Rachit Sharma, MBBS, MPH

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EDUCATION

Aug 2020 - Present

Ph.D. in Environmental and Occupational Health, Dornsife School of Public Health, Drexel University

Philadelphia, USA

Advisor: Jane E. Clougherty, ScD.

Dissertation: The synergistic role of psychosocial stress, ambient air pollution, and ambient temperature in shaping susceptibility toward hospitalization risk for epilepsy and other seizure-related disorders among children in New York, USA.

Oct 2017 — May 2019

Master of Public Health, Bloomberg School of Public Health, Johns Hopkins University

Baltimore, USA

Advisor: Monika Chaudhary, PhD.

Capstone: Perceptions and cost-benefit analysis of outdoor gymnasiums in public parks of Delhi-National Capital Region, India.

Jul 2011 — Nov 2015

Bachelor of Medicine and Bachelor of Surgery (MBBS), Pandit B. D. Sharma Post Graduate Institute of Medical Sciences

Rohtak, India

Research activities:

- Cross- sectional study on determining the knowledge of mothers of under-five children about ORS and drug use practices during diarrhoea, in an urban slum population of Rohtak, Haryana, India.
- Cross-sectional study on assessing the determinants of compliance to iron/folate supplementation during pregnancy in Chiri village, Rohtak, Haryana, India.

RESEARCH EXPERIENCE

Jan 2021 — Present

Graduate Research Assistant, Drexel University Dornsife School of Public Health

Philadelphia, USA

- Conduct secondary data analyses, coordinate and participate in team meetings, and perform other duties
 necessary to support the successful completion of a NIEHS funded research project (R01 grant) examining
 the impact of ambient temperature and extreme heat on pediatric health outcomes in New York, USA.
- Contribute to the development of research documentation for publications, scientific presentations, and grant applications.

May 2020 — Aug 2020

Research Fellow, Generating Research Insights for Development (GRID Council)

New Delhi, India

New Delhi, India

- Identified and supported the development of new research proposals in the domains of maternal and child health, environmental health, and geriatric mental health in India.
- Independently developed course curriculum on 'Introduction to Epidemiology and Biostatistics' for MPH students at ICMR-Regional Medical Research Centre, Bhubaneswar, India.
- Coordinated GRID COVID-19 Study Group on 'Community reactions to COVID-19 pandemic in India'.
- Prepared manuscripts and project documents.
- Represented GRID Council in stakeholder communications, networking, and dissemination activities.

Jan 2019 — Apr 2020

Senior Research Officer, International Clinical Epidemiological Network (The INCLEN Trust International)

- Assisted in recruitment and establishment of a pregnant mother-child population cohort to prospectively
 assess the impact of air pollution exposure on fetal growth, pre-term birth, birth weight, child growth, and
 development of acute respiratory illnesses among children in Delhi- National Capital Region, India.
- Conducted clinical assessments of children for acute respiratory illnesses and child growth monitoring.
- Assisted in planning, execution, and quality assurance of exposure and health assessment field activities.
- Managed and analyzed data acquired from field and lab investigations to estimate exposure-response relationships of interest.
- Prepared annual project progress reports.

Jaipur, India

Research Assistant, Indian Institute of Health Management Research

- Independently analyzed the anthropometric and nutrient intake data in a study assessing the nutritional status of children in three rural districts of Rajasthan, India.
- Identified key socio-demographic and cultural drivers associated with the under-nutrition status and nutrient gaps among the children.
- · Assisted in the formulation of food-based recommendations to help overcome the identified nutrient gaps.
- · Drafted the final project report and assisted in dissemination of the research findings.

Jun 2018 — Jun 2018

Research Assistant, Center for Health and Development

Mangalore, India

- Co-led monitoring and evaluation of services provided at Nutritional Rehabilitation Centers functioning across four rural districts of Northern Karnataka.
- Organized and provided primary health care services at two healthcare camps in remote villages of Mangalore.
- Independently organized and conducted a deliberation with the Mangalore City Police Department on 'The role of law enforcement agencies during public health emergencies in India'.

Feb 2017 — Sep 2017

Junior Resident Doctor, SHKM Government Medical College and Hospital

Nalhar, India

- Led a community-based, behavior change communication program aiming to increase the acceptability
 and use of indoor residual spray as an anti-malarial measure among the rural population of Mewat district,
 Haryana.
- Supervised primary data collection efforts during pre- and post- intervention household surveys.
- Planned and participated in the behavior change communication activities and focused group discussions in the field.
- Assisted in data analysis and drafting of the final project report.

