



# Journal of Health and Medical Sciences

**Deonandan, R. (2026). Capacity Building to Address the 10/90 Gap: Evaluation of a 2015 Global Health and Development Summer Institute in India. *Journal of Health and Medical Sciences*, 9(2), 1-4.**

ISSN 2622-7258

DOI: 10.31014/aior.1994.09.02.252

The online version of this article can be found at:

**<https://www.asianinstituteofresearch.org/>**

Published by:  
The Asian Institute of Research

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# Capacity Building to Address the 10/90 Gap: Evaluation of a 2015 Global Health and Development Summer Institute in India

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## Abstract

Ninety percent of global medical research expenditure is targeted at problems affecting only 10 percent of the world's population (the so-called 10/90 research gap). One strategy to address the gap is capacity building among global health scholars in low-income countries. In 2015, Canadian scholars, in partnership with Indian academics, conducted a series of training workshops in Ahmedabad, Gujarat, India, targeted to graduate students and junior faculty from across India. This study is a brief evaluation of those workshops, based on participants' perceptions collected via an end-of-program survey, to refine future interventions aimed at bridging the 10/90 gap. Methods: The 49 participants in the workshop completed a survey consisting of 23 questions: 6 open-ended, 13 multiple-choice, and 4 Likert-type. Questions concerned participant demographics, initial and concluding skills and capacities, and perceived relevance of the workshops' content. Responses were analyzed using a mixed methods approach. Textual survey responses were analyzed using thematic phenomenological analysis, while quantitative survey data were analyzed using descriptive and bivariate analyses. Results: Participants felt most knowledgeable in identifying ethical issues in research and felt more enthusiasm to build a career in global public health. A majority wanted more instruction in social justice issues, research design, and quantitative analyses. No significant differences in experiences or in desired outcomes were found with respect to gender, geographical location, or education level. These results are instructive for the design of subsequent workshops delivered to a similar audience.

**Keywords:** Global Health Capacity Building, 10/90 Gap, Research Training Evaluation; Health Workforce Development, India

## 1. Introduction

Ninety per cent of global medical research expenditure is directed toward health problems that affect only 10 percent of the world's population: a disparity commonly referred to as the 10/90 research gap. ("Western medical journals and the 10/90 problem," 2004) This imbalance has profound consequences for low- and middle-income countries (LMICs), where the burden of preventable, non-communicable, and infectious diseases is disproportionately high. The World Health Organization estimates that millions of deaths each year are preventable, with approximately 8 million individuals dying prematurely from treatable conditions. (World Health, 2004) Noncommunicable diseases (such as cancer, cardiovascular disease, and diabetes) now account for roughly

three-quarters of global deaths, with more than 80% of premature deaths from these conditions occurring in low- and middle-income countries. (World Health, 2025)

Capacity building has emerged as a promising strategy for narrowing the 10/90 gap. Broadly defined, capacity building is a conceptual approach to development that seeks to understand the obstacles impeding progress toward developmental goals and to strengthen the skills, infrastructure, and institutions needed to overcome them. ("Capacity Building for Urban Management: Defining the Concept," 2026) In the context of global health research, this includes developing the competencies of researchers in LMICs so that these individuals may meaningfully compete for and contribute to the global research enterprise. Without deliberate investment in such capacity, the research agenda for the majority of the world's population will continue to be shaped primarily by scholars based in high-income countries, further entrenching the 10/90 disparity.

India presents a particularly important context for this work. As one of the world's most rapidly developing economies, with a young and growing population of scholars, India offers considerable potential for the expansion of a domestic global health research workforce. In 2015, a collaboration between Canadian academics from the University of Ottawa and the University of Saskatchewan, together with Indian colleagues at the Indian Institute of Technology Gandhinagar, resulted in a month-long Summer Institute on Global Health and Development held in Ahmedabad, Gujarat. The institute was designed to provide graduate students and junior faculty from across India with foundational and advanced training in global health research, deliberately situated within an Indian cultural and political context rather than framed through an exclusively Western lens.

The present study is an evaluation of this summer institute, based upon participants' self-reported perceptions of knowledge, skills, and attitudes collected through an end-of-program survey. The primary aims of this evaluation were: (1) to assess participants' baseline and post-workshop levels of knowledge and competency across key global health domains; (2) to identify content areas in which participants sought additional training; and (3) to examine whether experiences and outcomes varied by gender, educational level, or geographic origin. The results are intended to inform the design of future iterations of the workshop and similar capacity-building interventions aimed at addressing the 10/90 gap through an educational lens.

