A professional scientific forum and voice for Africa's nutrition and health

BIOGRAPHIES OF KEYNOTE & PLENARY SPEAKERS

Professor Lawrence Haddad, **PhD**
Executive Director, Global Alliance for Improved Nutrition (GAIN), Geneva, Switzerland

An economist, Professor Lawrence Haddad completed his PhD in Food Research at Stanford University in 1988. He became the Executive Director of GAIN in October 2016. Prior to this Lawrence was the founding co-chair and lead author of the Global Nutrition Report from 2014 to 2016. From 2004-2014 Lawrence was the Director of the Institute of Development Studies (IDS), the world's leading development studies institute. Before joining IDS in 2004, he was Director of the Food Consumption and Nutrition Division at the International Food Policy Research Institute (IFPRI) from 1994 to 2004. From 2009-2010 Lawrence was the UK's representative on the Steering Committee of the High Level Panel of Experts (HLPE) of the UN's Committee on World Food Security (CSF). He was the President of the UK and Ireland's Development Studies Association from 2010 to 2012.
He is the co-recipient of the 2018 World Food Prize with Dr David Nabarro, former special adviser to the UN Secretary General for their "extraordinary intellectual and policy leadership in bringing maternal and child nutrition to the forefront of the global food security agenda and thereby significantly reducing childhood stunting".

Abstract

1. "**The Why, When, Who and How to Engage with the Private Sector to Advance Nutrition in Africa"**

The presentation argues that if we are going to get close to achieving the SDGs by 2030 governments cannot do it on their own. All stakeholders need to play their part. Businesses are the "last frontier" when it comes to understanding what this set of stakeholders can do positively for nutrition. This talk explains why businesses are important for SDG2, when they should be engaged, how and which companies to engage with.

2. **Making Economic Case for Nutrition Investment in Africa: Why Ministers of Finance Should Put Nutrition High on Their To Do List**

Nutrition is seen as a health issue by too many leaders in government. In fact, nutrition "Nourishes the SDGs". The presentation provides arguments drawn from the evidence and from experience on why and how to make nutrition a top issue for Ministers of Finance and Planning.

Dr Gerda Verburg, PhD
UN Assistant Secretary-General and Coordinator of the Scaling Up Nutrition (SUN) Movement The Netherlands

Dr Gerda Verburg from the Netherlands, has a degree in social economic relations and started her professional career as Regional Secretary-General of the Rural Youth Organization. Since August 2016, she has served as UN Assistant Secretary-General and Coordinator of the Scaling Up Nutrition (SUN) Movement. In 1982, she took up a position in the Christian Trade Union movement (CNV) and in 1990, became the first woman to be elected on the Board of the Confederation of CNV. She represented the CNV in the National Economic Council on labour issues, gender and international cooperation. In 1998, she was elected Member of the House of Representatives in the Netherlands where she served in various roles including as speaker on economics and social affairs and Vice Speaker of the House. In 2007, Dr Verburg was appointed Minister of Agriculture, Nature and Food Quality in the Netherlands and she championed innovative and sustainable agriculture and food security, both at national, EU and international level. she was elected Chair of the UN Commission on Sustainable Development (CSD17) in 2008 during which time they initiated the concept of "*climate smart agriculture* or *save and grow"*. She was closely involved with the follow up of CSD recommendations and the post MDG-policy formulation. In 2010, she returned to the House of Representatives and was appointed Ambassador/ Permanent Representative of the Kingdom of the Netherlands to the UN Organizations for Food and Agriculture in Rome (FAO, WFP and IFAD) in 2011. In October 2013, Gerda Verburg was elected Chair of the UN Committee on World Food Security (CFS), a multi-stakeholder committee where governments, civil society, private sector, research institutions and other stakeholders deal with food and nutrition related topics. In 2014, she was appointed Chair of the Agenda Council for Food and Nutrition of the World Economic Forum (WEF) and became a Trustee in November 2015.

Abstract

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Dr. Catherine Leclercq, PhD
Food Systems Division, UN Food and Agriculture Organization (FAO), Rome, Italy

Dr. Catherine Leclercq holds a PhD in nutrition. She is an expert on food consumption studies and dietary assessment. She was previously a senior researcher at the Centre for Research on Food and Nutrition of the Italian Council for Agricultural Research and Analysis of Agricultural Economics (CREA –AN). While working for this institution she was the Italian project leader for a large number of EU projects in the area of nutrition and food safety. She served as expert of dietary exposure in scientific committees at EU and international level. She is author of more than 50 international peer reviewed publications related to nutrition surveillance and dietary exposure to food chemicals. She joined the Nutrition and Food Systems Division at the Head Quarters of FAO in August 2013 as nutrition officer. She is leading the development of the FAO/WHO Global Individual Food consumption data Tool (FAO/WHO GIFT, http://www.fao.org/gift-individual-food-consumption/en/). This platform aims at supporting policy makers, program planners, NGO staff and many other stakeholders in taking informed decisions at country, regional and global level in the area of nutrition and food safety.

Abstract

FAO/WHO GIFT (Global Individual Food consumption data Tool) achievements and plans

The **FAO/WHO Global Individual Food consumption data Tool (FAO/WHO GIFT)** is an open-access online platform providing access to harmonized individual quantitative food consumption (IQFC) data, especially in low and middle-income countries (LMICs). This platform is hosted by FAO and supported by WHO.
Knowing who eats what, understanding the various eating habits of different population groups, according to the geographical area, is critical to develop evidence-based policies for nutrition and food safety.
The FAO/WHO GIFT platform provides an inventory of existing IQFC data collected worldwide. To date, it contains detailed information on 188 surveys (91 in Africa) conducted in 72 countries (29 in Africa). The platform is operational since 2017, and will serve as the global FAO/WHO hub to disseminate IQFC microdata. To facilitate the use of these data by policy makers, ready-to-use food-based indicators are provided for an overview of key summary data according to population segments and food groups. FAO/WHO GIFT is a growing database. Currently, datasets from Burkina Faso, Uganda, Bangladesh, the Philippines and Lao People's Democratic Republic are available for dissemination. An additional 50 datasets are planned to be disseminated within the next 4 years.
All datasets shared through the platform are harmonized with the food classification and description system FoodEx2, which was developed by the European Food Safety Authority (EFSA) and then upgraded for use at global level. The concurrent mapping with FoodEx2 of food hazard occurrence datasets will improve the consistency and reliability of dietary exposure assessments, a critical step in establishing suitably protective limits for microbiological or chemical agents in food. Similarly, the mapping of food composition datasets with FoodEx2 will enhance the quality of the assessment of nutrient intakes worldwide.
The FAO/WHO GIFT platform is developed in synergy with other global initiatives which are also aimed at increasing the quality, availability and use of IQFC data in LMICs to enable evidence-based decision-making and policy development for better nutrition and food safety.

Dr Habiba Hassan-Wassef, MD
National Research Center, Cairo Egypt

Dr Habiba Hassan-Wassef, a former Whitehall Research Fellow at Columbia University Institute of Nutrition Sciences, currently serves as an independent EU expert in food, nutrition and health. She is also a researcher at the National Research Center (Cairo) following a 20 year international career with the World Health Organization. She is a member of a number of scientific committees and think-tanks and is the National Contact Point for the EU Framework Research Programme since 2007 in the domains of food, agriculture, fisheries and biotechnology. She is at present leading the initiative for investigating the aetiology of stunting in Egypt. She is also advisor to the African Development Bank's Nutrition Leadership Group on the Nutrition Score Card. Dr Hassan-Wassef is a Trustee of the African Nutrition Society.