PUBLICATIONS

- 1. Uibel D, **Sharma R**, Piontkowski D, Sheffield PE, Clougherty JE. Impact of Ambient Extreme Heat on Pediatric Morbidity: A Scoping Review. *Int J Biometeorol*. Accepted.
- Sultana A, Tasnim S, Sharma R, Pawar P, Bhattcharya S, Hossain MM. Psychosocial Challenges in Palliative Care: Bridging the Gaps Using Digital Health. *Indian J Palliat Care*. 2021;27(3):442-447. doi:10.25259/IJPC_381_20
- 3. Bhadoria AS, Gawande K, **Sharma R**, Mohapatra A, Kant R. Institutional versus home isolation to curb the COVID-19 outbreak. *Lancet*. 2020;396(10263):1631-1632. doi:10.1016/S0140-6736(20)32161-9
- Sultana A, Sharma R, Hossain MM, Bhattacharya S, Purohit N. Burnout among healthcare providers during COVID-19: Challenges and evidence-based interventions. *Indian J Med Ethics*. 2020;V(4):1-6. doi:10.20529/IJME.2020.73
- 5. **Sharma R**, Hossain M, Pawar P, Sharma S. Air pollution and geriatric mental health: perspectives on the COVID-19 pandemic. *Int Psychogeriatr*. 2020;32(10):1255-1256. doi:10.1017/S1041610220001428
- Sharma R, Hossain MM, Pawar P. Strengthening primary care to address workplace violence against doctors in India. J Family Med Prim Care. 2020;9(5):2585-2586. doi:10.4103/jfmpc.jfmpc_149_20
- Sharma R, Chaudhary M. Perceptions of outdoor gymnasiums in National Capital Region, India: creating active environments for health promotion. *Health Promot Int*. 2021;36(1):89-100. doi:10.1093/heapro/daaa028
- 8. Hossain MM, Tasnim S, **Sharma R**, Sultana A, Shaikh AF, Faizah F, Kaur R, Uppuluri M, Sribhashyam M, Bhattacharya S. Digital interventions for people living with non-communicable diseases in India: A systematic review of intervention studies and recommendations for future research and development. *Digit Health*. 2019;5:2055207619896153. doi:10.1177/2055207619896153
- 9. Hossain MM, **Sharma R**, Sultana A, Tasnim S, Faizah F. Globalising artificial intelligence for improved clinical practice. *Indian J Med Ethics*. 2019;-(-):1-2. doi:10.20529/IJME.2019.074
- 10. **Sharma R**, Hossain MM. Strengthening Public Health Partnerships in India: Envisioning the Role of Law Enforcement During Public Health Emergencies. *Indian J Community Med.* 2019;44(3):188-192. doi:10.4103/ijcm.IJCM_110_19
- Sharma A, Sakshi, Sharma R, Kumar N. Prevalence and association of dental caries and dental fluorosis in fluoride endemic region of Mewat district, Haryana, India. *Int J Oral Health Dent* 2019;5(1):27-31. doi: 10.18231/j.ijohd.2019.007
- 12. Sharma S, Mannan R, **Sharma R**, Sharma SC. Co-existence of Wuchereria bancrofti Microfilaraemia in a Case of Multiple Myeloma: An Incidental Finding or an Association? *J Clinic Diagn Res* 2017, 11(12):6-8. doi: 10.7860/JCDR/2017/32300/10940
- 13. Institute research report (contributing author): Strengthening Population-Based Screening for NCDs In Five States Of India: Implementation Note. People to People Health Foundation. 2021.

- 14. Book chapter (contributing author): Stigma mechanisms in a globalized pandemic in India: A theoretical framework for stigma. In: Pachauri S, Pachauri A, editors. *Health Dimensions of COVID-19 in India and Beyond*. Springer (*in press*).
- 15. **Sharma R**, Pawar P, Appiah B, Hossain MM. Mental health outcomes associated with air pollution exposure among older adults: a systematic review (*manuscript in preparation*).
- 16. **Sharma R**, Chaudhary M. Economic viability of outdoor gymnasiums for promoting physical activity in Delhi, India: a cost-benefit analysis (*manuscript in preparation*).
- 17. Hossain MM, **Sharma R**, Tasnim S, Kibria GMA, Saxena T. Prevalence, characteristics, and associated factors of workplace violence against healthcare professionals in India: a systematic review and meta-analysis (*manuscript in preparation*).
- 18. Hossain MM, Sultana A, Fan Q, Ma P, **Sharma R**, Purohit N. The effects of natural environment on mental health and wellbeing: an umbrella review of systematic reviews and meta-analyses (*manuscript in preparation*).

