Anshul Kumar

Curriculum Vitae as of Nov 30 2023

Contact Information

Health Professions Education Program
Center for Interprofessional Studies and Innovation
MGH Institute of Health Professions
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Boston, Massachusetts 02129-4557

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Employment

MGH Institute of Health Professions (MGHIHP)
Assistant Professor   *April 2019 – Present*
Part-Time Lecturer   *January 2019 – March 2019*

Tufts University
Part-Time Lecturer, CH 1 – Introduction to Community Health   *January 2019 – May 2019*

Global Health Education and Learning Incubator, Harvard University and
Center for Health Decision Science, Harvard School of Public Health
Postdoctoral Research Fellow   *February 2018 – March 2019*

Education

Graduate School of Arts and Sciences, Harvard University
PhD in Sociology   *May 2018*
A.M. in Sociology   *May 2014*

College of Arts and Sciences, Cornell University
B.A. in Sociology, B.A. in Economics   *May 2009*

Written Works

Peer-reviewed publications

Yeo May May, et al. 2023. "Calculator for predicting the probability of faculty promotion in an academic medical centre." *BMJ Leader*. Published Online First: 06 October. http://doi.org/10.1136/leader-2023-000861.

Kumar, Anshul, et al. 2023. "The Application of Adaptive Minimum Match k-Nearest Neighbors to Identify At-Risk Students in Health Professions Education." *The Journal of Physician Assistant Education* 34(3): 171–177. DOI: http://doi.org/10.1097/JPA.0000000000000513. Pre-print: https://doi.org/10.35542/osf.io/wtuv6 and https://arxiv.org/abs/2108.07709.

Jafri, Farrukh N., et al. 2023. "In Situ Simulation as a Tool to Longitudinally Identify and Track Latent Safety Threats in a Structured Quality Improvement Initiative for SARS-CoV-2 Airway Management: A Single-Center Study." *Simulation in Healthcare* e18(1): 16-23. https://doi.org/10.1097/SIH.0000000000000633.

Mousavian, M., Ranganathan, K. & Kumar, A. 2022. "State of educational modalities employed in gender-affirming surgery amongst surgical residencies." *Global Surgical Education* 1(57). https://doi.org/10.1007/s44186-022-00065-6.

Jafri Farrukh N., et al. 2021. "The Addition of High-Technology Into the Stop the Bleed Program Among School Personnel Improves Short-Term Skill Application, Not Long-Term Retention." *Simulation in Healthcare: Journal of the Society for Simulation in Healthcare* 16(6): e159-e167. https://doi.org/10.1097/sih.0000000000000546.

Jafri Farrukh N., et al. 2020. "A Microdebriefing Crisis Resource Management Program for Simulated Pediatric Resuscitation in a Community Hospital: A Feasibility Study." *Simulation in Healthcare: Journal of the Society for Simulation in Healthcare* 16(3): 163-169. http://doi.org/10.1097/sih.0000000000000480.

Marks, Brynn E., et al. 2020. "Improving Pediatric Endocrinology Trainees' Knowledge about Insulin Pumps and Continuous Glucose Monitors with Online Spaced Education: Technology Knowledge Optimization in T1D (TeKnO T1D)." *Pediatric Diabetes* 21(5): 814-823. https://doi.org/10.1111/pedi.13010.

Kumar, Anshul. 2019. "Cultures of learning in developing education systems: Government and NGO classrooms in India." *International Journal of Educational Research* 95: 76-89. https://doi.org/10.1016/j.ijer.2019.02.009.

Teaching materials

Kumar, Anshul. 2023. *Responsible applied statistics in R for behavioral and health data (working title)*. Textbook used for course HE-902 at MGHIHP. https://bookdown.org/anshul302/HE902-MGHIHP-Spring2020/ or http://tinyurl.com/he902stats.

Kumar, Anshul. 2022. *Introductory predictive analytics and machine learning in education and healthcare*. Course book for HE-930 at MGHIHP. https://bookdown.org/anshul302/paml/

Kumar, Anshul. 2021. *MGHIHP HE-802, Spring 2021*. Course book. https://bookdown.org/anshul302/HE802-MGHIHP-Spring2020/.

Kumar, Anshul, et al. Equal first authorship. *Coronavirus Vaccine / कोरोनावाइरस वैक्सीन*. (COVID-19 vaccine information and resources for Indian audiences). https://globalhealtheducation.github.io/.

Software, code, and tools

Kumar, Anshul & Edwards, Roger. 2021. AdaptiveLearnalytics: Adaptive Predictive Learning Analytic Tools. https://github.com/readcreate/AdaptiveLearnalytics.

Kumar, Anshul. 2021. Predictive analytics tutorial: identify groups in your data using unsupervised machine learning. http://tinyurl.com/AnshulCluster1.

Unpublished research

Kumar, Anshul. 2018. *Innovating in Education: NGO Interventions in New Delhi Government Schools.* PhD Dissertation. Committee: Chris Winship, Orlando Patterson, Katherine Merseth.

