

Mahmoud A. Elkasabi, PhD

Senior Survey Statistician

RTI International

Phone: +1(734) 730-5726 (Cell)

Email: melkasabi@rti.org; mahmoudekasabi@gmail.com

LinkedIn: www.linkedin.com/pub/mahmoud-elkasabi-phd/23/390/286/

EXPERIENCE OVERVIEW

Dr. Mahmoud Elkasabi served as a survey statistician for population surveys, health facility surveys and establishment surveys over 25 countries in Africa and Asia for about 20 years with particular expertise in sampling design, calculating survey weights, adjusting for non-coverage and nonresponse errors, and weight calibration. He has built local capacity in these areas through training over 100 junior statisticians on using sampling tools. He also has experience with different methodological topics like dual frame estimation, combining data from different data sources, sampling rare populations and survey sampling in insecure environments.

EDUCATION

Ph.D. Survey Statistics, 2013

University of Michigan, Ann Arbor

Areas of specialization: Sampling Statistics, Survey Methodology

Dissertation: Joint Calibration Estimator for Dual Frame Surveys

Dissertation Advisors: Steven Heeringa, Ph.D. and James Lepkowski, Ph.D.

M.S. Statistics, 2008

University of Cairo, Faculty of Economics and Political Science, Cairo, Egypt

Areas of specialization: Sampling Statistics, Survey Methodology

Dissertation: Non-coverage Bias in Telephone Surveys in Egypt

Dissertation Advisors: Sahar El-Tawila, Ph.D. and Ali El-Hefnawy, Ph.D.

Certificate, 61st Summer Institute in Survey Research Techniques, June–July 2008

University of Michigan, Ann Arbor, Institute for Social Research, Ann Arbor, MI

B.S. Statistics, 2003

University of Cairo, Faculty of Economics and Political Science, Cairo, Egypt

PROFESSIONAL and RESEARCH EXPERIENCE

Senior Survey Statistician, August 2022 – present

RTI International, August 2022 – present

Senior Survey Sampling Statistician, March 2018 – August 2022

Survey Sampling Statistician, June 2013 – February 2018

The Demographic and Health Surveys (DHS) Program, ICF, June 2013 – August 2022

Graduate Research Assistant/Associate II

Surveys of Consumers (Web-Mail Experiment) as a Survey Manager/Analyst (under James Lepkowski and Richard Curtin), University of Michigan, September 2010 – July 2012
Program in Survey Methodology, University of Michigan (under Steven Heeringa), September 2009 – July 2010

Survey Statistician

Public Opinion Poll Center, Information and Decision Support Center, Cairo, Egypt, May 2005–August 2009

Market Research Statistician

Marketeers Egypt, Cairo, Egypt, September 2004 – April 2005

SELECTED PROJECT EXPERIENCE

NCHS Rapid Surveys System (2023 to date) — *Task Lead*. Leads the data quality and survey weight tasks. Lead junior statisticians to check the data quality and calculate survey weights. Document the process and results in technical reports. The CDC National Center for Health Statistics (NCHS) Rapid Surveys System (RSS) is a new survey system that collects data on public health topics, attitudes, and behaviors. The RSS is designed to complement the NCHS's current household survey systems.

State Library Administrative Agency (SLAA) Survey (2023 to date) — *Lead Statistician*. The biennial SLAA survey sponsored by the Institute for Museum and Library Services collects information from state library administrative agencies on topics such as the suite of services offered and funding sources. Data users include professional organizations, policymakers, and library administrators at the federal, state, and local levels. Jointly responsible for developing an analysis plan, updating real-time editing procedures built into the Web-based questionnaire, reporting survey results, and producing a microdata file for secondary analysis.

Tropical Data (2023 to date) — Leads sampling strategies and survey estimation for the Tropical Data initiative, a global initiative helping countries to collect high-quality, standardized prevalence data on neglected tropical diseases (NTDs) by supporting health ministries from the start to the end of the survey process.

World Bank Enterprise Surveys (2022) — Led RTT's support of the World Bank Enterprise Surveys in investigating considerations for choosing the split between fresh and panel cases. Documented the considerations in a technical report.

