Manal Kamal Elzalabany

elzalabany@demogr.mpg.de | website

PROFESSIONAL PROFILE

Manal K. Elzalabany is a multilingual epidemiologist & data analyst. She works currently as a research associate/ data scientist in MPIDR & previously worked on COVID-19 detection & data analysis, outbreaks' response in WHO, and as a *Lancet*-associated researcher. Her research interests focus mainly on re/emerging infectious diseases and global health, using quantitative data methodologies. Manal holds an MPH in Epidemiology & Biostatistics from the American University of Beirut, 2018. She is also enrolled in MSc Applied Statistics in Health Sciences program (online- part time) with Strathclyde university. Manal is an expert user of R/ RStudio, Rmarkdown & Quarto, and Shiny Web applications.

EDUCATION

MSc | September 2022- September 2024 | Faculty of Science - University of Strathclyde

· MSc Applied Statistics in Health Sciences (online, part time)- Department of Mathematics & Statistics

MPH | August 2016- June 2018 | Faculty of Health Sciences- American University of Beirut

· Master of Public Health in Epidemiology and Biostatistics, EPBS
· Graduation project: Epidemiological Analysis of Leprosy in Egypt, 2008-2017

BVSc | September 2004- May 2009 | Faculty of Veterinary Medicine- Cairo University

Bachelor degree in Veterinary Medical Sciences

WORK EXPERIENCE

Research Associate/ Data scientist | June 2022 – Now | Max Planck Institute for Demographic Research (MPIDR)- Rostock, Germany

COVID-19 Data management & analysis in R, development of Shiny App.

Data Analyst | June 2021- May 2022 | World Health Organization-Eastern Mediterranean Regional Office – EMRO Cairo, Egypt

In Health Emergencies Programme (WHE), Country Emergency Preparedness and International Health Regulations (CPI) unit

COVID-19 survey data analysis in R, COVID-19 PHSM data analysis & visualization

Epidemiologist | July 2020- June 2021 | World Health Organization-Eastern Mediterranean Regional Office – EMRO Cairo, Egypt

In Health Emergencies Programme (WHE), Health Information Management (HIM) unit

COVID-19 data management & analytics in R, COVID-19 & other infectious diseases Event based surveillance & risk assessment

Researcher | March 2020- December 2020 | COVID-19 Dispersed Volunteer Research Network

ANES survey data analysis in R, COVID-19 systematic review

Research Affiliate | January 2020- June 2020 | *The Lancet*-AUB Commission on Syria "Health in Conflict"

Multi-sector needs assessment (MSNA) household survey analysis in R

Research Associate | October 2018- December 2019 | *The Lancet*-AUB Commission on Syria "Health in Conflict"

Scoping review, APHA poster preparation

Intern | January 2018- April 2018 | World Health Organization-Egypt country office

Leprosy & Malaria data analysis & Leprosy active surveillance field work

Graduate Research Assistant | June 2017- December 2017 | *The Lancet*-AUB Commission on Syria "Health in Conflict"

Syria related health qualitative data management

Veterinary Epidemiologist | January 2010- July 2016 | South Giza Veterinary Governmental Department

Zoonotic diseases monitoring and vaccination

[Further details about work experience are mentioned at the end of the resume]

TECHNICAL SKILLS

Database management: Microsoft Access

Data wrangling, analysis, and modeling: R, Stata, Python & SPSS

Spatial analysis: ArcGIS & R

Data visualization: Tableau software & Power Bi

Reference management: Endnote software & Citavi

Writing & publishing: Microsoft Word, PowerPoint & Publisher

LANGUAGES

Arabic: Mother Tongue **| English:** Proficient **| French:** Proficient **| German:** Beginner

AWARDS

Full merit-based Research and Training on Tropical Diseases- TDR Scholarship for Masters in Public Health | September 2016- June 2018

CERTIFICATES & TRAININGS

· **Introduction to Outbreak Analytics using R |** November 2020: London School of Hygiene & Tropical Medicine (LSHTM)

- **Geographic Information Systems (GIS) for Public Health |** June 2020: Boston University School of Public Health
- **Attestation de réussite de DELF B2 |** Septembre 2019: Institut Français de Caire- Egypte
- **Monitoring & Evaluation Professional Diploma |** September 2018- March 2019: School of Continuing Education- American University of Cairo

