

Osama Abdelhay, PhD.

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Profile

Dynamic, highly accomplished senior Data Scientist/Statistician with proven expertise in analysis, project management, and training gained over 13+ years of progressively responsible experience. Strong ability to lead through influence and collaborate with cross-functional professionals to drive organizational improvement. Personable and proactive with an avid research interest in statistical modelling, predictive modelling, deep learning, data science, biostatistics, and epidemiology.

Professional Experience

The United Nations Children's Fund (UNICEF), Jordan Country Office, Amman, Jordan

Consultant Data Scientist, December 2019– July 2020 (**Budget = USD 88,684**)

Brought as a national consultant to map the children migration in Jordan. The project is 180 days funded by the UNICEF. The responsibilities include:

- Conducted desk review on data collection, data analysis, data use and reporting flows in Jordan, in terms of migration data
- Mapped data collecting and analysis entities, data availability and sharing mechanisms.
- Produced three reports and organized two capacity-building workshops.

United Nations High Commission for Refugees (UNHCR), Middle East and North Africa regional office (MENA), Amman, Jordan

Consultant Data Scientist, March 2018–October 2019

Establishing data science and statistical services unit that helps the local office and the MENA region.

- The first employee to have data scientist title in the organization
- Established statistical services Unit
- Built proper data management and statistical culture
- Questionnaire design, testing, and analysis. Responsible for writing the guidelines for questionnaires testing (see: <https://unhcr.github.io/Integrated-framework-household-survey/>), implementing the Syrian refugees' intention to return survey.
- Developed the first resilience index in the UNHCR and WFP using machine learning techniques.
- Produced R packages that can be used for predictive models' reproducible reports.
- One paper has been published at the ECPR.

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MSD, PSMHC Hospital, Riyadh, KSA

Biostatistics and Epidemiology Specialist and Lecturer, April 2014–October 2017

Drive doctors and scientists to undertake and publish research on pressing health issues while maintaining the full functionality and responsibilities of one of the largest medical facilities in Saudi Arabia. Teach Biostatistics and Epidemiology for Resident Doctors.

- I produced 14 publications without adequate funds or budget.
- Serve as Biostatistician editor for 2 ISI journals.
- Successfully increase publication within the hospital by 60% in 3 years.

The Human Rights Centre, Amman, Jordan

Data Analyst, January 2013–June 2013

Brought on for a major project: the first comprehensive statistical analysis of the Jordanian election.

- Produced major report within four weeks after the end of the elections
- Supervised the data management process and visualization produced by the centre

Loddon College for Autism, Sherfield-on-Loddon, UK

Research Associate, June 2012–January 2013

Contracted to review and analyze the college's data on student success.

- Managed the production of the first systematic review created by the college.

Cambridge University, Cambridge, UK

Research Associate, October 2011–May 2012

Researched and analyzed a wide variety of topics for the university in support of various initiatives and research projects.

- Sole analyst in 2 multi-centre clinical trials.
- Produced first publication within three months of hire.

Education

PhD, Biostatistics (09/2012)

University of Reading – Reading, UK

Master in Biometry (11/2006)

University of Reading – Reading, UK

Bachelor in Science, Applied Statistics (02/2005)

Yarmouk University – Irbid, Jordan

Certificates

Microsoft Professional Program in Data Science Certificate, Microsoft, November 2017

Microsoft Professional Program in Big Data Certificate, Microsoft, December 2017

R programming certificate from Datacamp, May 2018

Scrum Fundamentals Certified, July 2018

Training & Development

Planning for Monitoring and Evaluation, FHI 360, February/2020 – April/2020.

GDPR and Data Anonymisation, Dessian Sariava, Hackacademy, March/2020 – April/2020.

Introduction to Clinical Trials, Harvard University, 8 weeks course, Nov/2013 – Feb/2014.

Social Epidemiology, Harvard University, 8 weeks course, Nov/2013 – Feb/2014.