DHS.rates R Package (2018 to date) — Author and maintainer. Developed and published the DHS.rates R package to calculate demographic indicators such as childhood mortality rates (Neonatal Mortality Rate, Post-neonatal Mortality Rate, Infant Mortality Rate, Child Mortality Rate, and Under-5 Mortality Rate), adult and maternal mortality indicators, and fertility rates (Total Fertility Rate, General Fertility Rate, and Age Specific Fertility Rate). Developed a Shiny application for R non-users. Introduced the package in a paper published in peer-reviewed journal.

Sampling Strategies for The Service Provision Assessment (SPA) (2022)—Senior Survey Sampling Statistician. The SPA is a health facility survey funded by the USAID. Developed sampling strategies of health providers and clients within the selected health facilities. Developed survey weight procedures for facilities, health providers and clients. Documented the selection and weight procedures in a sampling manual.

DHS Code Share Project (2021 to 2022)—Senior Survey Statistician. Wrote R codes to replicate all indicators published in DHS final reports. Made all codes available on GitHub for data users.

Multilevel Modeling Using DHS Surveys: A Framework to Approximate Level-Weights (2020 to 2022) —Senior Survey Sampling Statistician. Developed a method to approximate level-weights for the DHS surveys. Documented the method in a methodological report and provided Stata illustrations. Answer questions of data users.

Accumulating Retrospective Data Across Surveys (2020 to 2022)—Senior Survey Statistician. Developed a method to accumulate retrospective data across DHS surveys. Applied the method on birth history data and calendar data. Documented the method in multiple technical documents. Co-authored a working paper and a paper published in peer-reviewed journal. Presented the method and results in a conference.

Gridded Population Sampling and the Demographic and Health Surveys (2020)—Senior Survey Sampling Statistician. Assessed the feasibility of applying the gridded population sampling methods in DHS surveys. Documented the comparisons and conclusions in a working paper.

Technical support for the Food Insecurity Experience Scale (FIES) surveys (2018 to 2022)—Senior Survey Sampling Statistician. The FIES surveys are funded by USAID. Wrote R code to estimate prevalence of food insecurity based on the Food Insecurity Experience Scale (FIES) and estimate the confidence interval. Wrote Stata codes to estimate Jackknife variance of The Women's Empowerment in Agriculture Index (WEAI). Documented all calculation steps in a Guide to Statistics manual. Provided technical support for data users.

Sampling design and technical support for the Population-Based HIV Impact Assessments (PHIAs) (2017 to 2022)—Senior Survey Sampling Statistician. The PHIAs are surveys funded by CDC. Provided technical support in sampling for PHIAs collected in Botswana, Nigeria and Zambia. Performed power analysis to determine final sample size of each survey. Checked the census frames and prepared them for sampling. Allocated the sample clusters over the sampling strata. Selected the sample clusters. Calculated survey weights for each survey. Adjusted the weights for nonresponse using SI-CHAID. Calibrated the weights to population totals. Wrote sampling and weighting manuals.

DHS eLearning Survey Sampling Training Courses (2017 to 2022)—Survey Sampling Statistician. Developed an e-learning curriculum in sampling topics, such as sample size, sample allocation, multi-stage sampling, sample selection, household listing and weight calculations. Reviewed the e-learning portal. Facilitated several e-learning courses attended by more than 1000 participants.

Sampling design and technical support for the Demographic and Health surveys DHS (2013 to 2022) —Survey Sampling Statistician. The DHS surveys are funded by USAID and collected in most of Africa and Asia. Provided technical support in sampling for the DHS surveys in more than 25 countries in Africa and Asia. Performed power analysis to determine final sample size of each survey. Checked the census frames and prepared them for sampling. Designed multi-stage sampling plans. Allocated the sample clusters over the sampling strata. Selected the sample clusters using the Probability Proportional to Size (PPS) method. Trained junior statisticians on using sampling tools. Developed household listing manuals. Trained fieldworkers on household listing procedures. Calculated survey weights for each survey. Estimated confidence intervals for key indicators. Wrote sampling and weighting manuals.

