Sampling Design of
The Survey on Aging in sub-Saharan Africa

Iliana V. Kohler

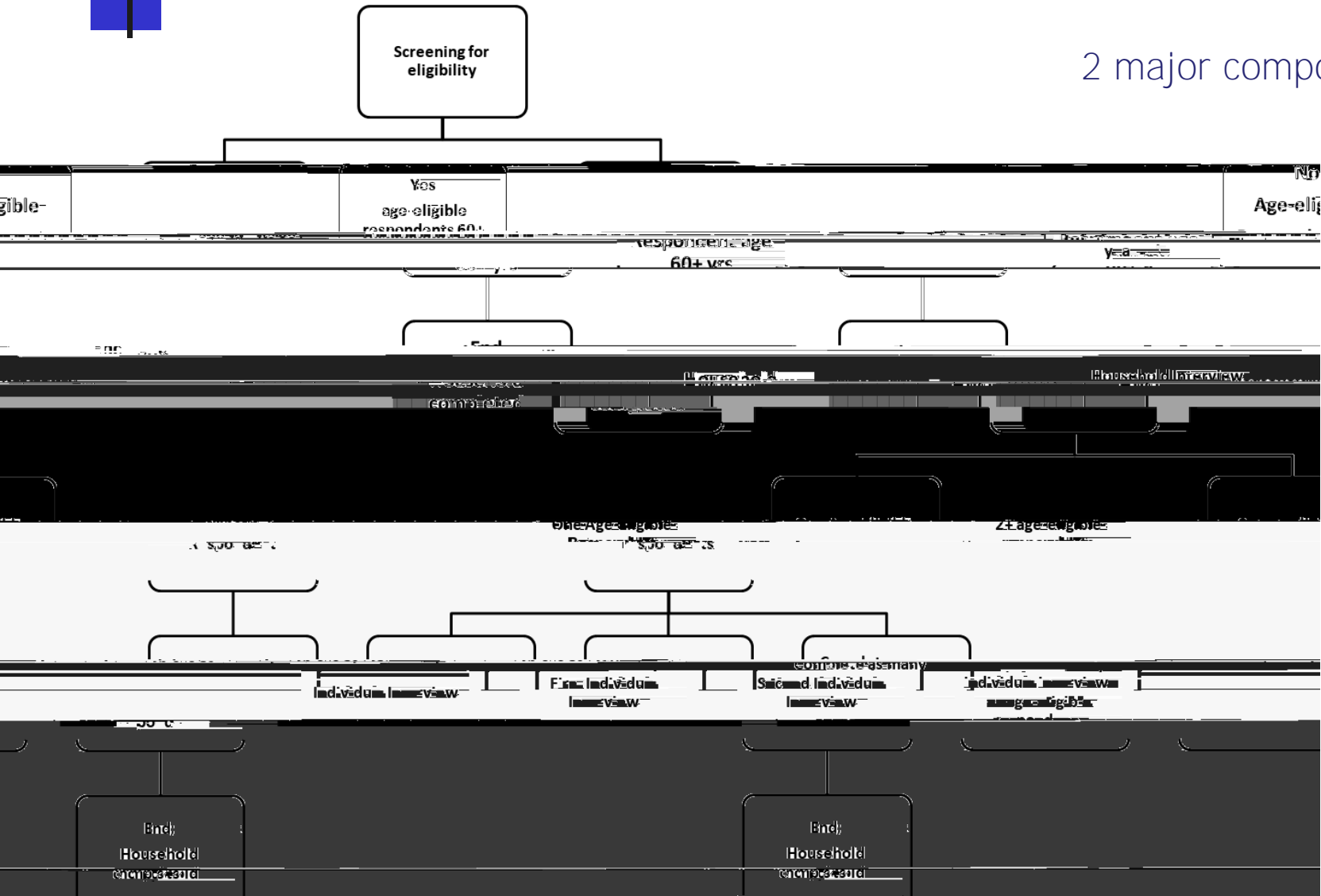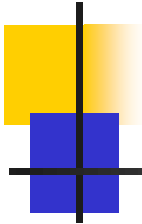Population Studies Center
University of Pennsylvania

Overall Structure of the Survey on Aging in SSA

2 major components:

Overall Sampling Design

Nationally representative stratified random sample of households that include at least 1 household member age 60 years and older
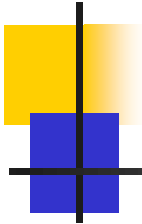
Household sample surveys:

- Key source for data on social phenomena
- Are among the most flexible methods of data collections
- In theory almost any population-based subject can be investigated through household surveys

Only probability samples following well-established sampling procedures are suitable for making inferences from the sample population to the larger population that it is designed to represent

- Snow-ball or convenience samples are not suitable for this survey

Overall Sampling Design cont'd

Probability sampling in the context of household surveys:

Refers to the means by which elements of the target population are selected for inclusion in the survey

 In order to be cost-effective, most household surveys are not implemented as simple random samples

Sampling procedure usually includes stratification to ensure that the selected sample actually is spread over geographic sub-areas and population subgroups

This sampling design usually uses clusters of households in order to keep costs to manageable level

General Principals of the Survey on Aging in SSA

Full coverage of the target population: should be nationally representative and cover 100% of the target population; that is no subpopulations age 60+ are systematically excluded;

Probability sampling: sample should be obtained as probabilistic sample based on existing sampling frame using established sampling procedures;

- Only way to obtain unbiased estimation and to be able to evaluate the sampling errors
- Excluded are purposive sampling, quota sampling, and other uncontrolled non-probability methods because they cannot provide evaluation of precision and confidence of survey findings

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Sample Size

Sample size must take into account competing needs so that costs and precisions are optimally balanced

Sample size must also address the needs of users who desire for sub-populations of sub-areas domains

Sample size is determined by the trade-offs between survey precision, data quality, organizational capacities and survey budget;

In the case of Malawi this is about 2,000 respondents (men and women)

Overall Sampling Design cont'd

Two stage sample design is well-established approach for implementing household surveys

1st stage: select a sample of EAs with probability proportional to size (PPS);

> Within each stratum a sample of predetermined number of EAs is selected independently with probability proportional to size, where size is measured in terms of older individuals age 60+;

> If size of pop age 60+ is not available, and variations in age structures are relatively modest, then total pop size can be used

> All households in the EAs are listed

Interviewing all individuals age 60+ in the HH

Advantages:

   Maximize the number of respondents for a given sample of HH

    Cost effective to achieve the sample size

    Analytical advantages so that interactions among spouses, within and between household variation of outcomes can be investigated

Disadvantages:

    Lower statistical power given the within household correlation of observations

    Logistical challenges in the fieldwork
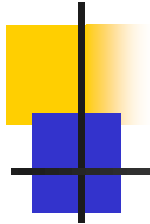
Sample Take per Cluster

Sample Take per Cluster

This fixed sample take per cluster is:

Easy for survey management and implementation

But requires sampling weights that vary within clusters