Abstract

Current strategies for stunting reduction in the light of emerging evidence of causal complexity

BACKGROUND AND OBJECTIVES:
Evidence from scientific research has identified a number of factors that contribute to linear growth retardation in children. The responsibility for control of several of these emerging causative factors may lie with other sectors than health and are rarely addressed in strategic orientations of health sector programmes for stunting reduction. Overcoming stunting is regarded by economists as critical for *building Africa's grey matter infrastructure; b*rain power being regarded as a basic requirement for accelerating economic growth and the realization of Africa's Agenda 2063.
METHODS:
The scientific evidence that identifies the various factors contributing to child stunting is presented. Evidence of impact of climate change and extreme weather on child stunting are also examined. The various approaches and strategies applied for stunting reduction are reviewed and probable reasons for noted differences in progress made in stunting reduction rates discussed. Special attention is given to environmental pollutants and food contaminants with focus on the group of mycotoxins recognized for their growth retardation and health damaging impact.
RESULTS:
Scientific evidence demonstrates the limitation of current stunting reduction strategies adopted by the health sector. The uptake by the health sector of scientific evidence incriminating environmental and food chain sources of some of the causative factors for stunting has not yet been translated into strategies.
CONCLUSIONS:
Stunting reduction strategies of national nutrition plans in Africa and supportive nutrition sensitive interventions in plans of other concerned sectors will necessarily need to be revised to address all causes of stunting if the commitment for reducing stunting by 40 percent is to be achieved by 2025. Treatment protocols for stunting, preventive strategies and regulatory measures to address all causative factors will necessarily be also revised.

KEYWORDS: Child stunting, causative factors, revised strategies, trans-sectoral actions

Professor Alan Jackson, CBE. MD; PhD; FRCP; FRCPHC; RNutr
University of Southampton, United Kindgom

Professor Jackson's major interest is the biological and social factors that enable optimal growth and development during childhood. He trained in paediatrics in Cambridge and London. He was Director of the Tropical Metabolism Research Unit, University of the West Indies, Jamaica, developing the evidence base for the WHO guidance on effective treatment of severe malnutrition. He has been a Senior Advisor on nutrition to the UK Government and advisor to the World Health Organization (WHO), Food and Agricultural Organization (FAO), and the European Union. He was recently Director for Nutrition Research, National Institutes for Health Research, England, Chair of their Cancer and Nutrition infrastructure collaboration and Chaired the Continuous Update Panel on nutrition and cancer for the World Cancer Research Fund/American Institute for Cancer Research.

Abstracts

1. **Developmental origins of adult diseases and the relevance to health in the African context**

It is now considered unremarkable that current health is built on past experience and that although genetic endowment marks the opportunity for biological function, cumulative experience and environmental interactions determine how this potential plays out. These relationships have been recognised throughout history but the underpinning biological mechanisms through which they are enabled is now the direct purpose of a body of scientific endeavour. It is clear that much of ill-health is a consequence of imposed stresses which may often be biological in origin, as with infections. But with the epidemiological, demographic, economic and nutrition transitions the stresses are increasingly attributable to the poor quality of life experience, loss of social and cultural harmony and the nature of social interactions. The basis of developmental origins is the relationship between the capacity of an individual ability to cope, otherwise characterised as the magnitude of their resilience, against the sum total of the stresses imposed through life's experiences. The extent to which these general relationships can be quantified from one context to another determines the policy choices and options for both population and individual approaches to health and care. At every stage of life nutritional considerations determine the capacity to cope, often most easily marked as growth in size and shape. Nutritional considerations can also contribute as stressors, as with poor quality diets that fail to match the needs for physical activity and growth. Locally relevant research and context specific enquiry is needed to determine how best an appropriate balance can be achieved for any particular group, community or situation.

2. **Prevention of cancer through, diet, nutrition, and physical activity: the case of Africa**.

Cancer is the most rapidly growing health problem across the world and particularly in low and middle income countries. In May, 2018 the World Cancer Research Fund International/American Institute for Cancer Research published their 3rd report on the "Prevention of Cancer Through, Diet, Nutrition, and Physical Activity". This extensive systematic enquiry into the relationship between a wide range of exposures and cancer risk at defined sites represents the largest analysis for any health related condition with careful and critical review of all the evidence against explicitly defined criteria to achieve consensus and come to considered advice that will form the basis of policy. Much of the policy informed advice is similar to that for health more widely and prevention of chronic non-communicable diseases but is built on a more secure evidence base. The recommendations are: to be a healthy weight; to be physically active; to eat a diet rich in whole grains, vegetables, fruit and beans; to limit processed foods, foods high in fat starch and sugars, to

limit processed and red meat consumption, to limit sugar sweetened drinks, to limit alcohol; to encourage and enable breast feeding. Although the available data are limited for Africa, the advice applies to all populations there are important considerations that may apply particularly, for protect against the consumption of aflatoxins. TAs a series of general statement, the Recommendations comprise a comprehensive package of behaviours that promote a healthy pattern of diet and physical activity to reduce cancer risk. They are to be used by individuals, health professionals, communities and policymakers, as well as the media. WCRF, IUNS and UICC have together formed an international collaboration, supported by IARC and IAEA, to enable wider national engagement and action through which the nutrition community and cancer community come together to better organise activities to address this widespread and common problem.

3. "Enabling People to Own their Health"

There are many models for the delivery of health care but those that most sustainable can be delivered at lowest cost, but require that people adopt and accept primary responsibility for their own health, where appropriate with the guidance and support of policy makers and health professionals. As with public health, effective and efficient delivery of all care requires the organised efforts of all society, acting collectively to achieve a common ambition. For the structures that are put in place to deliver quality requires that people of quality are able to recognise and address problems in context a timely way. The organized and structured approach to problem solving or learning from experience is what is often called research, but at times with pejorative overtones. Research should be seen as the structured approach to problem solving which enables greater efficiency of effort and distinguishes underlying principles from context specific experience. The so-called pipeline for research has for convenience been broken down into stage: discovery, efficacy, effectiveness; going to scale. Each step plays a role and each step has its own characteristics and skill base. Common to each stage of the process is the need to: inform and educate; set standards within a quality assurance management framework; understand how to, be able to show how and assure fidelity in practice. The formal development of Implementation Science as a formal structured approach to the application of what is known to routine practice offers a major development in enabling people to own responsibility for their own health when as a matter of course.