Web-mail Experiments for the Surveys of Consumers (SCA) (2010 to 2012)—Sampling Statistician. Designed web-mail experiments to collect data of the University of Michigan Surveys of Consumers (SCA). Coordinated and supervised the implementation of the experiments. Wrote the analysis codes, documented the experiments procedures and results and provided recommendations accordingly. Documented the methods and results in multiple technical documents. Co-authored several papers published in peer-reviewed journals. Presented the method and results in conferences.

TEACHING

Instructor/Facilitator

- Training on Survey Sampling and Weighting Procedures, Economic Research Forum (ERF), Cairo, Egypt, February 2024
- Technical assistance on Master Sampling Frame in Egypt: Hand-on training on Sampling design, weighting, and estimations, Food and Agriculture Organization of the United Nations (FAO), Cairo, Egypt, March 2023
- DHS eLearning Survey Sampling Training Courses, The Demographic and Health Survey (DHS) Program, Summer 2017/2018/2019/2020/2021
- Workshops on Dual Frame Design and Estimation, Program in Survey Methodology, University of Michigan, Summer 2016/2017/2018/2020/2021/2024
- Workshop on Survey Weights, the McGill Institute for Health and Social Policy, McGill University, July 2018
- Regional Sampling and Listing workshop, The Demographic and Health Survey (DHS) Program, Bali, Indonesia, August 7th to August 19th 2017
- Regional Sampling and Listing workshop, The Demographic and Health Survey (DHS) Program, Dar Es Salaam, Tanzania, July 18th to July 29th 2016
- Short course on Survey Sampling: procedures and techniques, Egypt Scholars Inc., January 2015
- Workshop on Survey Sampling Issues in DHS Surveys, Faculty of Economics and Political Science, Cairo University, Egypt, September 2014
- Workshop on Survey Sampling Techniques, Information and Decision Support Center (IDSC), Cairo, Egypt, August 2014
- Workshop on Sampling Design and Weighting Procedures, National Institute of Population Research and Training (NIPORT), Dhaka, Bangladesh, June 2014
- Workshop on Weighting Procedures, Program in Survey Methodology, University of Michigan, July 2012

Teaching Assistant

- Fundamentals of Survey Methodology, Program in Survey Methodology, University of Michigan, July 2012
- Sampling Techniques Workshop, June 2012
- Methods of Survey Sampling Course, Program in Survey Methodology, University of Michigan, January – April 2010; June–July 2010

WEBINARS

Pullum, T., Ren, R., and **Elkasabi, M.** (2015, June 3), Analyzing DHS data: Weights and other adjustments for the survey design [Webinar]. *The Demographic and Health Survey (DHS) Program*. Retrieved from <http://userforum.dhsprogram.com/index.php?t=msg&th=3238&start=0&>

PUBLICATIONS

Published – peer-reviewed journals/books

Elkasabi, M., Khan, A., The Evolution of Mobile Phone Surveys in Low- and Middle-Income Countries: A Study of Coverage Structure, *International Journal of Public Opinion Research*, Volume 35, Issue 4, Winter 2023, edad031, <https://doi.org/10.1093/ijpor/edad031>

Elkasabi, M., Suzer-Gurtekin ZT, Chen Y (2023) A framework for sample size calculations in longitudinal surveys to measure net and gross changes. *PLoS ONE* 18(9): e0291449. <https://doi.org/10.1371/journal.pone.0291449>

Belmin, C., Hoffmann, R., **Elkasabi, M.** *et al.* LivWell: a sub-national Dataset on the Living Conditions of Women and their Well-being for 52 Countries. *Sci Data* **9**, 719 (2022). <https://doi.org/10.1038/s41597-022-01824-2>

Schmidt, L., **Elkasabi, M.** Accumulating Birth Histories Across Surveys for Improved Estimates of Child Mortality. *Popul Res Policy Rev* (2022). <https://doi.org/10.1007/s11113-022-09721-7>

Elkasabi, M. (2021), Differences in Proxy-Reported and Self-Reported Disability in the Demographic and Health Surveys, *Journal of Survey Statistics and Methodology*, Volume 9, Issue 2, April 2021, Pages 335–351, <https://doi.org/10.1093/jssam/smaa041>