SCIENTIFIC PRESENTATIONS

- 1. Pawar P, **Sharma R**, Mukherjee R, Shammas A, Tasnim S, Hossain MM. Factors influencing violence against women in India during COVID-19: A systematic scoping review. Poster presentation at the American Public Health Association 2021 Annual Meeting and Expo.
- 2. **Sharma R**, Nair D, Arora NK, Balakrishnan K. Acute respiratory illnesses, child growth outcomes, and particulate matter exposures among infants- Preliminary findings from the Delhi Air Pollution Health and Effects Study. Poster presentation at Challenges of Air Quality in Global Megacities (CAGMe-2020) International Conference, March 2020, Indian Institute of Tropical Meteorology, Pune, India.
- 3. **Sharma R**, Chaudhary M. Perceptions and cost-benefit analysis of outdoor gymnasiums in Delhi-National Capital Region, India. Poster presentation at the 64th Annual Indian Public Health Association Conference (IPHACON), February 2020, All India Institute of Medical Sciences, New Delhi, India.
- 4. **Sharma R**, Pawar P, Hossain MM. Human resources for rural healthcare in India: Bridging the gaps. Oral presentation at World Rural Health Conference, April 2018, New Delhi, India.
- 5. Sultana A, **Sharma R**, Ahmad M. Women's health in rural Bangladesh: Violence, empowerment and health seeking behaviour. Oral presentation at World Rural Health Conference, April 2018, New Delhi, India
- 6. Sharma R, Verma M, Arora V, Khanna P. Determining the knowledge of mothers of under-five children about ORS and drug use practices during diarrhea within an urban slum population of Haryana. Oral presentation at VAMSCON (an annual medical students' national conference), February 2015, Vardhman Mahavir Medical College (VMMC), New Delhi, India.
- Sharma R, Verma M, Sahoo SS. Determinants of compliance to iron/folate supplementation during pregnancy in Chiri village, Rohtak, Haryana, India. Poster presentation at VAMSCON, February 2015, VMMC, New Delhi, India.
- 8. *Invited Talk*: GRID Academic Session on 'Introduction to environmental and occupational health'. August 2021. Organized by GRID Council, Delhi, India.

PROFESSIONAL SERVICE

- Co-organized EOH research seminar on 'Household air pollution and adverse pregnancy outcomes: Evidence from rural–urban cohort studies in India' at Drexel University Dornsife School of Public Health. February 2022.
- Manuscript reviewer for scientific journals:
- 1. Science of the Total Environment
- 2. Frontiers in Public Health (section: Public Mental Health)
- 3. Frontiers in Psychiatry (section: Public Mental Health)
- 4. Frontiers in Psychology (section: Psychology for Clinical Settings)

PROFESSIONAL DEVELOPMENT

- 'International teaching assistant training program'- a formal TA training program offered by Drexel University.
- 'Statistical analysis with R for public health'- a four-course specialization certificate offered by Imperial College London through Coursera.
- 'Geographical information systems'- a four-course specialization certificate jointly offered by University of California, Davis and Esri through Coursera.
- 'Methods and modelling in environmental health research'- short course jointly offered in-person by Public Health Foundation of India and Harvard Chan School of Public Health.
- 'Good clinical practice'- online certification offered by NIDA Clinical Trials Network.
- 'Research ethics'-online training offered by The Global Health Network, Liverpool School of Tropical Medicine, and Worldwide Antimalarial Resistance Network.

- CME on 'Injection safety: A preventive tool for patient, provider and community', November 2017, SHKM Govt. Medical College, Haryana, India.
- CME on 'Malaria control: Challenges, opportunities, and recent advances', October 2016, SHKM Govt. Medical College, Haryana, India.

PROFESSIONAL MEMBE	RSHIPS			
Mar 2022 — Present	Society for Epidemiologic Research (member)			
Feb 2021 — Present	International Society for Environmental Epidemiology (member)			
Feb 2021 — Present	American Public Health Association (member)			
Dec 2019 — Present	Epidemiology Foundation of India (life member)			
Sep 2019 — Present	Indian Public Health Association (life member)			
COMMUNITY SERVICE				
	Gift a Mask Campaign-Volunteered to raise funds and support distribution of anti-pollution (N95) masks among the street vendors and the homeless in Delhi-National Capital Region, India, during the highly polluted winter months of November to December 2019.			
LANGUAGES	English	Highly proficient	Hindi	Native speaker
REFERENCES	Dr. Jane E. Clougherty from Drexel University Dornsife School of Public Health, Philadelphia, PA. jec373@drexel.edu			
	Dr. Naveen Puttaswamy from Sri Ramachandra University, Chennai, India.			
	naveen@ehe.org.in			
	Dr. Archisman Mohapatra from GRID Council, Delhi, India.			

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