Professor Andrew M Prentice, PhD, FMedSci
Director, Medical Research Council (MRC) Unit, The Gambia
London School of Hygiene and Tropical Medicine (LSHTM)) United Kingdom

Andrew Prentice completed his PhD in Nutrition at the University of Cambridge. He is Professor of International Nutrition at the London School of Hygiene & Tropical Medicine (LSHTM). He lives and works in rural Gambia where he heads the Nutrition Theme for the MRC Unit at LSHTM and the field station at MRC Keneba, an association that spans over 40 years.
He has been involved in international nutrition research over the past four decades and his current research interests include iron and infection, and the effect of peri-conceptional maternal nutrition on the offspring's epigenome. His chief obsessions are the nexus relating iron, infection and anemia, and the effects of diet on the development of the epigenome in the very early human embryo. His team have recently developed a methodology for comparing the seasonal influences on two outcomes, when those influences may act cumulatively or instantaneously. They have used this to compare the seasonal pattern of intrauterine growth restriction (as reflected by weight-for-gestational-age) and preterm delivery (as assessed by Dubowitz scoring) among infants born in rural Gambia. He currently chairs the Wellcome Trust's Expert Review Group for Physiology in Health and Disease, the NIH/NICHD/Gates Research Review Group in Iron and Malaria, and the Strategic Oversight Committee of the American Society of Nutrition. He is also a Council Member of the International Union of Nutritional Sciences (IUNS).

Abstracts

1. Before the first 1000 days: the critical importance of the peri-conceptional nutrition of both parents

The 'first 1000 days' has become a mainstream concept in nutrition and has played a valuable role as an advocacy tool as we try to focus greater attention on the ills of malnutrition and how to solve them. However, if interpreted too literally, it has two shortcomings. The first is that it may wrongly imply that deficits present at age 24 months are irreparable. This is partly, but not entirely, true. More importantly it suggests that we need only concern ourselves with nutrition from conception onwards. Recent research shows that this is a critical error. Shortly after the fusion of the sperm and egg the new embryo's genome undergoes a rapid and highly complex process of epigenetic erasure and then re-establishment. Experiments in mice clearly show that these processes can be altered by changing the mother's diet before mating. We have recently revealed the first-in-human evidence to back this up. By exploiting a seasonal 'experiment of nature' in rural Gambia whereby conceptions randomly occur against a very different dietary background (mandated by seasonal changes in food types and availability) we have shown that a baby's season of conception has profound effects on the methylation levels of certain key genomic regions. There are already strong signals suggesting that some of these changes will affect susceptibility to obesity, viral diseases and certain cancers though biological validation of these phenotypic associations is still required. The fact that the epigenome might be alterable through nutrition interventions (whereas the genome is invariant) offers exciting possible prospects for next generation interventions to optimise fetal development and hence life-long health.

2. **Disappointing results from WASH intervention trials: Why, and where next?"**

Child growth is not simply a matter of good nutrition. Research in our field station in rural Gambia was among the first to link growth failure to persistent damage to the gastric mucosa involving villous atrophy, crypt hyperplasia and a persistent inflammatory state. This constellation of features (now frequently termed environmental enteric disease (EED)) causes malabsorption of key nutrients and nutrient wastage, especially energy. EED is widely viewed as a key driver of growth failure so a number of water, sanitation and hygiene (WASH) trials have attempted to clean up the child's environment in order to block the development and persistence of EED. The results of a series of large WASH interventions have been published this year; WASH Benefits from Bangladesh and Kenya, and the SHINE Trial from Zimbabwe. The results have caused widespread dismay and disappointment. Whilst the nutrition (promotion of IYCF) arms had a small benefit (averaging about 0.25 z-scores for length) the WASH arms had no benefit. Why is this the case? We have evidence from rural Gambia that the intention was valid but that there is a very high threshold of hygiene that needs to be overcome before EED will be reduced, and that the WASH interventions were simply not sufficiently intense. The investigators are working with WHO to promote the concept of 'Transformative WASH' and, subject funding being available, there will no doubt be trials of more intensive interventions in the near future.

Professor Paul Amuna *MB ChB (MD);* M.MedSci; FRSM; RNutr
Department of Clinical Affairs, Primary Health care Corporation, Qatar

Paul Amuna is a physician scientist and Subject Matter Expert in Research (SME-Research) at Primary Health Care Corporation, Qatar. He is a consultant in international nutrition and public health, Fellow of the Royal Society of Medicine. He is currently an honorary Principal Lecturer/Associate Professor at the University of Greenwich, United Kingdom (UK) and *Adjunct Professor* of Public Health, University of Health and Allied Sciences, Ho, Ghana. He has been involved in training and capacity building in Europe, Africa and The Middle East. He has also led and mentored researchers in these countries and regions over the past 20 years. He serves on a number of international boards and committees and is a Trustee of the African Nutrition Society in charge of scientific programmes. He is a Board Member of the e-Nutrition Academy (eNA), a new international multi-stakeholder technology platform to support nutrition workforce training in developing countries. He has also served as Advisor to the FAO of the United Nations on professional training in nutrition education (ENACT). His research interests span the maternal-infant nutrition and life course interfaces. He is currently lead principal investigator of the Qatar-ECHO-zone Childhood Obesity project. He is a faculty member on the Postgraduate Community Medicine and Family Medicine Residency Programmes in Qatar.

Abstract

Addressing the Problem of Childhood Obesity in the Arab Gulf: The Case of Qatar

Although the underlying causes and risk factors for childhood obesity are well recognised, this has not translated into tangible gains in tackling and preventing its exponential growth worldwide and especially in developing countries where a 4-fold increase in prevalence has been reported in some countries over the last decade alone. In the Arab Gulf region, rapidly rising childhood obesity levels require urgent national and collective regional actions to avert a worsening public health crisis. The components of risk are complex, involving intergenerational historical epigenetic and molecular risk-programming mechanisms which precede the post-natal life course social, environmental, cultural and behavioural determinants which although thought to be modifiable, have nonetheless remained an elusive proposition. An obesogenic environment plays a significant role especially in the Arab Gulf countries which have seen major demographic and epidemiological shifts as a direct result of rising gross national incomes, with a concomitant shift in unhealthy lifestyles, eating behaviours and sedentariness within the context of strong cultural values relating to gender, food and exercise. Government policies and the political will exist as well as broad strategies to tackle childhood obesity yet their implementation remains a work in progress. Inter-sectoral collaborative actions though necessary, still need to be developed and strengthened. Health care professionals' training, knowledge, understanding, accurate measurement and their ability to recognize risks; as well as parental and care-givers' health and nutrition literacy and parental involvement in addressing the issue remain some of the challenges to be overcome. The objective of this paper is to highlight childhood obesity as a major health issue in the Arab Gulf region and to explore efforts currently being made to address it with a focus on Qatar, including challenges and opportunities for the future.

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Professor Philip Calder, PhD
Faculty of Medicine, University of Southampton, United Kingdom

Philip Calder is Professor of Nutritional Immunology within the Faculty of Medicine at the University of Southampton, UK. He conducts research at the interface of nutrition, immunity and inflammation. His research addresses both life course and translational considerations. He has received several awards for his work including the Danone International Prize for Nutrition (2016) and the DSM Nutrition Prize in Human Nutrition (2017). He was President of the International Society for the Study of Fatty Acids and Lipids (2009-2012) and Chair of the Scientific Committee of the European Society for Clinical Nutrition and Metabolism (2012-2016). He is currently President of the (UK) Nutrition Society and President-Elect of the Federation of European Nutrition Societies. Professor Calder was Editor-in-Chief of the *British Journal of Nutrition* (2006 to 2013) and he is currently an Associate Editor of several journals. He has published about 305 research papers, 155 review articles in journals, 20 guidelines and expert group reports in journals, 65 book chapters, 80 editorials and commentaries, and 3 monographs, and he has co-edited 4 books. He is listed as a Highly Cited Researcher.