Odjidja, E. N., Hakizimana, S., Gatasi, G., Masabo, J. B., Irakoze, G., Muzungu, H., Murorunkwere, H., Ngabirano, L. R., **Elkasabi, M.**, & De Courten, B. (2020). Infant and child health status ahead of implementation of an integrated intervention to improve nutrition and survival: A cross-sectional baseline assessment. *BMC Nutrition*, 6(1), [42]. <https://doi.org/10.1186/s40795-020-00372-5>

Suzer-Gurtekin, Z., **Elkasabi, M.**, Liu, M., Lepkowski, J., Curtin, R., and McBee, R. (2019) “Randomized Experiments for Web-Mail Surveys Conducted Using Address-Based Samples of the General Population.” In: Lavrakas, P. J., Traugott, M. W., Kennedy, C., Holbrook, A. L., Leeuw, E., West, B. T., editors. “Experimental Methods in Survey Research: Techniques that Combine Random Sampling with Random Assignment.” USA, Wiley, ISBN: 978-1-119-08374-0; 2019.

Elkasabi, M. (2019) “Calculating fertility and childhood mortality rates from survey data using the DHS.rates R package.” *PLoS ONE* 14(5): e0216403. <https://doi.org/10.1371/journal.pone.0216403>

Elkasabi, M. A., Heeringa, S. G., and Lepkowski, J. M. (2015). “Joint Calibration Estimator for Dual Frame Surveys.” *Statistics in Transition new series*: June 2015, Vol. 16 No. 1, 2015 p.7–36.

Elkasabi, M. A. (2015), Weighting Procedures for Dual Frame Telephone Surveys: A Case Study in Egypt. *Survey Insights: Methods from the Field. Weighting: Practical Issues and ‘How to’ Approach*. Retrieved from <http://surveyinsights.org/?p=5291>

Suzer-Gurtekin, Z., **Elkasabi, M.** Liu, M., Lepkowski, J.M., Curtin, R., and McBee, R., (2016). “Effect of a Pre-Paid Incentive on Response Rates to an Address-Based Sampling (ABS) Web-Mail Survey.” *Survey Practice*: September 2016, Vol. 9 No. 3, ISSN: 2168-0094

Elkasabi, M., Suzer-Gurtekin, Z., Lepkowski, J., Kim, U., Curtin, R., and McBee, R. (2014). “A Comparison of ABS Mail and RDD Surveys for Measuring Consumer Attitudes.” *The International Journal of Market Research*: December 2014, Vol. 56 No. 6, 2014 p.705–707.

Lee, S., **Elkasabi, M.**, and Streja, L. (2012). “Increasing Cell-Phone Usage among Hispanics: Implications for Telephone Surveys.” *The American Journal of Public Health*: June 2012, Vol. 102, No. 6, pp. e19-e24.

Published – reports and working papers

Elkasabi, Mahmoud, and Azam Khan. 2022 Modeling Interviewer Effects in DHS Surveys. DHS Methodological Reports No. 32. Rockville, Maryland, USA: ICF.

Elkasabi, Mahmoud, and Shireen Assaf. 2021. Accumulating Contraceptive Calendars across Surveys. DHS Working Papers No. 181. Rockville, Maryland, USA: ICF

Elkasabi, Mahmoud and Ren, Ruilin. 2020. Gridded population sampling and the Demographic and Health Surveys. DHS Working Papers No. 176. Rockville, Maryland, USA: ICF.

Elkasabi, Mahmoud, Ruilin Ren, and Thomas W. Pullum. 2020. Multilevel Modeling Using DHS Surveys: A Framework to Approximate Level-Weights. DHS Methodological Reports No. 27. Rockville, Maryland, USA: ICF.

Schmidt, Laura, and Mahmoud **Elkasabi**. 2020. Accumulating Birth Histories across Surveys for Improved Estimates of Child Mortality. DHS Working Papers No. 177. Rockville, Maryland, USA: ICF.