Technical Proficiencies

Data Analysis Software STATA, SAS, SPSS, Minitab, SmartPLS

Programming R, Python, C++, SQL, Scala

Skills Tensorflow, Deep learning, Shell script, Big Data, Machine Learning, Statistical Modelling, M&E, Systematic reviews and Meta-Analyses

Teaching and Advising

UNHCR, The design and analysis of questionnaires and surveys in social and medical studies (2019)

PSMMC, Introduction to Biostatistics (2014 – 2017)

PSMMC, Introduction to Epidemiology (2014 – 2017)

PSMMC, Introduction to Statistical Packages: SPSS and Excel

At the PSMMC I supervised over 20 studies conducted by resident physicians.

Selected Projects

Using decision trees, multinomial, and ordered logistic regression in profiling the refugees in Kurdistan, Iraq
A comparison study between KSA provinces in using addressing terms and the effect of certain factors on individuals' behavior (2012).

An exploratory study about the factors that affect small-mid biomedical companies marketing networks in the M4 corridor in the UK. Statistical analysis using PLS techniques (2012).

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Publications

Published

- Michela Gnaldi, **Osama Abdelhay**, Simone Del Sarto. Guiding Assistance and Support Interventions for Refugees on Account of their Vulnerability. ECPR conference, Wrocław, Poland, 2019.
- Ayla Tourkamni, Turki alharbi, **Osama Abdelhay**, Abdulaziz Bin Rasheed, Abdulrahmani K Al-Asmari, Hesham I Alkhashan, Sarah N Abuhaimed, Najeebuddin Mohammed, Abdulrhman N AlRasheed, Nouf G. AlHarbi. The Association of Metformin use with Vitamin B12 Deficiency and Peripheral Neuropathy in Saudi Individuals with Type 2 Diabetes Mellitus. PLoSOne, 2018. 10.1371/journal.pone.0204420
- Ayla Tourkmani, **Osama Abdelhay**, Turki Alharbi, Saad Abattal, Abdel Rahman Alrasheed. Impact of Ramadan focused education program on medication use for patients with type 2 diabetes. Diabetes & Metabolic Syndrome: Clinical Research & Reviews. 2018 July 10.
- Tourkman AM, Alharbi TJ, Rsheed AM, AlRasheed AN, AlBattal SM, **Abdelhay O**, Hassali MA, Alrasheedy AA, Al Harbi NG, Alqahtani A. Hypoglycemia in Type 2 DM patients. Diabetes & Metabolic Syndrome: Clinical Research & Reviews. 2018 Apr 12.
- Tourkmani AM, **Abdelhay O**, Alkhashan HI, Alaboud AF, Bakhit A, Elsaid T, et al. Impact of an integrated care program on glycemic control and cardiovascular risk factors in patients with type 2 diabetes in Saudi Arabia: an interventional parallel-group controlled study. BMC Family Practice. 2018;19(1):1.
- Turki Alharbi, Ayla Tourkamni, **Osama Abdelhay**, et al. Clinical audit for the adherence to Safety Monitoring for Pioglitazone Use in Patients with Type 2 Diabetes in the Al-Wazarat Primary Care Center, Saudi Arabia, Clinical Audit Journal, Dove Press. 2017
- **Osama Abdelhay**, Ayla Tourkmani, Turki Alharbi, Saad Albattal, "Effect of integrated care services on glycemic control and cardiovascular risk factors". ISRCTN83437562 DOI 10.1186/ISRCTN83437562. 22/09/2016.
- Turki J. Alharbi, Ayla M. Tourkmani, Abdulrhamn N, Al Rasheed, Aboud F. Alaboud, Ahmed Bakhiet, **Osama Abdelhay**. "Effect of integrated care services in Glycemic Control and Diabetic Nephropathy", IJCRIMPH, May 2016.
- **Osama Abdelhay**, Abdelfattah Tamimi, Qusai Abdelhay, Mutaz Tamimi, Marwan Manajreh. Knowledge and awareness of antibiotics use and misuse among Saudi population: An intervention study protocol. International Forum on Quality and Safety in Healthcare, BMJ, London 26th – 28th April 2017
- M. Altamimi, **O. Abdelhay**, R.A. Rastall, Effect of oligosaccharides on the adhesion of gut bacteria to human HT-29 cells, Anaerobe, Volume 39, June 2016, Pages 136-142, ISSN 1075-9964, <http://dx.doi.org/10.1016/j.anaerobe.2016.03.010>.
- Abdulrahman Al Rasheed, Umar Yagoub, Hesham Alkhashan, **Osama Abdelhay**, Ahmad Alawwad, Aboud Al Aboud, and Saad Al Battal, "Prevalence and Predictors of Self-Medication with Antibiotics in Al Wazarat