## **2. Method**

The participants of the workshop were invited to complete an online survey consisting of 23 questions: 6 open-ended, 13 multiple choice, and 4 Likert-type scale. Questions concerned participant demographics, initial and concluding skills and capacities, and perceived relevance of workshops' content. Responses were analyzed using a mixed methods approach. Textual survey responses were analyzed thematically and phenomenologically, while quantitative survey data were analyzed using descriptive and bivariate analyses, performed using SPSS version 20.

Permission for this study was granted by the University of Ottawa's Office of Research Ethics and Integrity, file number H12-16-02.

## **3. Results**

Of 73 participants, 49 completed the questionnaire, rendering a response rate of 67%. Their mean age was 27 years. Most came to the institute from parts of Gujarat (33%) and Maharashtra (20%), and most were male (59%). Only 12 respondents (24.5%) were undergraduate students, while 16 (33%) were Master's students and 21 (43%) were completing their doctorates. Slightly more than 12% considered themselves to be students of health care or health sciences, while 31% studied natural sciences, and 33% social sciences.

In terms of baseline skills, respondents rated the ability to write a grant application as the skill in which they were most lacking. Knowledge of public health matters and the ability to conduct qualitative analyses were also lowly ranked, though not as low as grantsmanship. The most commonly mentioned topics of greatest interest were research design and statistical analysis (57%).

Respondents indicated the most positive change in knowledge and abilities with respect to identifying ethical issues in research and in understanding the role of social sciences in public health.

#### 4. Discussion

The findings of this evaluation are, on the whole, encouraging for capacity-building efforts aimed at bridging the 10/90 research gap through educational means. Participants' self-reported gains in knowledge regarding the identification of ethical issues in research, and their increased enthusiasm for careers in global public health, represent precisely the kinds of attitudinal and competency outcomes that such a workshop aims to produce. The identification of ethical issues is a foundational research skill, and participants' confidence in this area likely reflects the sustained attention given to research ethics within the curriculum.

Similarly, heightened career enthusiasm is an important precursor to sustained engagement with global health, suggesting that the institute may have successfully cultivated a sense of purpose and professional identity among its participants.

Participants' expressed desire for more training in research design, statistical analysis, and social justice issues is instructive for the refinement of future programming. The high baseline interest in research design and statistical analysis (57%) is consistent with the practical demands of graduate-level scholarship, and the post-workshop recognition that further training was needed likely reflects a deepened appreciation for these skills rather than a failure of the curriculum. The call for more instruction in social justice issues is particularly noteworthy, as it suggests participants are attuned to the broader structural determinants of health inequity.

The absence of significant differences in outcomes across gender, geographic origin, and educational level is a meaningful finding that warrants reflection. It suggests that the institute was broadly accessible and relevant to a diverse cross-section of Indian scholars, and that the curriculum was neither so specialized as to advantage certain groups nor so elementary as to fail others.

There are several limitations to this study that must be acknowledged. Most importantly, the evaluation relies entirely on participants' self-reported perceptions, which are subject to social desirability bias and may not accurately reflect objective gains in knowledge or competency. The end-of-program survey captures immediate impressions rather than longer-term changes in research behaviour or career outcomes, which would be more meaningful indicators of capacity-building success.

#### 5. Conclusion

The 2015 Global Health and Development Summer Institute in Ahmedabad represents a meaningful effort to address the 10/90 research gap through capacity building. Participants reported positive gains in knowledge and professional orientation, and identified clear areas in which future programming could be strengthened. The equitable distribution of outcomes across demographic subgroups speaks to the inclusivity of the design. Taken together, these results provide a useful foundation for the ongoing refinement of this workshop series and for the broader project of developing a robust global health research workforce in India and in comparable LMIC settings.

**Acknowledgments:** The authors would like to acknowledge the contributions of Tannistha Samanta of FLAME University, and Raj Srinivsan, Lisa Vargo, Jason Disano, Lachlan McWilliams, and Kalowatie Deonandan of the University of Saskatchewan.

**Funding:** Not applicable.

**Conflict of Interest:** The authors declare no conflict of interest.

**Informed Consent Statement/Ethics Approval:** Not applicable.

**Declaration of Generative AI and AI-assisted Technologies:** This study has not used any generative AI tools or technologies in the preparation of this manuscript.

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