EXTRACURRICULAR ACTIVITIES

M & E Assistant | Namaa' School for Sustainable Development | May 2012- December 2015
- Co-designing the curriculum of Namaa' school in 2012 ,2013 and 2014
- Co-planning for school strategic direction for the next school in 2015
- Documentation & Evaluation of the curriculum designing process
- Contributing to 10-years' evaluation of the school (2005-2015) conduct qualitative and quantitative analysis

PUBLICATIONS

ORCID No.: https://orcid.org/0000-0002-2686-8364

2023
- **Elzalabany M. K.**, Kniffka M. S., Donzowa J., Schöley J., Acosta E., Riffe T. The COVerAGE-DB vaccination addon: A global database of age-harmonized COVID-19 vaccination time series. Population Association of America. 2023. https://events.rdmobile.com/Lists/Details/1725962
- Nikoloski Z, Bain R, **Elzalabany M. K.**, Hanna P, Aynsley TR, Samhouri D, Menchini L, Kapil N, Gillespie A. Modelling COVID-19 vaccination status and adherence to public health and social measures, Eastern Mediterranean Region and Algeria. Bull World Health Organ. 2023 Feb 1;101(2):111–20. https://doi.org/10.2471%2FBLT.22.288655

2022
- Elmahal, O., Abdullah, A., **Elzalabany, M. K.**, Samhouri, D., & Brennan, R. (2022). Public health emergency operation centers-PHEOCs: status, gaps, and areas for improvements in the Eastern Mediterranean Region (BMJ Global Health 20227:e008573).
- Samhouri, D., Barry, J., Abdullah, A., **Elzalabany, M. K.**, & Brennan, R. (2022). Development of the WHO Eastern Mediterranean Region's travel measures platform during the COVID-19 pandemic: a novel regional approach and interface in implementing the International Health Regulations (2005) and exchanging information in real time. *WHO Weekly epidemiological record*, 5(97), 25-32. Online: https://apps.who.int/iris/handle/10665/351505
- Hasan Q, Elfakki E, Fahmy K, et al. (2022). Inequities in the deployment of COVID-19 vaccine in the WHO Eastern Mediterranean Region, 2020–2021 BMJ Global Health7:e008139. Link (*acknowledgement*)

2021
- Abouzeid, M., **Elzalabany, M.K.,** Nuwayhid, I. et al. Conflict-related health research in Syria, 2011–2019: a scoping review for *The Lancet* - AUB Commission on Syria. Confl Health 15, 92 (2021). https://doi.org/10.1186/s13031-021-00384-3

2020

- Krista Wollny, Carol Liu, Ghinwa El Hayek, Sameer Gopalani, Hanh Dung Dao, Katharine Fagan-Garcia, Luca Martial, **Manal Elzalabany**, Helen Piontkivska, Arianna Amit, Jovia Nierenberg, Louisa Smith, Anhvinh Doanvo, Angel Desai, Vladimir Teif, Maimuna Majumder. Time-associated clinical and epidemiological parameters characterising COVID-19: a systematic review and meta-analysis. PROSPERO 2020 CRD42020177045 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42020177045
- Abdul-Khalek, R., Kayyal, W., Akkawi, A. R., Almalla, M., Arif, K., Karroum, L. B., . . ., **Elzalabany, M. K**.,.. Jawad, M. (2020). Health-related articles on Syria before and after the start of armed conflict: a scoping review for *The Lancet*-American University of Beirut Commission on Syria. *Confl Health* **14,** 73 (2020). https://doi.org/10.1186/s13031-020-00316-7.

2019

- Lewison, G., Abouzeid, M., Sabouni, A., **Elzalabany, M.**, Jabbour, S., & Sullivan, R. (2019). Identification of the research on warfare and health, 1946-2017. *Paper presented at & published in 17th International Conference on Scientometrics & Informetrics (ISSI2019), Vol I, p. 271-282*. http://www.issi-society.org/publications/issi-conference-proceedings/proceedings-of-issi-2019/

2018

- Sabouni, A., Abouzeid, M., **Elzalabany, M.**, Fardousi, N., Ghaddar, F., & Jabbour, S. (2018). Public health and war: A critical synthesis towards a new approach. *Poster presentation at the European Public Health Conference (EPHC), Slovenia*
- Abouzeid, M., Sabouni, A., Fardousi, N., Ghaddar, F., **Elzalabany, M.**, Khrisht, G., . . . Jabbour, S. (2018). Is there a 'field' of health and armed conflict? Towards a sustained and expanded role for the global health community. *Paper presented at the APHA 2018 Annual Meeting & Expo, San Diego.* https://apha.confex.com/apha/2018/meetingapp.cgi/Paper/420147