Health Center, Riyadh City, KSA," BioMed Research International, vol. 2016, Article ID 3916874, 8 pages, 2016

- Rabaa K. Al Momen, Mishal M. Alotaibi, **Osama Abdelhay**. Patient Enablement in Chronic Diseases in Primary Health Care, Riyadh City, KSA. International Journal of Clinical Medicine. September/2015.
- Rabaa K AlMomen, **Osama Abdelhay**, NouraA Alrowais and Tarek Elsaid. Evaluation of patient with chronic disease using patient assessment of chronic illness care questionnaire (PACIC) in Riyadh, KSA. International Journal of Current Advanced Research. Sep/2015.
- Hisham Ibrahim AlKhashan, **Osama Abdelhay**, Mohammed Sroor AlHarbi, Zuwayed Abdulla AlZuwayed, Umar Yaqoub, Turki Nassar AlNassar, Mohammed Ahmed AlShehri and Fahad Hassan AlJuraisi. Health Reasons for Rejection among 2,518 New Military Recruits in the Kingdom of Saudi Arabia: A Cross-sectional Study. Epidemiology: Open Access. Feb/2015.
- Enas Abdulhay, **Osama A. Tamimi** Development of a simulator for patient-ventilator interaction in non-invasive mask ventilation. BHI 2012: 882-885
- Barnett GC, Elliott RM, Alsner J, Andreassen CN, **Abdelhay O**, Burnet NGB, Chang-Claude J, Coles C, Dunning AM, Gutiérrez-Enriquez S, Kerns S, Raabe A, Symonds P, Seibold P, Talbot C, Yarnold J, Rosenstein B, West CML, Bentzen SM. Meta-analysis of Radiogenomics Consortium studies shows no association between a SNP regulating TGF- β 1 secretion and late radiotherapy toxicity, Radiother Oncol, 2012 Dec /2012.

Conferences' proceedings

- **Osama Abdelhay**, Michela Gnaldi, Simone Del Sarto. Guiding Assistance and Support Intervention for Refugees on Account of Their Vulnerability. European Consortium for Political Research (ECPR). General Conference Wrocław (2019).
- Abdulaziz Alrabiah, Tarek Elsaid, **Osama Abdelhay**, Awareness, knowledge, and application of Saudi Asthma management guidelines at a primary healthcare centre. The 1st IMC International Family Medicine Summit and Saudi/Arab Board Review Course. 25th – 27th October 2016.
- Al-Hakami M, Afifi A, **Abdelhay O**, Main factors associated with vitamin D deficiency among patients attending Wazarat Primary Health Center, PSMCC, KSA, Journal of Health Specialists, April/2015
- Alabbas F, **Abdelhay O**, Reasons for couples to proceed with marriage after testing positive to Sickle Cell Disease. Arab Haematologists Congress, Abu Dhabi, 5-7 Feb/2015

Submitted

- **Osama Abdelhay**, Enas Abdulhay, Tareq Elsaid, Ayla M. Tourkmani, Saad Al-Battal, Marwan Manajreh. "Perceived physical activity barriers among Saudi Arabia's residents: results from the PBAQ study". BMC public health Journal, Under revision.

- **Osama Abdelhay**, Mutaz Tamimi, Qusai Abdelhay, Marwan Manajreh, Smoking Waterpipe (hookah, Nerghilah, Shisha) in Saudi Adolescents aged 12 – 18 in Riyadh, KSA: A school based cross-sectional study. Tobacco induced diseases, Under revision.
- **Abdelhay O** and Böhning D, Meta-Analysis and systematic reviews of observational dose-response epidemiologic studies, with alcohol consumption and all-cause mortality as an application. Eur J Epidemiol, Under revision.
- **Abdelhay O** and Böhning D, Alcohol consumption and mortality from all- and specific causes: The J-hypothesis. Meta-analysis and systematic review of the current and historical evidence. Eur J Epidemiol, Under revision.