

## Editorial [Volume 23 No. 1 (2023)]

'Special Issue for the Queen Elizabeth Scholars Program in Ghana'

### Building Research and Implementation Capacity among Early Career African Scientists

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Building the capacity of a new generation of scholars is both a necessary and an exciting quest. It is an opportunity to be intentional in passing on the baton of 'know-how' (knowledge and experience) and 'know-do' (competence and leadership) in a way that ensures that future generations of scholars will generate the scientific evidence to support policy and program decisions make the world a better place. This special issue of AJFAND includes output from scholars involved in capacity building activities that have been possible through more than 20 years of research and training partnership between the University of Ghana, McGill University, and rural institutions in Ghana. The two Universities have collaborated on multiple projects (the [RIING](#), [ENAM](#), [Nutrition Links](#), and [LinkINg UP](#) projects) that have developed the capacity of young trainees while improving maternal and child nutrition in rural settings [1-3].

One other activity which strengthened the capacity of a global cohort of interdisciplinary researchers between 2017 and 2021 was the [LINKIN Ghana](#). The LINKIN Up project was funded by the Canadian Queen Elizabeth II Diamond Jubilee Scholarships Advanced Scholars (QES-AS) program and is managed through a unique partnership of Universities Canada, The Rideau Hall Foundation, Community Foundations of Canada, and Canadian Universities. The QES-AS is made possible with financial support from International Development Research Center and the Social Sciences and Humanities Research Council. LINKIN Ghana focused on enabling enhanced capacity and networking among early career scientists and graduate students. The LINKIN Ghana project has trained 17 scholars to ensure that Ghanaian rural farmers, entrepreneurs, community leaders, and local institutions worked together in a coordinated fashion to develop solutions to the complex, interrelated problems related to agriculture, food security, and human health and nutrition.

Some of these scholars were doctoral students while others were postdoctoral or early career scholars. Across the board, the project offered an opportunity to acquire competencies in research, leadership, communication, networking, and teamwork, among others. The scholars then put these skills to use in their QES-supported research projects. Seven out of the eleven papers in this special issue are based on the QES-supported research carried. The papers are briefly described below.

The paper by Thomas Anning-Dorson [4] was based on a study focused on creating enhanced opportunities for women entrepreneurs to add value to their income-generating activities. Using evidence from a literature review and key informant interviews, they examined the value chain for gari, a local staple made

from cassava and the making of which constitutes an important livelihood for rural women in Ghana. The study's findings indicated that although the gari value chain had a high income-generating potential for women, there was an unmet need. For women to be able to take full advantage of this business opportunity, there is a need for enhanced capacity in the form of training, technology, and standardization of product quality.

The paper by Abdu and colleagues reported on the local meanings and perceptions of women's empowerment aimed to unravel the linkages between women's empowerment and nutrition from the perspective of both men and women living in rural Ghana [5]. The study employed a qualitative research approach and found that women's empowerment was linked to their relationship with others, and their roles around reproduction, production, and community. These findings serve as a useful guide for how women's empowerment can be measured in studies on the links between nutrition and empowerment.

In another study focused on women, Chamoun *et al.* [6] explored the feasibility of addressing maternal anemia through promoting the consumption of edible insects, such as palm weevil larvae. In the Ashanti region of Ghana where this study was conducted, she observed a positive perception of palm weevil larvae. The barriers to its utilization, which need to be addressed include increasing the supply and ensuring safety of the value chain.

Dallmann *et al.* [7] examined both undernutrition among women, and the rapidly growing burden of maternal overweight in Ghana. Using data from the Nutrition Links baseline study, they examined the links between women's characteristics (such as marital transition, household food insecurity, and diet quality) and overweight in a rural district of the Eastern Region. A key finding of this study is that women in current cohabiting relationships with no previous union were less likely to be overweight compared to those who were continuously married. Also, cohabiting women were less likely to consume a minimally diverse diet, compared to continuously married counterparts.

Anouk *et al.* [8] assessed the predictors of overweight as well as the perceived consequences in a mixed-methods study of rural households. Overweight among men and women was correlated with age and household wealth. Further, overweight among women was associated with symptoms of mental health. As reported previously in other settings, in these rural communities, being overweight was considered a positive outcome; it was only considered as a problem if it incapacitated ability to work and earn a living.

In response to the high overweight prevalence observed in the Nutrition Links study among rural-dwelling women, Kushitor *et al.* [9] developed a nutrition education facilitator's guide for motivating behavior change based on the Four Star Diet model used by the Ghana Health Service. Kushitor *et al.* describe the procedure for developing the five lessons in this guide, including the literature review, stakeholder engagements, and optimization workshops implemented to ensure the quality of the guide.

Adhikari and colleagues [10] analysed data on maternal perceived stress, HIV, and feeding styles on child dietary intake. This study was implemented as part of the RIING study implemented in peri-urban and rural households in the Eastern Region. In linear regression analysis, the study reported that maternal stress, feeding style, and HIV status were significantly associated with child feeding. This study adds to the literature on the need to prioritize maternal health for the benefit of infant feeding and nutrition.

Boadi and colleagues' paper [11] on nutrition-sensitive agriculture policy-making was implemented at the national level in Ghana. It aimed to understand the processes involved in developing such policies, by examining the linkages between stakeholders in the food, agriculture, and nutrition sectors' as well as how they influence each other. The study used a modified version of the Net-map methodology, which is a visual participatory mapping technique. The map that was generated of stakeholders and their capacity to influence the landscape will be useful for guiding future policy making in agriculture to ensure enhanced nutrition-sensitivity.

Fusta Azupogo and colleagues [12] reported on the process for diet modelling that informed the development of food-based dietary guidelines in Ghana. Using a Microsoft Excel Solver linear programming tool and with inputs from local dietary intake data, a healthy diet was modelled to ensure reduced risk of undernutrition among the most vulnerable populations (women in reproductive age, adolescent girls, and the elderly) and to prevent overweight and diet-related diseases. The process reported here will serve as a useful learning experience for other countries developing food-based dietary guidelines.

A secondary data analysis study by Tetteh *et al.* [13] modelled the drivers of anemia prevalence reduction among women of reproductive age in the Upper West and Eastern Regions of Ghana. The study used data from the Demographic and Health Surveys of Ghana in 2008 and 2014, modelled using decomposition

analysis. Household wealth index, and maternal age, education, use of hormonal contraception and body mass index were identified as the key drivers of anemia prevalence reduction between 2008 and 2014. The study also reported region-specific drivers of anemia reduction, indicating the need for multi-sectoral and multi-dimensional strategies to address anemia among women in communities with high risk of anemia.

The final paper is based on work done by Nyantakyi-Frimpong and colleagues [14] to assess risk of artisanal mining on food security and food systems in rural communities in Ghana. Using the Photovoice technique, community volunteers used photography to highlight the effect of mining on the availability, access, and affordability of food in their communities. The study findings shed more light on the adverse impact of artisanal mining on local communities in rural farming communities in Ghana.

The studies in this special series highlight the challenges of food and nutrition security of rural households, especially among women in reproductive age. The series highlights the transitions in the nutrition challenges that Ghana is experiencing today by pointing to both the risk of undernutrition and overweight.

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