**Global Research Partnerships in Advancing Public Health: A descriptive case study on India**

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**Introduction:**

Collaborative research is integral in medicine. Multi-national and multi-institutional research partnerships produce advances in medicine and public health that have significant societal impact. Developing nations can gain from such collaborative partnerships in achieving its progress on sustainable development goals. However, it is important that the research agenda is relevant to the region where studies are conducted. Funding of research by the national government and regional organizations will ensure that the research is appropriate for the region, and ethically rigorous. In this study, I investigated the characteristics of research partnerships in India, especially the source of research funding.

**Methods:**

I conducted a cross-sectional analysis of all original research articles published in the top five high impact clinical research journals over a period of ten years prior to February 18th 2018. I restricted the search on PubMed database to articles containing the word ‘India’ in any part of the publication, and limited the search to those which provide an abstract. Of the 258 articles that were retrieved from this search, I found 59 manuscripts which describe research conducted exclusively in India.

**Results:**

Of the 59 research studies, 31 were published in *The Lancet*, 13 in *British Medical Journal*, 11 in *New England Journal of Medicine*, 3 in *Journal of American Medical Association* and 1 in *Annals of Internal Medicine*. Only 46% of the studies had an Indian-affiliated researcher listed as a first author, and 29% as a corresponding author. The first and the last authors of the study were both from outside India in 63% of the studies. The Government of India provided funding support to 9 studies (15%), whereas a foreign government provided support to 29 studies (51%). 54% of studies had funding from a non-governmental organization, not including the United Nations, World Health Organization or the World Bank. Bill & Melinda Gates Foundation and Wellcome Trust provided research funding in 14 (24%) and 7 (12%) of the studies respectively. Only 6 studies were conducted with pharmaceutical support, of which only 3 were funded exclusively by the industry. Of the 59 studies, 36 were interventional and 23 were observational. The study design and topic of research are listed in Table 1. Maternal and child health were the field of study in 36% of the publications. Infections, chronic diseases, and cause of death studies formed the other major fields. A substantial proportion of research projects (15%) were focused on describing mortality rates specific to exposures such as infectious organisms and risk factors such as smoking.

**Discussion:**

Majority of the high-impact clinical medicine and public health research articles on India has partnerships that span countries and funders. Although all the research topics identified in this study were relevant to the Indian context, two-thirds of the projects were conceived, designed, and conducted by an individual who has an affiliation to a foreign nation. Non-governmental and external government support has been crucial to these studies. More than four-fifths of the funding for high-impact research projects conducted in India was independent of the government of India. In fact, one-third of the funding support has been from the Bill & Melinda Gates Foundation and the Wellcome Trust, which are organizations based in the United States of America and United Kingdom respectively. It is to their credit that the areas of research funded by such organizations are relevant to the region.

Research in developing regions should be conducted based on strong ethical benchmarks. Collaborative partnerships, social value, scientific validity, and context of the research have to favor the region where research is conducted.1 Funders of research projects can ensure that such benchmarks are met. Recently, the government of India has imposed strict restrictions on research funding from the Bill & Melinda Gates Foundation, among several other similar non-governmental organizations.2 While such a move may have been to minimize the risk for exploitation of Indian citizens from externally-driven research agenda, such a decision could negatively impact the progress in public health. International collaborative research partnerships have only helped advance research into vital areas of public health issues in India. Unless the paucity in research funding that will occur from such a decision by the government of India is not urgently rectified by the national government and regional organizations, curtailing research funding from external sources may have a human cost. The solution to this problem rests with the government which should ensure greater investment in research. Not doing so will be detrimental to the well-being of its people.

**References**

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**Table 1: Research in India in field of medicine and public health published in five high impact factor clinical research journals over ten years (2008-2018)**

|  |  |  |
| --- | --- | --- |
| **Characteristics of research** | **N** | **%** |
| Type of interventional study (N=36) |  |  |
| Drug | 7 | 19.4 |
| Vaccine | 7 | 19.4 |
| Vitamin | 3 | 8.3 |
| Surgery | 2 | 5.6 |
| Health behavioral | 7 | 19.4 |
| Health workers | 8 | 22.2 |
| Other (CPAP, drug eluting stents) | 2 | 5.6 |
| Type of observational study (N=23) |  |  |
| Cross-sectional | 15 | 65.2 |
| Modeling study | 4 | 17.4 |
| Registry/census data | 2 | 8.7 |
| Cohort | 2 | 8.6 |
| Field of study (N=59) |  |  |
| Maternal/Pregnancy | 5 | 8.5 |
| Child health | 16 | 27.1 |
| Public health | 3 | 5.1 |
| Mental health | 3 | 5.1 |
| Mortality study | 9 | 15.3 |
| Cancer | 2 | 3.4 |
| Infections | 10 | 16.9 |
| Nutritional | 1 | 1.7 |
| Chronic diseases | 10 | 16.9 |