Abstract

Recent scientific developments and new insights in nutritional immunology: their relevance to Africa

A well-functioning immune system is key to providing good defence against pathogenic organisms and to providing tolerance to non-threatening organisms, to food components and to self. The immune system works by providing an exclusion barrier, by identifying and eliminating pathogens and by identifying and tolerating non-threatening sources of antigens, and by maintaining a memory of immunological encounters. The immune system is complex involving many different cell types distributed throughout the body and many different chemical mediators some of which are involved directly in defence while others have a regulatory role. Babies are born with an immature immune system that fully develops in the first few years of life. Immune competence can decline with ageing. The sub-optimal immune competence that occurs early and late in life increases susceptibility to infection. Nutrition is very important in assuring appropriate immune function. Undernutrition decreases immune defences, making an individual more susceptible to infection. However, the immune response to an infection can itself impair nutritional status and alter body composition. Practically all forms of immunity are affected by protein–energy malnutrition, but non-specific defences and cell-mediated immunity are most severely affected. Micronutrient deficiencies impair immune function. Vitamins A and D, Zn, Fe and long chain omega-3 fatty acids will be considered here. Their effects on the immune system and the underlying mechanisms of action will be discussed.

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Professor Wilna Oldewage-Theron, PhD
College of Human Sciences, Texas Tech University, USA

Wilna Oldewage-Theron is a Professor of Nutrition in the College of Human Sciences at Texas Tech University where she teaches face to face undergraduate and online graduate courses in community nutrition, nutrition throughout the life cycle and food and nutrition security. She has eighteen years Community Nutrition research experience in Africa and is a National Research Foundation (NRF)-rated researcher in South Africa. Her research interests include the factors contributing to household food insecurity and malnutrition in resource-poor communities where she has investigated the effect of various interventions such as food fortification, supplementation, nutrition education, food product development and implementation. Others include impact of school feeding programs on food security, dietary diversity and nutritional status of women and children as well as the elderly. Her current community research and development is mainly focused on the double burden of disease (micronutrient deficiencies and lifestyle diseases) as well as soy applications and the nutritional benefits of soy for human health in South Africa and Zambia. She has also been involved in impact studies for the Council for Scientific and Industrial Research (CSIR-SA), Joint Aid Management, the United States Potato Board, and the World Initiative for Soy in Human Health (WISHH, USA). Between 2016 and 2018, she was a consultant for WISHH facilitating a workshop on school feeding programs for delegates from various African and South American countries.

Abstract

Food security and malnutrition – are the elderly as vulnerable as women and children? The situation in South Africa

OBJECTIVE:
Specific indicators such as food insecurity, poverty and malnutrition prevalence among children, women and the elderly were investigated. To answer the question if the elderly is just as vulnerable as women and children, due to lack of data, a case study was undertaken in a group of Sharpeville elderly to determine the food security situation and the influence of socio-demographic factors on food security markers.
METHODS:
A literature review was undertaken for the background study and included national studies and review articles about food security in South Africa. The case study was undertaken in 146 free-living elderly, attending a care centre in Sharpeville. The m**easurin**g instruments included a socio-demographic-, 24-hour recall- and dietary diversity questionnaire and the validated household food insecurity access scale (HFIAS). Data were analysed on SPSS, version 23.0. A comparison was drawn between children women and the elderly.
RESULTS:
The prevalence of food security was 67.8% in the Sharpeville elderly, which compared more favorably to the national prevalence rate of 45.6% in women. A variety of coping strategies were used to cope with food insecurity. Poverty rates were much higher among women (55.5%) and children (66.8%) and elderly (44.0%) in South Africa. However, 100% of the Sharpeville elderly lived under $2 per person per day.

CONCLUSION AND RECOMMENDATIONS:
Due to a paucity of national data, a comparison to answer the research question, could not be drawn. The Sharpeville study points to a problem of household food insecurity with poor dietary intakes among the elderly. National surveys should include the elderly as a separate entity for data analyses to plan and implement interventions/programs/policies that would best fit the needs of senior citizens in South Africa.

KEY WORDS: children, elderly, food security, poverty, South Africa, women,

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Professor Mary Murimi, PhD
College of Human Sciences, Texas Tech University, USA

Mary Murimi is Professor of Nutrition in the college of Human Sciences at Texas Tech. A nutrition education and communication expert, Dr, Murimi's research has evolved to food insecurity. Her research interests include understanding the effects of the community environment on the nutrition status of residents, identifying coping strategies for food insecurity and factors that influence dietary behavior, especially among low-income populations.. In Ethiopia, Dr. Murimi has a USAID-funded project on linking livestock to human nutrition. In addition, she has organized two international conferences on Health disparity in collaboration with Jijiga University. Dr. Murimi is committed to the concept of mentoring the next generation and encouraging women in leadership roles. She is currently mentoring women at Jijiga University in conducting research and publication. Dr. Murimi has been recognized by her peers for her scholarly achievements, as distinguished alumni by her graduate school and by the Society of Nutrition Education and Behavior for mid-career achievement award. She also received her University's Global vision award and was recognised by the Korean community organization for her international engagement. Dr. Murimi has served as President for the Society of Nutrition Education and Behavior, and as Associate Editor for the Journal of Nutrition Education and Behavior. She is currently Chancellor of the Daystar University in Kenya.

Abstract

Breaking the vicious cycle of Health literacy and health outcome

Health Literacy is the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate and personal health decisions. Health Literacy therefore implies having correct and clear information to make the right health decisions. However nearly one billion of the world's poorest people have not yet experienced the education age and majority of them reside in Africa south of Sahara and majority of them are women and girls. Evidence based studies show a consistent association between low health literacy and poor health status. The purpose of this session is to discuss the benefits of health literacy and evidence based strategies to narrow the gap health literacy gap.

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Professor MUHAMMAD ALI DHANSAY, MD; PhD.
South African Medical Research Council,IUNS

MUHAMMAD ALI DHANSAY, (Ali), hails from Cape Town, South Africa (SA) and a specialist Paediatrician. He is Chief Specialist Scientist at the South African Medical Research Council with over 30 years' experience in nutrition research. He is Extraordinary Professor in the Division of Human Nutrition and External Lecturer in the Department of Paediatrics and Child Health, Stellenbosch University. His main research interests are Child and Maternal Health and Public Health Nutrition, with a special interest in Research Integrity, Ethics and Human Rights. He is currently President of Nutrition Society of South Africa and a Council Member of the International Union of Nutritional Sciences (IUNS).

