacy. In addition, I will examine the relationship between food insecurity and environmental reliance for one's livelihood (e.g., agriculture, fishing, mining). The latter analysis will particularly consider gendered experiences and focus on countries where substantial portions of the population are engaged in environment-focused livelihoods.





Hala Ghattas

Assistant Research Professor and Associate Director of the Center for Research on Population and Health, at the American University of Beirut. As a public health nutritionist with interests in the nutritional and health manifestations of poverty and food insecurity, Hala has been involved in various multi-disciplinary research projects investigating associations between poverty, livelihoods, social safety nets, health and food security experience in marginalized populations in the Middle East region. She has been involved in the development and validation of the Arab Family Food Security Scale, and the Arabic language adaptation of the FIES.

Key points of the proposed research

Food insecurity in the Arab world; youth, gender and wellbeing differentials

The Arab region has recently experienced large political, economic and demographic fluxes, with implications on poverty, inequality, food insecurity and wellbeing of its populations. It has been implied that the youth bulge and consequently high levels of youth unemployment, combined with increases in food prices and food insecurity, contributed to the recent Arab uprisings. Gender inequality in employment rates is also remarkable in Arab countries, which are consistently ranked at the bottom of Global Gender Gap analyses, placing women in the region at potentially increased risk of food insecurity. In addition to differential vulnerabilities among groups within countries, the region also exhibits differences in vulnerabilities across countries to food insecurity and its potential

effects on wellbeing. This project aims to explore these differentials within and across countries of the Arab region, with a particular focus on understanding social, gender- and age-specific vulnerability to food insecurity experience. More specifically, this research project will:

- 1- Investigate prevalence of food insecurity across countries of the Arab region.
- 2- Describe the socio-economic and demographic correlates of food insecurity in the Arab world, at both macro and micro levels.
- 3- Explore the potentially modifying effects of gender and age on the hypothesised socioeconomic predictors of food insecurity.
- 4- Assess the associations between food insecurity and measures of subjective wellbeing, and explore whether these associations are modified by socio-economic and demographic variables.





Sudhanshu Handa

Chief of Social & Economic Policy at UNICEF Office of Research and Professor of Public Policy at the University of North Carolina at Chapel Hill. He is an Economist by training, and currently the co-Principal Investigator on the Transfer Project, a multi-country initiative to understand the impacts of national cash transfer programs on child and household well-being in SSA. He previously held positions at the University of the West Indies in Jamaica, Eduardo Mondlane University in Mozambique, the International Food Policy Research Institute, and the Inter-American Development Bank in Washington DC. In 2007-08 he served as UNICEF's Regional Advisor on Social Policy for Eastern and Southern Africa. He was born in Ghana and is a citizen of the United States and Canada.

Key points of the proposed research

This project will provide new evidence on an under-studied area of food security—the food security of children and young people. Using the FIES, the first research aim is to provide prevalence estimates of food insecurity among households with children under age 15, and among young people age 15-24, by region, globally, and for selected countries where sample size permits. The second research objective is to estimate the determinants of food insecurity among households with children under age 15, and among young people age 15-24 using the FIES in 2014. This analysis will then be extended to 2006-2014 using the Global World Poll indicator of household food insecurity. These estimates will be conducted by world region and since the time period includes a period of both food price volatility and the Great Recession, it provides an opportunity to understand how the determinants of food insecurity were affected by these macroeconomic phenomena. The third and final objective is to use the UNICEF Office of Research Structural Determinants Framework to understand the importance of food insecurity as a determinant of young person's (age 15-24) well-being.





Andrew Jones

Public health nutritionist, interested in understanding the influence of agriculture and food systems on household food security, and the nutritional status of women and children in low-income settings. His research examines the extent and pathways via which farm- and landscape-level agrobiodiversity impact diet quality and nutrition outcomes in rural and peri-urban settings of low-income countries. He also examines the role of food security in shaping the co-occurrence of iron deficiency and obesity among adolescents and pregnant women, and the intergenerational consequences of this “double burden” on infant and child nutrition. Andrew has ongoing research projects in India, West and Southern Africa, and throughout the Andean region of South America.

Andrew is currently Assistant Professor in the School of Public Health at the University of Michigan. Andrew received his PhD in International Nutrition from Cornell University, and holds BA degrees from the Pennsylvania State University in Geography and Film Production.

