International Workshop on Statistics for Health and Social Science Researchers for National Development

Monday, 8th Jan., 2018
Friday, 19th Jan., 2018
Accra, Ghana

University of Ghana School of Public Health

The University of Ghana School of Public Health (UGSPH) is a constituent school of the College of Health Sciences (CHS), University of Ghana. Since its inception in 1994, the school has collaborated with governmental institutions and international organisations in advancement of teaching, research and extension services in public health and social science research. As part of its achievements, the school has churned out great individuals who are advancing national development through research, formulation of policies, provision of practical interventions and implementation of research findings. University of Ghana School of Public Health has an extensive network of research partners with leading institutions in more than 35 countries on a regional and international scale for successful international collaborative research and training projects.

D&D Statistical Consulting Services Ltd

D&D Statistical Consulting Services Limited is a team of statistical methodologists and data analysts collaborating to provide advanced statistical consulting services and cutting-edge research support to Government, health industry including NGOs, and university academic departments. We also support post-graduate/Doctoral students to carry out top-class research, with great emphasis on grant applications and peer review publications.

Workshop Objective

This is a competence-based training which aims at providing participants with intensive, hands-on training from introduction to advanced statistical analysis and geographic information systems for policy formulation, implementation and evaluation in public health and social science research. It also aims at equipping participants to make informed decisions for national development based on empirical data with robust statistical analysis. It will focus on real life data analysis and interpretation. Theoretical background of the techniques will be introduced briefly.

Workshop Content

* Introduction to Stata software for statistical analysis
* Data management using Stata: Data quality issues
* Review of basic statistical concepts:
  * Statistic and parameter
  * Standard error and Standard deviation
  * Central limit theorem
  * Sampling techniques
  * Measurement scale and its relevance to public health, medical and social science research
  * Likert scale versus liker-typed item
  * Outcome and explanatory variables
  * Hypothesis testing, power of a study, type I and type II error, p-values

- Sampling and sample size calculation for various outcome measures
- Analysis of continuous outcomes variables with Stata
  - t-test (independent, paired and one sample t-test)
  - Confidence interval estimation/ One sample case
  - Wilcoxon-rank sum test
  - Oneway Analysis of variance
  - Kruskal Wallis test
  - Simple and Multilinear regression and underlining assumption
- Analysis of categorical outcomes with Stata
  - Confidence interval estimation for binary variables
  - Fishers exact, likelihood ratio test, Chi-square test, Cochran Armitage trend test
  - Odds ratio, risk ratio, risk difference and Mantel Hazenzel estimation with interpretation
  - Logistic regression analysis, multinomial logistic regression analysis and Ordinal logistic regression analysis
- Analysis of count outcomes with Stata
  - Poisson regression models
  - Negative binomial regression models
  - Zero inflated regression models
- Introduction to survival analysis (time to an event outcome) with Stata
  - Kaplan Meier estimate/graphs
  - Log-rank test
  - Proportional hazard models (Cox, Weibull, Exponential)
- Introduction to factor analysis with Stata
- Introduction to Spatial Statistics and Geographic Information System
- General discussion on research methodology (statistical technique).

Workshop Eligibility

This training is designed for mid-level health professionals, social scientist, administrators, program managers, professionals involved in the daily collection of health/social science data / its analysis, publication of manuscripts, implementation and evaluation of public health programs, first degree, masters and PhD students with keen interest in pursuing a career in public health and social science research. Individuals with interest in data analysis can apply.

- Applicant should be English proficient
- A Laptop is required

Mode of Delivery

Lectures - this workshop will be handled by statisticians from University of Ghana School of Public Health, Department of Biostatistics and D&D Statistical Consulting Services with enormous international exposures and experiences in projects relating to statistical analysis and social science research.

Individual Work Assessment – participants will analyze different data set to evaluate how well they have been equipped with the necessary tool required for data analysis.

Practical applications and exercises

Workshop Details

Venue: Noguchi Memorial Institute for Medical Research

Days: Monday to Friday, each week. Practical assignments will be given on Friday for submission on next Monday.

