

# Manal Kamal Elzalabany

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## PROFESSIONAL PROFILE

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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 & 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 with Strathclyde university. Manal is an expert user of R/ RStudio, Rmarkdown & Quarto, and Shiny Web applications.

## EDUCATION

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

- MSc Applied Statistics in Health Sciences - Department of Mathematics & Statistics
- Graduation project (in progress): Age-Period-Cohort analysis of Cervical Cancer in Scotland, 1997-2021

### **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

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### **Research Associate/ Data scientist | June 2022 – November 2024| Max Planck Institute for Demographic Research (MPIDR)- Rostock, Germany**

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

### **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

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**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

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

## AWARDS

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

## CERTIFICATES & TRAININGS

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- **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

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### **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

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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, Samhoury 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.**, Samhoury, 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](#)).
- Samhoury, 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 Health*7: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](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

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### **Research Associate/ Data scientist | June 2022 – November 2024| Max Planck Institute for Demographic Research (MPIDR)- Rostock, Germany**

**Skills:** COVID-19 Data management & time series analysis in R, Shiny App development

- 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 (<https://manal-kamal.shinyapps.io/coharm-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

**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 DVNR](#), 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.