

## COMMENTARY

### AN ADAPTIVE HOUSEHOLD SAMPLING METHOD FOR RURAL AFRICAN COMMUNITIES



**Richard Douglass<sup>1</sup>**

#### **Introductory Comments from Richard Douglass**

This issue of AJFAND is special in a new way. The need for improved and appropriate research methods throughout Africa has been recognized for some time and in this issue AJFAND declares that it is time to address the issue. I have had the privilege of serving on the Editorial Board, reviewing manuscripts for technical and substantive quality, working with young scholars to get their work into print, and collaborating with Professor Ruth Oniang'o to move this journal to the forefront of discovery and multidisciplinary scientific communication. The joy of the work has frequently been frustrated by the presentation of good questions and ideas that are pursued with inadequate research methodology. From many of these submissions since 2001 it has become clear to me, and also by many other reviewers, that the teaching and state of the art regarding research methods is often dismal. Many submissions demonstrate a very elementary and naïve understanding of research methods. A large proportion of survey-based studies, for instance, report dependence on the catch-all “convenience sample” that may serve the purpose of developing new questions in the context of qualitative research, but can never demonstrate methodological transparency or replicability. Results of a single convenience sample cannot be used as a basis for extrapolation to any extant population.

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Using convenience sampling as a proxy for scientifically adequate survey sampling is bad science and can lead to bad public policies and flawed decisions by practitioners. In my teaching I have been known to say that a convenience sample is only “convenient for the investigator”.

Many other methodological mistakes, or insufficiencies are revealed in papers submitted for publication including inappropriate statistical applications, comparisons of non-equivalent populations, confusion about what experiment is compared to a quasi-experiment and misunderstanding the meaning methodological terminology. Often we have seen authors blindly administering survey instruments in the field with little evidence of testing for contextual appropriateness even when the original instrument was developed many years earlier, on a different continent, and in a different language. Human subjects protections are often either absent or undocumented in submitted manuscripts.

Recognizing these issues has resulted in our decision to begin publishing innovative and interdisciplinary contributions that focus on how good research can be conducted in Africa while also acknowledging the limitations of resources, inconsistent or missing essential elements of sampling frames that are routine in North America or Europe, fiscal priorities that preclude the level of research funding commonly expected in the developed world, and the apparent elementary levels of research training and experience among academics and field personnel in fields of agriculture, nutrition, and development throughout Africa. The purpose of this focus will be to share ideas about methodology, increase the levels of sophistication regarding applied research in the field, and to promote innovation and discovery of new, or adaptive methods to help produce good science and good answers to pressing questions upon which Africa’s development depends.

Since 2013 I have been part of a team lead by Professor Rebecca Awuah at Ashesi University in Ghana to investigate the consequences of imposing a modern university on a traditional Ghanaian community. The Berekuso Impact Study needed a survey sampling method that could be replicated over time that reflected operational consistency and reliability, and demonstrated good scientific replicability. The team was up to the challenge and **An Adaptive Household Sampling Method for Rural African Communities** is the first publication from this longitudinal research effort. The paper discusses the need for scientifically rigorous sampling methods that face limitations that haunt most field research projects in Africa. The methodology was adapted from the fields of ecology and agriculture and applied to a human population.

The need to conduct such research, especially for local or regional research is just as important for planning and evaluation of economic and human development as are national studies conducted by government ministries, often with international resources. We coined the term “civic infrastructures” to refer to lists, regimentation, documentation, and records used by most large scale survey research in the developed world. But local and regional research, especially in rural Africa, rarely benefits from international funding and cannot sustain the costs of maintaining ongoing survey research infrastructures. Most often such infrastructures simply do not exist anyway in such

places, making survey research on the model of American or European academic standards impossible. Our challenge was to find a way to produce good science in the absence of such civic infrastructures and to do so within economic constraints that most rural African investigators face. My colleagues at Ashesi University and I will welcome a vigorous examination of what we produced and we hope that this paper stimulates replication of our adaptive methods and also the invention of new methods for and by African scholars.