PRESENTATIONS/POSTERS/CONFERENCE PAPERS

Elkasabi, M. (2023, May). *A Framework for Sample Size Calculations in Panel Surveys to Measure Net and Gross Changes*. Presented at The American Association for Public Opinion Research (AAPOR) 78th Annual Conference.

Elkasabi, M. (2022, May). *Accumulating Retrospective Data Across Surveys*. Presented at The American Association for Public Opinion Research (AAPOR) 77th Annual Conference.

Elkasabi, M. “Calculating Fertility and Childhood Mortality Rates From Survey Data Using the DHS.Rates R Package” Poster presented in a flash session at the 2019 Annual Meeting of the Population Association of America (PAA), Austin, Texas.

Franca-Koh, A.C., Herrera, S., Manda, J., Tuttle, A., Chitemu, K., Do, M., **Elkasabi, M.**, Zalisk, K., Temsah, G., Wang, W., Wakefield, C., Chipukuma, A., Maliwa, E., Simbaya, J., Fumpa, H., Nyamazana, M., Sachingogu, N. “Zambia CSH: Safe Love” Poster presented at Evaluation 2015 Conference, Chicago, 2015.

- Franca-Koh, A.C., Herrera, S., Manda, J., Chilemu, K., Do, M., **Elkasabi, M.**, Zalisk, K., Temsah, G., Wang, W., Wakefield, C., Chipukuma, A., Maliwa, E., Simbaya, J., Fumpa, H., Nyamazana, M., Sachingogu, N. "Outcome Evaluation of an HIV Prevention Social Behavior Change Communications Program in Zambia Using Propensity Score Matching" Poster presented at 5th Biennial South African Monitoring and Evaluation Association (SAMEA) Conference, South Africa, 2015.
- Suzer-Gurtekin, Z., Liu, M., **Elkasabi, M.**, Lepkowski, J., Curtin, R., and McBee, R. "The Comparison of Web-Mail Contact Strategies in a General Population Panel Survey." Paper presented at The Midwest Association for Public Opinion Research (MAPOR) 39th Annual Conference, Chicago, 2014.
- Elkasabi, M.** (2012), "Joint Calibration as a Technique for Dual Frame Samples Estimation." Paper presented at The Midwest Association for Public Opinion Research (MAPOR) 37th Annual Conference, Chicago, 2012.
- Liu, M., **Elkasabi, M.**, Suzer-Gurtekin, Z., Lepkowski, J., Curtin, R., and McBee, R. "Contact Strategies Effect on Participation in Mixed-Mode ABS Surveys." Paper presented at The Midwest Association for Public Opinion Research (MAPOR) 37th Annual Conference, Chicago, 2012.
- Elkasabi, M.**, and Suzer-Gurtekin, Z., Lepkowski, J., Kim, U., Curtin, R., and McBee, R. (2011), "Evaluation of Mail Survey as an Alternative to Landline Random-Digit Dialing Telephone Survey." Paper presented at The Midwest Association for Public Opinion Research (MAPOR) 36th Annual Conference, Chicago, 2011.
- Elkasabi, M.**, Suzer-Gurtekin, Z., Lepkowski, J., Curtin, R., McBee, R., and Chai, B. (2011), "The Impact on Accuracy of Estimates of Increasing Cell Telephone Sample to Correct Coverage Error in the Survey of Consumer Attitudes." Paper presented at The American Association for Public Opinion Research (AAPOR) 66th Annual Conference, 2011.
- Suzer-Gurtekin, Z., **Elkasabi, M.**, Lepkowski, J., Curtin, R., McBee, R., and Chai, B. (2011), "Comparing Response Propensities between a Web Mail Multi-Mode Survey and a Mail Survey." Paper presented at The American Association for Public Opinion Research (AAPOR) 66th Annual Conference, 2011.
- Elkasabi, M.**, El-Tawila S., and El-Hefnawy A. (2007), "Non-coverage Bias in Telephone Surveys in Egypt", paper presented in the American Association for Public Opinion Research 62nd Annual Conference, California, 2007.
- Elkasabi, M.**, and Loutfy A. (2007), "Egypt Telephone Surveys between Fixed Phones and Cell Phones", paper presented in American Association for Public Opinion Research 62nd Annual Conference, California, 2007.