Time: 9:00am – 4:00 pm each day

Full Workshop Package:
includes tuition fee, accommodation, partial board – breakfast daily, refreshments, and lunch on workshop days and round trip airport transfers), but **not including airfare and visa fees**

USD 2,500

Ghanaian Students Workshop Package:
includes tuition fee, partial board – breakfast daily, refreshments, and lunch on workshop days
(must show proof of studentship with an accredited university)

USD 1,000

Application Information

You can download the application form via **www.ug.edu.gh** or contact **staphnadgh@gmail.com.**

For further information, kindly contact:
Irene Yeboaa Ashiley
School of Public Health
College of Health Sciences
University of Ghana
Legon Campus
Accra –Ghana
Phone: +233 557756126/+233 260756744
E-mail: staphnadgh@gmail.com

Completed application form should be sent to the same contact details above.
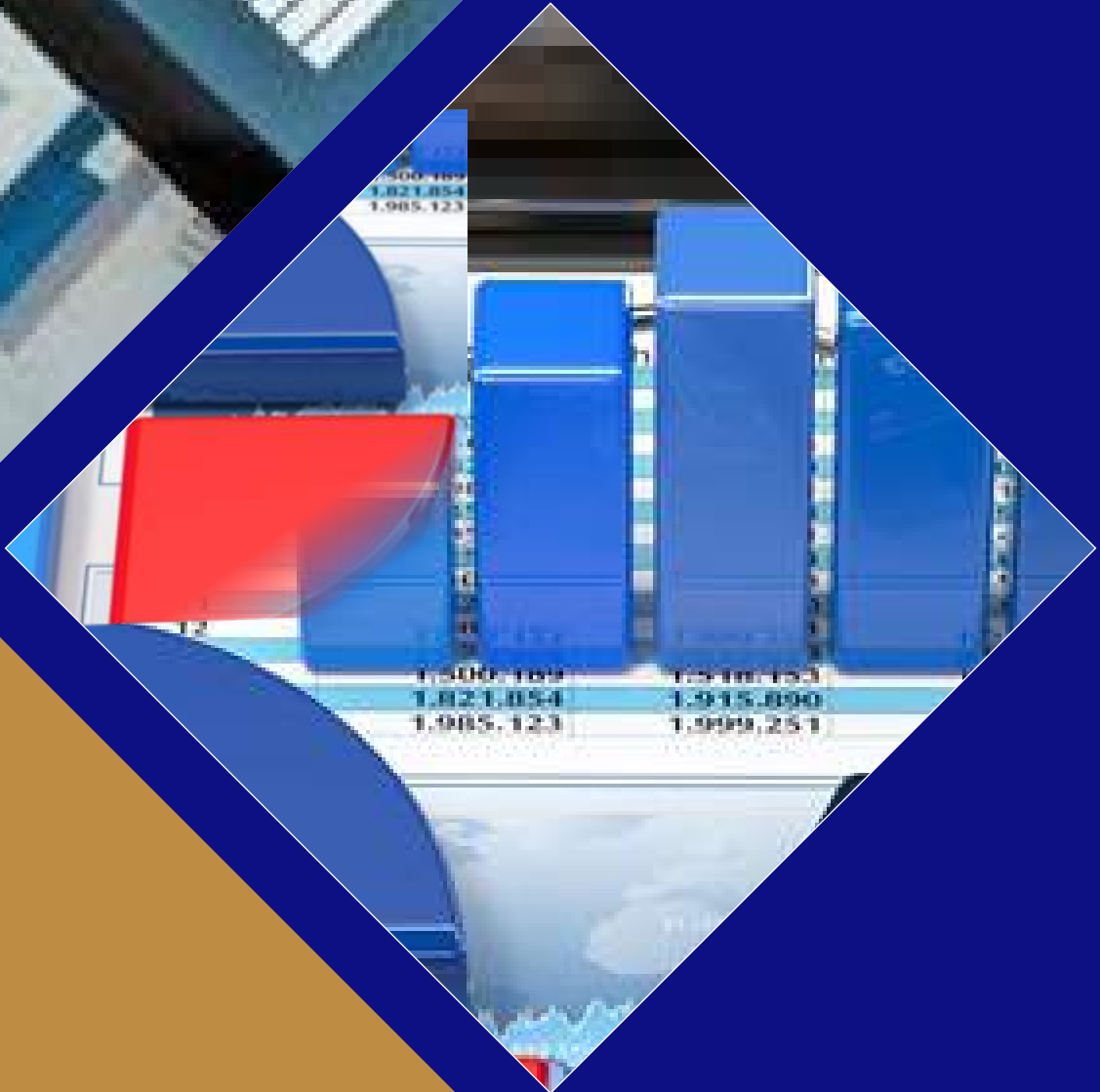
Workshop Facilitators Profile