Kumar, Anshul. 2013. "The organization and behavior of HIV-affected families in 18 African countries." (Graduate Qualifying paper).

Kumar, Anshul. 2009. "Food and Nutrition in Kabula – a Qualitative Examination in Western Kenya." Sociology Honors Thesis at Cornell University. Advisor: David Brown.

Student advising and mentorship

Current graduate students

- Mohammad Mousavian (chair of PhD dissertation committee)
- Solomon Germossa (chair of PhD dissertation committee)
- Peter Stallo (PhD dissertation committee member)
- Rosemary Samia (PhD dissertation committee member)
- Sateesh Arja (PhD dissertation committee member)
- Toby Kinney (PhD dissertation committee member)
- Farrukh Jafri (PhD dissertation committee member)
- Ayman Mohamed (MS scholarly project advisor)

Alumni

- Robin Klein (chair of PhD dissertation committee)
- May May Yeo (PhD dissertation committee member)
- Egide Abahuje (PhD dissertation committee member)
- Jabeen Fayyaz (PhD dissertation committee member)
- Wed Almutairi (MS scholarly project advisor)
- Schoen Kruse (MS scholarly project advisor)
- Mohammad Mousavian (MS scholarly project advisor)
- Brianna Vaa Stelling (MS scholarly project advisor)

- Margaret Mitchell (MS scholarly project advisor)

Selected Projects

COVID-19 Education and Community Health Worker Training in India
Principal investigator, with Claudia Rosu   March 2020 – Present

- Collaboration of 30-40 people from Sinchan Education & Rural Entrepreneurship Foundation, Lahanti Club community group, Universidad Anáhuac Mexico, Tufts University, Harvard University, MGHIHP.
- Delivery of COVID-19 educational lessons and evaluation instruments regarding COVID-19 basics, mask usage, hand hygiene, vaccine, nutrition myths/facts, and MIS-C.
- Mass General Brigham IRB protocols #2020P003752 (PI: Claudia Rosu) and #2020P003554 (PI: Anshul Kumar).
- Partially funded by a $5,000 COVID-19 Small Grant from MGHIHP

Inequality in Water and Sanitation Conditions in DHS Countries   July 2018 – Present
Principal Investigator
- Quantitative cross-country examination of factors influencing differential access to hygienic drinking water and toilets, using data from Demographic and Health Surveys.

Water and Sanitation in Gulu, Uganda   July 2018 – Aug 2019
Advisor to organization Water and Health for All
- Advise organization on processing, analysis, and interpretation of survey data related to water quality in Gulu, Uganda.

Pre-Texts for India   May 2018 – May 2019
Principal Investigator, with Polly Lauer and Jahnvi Singh
- Conducting one-year controlled pilot to bring Pre-Texts teaching methodology to a network of schools in Coimbatore, Tamil Nadu, India, with specific focus on literacy, math, and health.
- Funded by a $5,000 seed grant from the Lakshmi Mittal and Family South Asia Institute at Harvard University.
- Supervised by Professor Doris Sommer.

Teaching

Courses taught as instructor
- Advanced Statistical Modeling for Health Professions Education (HE902), MGHIHP, Spring, 2020-2023.
- Advanced Quantitative Methods and Measurement (HE802), MGHIHP, Spring, 2019-2021
- Statistics/Predictive Analytics for Health Professions Education (HE930), MGHIHP, Summer, 2020-2022.
- Pharmacy Research Methods Certificate Program, MGHIHP, 2021-2023.
- Introduction to Community Health (CH1), Tufts University, Spring 2019

Courses taught as teaching assistant

Harvard University
- Fundamental Concepts of Public Health (GHP556) with Suerie Moon and Julio Frenk; summer 2015
- Global Health Challenges: Complexities of Evidence-Based Policy (SW24) with Professor Sue Goldie; spring 2014
- Life and Death in the USA (SOC190) with Professor Nicholas Christakis; spring 2012, spring 2013
- The American Family (SOC107) with Professor Marty Whyte; fall 2011, fall 2012, fall 2013

Peer Review

- 4th International Conference on Physics, Mathematics and Statistics. December 2020.
- Fourth International Conference on Social Science Public Health and Education, August 2021.

Additional Skills and Training

Data and Computer Skills
- Proficient in data analysis and manipulation in R, Python, Stata, Google Drive API, Google Colab.
- Statistical and demography training from National Science Foundation Research Experience for Undergraduates Program in Minority Group Social Demography; Population Research Center, University of Texas, Austin. Summer 2008.
- Relevant coursework: Advanced Quantitative Research Methods (taught by Chris Winship), Social Network Analysis (Peter Marsden), Computational Methods for Complex Networks (Gueorgi Kossinets), Population Dynamics (David Brown).

Other selected graduate-level coursework: Charter Schools (with Katherine Merseth and Nelson Smith), Sociology of Development (Martin Whyte), Sociology of Families and Kinship (Martin Whyte).

Language abilities: Native English, intermediate Hindi and French.

Nationality: USA