WORK EXPERIENCE- DETAILS

Research Associate/ Data scientist | June 2022 – Now | Max Planck Institute for Demographic Research (MPIDR)- Rostock, Germany

Skills: COVID-19 Data management & Data analysis in R, development of Shiny App

· Supervise the collection, updating & processing of data, metadata & documentation of the COVerAGE-DB project using RStudio, Python, and Google spreadsheets,
· Perform regular data quality checks & de-bugging using RStudio,
· Supervise the data publication process through the project OSF repository & COVerAGE-DB website,
· Coordinate the work of student assistants & other project collaborators,
· Train student assistants for data collection,
· Draft, schedule & oversee scripts for automatic data collection in RStudio,
· Development of Shiny Web application to visualize the age-harmonized dataset (to be published).

Data Analyst | June 2021- May 2022 | World Health Organization-Eastern Mediterranean Regional Office – EMRO Cairo, Egypt

In Health Emergencies Programme (WHE), Country Emergency Preparedness and International Health Regulations (CPI) unit

Skills: COVID-19 survey data analysis in R, COVID-19 PHSM data analysis & visualization

· Participating in COVID-19 outbreak analytics as follows:
  ▪ Outbreak analytics: provided analysis of the effectiveness of the public health & social measures (PHSM) implemented on the epidemiological situation over the course of the pandemic:
    • Lead & trained a team on collecting data using Epidemic Intelligence tools, such as: Epidemic Intelligence from Open Sources (EIOS), cleaning these data and categorizing it using WHO guidelines for PHSM.
    • Conducting and coordinating the analysis of regional and country-specific describing time series analysis on the impact of the public health measures implemented in countries in the lens of the epidemiological and mobility data inform the mathematical modeling.
    • Developing a dashboard using Power Bi to visualize PHSM data against epidemiological data.
  ▪ Risk Communication & Community Engagement (RCCE): Coordinating population-based survey on knowledge, attitudes and practices on COVID-19, its preventive behaviors, and vaccines in 23 countries:
    • Developing and reviewing the survey questionnaire.
    • Developing descriptive and inferential regional-level and country-specific analysis plans, reports and profiles summarizing the survey findings.
    • Provided analysis of the survey using R to streamline and automate the required analyses.
  ▪ International Health Regulations (IHR-Points of Entry):
    • Providing weekly analysis/ summary of travel-related measures in EMR countries in bulletin for dissemination.
    • Developed an automated html document (using R markdown) for weekly reporting of countries' travel measures profiles.

- In Emergency Operation Centre (EOC) related activities:
  - Provided descriptive analysis of survey data conducted in 22 countries to assess the EOC status-quo and countries' readiness.
  - Development of dashboards in Power Bi for Signals management module
  - Co-writing and reviewing EOC related publications
  - Developed dashboard for Readiness and Preparedness index using flexdashboard & Power Bi.

Epidemiologist | July 2020- June 2021 | World Health Organization-Eastern Mediterranean Regional Office – EMRO Cairo, Egypt

In Health Emergencies Programme (WHE), Health Information Management (HIM) unit

Skills: COVID-19 data management & analytics in R, COVID-19 & other infectious diseases Event based surveillance & risk assessment

- Participating in COVID-19 outbreak analytics as follows:
  - Performing the detection of COVID-19 signals and alerts through the Ministries' official websites or other Epidemic Intelligence platforms.
  - Maintaining the COVID-19 Detection Database.
  - Collecting and reviewing the situation reports of non-COVID-19 diseases outbreaks and support the risk assessment analysis.
  - Supporting the member states in COVID-19 epidemiological analysis, estimation of Rt on national & Sub-national levels, and other outbreaks analysis.
  - Supporting and co-developing the required analyses plan for COVID-19.
  - Providing weekly analysis of surveillance and line lists data for COVID-19.
- Facilitating a training to member states on R programming language.
- Supporting other Public Health Intelligence (PHI) & data analysis related activities.

Researcher | March 2020- December 2020 | COVID-19 Dispersed Volunteer Research Network

Skills: ANES survey data analysis in R, COVID-19 systematic review

The COVID-19 DVRN, initiated & supervised by Dr. Maimuna Majumder, is a remote-based network which primary goal is to address challenging epidemiological (and epi-adjacent) questions that have emerged in the face of the ongoing coronavirus pandemic through the remote execution of collaborative studies across institutional boundaries.