ONLINE ARTICLES

- Elkasabi, M.** (2014, July 08), DHS Data: More than Demographic and Health Indicators [Web blog post]. Retrieved from <http://blog.dhsprogram.com/dhs-data-more-than-demographic-and-health-indicators/>
- Elkasabi, M.** (2014, October 24), Introducing: Sampling and Weighting at DHS [Web blog post]. Retrieved from <http://blog.dhsprogram.com/devinfoday-14/>

Elkasabi, M., Elabaseery, H. (2009). “How Egyptian Newspapers published opinion polls.” In Arabic. Retrieved August 1, 2009, from The Public Opinion Poll Center – The Information and Decision Support Center: <http://pollcenter.gov.eg/showingpublishings.aspx>

Elkasabi, M., Ismail, H. (2008). “Monitoring and Improving Researchers Performance.” In Arabic. Retrieved August 1, 2009, from The Public Opinion Poll Center – The Information and Decision Support Center: <http://pollcenter.gov.eg/showingpublishings.aspx>

Elkasabi, M., Ismail, H., and Shiha, N. (2007). “Questionnaire Forgery: Why It Happens? How to Discover it? How to Avoid it?” In Arabic. Retrieved August 1, 2009, from The Public Opinion Poll Center – The Information and Decision Support Center: <http://pollcenter.gov.eg/showingpublishings.aspx>

Elkasabi, M., Eltawila, S., and Elhefnawi, A. (2007) “Handling the Non-coverage Bias in Telephone Surveys in Egypt” In Arabic. Retrieved August 1, 2009, from The Public Opinion Poll Center – The Information and Decision Support Center: <http://pollcenter.gov.eg/showingpublishings.aspx>

Elkasabi, M., Eltawila, S., and Elhefnawi, A. (2006) “The Basic Correlates of Households Telephone Ownership in Egypt” In Arabic. Retrieved August 1, 2009, from The Public Opinion Poll Center – The Information and Decision Support Center: <http://pollcenter.gov.eg/showingpublishings.aspx>

WORKSHOPS and SHORT COURSES

Propensity Scores, May 2007

American Association for Public Opinion Research 62nd Annual Conference, California

Multimode Data Collection: Design, Implementation, and Evaluation, May 2007

American Association for Public Opinion Research 62nd Annual Conference, California

Demographic Surveys, May 2005

Cairo Demographic Center, Egypt

AWARDS and FELLOWSHIPS

Honorable Mention for the Survey Research Methodology track about “Joint Calibration as a Technique for Dual Frame Samples Estimation.”, The Midwest Association for Public Opinion Research (MAPOR) 37th Annual Conference, 2012

2012 Global Supplementary Grant, Open Society Foundations, NY, 2012-2013

2011 Global Supplementary Grant, Open Society Foundations, NY, 2011-2012

Yossi Schiff Award Scholarship, University of Michigan, 2010-2011

Leslie Kish 61st Summer Fellowship Award, Institute for Social Research, University of Michigan, 2008

PROFESSIONAL SERVICES and AFFILIATIONS

Journal Referee

Journal of American Statistical Association, Journal of Statistics Applications & Probability, Field Methods.

American Statistical Association

Member, 2009-present

Section on Survey Research Methods, 2009-present

American Association for Public Opinion Research

Member, 2009-present

Midwest Association for Public Opinion Research

Member, 2009-present

RESEARCH INTERESTS

Population-based data collection

- Coverage and nonresponse adjustment

- Weighting

- Calibration

- Dual frame estimation

- Data combining

Methodological challenges in mixed-mode surveys

- Sampling/Contact strategies for Web-Mail Address-Based-Sampling (ABS)

- Differential coverage, nonresponse and measurement errors

- Weighting

Demographic estimation

- Estimation of fertility indicators from survey data

- Estimation of childhood mortality indicators from survey data

STATISTICAL COMPUTING PROFICIENCY

R; SAS; Stata; SPSS; WesVar

LANGUAGE PROFICIENCY

Native in Arabic; Fluent in English