

Fatma Abdelkhalek

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My primary research interests lie in social/educational research and applied statistics in social sciences. I participated in several policy-relevant studies related to social and economic development issues. Most of these pertain to aspects of the Sustainable Development Goals such as higher education, Arabic literacy, poverty, employment, women empowerment, sexual harassment, and public health.

Being a successful researcher is not easy. Working with many international and national organizations has enhanced my leadership, networking, social research, and problem-solving skills.

EDUCATION

- PhD** 2017–2021, Institute of Mathematics, Budapest University of Technology and Economics, Budapest, Hungary.
PhD Thesis: Graphical Models & Structural Equation Modeling.
Supervised by Prof. Marianna Bolla.
- MSc** 2013-2016, Faculty of Statistical Studies & Research, Cairo University, Egypt.
MSc Thesis: Structural Equation Modeling with Applications.
Supervised by Prof. Amany Mousa.
- NVivo Workshop** September 2013 - October 2013, Introduction to qualitative data analysis using NVivo, Social Research Center, American University in Cairo, Cairo, Egypt.
- Social Science Scholarship** September 2012 -August 2013, Social Science Research Methods Training for Young Egyptian Scholars, Social Research Center, American University in Cairo, Cairo, Egypt.
- BSc** 2006-2009, Statistics, Faculty of Economics and Political Sciences, Cairo University, Cairo, Egypt.

WORK EXPERIENCE

- August 2022 - Present** Post-Doctoral Research Fellow, School of Primary Care, Population Sciences and Medical Education, Faculty of Medicine, Southampton University, Southampton, UK.
- 2021 – 2022** Lecturer, Faculty of Commerce, Assiut University, Assiut, Egypt.
- 2017 – 2021** Teaching Assistant and Doctoral Researcher, Institute of Mathematics, Budapest University of Technology and Economics, Budapest, Hungary.
- 2014 – 2017** Demonstrator, Faculty of Commerce, Assiut University, Assiut, Egypt.
- 2012 – 2017** Senior Statistician, Social Research Center, American University in Cairo, Cairo, Egypt.

- 2013 – 2014** Teaching SPSS for the trainees of Social Science Research Methods Training for Young Egyptian Scholars, Social Research Center, American University in Cairo, Cairo, Egypt.
- 2009 – 2012** Research Assistant and Data Processing Coordinator, El-Zanaty and Associates for Research and Studies, Cairo, Egypt.

CONSULTANCIES

- 2022 – Present** Statistician and researcher for the second trial of the implementation of the perceptually enhanced textbook developed and trialed by the Al Qasimi foundation of Ras al Khaimah. This project was carried out by the American University in Cairo and the Qodra organization in Minya, Egypt.
- 2021 – 2022** Statistician and researcher for the first trial of the implementation of the perceptually enhanced textbook developed and trialed by the Al Qasimi foundation of Ras al Khaimah. This project was carried out by the American University in Cairo and the Qodra organization in Assiut, Egypt.
- 2014** Statistician for Towards a Safer City- Sexual Harassment in Greater Cairo: Effectiveness of Crowdsourced Data. The Study was Supported by The International Development Research Center (IDRC), Egypt.
- June – July 2013** Data analyst for Assessing the Regulations of the Private Health in the Mediterranean Region: Egypt, for Social Research Center, in collaboration with the WHO, Egypt.
- August 2011 – December 2012** Data processing coordinator for a study of the Experience of CARE's Multi-Grade Schools, Social Research Center, American University in Cairo, Egypt.

JOURNAL PUBLICATIONS

Abdelkhalek, F., and Langsten, R., *Girls' Empowerment in Rural Upper Egypt: A Comparative Study between Community and Government Schools*, Journal of Education in Muslim Societies, 4(1), 2022.

Wolsey, T.D., Karkouti, I.M., Hiebert, E.H., Abo El Seoud, D., Abaszi, H., and Abdelkhalek, F., *Texts for reading instruction and the most common words in modern standard Arabic: an investigation*. Reading and Writing, 2022.

Bolla, M., Winstein, V., You, T., Seidl, F., and Abdelkhalek, F., *Regularity-based spectral clustering and mapping the Fiedler-carpet*, Special Matrices, 10(1), 2022.

Bolla, M., and Abdelkhalek F., *Klaman Filtering Technique in Structural Equation Modeling*, Studia Universitatis Babes-Bolyai Mathematica, 66 (1), 2021.

Bolla, M., Szabados, T., Baranyi, M., and Abdelkhalek F., *Block Circulant Matrices and the Spectra of Multivariate Stationary Sequences*, Special Matrices 9, 2021.

