

Sumedha Dharmarajan (she/her)

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Public Health Consultant

A self-motivated, detail-oriented and dedicated public health professional. Experienced in interdisciplinary scientific analysis, integrating epidemiological and laboratory approaches to address complex health challenges. I am adept at data analysis, critical thinking and translating data into meaningful research outcomes. Demonstrated expertise in scientific writing, including preparation of manuscripts and project reports, with contributions to peer-reviewed, indexed publications.

Professional experience

- July 2026- current **Research Scientist, Birth Defects Research Foundation**
 - Leading a project to set up (BIND) a national network on birth anomalies in India in co-ordination with Smile Train, India
 - Mapping health resources providing surgical services to children with congenital heart defects (CHDs) in India.
- May 2024- May 2026 **Research Scientist, Geneovate HealthTech LLP**
 - Provided research consultancy for international clients supporting research study design, data analysis (primary and secondary data), narrative and systematic reviews and scientific communication.
- January - March 2025 **Senior Research Co-ordinator**
 - Project on the Impact Evaluation of ‘Niramayam Yojana’ – Madhya Pradesh
 - Responsibilities involved initiation and implementation of the study, interaction with stakeholders at various levels, development of study instruments and training of data collectors, data analysis and report writing.
- June 2023- May 2024 **Research Affiliate, Birth Defects Research Foundation, Pune**
 - A scoping review on the sources of bias in studies reporting birth prevalence of congenital anomalies
 - Responsibilities involved study design, study identification, data extraction, analysis and communication.
- June 2023-August 2023 **Consultant, Goa Institute of Management**

Technical skills

Project management
Stakeholder engagement
Data analyses
Scientific communication
Academic conference and event coordination

- Work responsibilities involved manuscript preparation for publication for the assigned projects
 - Sept 2021- Jan 2022 **Consultant**, Goa Institute of Management
 - Project on “Post COVID Workplace: Implications of Long-Term work from home on India’s IT sector”
 - Work responsibilities involved data cleaning, analysis of quantitative and qualitative data, report and manuscript writing
 - August 2011-May 2017 **Teaching experience**
 - Modules of Public Health Genetics, Laboratory methods and Human Physiology
 - Mentored M.Sc. Health Sciences and Masters in Public Health students for their Master’s dissertation and Development of Research Proposal
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Education

▪ **Ph.D. in Health Sciences**

Interdisciplinary School of Health Sciences, Savitribai Phule Pune University (SPPU)

August 2012- July 2019

- Awarded the **INSPIRE Fellowship** by the Department of Science and Technology (DST), Government of India

▪ **M.Sc. Health Sciences**

Interdisciplinary School of Health Sciences, University of Pune

June 2009 – April 2011

- Grade ‘A’ (*First Rank*). G.P.A: 4.79/6
- Awarded the **Sukhatme Fellowship** (for the top ranking student) for two consecutive years.

▪ **B.Sc. Biotechnology**

Fergusson College, University of Pune

June 2006 – April 2009

Research and Field experience

Doctoral research- DST-INSPIRE Fellow

August 2012- July 2019

Thesis title: Epidemiology of beta thalassaemia in India

- Established prevalence of beta thalassaemia carriers in India through a systematic review and met-analysis, and verified the same through a prevalence study of pregnant women in government hospitals

- A follow-up cohort study determined the decisions taken for management of thalassaemia and the resultant out-of-pocket expenditure incurred. *Developed an IEC material* for diagnosis of beta thalassaemia carriers based on the results of the study.
- Determined the genotype-phenotype correlation in patients with beta thalassaemia major.

External Monitor

September 2016

External Monitor to monitor the availability of fIPV as a part of the National Polio Surveillance Project in Pune district.

External Monitor

April 2016

Monitoring of switch of tOPV (trivalent Oral Polio vaccine) to bOPV (bivalent OPV) for the National Polio Surveillance Project in Pune district

Post-Graduate research – Junior Research Fellow

June 2010 - April 2011

Project title: Use of a GIS to study the tuberculosis epidemiology and the factors affecting case detection in a population in Pune, district, Maharashtra

Collected socio-demographic and geographical data of tuberculosis patients and sputum samples for genotyping *M. tuberculosis*. Conduct GIS-mapping of patients' residences and healthcare facilities. Analysis was done for identification of circulating strains

Post-Graduate research

June 2010 - April 2011

Dissertation title: Study on the bleeding pattern, treatment decisions and cost of care for hemophilia

Conducted a follow up a cohort of families of patients with haemophilia to assess the treatment pattern and out-of-pocket expenditure incurred for treatment

Internship at the State Blood Transfusion Council

May-June 2010

- A comprehensive understanding of the role, functioning, and responsibilities of the State Blood Transfusion Council and understood the process of blood collection, storage, distribution, blood allocation and managerial activities at various levels.