Abstract

Double-duty actions for nutrition in Africa

In the past, there was colonialism, the industrial revolutions, and world wars. The world now is still in tumult, as evidenced by the 2008 financial implosion; genocide; civil strife with internal displacements; xenophobia; rising (economic) nationalism; trade wars; climate extremes (drought and floods); cross-border disease outbreaks (cholera, Ebola); poor governance, cybersecurity issues (Fourth Industrial Revolution), intemperate politicians; interference (overt and covert) in countries' sovereignty; corruption … the list is endless! Some might say the world, and Africa, have become inured to all the strife, conflict and changing social and health environments – this should not be allowed to happen. Against this backdrop, the world, and especially Africa, faces the spectre of malnutrition in all its forms (over-and undernutrition) and diet-related non-communicable diseases, today and for the fore-seeable future. Nearly 151 million children under five years of age are still stunted. Other forms of malnutrition, such as adult obesity, continue to increase in countries, and many countries are coping with multiple forms of malnutrition at the same time. Coherent and cohesive responses are required and at multiple levels, with sound nutrition as a keystone. Several global compacts and initiatives are on the agenda, e.g., the UN Decade of Action on Nutrition; the WHA Global Nutrition Targets 2025; and the SDGs 2030. However, time is short, political commitment is lacking most times and resources stretched, especially in Africa. In light of this, the strategy to address multiple forms of malnutrition by considering implementing *double-duty nutrition actions* is urgent, more so in Africa with its fragile economies and huge disease burden. The approach is rooted in contextualizing these actions, since the diversity that is both an outstanding feature of the continent is also its potential weak spot. Through case studies, potential double-duty nutrition actions are presented with a bias towards the South (African) context.

Professor Dr Heiner Boeing, PhD.
German Institute of Human Nutrition Potsdam-Rehbruecke, Germany &
Federation of European Nutrition Societies (FENS)

Prof Dr Heiner Boeing is the head of the Department of Epidemiology at the German Institute of Human Nutrition Potsdam-Rehbruecke with a background in Nutrition (Diploma) and Epidemiology (MSPH). He started his scientific carrier at the Department of Epidemiology, German Cancer Research Center, Heidelberg during which time he joined the European Prospectictive intervention on cancer (EPIC) collaboration. In 1992, he moved to the newly established Institute in Potsdam-Rehbruecke and established the prospective EPIC-Potsdam Study with more than 27,000 participants as one of the German contributions to the EPIC-Study. He is a member of the EPIC Steering Committee and was appointed local PI for the German National Cohort some years ago. Dr Heiner Boeing is currently president of the Federation of European Nutrition Societies (FENS) and has particular interest in, and is engaged in conceptional issues of Food Based Dietary Guidelines and its further development.

Abstract

Generating evidence for diet-disease relationships and their further use in FBDGs

During the past years, more and more clinical trials with human subjects were conducted and existing large scale prospective data collection have been analyzed regarding many research questions. This development made it more and more difficult to summarize dietary status by simply describing the studies and rather favoring a quantification approach pursued by meta-analysis. More recently, the quantification of effects or associations across different studies forms the basis of the data that are used by scientific panels to give advices and to formulate recommendations. Thus, in the food area and their translation into public health policy via food based dietary guidelines, meta-analytical approaches are also the choice. One example is the conduct of meta-analyses with an identical number of 12 foods for different endpoints, which also generated non-linear plots of the relationships. However, the single food-disease relationship needs further to be processed into a common relationship of a food with the various endpoints in order to obtain one non-linear relation per food, independent from any future disease because such events are not projectable for an individual. Such relationships need further to be translated into daily adjusted life years (DALYs) attributed to the food by using counterfactual food intake distributions often taken from real surveys. In this presentation, these issues will be explored with case examples from the scientific evidence.

Professor Grace S. Marquis, PhD
McGill University, Canada and Affiliate Associate Professor at Iowa State University, USA

Grace Marquis is Associate Professor at McGill University and Affiliate Associate Professor at Iowa State University, USA. Her research career spans over 35 years beginning at the Instituto de Investigación Nutricional (Nutrition Research Institute) in Lima, Peru. In 1999, her research group also began working in Ghana, West Africa. The long-term collaborations in both countries continue today, primarily through the Nutrition Research and Training Centre, a permanent research site which she built in the Eastern Region of Ghana in collaboration with faculty at the University of Ghana (https://www.mcgill.ca/cine/research/building-capacity-sustainable-livelihoods-and-health-ghana). Her community-based research examines how many social, cultural, biological, and environmental factors interact and the mechanisms by which they alter a household's ability to provide optimal feeding and caregiving for young children. Her research group develops integrated strategies that strengthen economic activities and expand knowledge to support health and growth of children living in poverty. Dr. Marquis is an Associate Editor for *Advances in Nutrition*. She was the Canadian Research Chair in Social and Environmental Aspects of Nutrition from 2006-2016. She received a Doctorate of Laws, *honoris causa*, for contribution to tertiary education from the University of Ghana in 2013.

Abstract

On-the-ground coordinated multi-sector activities are needed to improve child nutrition

Introduction/Background. Endemic poverty, inadequate infrastructure, and limited government services contribute to the poor nutritional status of rural Ghanaian children. Interventions that integrate resources from diverse district sectors are needed to develop effective approaches to improve infant and young child (IYC) nutrition.

Methods. *Nutrition Links [NL]* was 5-year capacity-building and research program in the Upper Manya Krobo District of the Eastern Region of Ghana. The *NL* program provided training on nutrition and health, gender, data analysis, and evidence-based decision-making to government and private sector service providers in the health, education, agriculture, governance, and finance sectors of the district. In addition, three of six sub-districts were randomly selected for a cluster randomized controlled trial to test the effect of a 12-month agriculture-nutrition education intervention on child diet and growth. Sixteen clusters with 500 households were randomly assigned to intervention (inputs and training for poultry farming and home gardening, and nutrition and health education) or control group. The study was registered at Clinicaltrials.gov (NCT01985243).

Results. Compared to children in the control group, children in the intervention group met minimum diet diversity (aOR=1.65; 95% CI: 1.02, 2.69) and had a higher LAZ (β=0.22; 95% CI: 0.09, 0.34) and WAZ (β=0.15, 95% CI: 0.00, 0.30). The components of the program that contributed to its success included: (1) training that strengthened the district-wide support of child nutrition in different sectors of government; (2) community-based training and development of community volunteers that improved local awareness and support of child nutrition; and (3) training, support of income-generation activities, and increase in accessibility of diverse foodstuffs that enhanced household opportunities to support child nutrition.

Conclusions. Interventions that address the multiple barriers that households face require the diverse expertise that is available in the different government sectors in a district. Integrated approaches that can increase access to high quality foods and nutrition education can improve child nutrition.

Key words (4 –5): child nutrition, agriculture, income-generation activity, linear growth, diet diversity

A professional scientific forum and voice for Africa's nutrition and health

Professor Michelle Holdsworth PhD; RD; RNutr
University of Sheffield, United Kingdom

Michelle Holdsworth is Professor of Public Health Nutrition, University of Sheffield (UK), where she leads an interdisciplinary 'Food and Nutrition' research group. She is a Registered Nutritionist and Dietitian and her research experience falls broadly within: dietary transitions, changing food environments and policy development in the context of the multiple burdens of malnutrition (especially in Africa, France and UK). She was based for almost 10 years in Montpellier (France) for the French Government-funded Institute of Research for Development, working mainly in francophone Africa. She leads two projects investigating dietary transitions in collaboration with Universities in Ghana, Kenya, Liverpool, Loughborough, and France

Abstract

Changing food environments in African cities and implications for policy

Africa is currently experiencing rapid demographic change, partly driven by increasing migration of individuals to cities. As a consequence, people's food environments and dietary habits are also changing, with increasing marketing, availability and consumption of energy-dense, nutrient-poor foods and beverages. Such changes are associated with increasing levels of obesity and diet-related non-communicable diseases (NCDs), coexisting with persistent undernutrition, as for example, unhealthy diets are also associated with lower micronutrient intake. Therefore, improving food environments has the potential to prevent both diet-related NCDs and undernutrition. This double burden of malnutrition represents a pressing public health concern and integrated actions (interventions and policy) are required to improve food environments. This presentation will provide evidence for how food environments are changing and shed light on the factors driving this in Africa. It will summarise the role that people's physical environments play (e.g. access to outlets selling unhealthy food and food advertising. It will explore how food consumption habits are structured and organised in social environments, such as when/where unhealthy food and beverages are eaten, how quickly and with whom. The evidence for developing interventions and policies within Africa comes mainly from outside the continent. Whilst useful, it is important to account for the food environments that people live in, so that policies and interventions to promote healthier food consumption in African cities are context and culturally relevant and address all forms of malnutrition. Hence, by investigating the role of urban social and physical environments, emerging public policies and interventions are likely to positively impact on nutritional status, thereby enhancing social and economic development.

