



Dr Anita Kar, PhD



Designation and Contact

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A. RESEARCH

With a background in genetics and public health, my research focuses on birth defects (congenital disorders), examining their epidemiology and public health implications. The goal of the research is to understand the elements of a situationally appropriate, equitable, and sustainable model of care for birth defects in India and other low and low-middle income settings. Our research has examined the magnitude of disorders, proportion of child mortality attributable to birth defects in India, birth defects surveillance and reporting systems, barriers and facilitators to care under the RBSK, maternal health issues related to birth defects, preconception risk factors including folate insufficiency, and women's knowledge about birth defects. We have recently reported the history of thalidomide in India. Our earlier work focused on the epidemiology and social consequences of hemophilia and thalassemia. In addition to quantitative and qualitative methods, we have utilized molecular techniques in our studies.

At the Birth Defects Research Foundation, our focus is on advocacy for these disorders. Understanding that these disorders are not visible in MPH curricula, we have developed a toolkit for understanding the public health implications of birth anomalies for an interdisciplinary audience of students and researchers. Our field-based studies now focus on examining global birth defects services, the RBSK programme in India, and especially, registries. Our research includes building a network of organizations and individuals working in this field.

Research areas/keywords

- Birth defects / congenital disorders/ epidemiology / public health policy/ maternal and child health
- childhood disability / disability and public health
- Public health/ Global health / Health systems/ health service research /disease surveillance

ORCID ID : 0000-0003-1336-4244

Total publications : (Peer reviewed international and national, book chapters) 79

SELECTED PUBLICATIONS (FROM BDRF)

1. Radhakrishnan B, Chatta V and Kar A (2025) Public health interventions for a birth defects service for low and low-middle income countries: Implications from a community study in India. *Journal of Public Health Policy* Dec 14:1-13
2. Kar A. (2024) Birth defects reporting and surveillance in India: a narrative review. *J Community Genet.* Dec 9. doi: 10.1007/s12687-024-00760-5. Epub ahead of print. PMID: 39652147.
3. Dharmarajan, S., Bhide, P., & Kar, A. (2024). Sources of bias in studies reporting birth prevalence of congenital anomalies: a scoping review and reporting checklist. *Journal of Public Health*, fdae299.
4. Kar, A., Dhamdhare, D., & Medhekar, A. (2023). “Fruits of our past karma”: a qualitative study on knowledge and attitudes about congenital anomalies among women in Pune district, India. *Journal of Community Genetics*, 3; 1-10.
5. Wimmelbucker L and Kar A.(2022) History of thalidomide in India. *Medical History* 67(3),228-246
6. Kar, A., Yajnik, C. S., Doke, P. P., Bhide, P., Chutke, A., Radhakrishnan, B., & Phadnis, S. (2022). Mandatory food fortification with folic acid. *The Lancet Global Health*, 10(10), e1390.

SELECTED EARLIER PUBLICATIONS

7. Dharmarajan, S, & Kar, A. (2023). Prevalence of beta thalassemia carriers in India: a systematic review and meta-analysis. *Journal of Community Genetics*, 14(6), 527-541.
8. Ujagare D and Kar A (2021) Birth Defect Mortality in India 1990-2017: Estimates from the Global Burden of Disease Data. *Journal of Community Genetics* 12, 81-90
9. India State-Level Disease Burden Initiative Child Mortality Collaborators. Subnational mapping of under-5 and neonatal mortality trends in India: the Global Burden of Disease Study 2000-17 *Lancet.* 2020;395(10237):1640-1658. doi:10.1016/S0140-6736(20)30471-2
10. Kar A, Radhakrishnan B, Girase T, Ujagare D, Patil A. Community based screening and early intervention for birth defects and developmental disabilities: Lessons from the RBSK programme in India *Disability, CBR & Inclusive Development* 31(1) 30-46
11. Zimmerman, M. S., Smith, A. G. C., Sable, C. A., Echko, M. M., Wilner, L. B., Olsen, H. E., ... & Castro, F. (2020). Global, regional, and national burden of congenital heart disease, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet Child & Adolescent Health*. Published online January 21, 2020 [https://doi.org/10.1016/S2352-4642\(19\)30402-X](https://doi.org/10.1016/S2352-4642(19)30402-X)
12. Bhide P and Kar A (2018) Prevalence and determinants of folate deficiency among urban Indian women in the periconception period *Eur J Clin Nutr* (DOI: 10.1038/s41430-018-0255-2)
13. Bhide P and Kar A (2018) : A national estimate of the birth prevalence of congenital anomalies in India: systematic review and meta-analysis *BMC Pediatrics* 18:175 <https://doi.org/10.1186/s12887-018-1149-0> 20.
14. Bhide P, Gund P and Kar A (2016) :Prevalence of Congenital Anomalies in an Indian Maternal Cohort: Healthcare, Prevention, and Surveillance Implications *PLoS ONE* 11(11): e0166408. doi:10.1371/journal.pone.0166408
15. Gund P, Bhide P, Kar A. (2016) Prevalence of Periconception Risk Factors for Adverse Pregnancy Outcomes in a Cohort of Urban Indian Women: Implications for

Preconception Health Education. *J Women's Health Care*. 2016;5: 296.
doi:10.4172/2167-0420.1000296 .