Abdelkhalek, F., Bolla M., *Application of Structural Equation Modeling to Infant Mortality Rate in Egypt*. In: Skiadas C., Skiadas C. (eds) Demography of Population Health, Aging and Health Expenditures 2020. The Springer Series on Demographic Methods and Population Analysis, (50).

Langsten, R., Abdelkhalek, F., and Hassan, T, *Arabic Language Skills: A Comparative Study of Community and Government Schools in Rural Upper-Egypt*, Compare: A Journal of Comparative and International Education, 2020.

Shatanawi, M., Abdelkhalek, F., and Mészáros, F., *Urban Congestion Charging Acceptability: An International Comparative Study*, Sustainability 12(12), 2020.

Bolla, M., and Abdelkhalek, F., *Bi-classified block models as mixtures of standardized contingency tables with Beta-distributed entries*, Libertas Mathematica (new series), 39(1), 2019.

Bolla, M., Abdelkhalek, F., and Baranyi, M., *Graphical models, regression graphs, and recursive linear regression in a unified way*, Acta Scientiarum mathematicarum 85(12), 2019.

Abdelkhalek, F., and Langsten, R., *Track and Sector in Egyptian Higher Education: Who Studies Where and Why?* FIRE: Forum for International Research in Education, 6(2), 2019.

ACADEMIC CONFERENCES & Talks

- September 2022** World Bank Webinar hosted by the Education GP and the 1818 Society Education Thematic Group, Short Presentation and Discussion “Foundational learning outcomes of Arabic speaking children – Piloting a perceptually enhanced curriculum in Egypt”.
- April 2022** 66th Comparative & International Education Society, Minneapolis, US. Short presentation, “Foundational Reading Skills In Sub-Saharan Africa”.
- November 2021** 5th Annual Advancing Education in Muslim Societies (AEMS) Virtual Symposium: Implications for Policy, Pedagogy, and Development, Short presentation, “Girls’ Empowerment in Rural Upper-Egypt: A comparative study between community and government school students”.
- June 2020** 8th Virtual Stochastic Modeling Techniques and Data Analysis, International conference (SMTDA), Barcelona, Spain. Short presentation, “Predictive Capability of the Partial Least Squares Structural Equation Modeling (PLS-SEM) with Application”.
- March 2020** 64th Virtual Comparative & International Education Society, Miami, US. Short presentation, “Girls’ Education Transitions in Rural Upper Egypt: A Comparative Study of Students in Community and Government Schools”.
- June 2019** 18th Applied Stochastic and Data Analysis, International conference and Demographic workshop, Florence, Italy. Short presentation, “Structural Equation Modeling: Indicators affecting Infant Mortality Rate in Egypt”.
- April 2019** 63rd Comparative & International Education Society, San Francisco, US. Short presentation, “Attitudes and Empowerment in Rural Upper Egypt: A Comparative Study of Students in Community and Government Schools”.
- March 2018** 62nd Comparative & International Education Society, Mexico City, Mexico. Short presentation, “Learning in Public and Private Universities in Egypt”.
- December 2017** Society for Research into Higher Education Newer Research, Newport, Wales, UK. Short presentation, “Gender, Field of Study and Labor Force Participation in Egypt”.
- December 2017** Society for Research into Higher Education Newer Research, Newport, Wales, UK. Short presentation “Learning in Public and Private Universities in Egypt”.

- May 2015** 17th Annual International Conference on Education, Athens, Greece. Short presentation “Track and Sector in Egyptian Higher Education: Who Studies Where and Why?”.
- March 2015** 21st Annual Research Conference of Middle East and North Africa Region, American University in Cairo, Egypt. Short presentation “Factors Related to Students’ Choices of Track and Sector in Higher Education”.
- October 2014** “Expansion of Private Higher Education in Egypt: Issues of Equity” at Issues of Equity in Higher Education Conference, American University in Cairo, Egypt.

COMPUTER AND PROGRAMMING SKILLS

- Professional Knowledge of: STATA, SPSS, and CSPro.
- Intermediate knowledge of: R, Latex.
- Basic knowledge of: Mathematica, Python.

JOB RELATED SKILLS

Data Management

- Design and validate data entry, consistency programs.
- Data analysis using basic/advanced statistical techniques through different statistical packages.

Research

- Develop qualitative and quantitative research instruments.
- Transcribe process interviews.
- Develop academic papers and reports.
- Prepare/present study results for the public.
- Develop interesting research questions and research methodology.

Teaching

- Develop course material.
- Develop course evaluation.
- Teach statistical courses (Linear Algebra, Probability, Applied Statistics, Research Methods, Multivariate Statistics, Research Methods and Statistical Packages).

LANGUAGES

Arabic: Native language.

English: Fluent (writing, reading, and speaking).

RERFERNCE

On Request.