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Professor Kaleab Baye, PhD
Centre for Food Science and Nutrition, Addis Ababa University, Ethiopia

Kaleab Baye is Associate Professor and Director of the Center for Food Science and Nutrition, Addis Ababa University. Dr. Baye's research interests include maternal and child nutrition, dietary intake assessment, and food systems-research aimed at improving diets. He is an honorary research fellow at Bioversity International and Deputy Editor of the journal *Public Health Nutrition.* He serves as Deputy Regional Secretary for Africa for the World Public Health Nutrition Association (WPHNA). He has also served as an expert and consultant for various UN agencies. Dr. Baye is a founding member of the Ethiopian Young Academy of Sciences (EtYAS) and a member of the Nutrition Research Advisory Council (RAC) of the Ministry of Health, Ethiopia, Member of the Food and Nutrition Society of Ethiopia (FONSE), the Nutrition Society (NS), and the American Society for Nutrition (ASN).

Abstract

Maximizing benefits and minimizing adverse effects of micronutrient interventions

Micronutrient deficiencies affect a significant proportion of the world's population. Infants, young children, adolescent girls, and women of reproductive age are the most affected. The adverse effects of micronutrient deficiencies include poor cognitive performance, frequent infections, congenital abnormalities, and overall poor health to name a few. Food fortification and supplementation have been proven to be cost-effective in preventing micronutrient deficiencies and related health risks. Consequently, efforts to scale-up the reach of fortification and supplementation have been underway. However, little is known about usual intakes and the risk of excessive micronutrient intakes in low and middle-income countries (LMIC) and whether there is a reasonable additional risk with untargeted micronutrient interventions. In this review, evidence of the co-existence of excessive nutrient intake will be shown in a non-negligible proportion of the population living in resource-limited settings of LMIC, where inadequate intake is often seen as the only problem. Vitamin A, iron, iodine and folic acid are among the most common nutrients for which excessive intakes exist. Secondly the need for targeting interventions will be highlighted and the programmatic challenges associated with it discussed. Finally, current technological and program design advances that have the potential to maximize the benefits of micronutrient interventions while minimizing risks will be discussed.

Professor Henrietta Nkechi Ene-Obong, PhD.
University of Calabar, Nigeria**.**

Henrietta Ene-Obong is Professor of Human Nutrition at the University of Calabar, Nigeria and coordinator of the African Network of Food Data Systems (AFROFOODS). Her major research interests are food composition, consumption and dietary assessment. She co-authored the *West African Food Composition Table* (FAO, 2012) and was a major facilitator for the compilation of the Nigerian Food Composition Table/Database. Henrietta, is a Fellow of the Nigerian Academy of Sciences (NAS) and Nutrition Society of Nigeria (NSN). She is a member of various Technical Advisory Committees including National Food Consumption and Nutrition Survey and Setting Menu Standards for the Nigerian Home Grown School Feeding programme. Dr Ene-Obong has over 90 scientific publications to her credit.

Abstract

Importance of reliable & standardized food composition data generation towards solving Africa's nutrition problems: constraints and the role of FAO/Infoods/Afrofoods & other stakeholders in future initiatives

BACKGROUND: Despite the rich biodiversity of the African continent and the tremendous progress so far made in food production, African is still pledged with the problems of food insecurity, hunger and malnutrition. Malnutrition, in its various forms (under-nutrition, over-nutrition, micronutrient deficiencies and the emerging non-communicable diseases) has continued to be a serious public health problem in Africa. To combat these nutritional problems, the production and consumption of nutritious and safe foods need to be promotion. These cannot be achieved without accurate data on the quantity and quality of nutrients and other components (food composition data) provided through foods. Food composition data (FCD) are compiled in food composition tables (FCTs) or food composition databases (FCDBs) for use by several professionals for a variety of purposes, ranging from clinical practice, research, public health/education, food industry to planning and policy, as well as nutrition monitoring and surveillance, with the ultimate goal of improving the nutritional status and wellbeing of population. To perform these functions effectively, the importance of reliable and standardized FCTs/DBs cannot be overemphasized. Poor quality FCD has serious consequences on the health of the population, and provide wrong evidences for nutrition and health related policies.

OBJECTIVES: This paper will review the various methods of FCD generation, the importance of reliable and standardized FCD generation in assisting nutrition/dietetic professionals in solving Africa's nutrition problems; current status of FCD generation, compilation and dissemination in Africa, constraint to the use of FCD by professional and the role of FAO/INFOODS/AFROFOODS and other Stakeholders towards improvement and future initiatives.

PROGRAMME IMPLICATION: The information provided will create awareness on the importance of FCD and facilitate the identification of gaps and prioritization of future efforts in FCD generation, compilation and dissemination in Africa and subsequent strategies for the alleviation of the food and nutrition problems in Africa.

Keywords: Food composition data, generation, uses, current status and limitations, Africa's nutrition problems, INFOODS/AFROFOODS.

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Professor Carl Lachat, PhD
Department of Food Technology Safety and Health, Ghent University Belgium

Prof. Carl Lachat works at the Department of Food Technology, Safety and Health at Ghent University, Belgium where he lectures on food and nutrition policies, nutritional epidemiology, planning and project design and nutrition-sensitive interventions. His research aims to develop effective approaches to enhance the nutritional status of vulnerable populations. He actively develops new knowledge with regard to collection, management and integration of food intake data and ways to increase quality of nutrition research for better policies and practices. Over the last decades, he has been a consultant to various international organisations and NGO's. He is Deputy Editor for the journal Public Health Nutrition

Abstract

Adding value to nutrition research for evidence-based policies in Africa

Introduction/Background: Ineffective use of resources for biomedical research is an important concern internationally, in particular in low- and-middle income countries where needs are high and resources are constrained. Concerns regarding the quality of nutrition research were raised previously and call for concerted actions by the nutrition research community. To date, a comprehensive overview of strategies to add value to nutrition research is unavailable.
Methods: Narrative review of existing initiatives to enhance quality of nutrition research across the research cycle: from adequate formulation of research priorities and funding to better reporting of findings, sharing and re-use of data.
Results: Most research has focused on technical aspects related to the design, implementation and analysis of nutrition research. Efforts to (i) define and fund research priorities according to priorities by African researchers, (ii) better reporting of findings and (iii) data handling are unexplored and deserve attention. Examples of relevant tools, reporting guidelines, and data sharing practices will be discussed.
Conclusions: Fostering of evidence-based nutrition policies will require attention and curriculum development of courses to integrate different parts of the research cycle: from adequate priority setting to reporting of findings. Most of the tools developed however, require application, testing and engagement of nutrition researchers in low- and middle-income countries to ensure adequate uptake into the best possible programs and policies.