Key points of the proposed research

Household food insecurity has increasingly been recognized as an important determinant of health status. However, there is a dearth of data from low- and middle-income countries examining the potential impacts of food insecurity on health outcomes, particularly using standard metrics that allow for comparisons across contexts. The objective of this research is to determine global and regional associations between household food insecurity and the self-reported physical and mental health status of adults. Specifically, this research aims to: 1) characterize the prevalence of food insecurity, using a global data set, across strata of urbanicity and across categorizations of livelihood strategies; 2) determine the association of household food insecurity with the self-reported

physical and mental health status of survey respondents of the Gallup World Poll (GWP); and 3) assess heterogeneity in these associations across urban gradients and across the distinct world regions surveyed through the GWP. The research will use data from the complete set of more than 150 countries available through the GWP data between 2006 and 2014, and will include analyses of data using the FAO Food Insecurity Experience Scale (FIES). This research is expected to advance our understanding of the health implications of food insecurity across distinct global regions, and provide unique insights into how these relationships may differ by region, by urban environment, as well as how differing livelihoods strategies in different contexts may protect against vulnerability to food insecurity.



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Muzi Na

Postdoctoral fellow at the Johns Hopkins Bloomberg School of Public Health. Her research interests include food insecurity and socio-behavioral risk factors in relation to human nutrition and health. She holds a Ph.D. in Nutrition and a M.H.S. in Biostatistics from Johns Hopkins University, a B.S. in Economics and a B. Medicine (M.D. equivalent) from Peking University, Beijing, China.

Key points of the proposed research

Association between Social Support and Food Insecurity: An analysis of the Gallup World Poll Data

To date, evidence has accumulated linking risk of food insecurity to economic determinants. Few studies have focused on how social access affects food acquisition. Less well understood is the role that non-economic determinants, such as social support structures modulate food insecurity under circumstances when physical or financial access to food is limited. The goal of the proposed study is to explore relationships between aspects of social support and food stress experiences in sub-

Saharan African countries, where food insecurity and malnutrition are the most prevalent around the world. Using consistent measures of social support and food insecurity in Gallup World Poll 2006-2014 in more than 30 sub-Saharan African countries, the proposed study aims 1) to assess cross-country variation in the associations between social support and the risk of being food insecure; 2) to explore the potential dose-response relationship between social support and different levels of food insecurity; 3) to analyze the reciprocal aspects of receiving and giving support in relation to food security; and 4) to compare the relationship by proposed modifiers of these associations.





Edwina Wambogo

Information Analyst for CARDS (Computer Assisted Research on Dietary Supplements) at the Office of Dietary Supplements at the National Institutes of Health and also works in clinical nutrition as registered dietitian with the Academy of Nutrition and Dietetics. Her research interests are in the areas of aging, maternal child health and HIV/AIDS. She has also conducted research in the areas of diabetes and prostate cancer. She earned her Master of Science degree In Nutrition and Dietetics from Kenyatta University in Nairobi, Kenya and her Master of Public Health degree in Community Health Education from the University of Maryland and is currently pursuing a PhD in Nutrition from the University of Maryland.

Key points of the proposed research

Food insecurity among older adults in sub-saharan africa: a comparative study.

The population of older adults worldwide is growing rapidly, with estimates for people 60 years and above projected to reach 2 billion by 2050 compared to 605 million in 2000. Compared with global percentages, Sub-Saharan Africa (SSA) has a lower percentage of older adults 60 years and above, but has one of the highest growth rates for this age group.

Older adults are vulnerable to food insecurity due to many factors such as low income, limited mobility and poor health, yet food insecurity among older adults in SSA has largely been ignored with priority being given to women and children with manifested under-nutrition.

The intent of this study is to determine

the prevalence of food insecurity among older adults that is not an outcome of war and displacement and where implementation of policy recommendation may be possible. We will examine the internal validity of the Food Insecurity Experience Scale (FIES) in several SSA countries and assess the possibility of pooling data from 11 relatively comparable countries. These countries from the Western, Eastern and Southern Africa regions are selected based on life expectancy, political stability and relatively higher GNI. We will explore determinants of food insecurity and associations with health and well-being as potential consequences of food insecurity among older adults in SSA. This study could have implications for food security interventions and policy recommendations targeting older adults in Sub-Saharan Africa.





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