Books

16. Kar Anita Ed Birth Defects in India : Epidemiology and public health implications. Springer, Singapore;2021.
17. Kar Anita, Eide Arne, Hedlund Marianne (Ed). Global health and Disability (forthcoming). Springer Nature, under Springer Sustainable Development Goals series.
18. Pal J K, Kar Anita Birth Anomalies : When Development Goes Awry (forthcoming) IISc Press

B.DOCTORAL RESEARCH SUPERVISION

Doctoral candidates supervised	21
As co-guide	3
Ongoing (as co-guide)	1
Master's dissertations	Over 100 since 1995

C.ACADEMIC AND SCIENTIFIC COMMITTEES (selected, past and current):

National/International/State Committee/Expert group

Member WHO Technical Working Group on Burden of Birth Defects (current)
 Member WHO expert group for formulation of guidelines on for newborn screening, diagnosis and management of birth defects (current)
 Research Advisory Committee Krishna Vishwa Vidyapeeth (current)
 Member, Project Review Monitoring Committee, NITVAR, Pune (current)
 Member, World Health Organization Expert group on development of strategic guidelines for prevention of birth defects in Southeast Asian Region Countries (2014)
 Member, Department of Biotechnology, BIRAP Task Force member, 2011-13
 Member, Department of Biotechnology, Human Genetics Expert Group 2017
 University Grants Commission, Expert Major and Minor projects from 2014- 16

Ethics and Biosafety :

Member, Ethics Committee, Maharashtra State Health Systems Resource Centre
 IBSC member, three pharmaceutical companies

D. EDUCATION, EMPLOYMENT, HONORS, PROFESSIONAL MEMBERSHIP

EDUCATION

1983 M.Sc. University of Calcutta
 1989 Ph.D (Cytogenetics), University of Calcutta

ACADEMIC/ EMPLOYMENT



2019- present Birth Defects Research Foundation, Pune

July 2018 -1994- Director, Professor/ Associate Professor/ Lecturer School of Health Sciences, Savitribai Phule Pune University

1994-1987 Post-doctoral Fellow, Department of Biology, Massachusetts Institute of Technology, USA; Visiting Scientist, Institute Jacques Monod, Paris, France; CSIR, Post-doctoral Research Associate, University of Pune, Department of Zoology-Biotechnology

ACADEMIC/ RESEARCH AWARDS/FELLOWSHIPS/ORATIONS (selected)

- Invited plenary speaker International Clearinghouse of Birth Defects Surveillance and Research, November 1-5th 2025, South Africa
- Plenary speaker invited World Health Organization : International Conference on Birth Defects and Developmental Disabilities, 22-26 February, 2023, Chile.
- Invited plenary speaker International Conference on Birth Defects and Developmental Disabilities, 22-26 February, 2022, Sri Lanka.
- Invited speaker, Global Health Day Norwegian University of Science and Technology, Trondheim Norway
- Banoo Coyajii Memorial Oration of the Indian Public Health Association Maharashtra Chapter, Mahatma Gandhi Medical College, Wardha 2013
- Silver Jubilee Oration, Karad Institute of Medical Sciences Deemed University, Karad, Maharashtra. 2014
- British Council Staff exchange fellowship 2012
- Dozor Fellow, Ben Gurion University of the Ngev, Israel 2009
- B C Garg Memorial Award, Indian Tuberculosis Association 2006
- Pyarelal Memorial Award of the Indian Association of Preventive and Social Medicine, 2005
- Gold Medallist, University of Calcutta, 1982
- Jubilee Merit Prize, University of Calcutta, 1979

MEMBERSHIP PROFESSIONAL SOCIETIES

1. Affiliate Member, International Clearinghouse for Birth Defects Surveillance and Research
2. Life member, Epidemiological Foundation of India
3. Life Member, Indian Public Health Association
4. Life Member, Indian Society of Developmental Biologists
5. Life Member, Indian Cell Biology Society