

Nilima

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Designation: Scientist-I

About Me

Nilima is a Scientist-I in the Department of Biostatistics at the All India Institute of Medical Sciences (AIIMS), New Delhi, with over twelve years of experience in statistical methodology and collaborative health research. Her research focuses on developing and applying advanced statistical methods to address complex problems in public health and clinical research, with particular interests in causal inference, longitudinal data analysis, spatial epidemiology, structural equation modelling, and classification and regression trees. She has collaborated extensively on multicentre observational and interventional studies, contributed to Government of India-funded research initiatives, and was a part of training workshops in statistical software including R and Stata. Her long-term research goal is to advance statistical methodology that enables robust evidence generation for improving healthcare decision-making and population health.

Awards and Fellowships

Her research has been recognized with the **Dr. Chandrasekharan Young Scientist Award** at the 39th Annual Conference of the Indian Association for the Study of Population (2018) for her work on the spatial determinants of cervical and breast cancer screening in India. This award acknowledged the methodological innovation and public health relevance of her research in applying spatial statistical approaches to national health survey data.

Research Projects

She currently serves as a **Co-Investigator** in the ICMR-funded multicentre project **Strategic Multimodal Intervention in At-Risk Elderly Indians for Prevention of Dementia (SMRUTHI INDIA)**, a large prospective cohort study designed to establish a high-risk dementia cohort, develop multidomain preventive care bundles, and evaluate longitudinal cognitive outcomes. She also contributed as a research team member to other major ICMR-funded projects, including studies evaluating the impact of **Ayushman Bharat Health and Wellness Centres on out-of-pocket healthcare expenditure among older adults** and investigations into the **psychosocial and economic burden of dementia caregiving**. Her responsibilities span statistical design, methodological development, data management, advanced statistical modelling, and interpretation of findings from large multicentre datasets.

Publications

Her research has resulted in publications in leading international journals spanning biostatistics, epidemiology, spatial health research, oncology, artificial intelligence, and public health. Her work includes methodological contributions to longitudinal study designs, spatial regression modelling, structural equation modelling, and machine learning applications in healthcare. She authored and co-authored publications in journals such as *Spatial Demography*, *BMJ Open*, *Frontiers in Aging Neurosciences*, *Public Health*, *BMC Public Health*, *SN Computer Science*, *Maternal & Child Nutrition*, *Cancers*, and *Cureus*. My recent work focuses on cognitive ageing and dementia research, including the development of cognitive normative data for rural Indian populations and statistical methodology for cohort multiple randomized controlled trials.

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