- Contributing to research project on COVID-19, named: Time-associated clinical and epidemiological parameters characterizing COVID-19: a systematic review and meta-analysis:
  - Identify the eligible articles through title/ abstract and full text screening
  - Data extraction from eligible articles
  - Quality and risk of bias assessment using the NIH Study Quality Assessment Tools.
- Contributing to a research project on Police Brutality in USA Protests and COVID-19
  - Analyze American National Election Studies (ANES) data to get the proportion of registered voters' post-election out of the registered voters' pre-election per state.

Research Affiliate | January 2020- June 2020 | *The Lancet*-AUB Commission on Syria "Health in Conflict"

Skills: Household survey data analysis in R

· In collaboration with Handicap International (HI), contributing to research work examining the status of disabilities and injuries inside Syria:
  ▪ Identify the relevant articles from previously developed research library
  ▪ Analyze quantitative household survey data on injuries using RStudio
· In collaboration with WHO EMRO Global Health Cluster, analyzed the Multi-Sectoral Needs Assessment (MSNA) of Syria 2019 dataset: household complex survey data
  ▪ Provided descriptive analysis of questionnaires on Demographics, Inter-sector questionnaire and Healthcare questionnaire using RStudio

Research Associate | October 2018- December 2019 | *The Lancet*-AUB Commission on Syria "Health in Conflict"

Skills: Scoping review, APHA poster preparation

· Contributing to a scoping review and examination of landmark initiatives and frameworks underpinning the field of health and war/ armed conflict (1946-2017):
  ▪ Screening publications
  ▪ Creating a Microsoft Access database to collect data from publications
  ▪ Analyzing and visually presenting the data
  ▪ Prepared a poster of 2017 & 2016 years analysis for presentation as a case study at APHA 2018 (San Diego, USA) and EPHC 2018 (Ljubljana, Slovenia).
· Leading & conducting a scoping review & co-assist in a series of reviews on Syria and Health (2011-2019):
  ▪ Conceptualizing the study with the PIs
  ▪ Developing the research question and the study design
  ▪ Running the search strategy in the databases
  ▪ Screening the eligible publications
  ▪ Creating a Microsoft Access database to collect relevant data from publications
  ▪ Analyzing and visually presenting the data using RStudio and Tableau
  ▪ Writing up the first draft and incorporate the comments from the co-authors.
· Conducting & contributing to research work examining the public health conceptual approach to war in particular: screening articles, collecting and summarizing data
· Contributing to development of a global collaborative research agenda towards "*Global Alliance on War, Conflict and Health*".
· Provide support and mentoring to Public Health Masters students in their graduation projects how to use evidence-based analysis tools, and how to think on analysis of the synthesized data.

Intern | January 2018- April 2018 | World Health Organization-Egypt country office

Skills: Leprosy & Malaria data analysis & Leprosy active surveillance field work

· Supporting two main programs on neglected tropical diseases (Leprosy & Malaria)
  ▪ Leprosy control program:

- Assessment of the gaps and barriers in the leprosy control program
- Conduct a 10-years longitudinal demographic analysis of the leprosy situation in Egypt (2008-2017).
- Conduct a 3-years spatial & demographic analysis to identify hotspots in Egypt that informed an active screening campaign.
- Draft an outline for the required strategic actions & draft a monitoring and evaluation framework based on WHO guidelines.
- Participate in the design, the implementation and the monitoring of an active screening campaign of leprosy in Luxor for 10 days.
- Malaria control program:
  - Review & develop the needed documents to certify Egypt as Malaria free country and draft an outline for the Malaria Elimination Report in Egypt.

Graduate Research Assistant | June 2017- December 2017 | *The Lancet*-AUB Commission on Syria "Health in Conflict"

Skills: Syria related health qualitative data management

- Developing a timeline on key events on Syria and the response to the refugee crisis.
- Moderate key informant interviews with healthcare providers in Lebanon, Jordan and Turkey.
- Creating an Endnote Library that includes all what was published about Syria
- Transcribing and writing up reports about the commission's meetings
- Exploring ideas of data visualization with the team members

Veterinary Epidemiologist | January 2010- July 2016 | South Giza Veterinary Governmental Department

Skills: Zoonotic diseases monitoring and vaccination

- Monitoring the situation of endemic zoonotic diseases in South Giza.
- Supporting the implementation of Avian flu control strategies campaigns.
- Responsible for the implementation of vaccination campaigns of the veterinary endemic diseases in South Giza Foot and Mouth Disease, Rift Valley Fever, Lumpy Skin Disease.