Mark Hollingsworth
Chief Executive Officer (CEO), The Nutrition Society, London, United Kingdom

Mark Hollingsworth is the CEO of the Nutrition Society, the scientific learned society for nutrition for the United Kingdom and Ireland, with worldwide international membership. He began his career by serving for 16 years in a variety of roles as a military officer in the Royal Air Force. Mark Hollingsworth then developed extensive experience in the non-profit sector, serving as a Director, Vice-President, Executive Director and Board Chair in Canada. This was followed by a two-year period as a visiting lecturer on Leadership at the University of Winnipeg in Canada. He returned to the United Kingdom in 2014 to take up his role as CEO of the Nutrition Society.

Abstract

The Need for Ethical Leadership Has Never Been Greater

The presentation examines the structure of ethical leadership. Leaders who put their personal interests first, who see leadership as power, are identified through links with corruption, nepotism, egoism, and abuse of power. They avoid the truth, do not take responsibility for their actions, often simply to cover their own tail, or to make themselves look good. Ethical leaders act in accord with their conscience, when called upon, risking their careers by pursuing a more expansive vision of the organisational, institution, national or local interest in opposition to internal and/or external popular opinion or pressure. Such leaders are naturally humble, trustworthy, honest, considerate, charismatic and fair. They set high standards through personal example, becoming the role model and champion for the importance of ethics. Ethical leaders are able to recognise ethical dilemmas, the trigger situations and 'inner voice' which alerts them to certain challenging situations. However, recognising ethical dilemmas is one thing, deciding how to manage them is somewhat different. Ethical leaders have developed systems to assist them in dealing effectively with ethical dilemmas. In summary, to act ethically requires one key trait: Courage. In practice this means to be a true ethical leader, to engender deep trust and loyalty, starts with telling the truth. Telling those being led not what they want to hear, but rather what they need to hear is ethical leadership in action.

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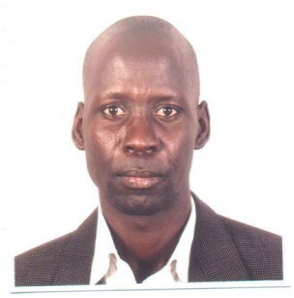

Dr Victor Owino, PhD.
International Atomic Energy Agency (IAEA), Vienna, Austria.

Victor Owino holds a BSc in Food Science and Technology (University of Nairobi, Kenya), MSc Food Science and Technology (Ghent University, Belgium) and PhD in Nutrition (University of London, UK). Dr Owino is currently a Nutrition Specialist with the International Atomic Energy Agency (IAEA) where his work focuses on supporting Low and Middle Income countries to apply non-invasive stable isotope techniques to design and evaluate nutrition interventions that target all forms of malnutrition. Topics covered include how body composition assessed using deuterium dilution reflects the link between early malnutrition and risk of obesity and non-communicable disease. Dr Owino is also leading cutting-edge research in 9 countries to develop a stable isotope-based breath test to diagnose environmental enteric dysfunction, a condition associated with stunting. He is a Fellow of the Nevin Scrimshaw International Nutrition Foundation. His main contribution to science has been the development and testing of the efficacy of novel complementary foods targeting malnutrition in early childhood. He has over 20 publications in peer-reviewed journals in this field. He has over 20 years industrial and professional experience, the most recent of which include as Research and Development Manager with Valid Nutrition; and Senior Lecturer and Head of the Department of Human Nutrition at the technical University of Kenya. He was also an instrumental team member in the implementation of the pilot phase of the WASH Benefits Project in Kenya, one of the largest randomised trials to date addressing how improved water and sanitation combined with novel supplementary foods impact child growth.

Abstract

The journey of a thousand miles: what first steps does Africa need to take to tackle the rising menace of diet-related non-communicable diseases?

Like other regions worldwide, Africa is experiencing a sharp rise in non-communicable diseases (NCDs) related to rapid globalization and urbanization. Both phenomena have led to shifts in dietary and lifestyle patterns. Increase in caloric intake, physical inactivity and complexity of the built environment are manifest. The African diet has shifted from largely fibrous to more refined, energy-dense foods coupled with increased consumption of alcohol and sweetened beverages. However, unlike more developed regions, Africa has a double burden of disease: NCDs co-exist with infectious diseases including lower respiratory tract infections, HIV/AIDS and diarrheal diseases. African economies are also relatively weaker, making it difficult to cope with this burden. It is postulated that NCDs, specifically, Ischaemic heart disease and stroke, will soon overtake infectious diseases as the number one cause of death in the African region. The recognition of NCDs as diseases and obesity as a related risk factor is weak in Africa, compounded by stigma associated with wasting in HIV/AIDS and obesity being perceived as a sign of wealth, achievement and care. There is also a dearth of data on overweight and obesity in the region and little knowledge that infant feeding practices, such as breastfeeding, are linked to reduced risk of NCDs in both children and mothers. Whilst complex multi-sectoral approaches to address this NCD menace are needed, Africa may benefit from taking simple initial steps to address NCD risk factors including: 1) behaviour change communication to challenge perceptions on NCDs and inform the region on preventative measures such as breastfeeding; 2) formulate policies and regulations limiting wide availability of unhealthy foods; 3) mainstream nutrition education in school curricula and; 4) collection of accurate data based on indicators that can reflect the double burdens of disease and malnutrition.

Dr Carla Cerami, MD; PhD
Medical Research Council (MRC) Unit The Gambia, at The London School of Hygiene and Tropical medicine (LSHTM), United Kingdom

Dr Carla Cerami earned both her MD and PhD from the New York University School of Medicine. In 2009 she joined the faculty of the University of North Carolina (UNC) Gillings School of Global Public Health in Chapel Hill, North Carolina, USA. She became Associate Professor in the Division of Infectious Diseases at the University of North Carolina. She joined the Nutrition Theme MRC Unit, The Gambia at The London School of Hygiene and Tropical Medicine in June 2016. Dr Cerami's work focuses on human iron metabolism and nutritional immunity.

Abstract

Anaemia in African children: Efficacy and Risks of Iron Supplementation

Iron deficiency is the most common nutritional deficiency worldwide. Despite aggressive implementation of iron supplementation programs either alone or in combination with food-based supplementation, the prevalence of anaemia remains high in Sub Saharan Africa. The long-term consequences of anaemia are severe, yet it is, in theory, easily treatable – hence, the WHO recommends universal iron supplementation for young children. However, in 2006 a large interventional trial resulted in significant excess of serious adverse events in African children receiving iron and raised serious concerns about the safety of iron supplements. These concerns have been reinforced by subsequent studies that show a stimulatory effect of iron on potential bacterial and protozoal. A 2016 Cochrane review searched all available evidence and concluded that iron supplementation should not be withheld in malaria endemic areas where malaria management services are available. Unfortunately, they were unable to address the question of the safety of iron supplementation in young children in the absence of malaria prevention and treatment services. Our work has sought to understand the relationship between iron deficiency, iron supplementation, and malaria, using *in vitro* infection models and blood from iron deficient Gambian children. Our results show elevated rates of malaria susceptibility following iron supplementation, which parallels increases in erythropoiesis. These results highlight the need for malaria prophylaxis during iron supplementation campaigns. We have also demonstrated that the inefficacy of iron supplementation in children is likely to be mediated, at least in part, by a hepcidin-mediated blockade of iron absorption. This is driven by chronic inflammation that in turn is caused by poor living conditions, and points to a need for multi-sectoral interventions in order to eliminate iron deficiency anaemia.