Dr. Duah Dwomoh (Lead Facilitator) holds Master of Philosophy in Mathematics with specialization in Statistics from Kwame Nkrumah University of Science and Technology and PhD in Public Health with specialization in Biostatistics from the University of Ghana, Legon. He is the founder and Chief Executive Officer of D&D Statistical Consulting Services Limited and a lecturer with the University of Ghana, School of Public Health, Department of Biostatistics. His area of specialization include: Quantitative techniques for impact evaluation of intervention/program/policy in the area of social and health sciences, financial risk and health outcomes using difference in differences, matching procedures, regression discontinuity and randomized designs), statistical prognostic/diagnostic modeling of diseases, financial risk evaluation and market trend analysis. He has expertise in risk prediction models in the presence of missing values, mathematical modeling of infectious disease using deterministic and stochastic models based on systems of differential equations. He has also supervised undergraduate projects and post graduate thesis in Public Health, Health Informatics, and Biostatistics. Has served as consultant to a number of local and foreign organization. He has expertise in the use of statistical software packages such as STATA, SPSS and R.

Dr. Samuel Bosomprah is a PhD Medical Statistician and Epidemiologist who trained at the London School of Hygiene and Tropical Medicine. He serves as a primary methodologist on a number of projects being implemented across southern African region. He also serves as a faculty at University of Ghana School of Public Health. Through more than 16 years as a methodologist, he has developed expertise with diverse study designs and has evaluated observational and implementation science studies across several diseases. His research interest include: design and evaluation of HIV/AIDS and Malaria intervention studies; neonatal and child health intervention studies, methods for health surveys in developing countries; vaccine evaluation; and application of advanced statistical methods to answer complex research questions that involve multi-level/hierarchical data.

Dr. Samuel Iddi obtained his Masters and PhD in Biostatistics from two prestigious Belgium universities, UHasselt and KU Leuven, respectively. He is currently a Senior Lecturer at the Department of Statistics, University of Ghana (Legon) and a Post-doctoral Scholar – Research Associate at the Alzheimer's Therapeutic Research Institute (ATRI) of University of Southern California, USA. Over the past 4 years, he has taught academic courses at undergraduate, master and PhD levels and has been a Resource Person for many short training courses in statistics. He has also supervised undergraduate projects, graduate and PhD thesis in bio-statistics. His research works in longitudinal and multivariate analysis has led to several scientific publications in refereed international journals, which have also been presented at seminars and international conferences worldwide. He has competences in the implementation of statistical methods using software packages such as SAS, STATA and R.

Mr. Seth Kwaku Afagbedzi holds a graduate degree in MPhil Health Informatics from University of Ghana and also Bachelor of Science degree in Statistics from University of Cape Coast. Currently a final year PhD student in the area of Geographic Information System. Seth is currently an Assistant Lecturer in the Department of Biostatistics, School of Public Health, College of Health Sciences, University of Ghana. His areas of competence include: Application of Geographic Information Systems (GIS) in Health, Spatial Statistics, Health Data Management, Electronic Data and Health Systems.

International Workshop on Statistics for Health and Social Science Researchers for National Development