Research Publications

1. Dharmarajan, Sumedha, Prajкта Bhide, and Anita Kar. "Sources of Bias in Studies Reporting Birth Prevalence of Congenital Anomalies: A Scoping Review and Reporting Checklist." *Journal of Public Health*, vol. 47, no. 1, Mar. 2025, pp. e38–e55. <https://doi.org/10.1093/pubmed/fdae299>

2. Dharmarajan, S., and A. Kar. "Prevalence of Beta Thalassemia Carriers in India: A Systematic Review and Meta-Analysis." *Journal of Community Genetics*, vol. 14, no. 6, Dec. 2023, pp. 527–541. <https://doi.org/10.1093/pubmed/fdae299>
3. Dharmarajan, S. "Haemoglobinopathies: Genetic Services in India." *Birth Defects in India*, edited by A. Kar, Springer, 2021. https://doi.org/10.1007/978-981-16-1554-2_11
4. Dharmarajan S, Pawar A, Bhide P, Kar A. Undiagnosed haemoglobinopathies among pregnant women attending antenatal care clinics in Pune, India. *J Community Genet*. 2021 Jul;12(3):337- 344. doi: 10.1007/s12687-021-00505-8.
5. Dharmarajan S, Phadnis S, Gund P and Kar. A, Out-of-pocket and catastrophic expenditure on treatment of haemophilia by Indian families. *Haemophilia* 2014, 20 (3): 382–7
6. Kar A, Phadnis S, Dharmarajan S and Nakade J. Epidemiology and social costs of Hemophilia in India. *Indian J Med Res* 2014; 140 (1):19-31.
7. Dharmarajan S, Gund P, Phadnis S, Lohade S, Lalwani A and Kar A. Treatment decisions and usage of clotting factor concentrate by a cohort of Indian haemophilia patients. *Haemophilia* 2012; 18 (1): e27-9

Conferences & Presentations

1. **Dharmarajan S**, Divgi K, Munshi N and Kar A. A study to genotype the primary, secondary and tertiary modifiers of beta thalassaemia among patients from Pune, India. Abstract presented at the "International symposium on Genomics in Health and Disease" of the 40th Annual conference of the Indian Society of Human Genetics, Abstract #P-93, 2015. *Indian J Hum Genet*, 20 (Suppl 1):S79
 2. **Dharmarajan S**, Divgi K, Munshi N and Kar A. Out-of-pocket expenditure and health systems cost of management of beta thalassaemia. Poster session presented at: Millenium Maternal and Child Health Goals: Post 2015 Strategies; Pune Public Health Conference 2014 & Joint State Conference of IPHA-IAPSM (Maharashtra Chapter); 2014 Feb 25-26; Pune, India. Abstract # HS:1.
 3. Kar A, **Dharmarajan S**, Phadnis S, Nakade J. Evidence for Mobilizing Policy on Haemophilia in India: II. An Estimate of Treatment Gap in Maharashtra. Abstracts of the XXX International Congress of the World Federation of Hemophilia, Abstract #PO-MO-046, 2012, Abstracts. *Haemophilia*, 18: 1–208
 4. Nominated as a resource person from the School to give a talk about the need for applied scientific research at the **Indian International Science Festival, 2016**
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Certifications

1. Certificate for attending an online webinar on "Data Analysis using SPSS Statistics 29.0 and Modules" on October 4, 2024

2. Laboratory and Molecular Diagnosis of Hemoglobinopathies, conducted by Dr. Roshan Colah, National Institute of Immunohaematology on 27th January, 2015
 3. Genetics in Public Health Systems : Birth defects under the RBSK and haematology programme as special initiative of the NRHM, on 24th February, 2014.
 4. *Certificate course attended on the Clinical trials and Meta-analyses from 27-31 May, 2013*
 5. Certificate course on “Qualitative Methods in Health Research” at MGIMS, Wardha: 16th Aug 2011 -20th Aug 2011
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Softwares

- Data analysis- SPSS, RevMan, WHO Anthro, Anthroplus, ATLAS.ti
 - MS Office Suite- Advanced MS Excel |MS Word| MS PowerPoint
 - Reference manager- Mendeley
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Personal details

Residential address: B-404, Bliss, Vasant Oscar CHS, Behind Hallmark Commercial Complex, LBS Marg, Mulund (W), Mumbai-400080

Languages spoken: English, Hindi, Marathi, Tamil (spoken)