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Prof Jacques Delarue, PhD
(Department of Nutritional Sciences and Human Nutrition Laboratory of Brest University, France)

Professor Jacques Delarue is MD, PhD, and Professor of Nutrition. He leads the Department of Nutritional Sciences and Human Nutrition Laboratory of Brest University Hospital in France. His is past-President of French Federation of Nutrition (FFN), current Vice-Président of FFN and Vice-President of French Nutrition Society in charge of International Relations. He is member of Board of (Federation of European Nutrition Societies) FENS in charge of Task Force of Mediterranean Networking. He is Chairman of Organizing Committee of International Congress of Nutrition of the International Union of Nutritional Sciences (IUNS), which will hold in Paris in 2025. He has contributed to the organization of several international congresses.

Abstract
Fatty acids, a role for Africa ?

Among macronutrients, fatty acids have been the most controversial concerning health effects. This is mainly explained not only by the very different biological effects of their different major subclasses of fat: saturated monounsaturated and polyunsaturated (PUFA) but also because of the biological and health effects of specific fatty acids inside a subclass. In the whole, contrarily to a popular belief, total mortality is inversely associated to the amount of fatty acids consumed. In contrast, a positive relationship exists between consumption (expressed as quintiles in 126,233Nurses) of Trans fatty acids or saturated fatty acids and total mortality and an inverse relationship between consumption of monounsaturated or polyunsaturated fatty acids and total mortality. Among PUFA, in spite of some controversy, long chain omega 3 PUFA has a protective effect in secondary cardio-vascular prevention at least in subgroup of population and when including cohort studies. Concerning the consumption of fat there is a specificity of Africa as compared to other continents. Energy from saturated fat does not exceed 14% and highly depends on the country as well energy from n-6 PUFA, which does not exceed 8% (4). Energy from trans-fat is very low in Africa except in Egypt; dietary intake of marine omega 3 PUFA is very low in Africa inferior to 100 mg/day whereas international recommendations promote 250 to 500 mg/day. In contrast consumption of plant omega 3 PUFA (ALA) is highly variable depending on the country. Both fish and ALA availability are low in numerous African countries. In spite of these characteristics of fat consumption and availability prevalence of diabetes is the lowest and cardiovascular events are very low in Africa, partly explained by the fact that the whole dietary pattern is globally the best of all continents, even though there is a tendency to deterioration over the last decade. One objective of "fat for Africa" could be to increase as much as possible the amount of marine omega 3 PUFA consumed by promoting aquaculture, and to maintain as much as possible traditional dietary pattern by preventing a tendency to westernization, provided that the amount of energy and protein is sufficient to fight against wasting and stunting where it still exists.

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Dr. Namukolo Covic ,
Senior Research Coordinator,
Poverty Health and Nutrition Division at IFPRI,
Addis Ababa, Ethiopia

Dr. Namukolo Covic is a Senior Research Coordinator in the Poverty Health and Nutrition Division at IFPRI based in Addis Ababa, Ethiopia where she works closely with the African Union. With a dual background in agriculture and nutrition, her work straddles the interface between policy, dynamics of nutrition action implementation and the types of capacity considerations needed. She has been one of the facilitators of the African Nutrition Leadership Programme since 2008. Since 2011 she has been involved in different aspects of mainstreaming nutrition in the Comprehensive Africa Agriculture Development Programme (CAADP) and is on the African Union technical team that developed technical guidelines for the CAADP Biennial Review-2017. She guided the process that developed the Annual Trend and Outlook Report-2015 (ATOR-2015) for the African Union's ReSAKSS Platform led by IFPRI and the ReSAKSS Conference 2016, on a synthesis of evidence towards supporting a nutrition revolution for Africa.

Abstract

What role can leadership play in governance for nutrition policies, strategies and programmes in Africa?

Leadership is a critical component of accelerating progress on nutrition on the African continent. Yet this is an area that has not received adequate attention. If we are to benefit from policies and programmes being implemented across the African continent, key leadership principles need attention across the whole multisectoral nutrition system. This must bring on board food systems dynamics. The complexity of multisectoral action calls for vision and purpose beyond self-interest as well as appropriate governance attitudes within existing structures to effectively deliver on stakeholder commitment and collaboration through effective coordination. Leadership can play a role in governance for nutrition in Africa by galvanising efforts in a positive direction and this leadership capacity needs to be developed in addition to technical capacity.

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Dr. Suneetha Kadiyala

Associate Professor in Nutrition-Sensitive Development, London School of Hygiene & Tropical Medicine (LSHTM); Principal Investigator of IMMANA & the Agriculture, Nutrition and Health (ANH) Academy

Dr. Suneetha Kadiyala is a nutritionist with research interests focusing on the intersection between agriculture/food systems and food security, health (HIV) and nutrition. I am a core faculty member of the Leverhulme Centre for Integrative Research on Agriculture and Health (LCIRAH). She joined LSHTM in August 2013.Prior to joining LSHTM, she was a Research Fellow at the International Food Policy Research Institute (IFPRI), New Delhi. Dr. Suneetha Kadiyala, the Principal Investigator of IMMANA (Innovative Methods and Metrics for Agriculture and Nutrition Actions), DFID's partnership to stimulate the development and application of scientifically sound methods and metrics in agriculture, health and nutrition research. She is the Principal Investigator of a research programme integrating maternal and child nutrition objectives into a participatory low-cost video driven agriculture extension platform. I am also a co-investigator of Leveraging Agriculture for Nutrition in South Asia (LANSA) research consortium. At the International Food Policy Research Institute (2002-2013), she co-established and led multiple large multidisciplinary and multistakeholder research programmes including the HIV and Nutrition Security theme under a five country initiative, RENEWAL (Regional Network on AIDS, Livelihood and Food Security) in eastern and southern Africa; TANDI (Tackling the Agriculture Nutrition Linkages in India) and POSHAN (Partnerships and Opportunities to Strengthen and Harmonize Actions for Nutrition in India) in India and; the evaluation design and baseline survey of a multisectoral program, *Suaahara*, in Nepal.

Abstract

Innovations in Agriculture/food systems-nutrition research: Connecting disciplines and sectors, globally and locally

The talk will first highlight the developments in agriculture-nutrition research in the last decade and summarize the evidence of the impact of agriculture interventions outcomes along agriculture-nutrition pathways and key evidence gaps. The talk will then present some recent key innovations in interdisciplinary methods and metrics to fill these evidence gaps and conclude with presenting a way forward in bridging disciplines and communities of practice (with specific reference to the Agriculture, Nutrition and Health Academy) to accelerate the the development of a robust scientific evidence base needed to guide policy investments in agriculture-food systems for improved nutrition.