
Challenges to Turning Nutrition & Agriculture Research into Action: A Case Study of NGO Research Uptake in Nepal

E Biehl¹, S Manohar¹, D Gauchan², M Magar², P Pokhrel², K West¹, R Klemm¹

¹Johns Hopkins Bloomberg School of Public Health, Baltimore, USA, ²Nepal Agricultural Research Council, Kathmandu, Nepal

Background

In Nepal, despite improvements in poverty reduction and health services, malnutrition persists. 41% of children under age five are stunted, 29% of children are underweight, and 18% of women of reproductive age are malnourished¹. The Government of Nepal, research institutions, and local and international non-governmental organizations (NGOs) are working to improve nutrition through nutrition-specific and nutrition-sensitive interventions such as agricultural programs that increase production, productivity and income; improving water, sanitation, and hygiene practices; and encouraging more equitable food allocation within the household². The involvement of these different sectors and recent push for nutrition-sensitive interventions and evidence supporting them makes Nepal an appropriate case study of how research is (or is not) translated into action. Current published knowledge on research uptake focuses on how research translates into policy, particularly in developed countries³⁻⁶. Much less is known about how this research is taken up by NGOs and incorporated into program design in low-income countries.

Objective

This study identified 1) the key factors influencing NGOs use of scientific evidence to inform the design and implementation of nutrition and/or agriculture programs in Nepal 2) common barriers to research uptake and 3) recommendations for overcoming these barriers. Understanding the challenges to turning nutrition and agriculture research into action will help ensure that scientific knowledge of nutrition and agriculture interventions is optimally used by implementing organizations in Nepal.

Methods

We conducted semi-structured key informant interviews with stakeholders from 15 NGOs currently implementing nutrition and/or agriculture interventions in Nepal. 1-2 senior staff members from each organization was interviewed based on his/her perceived involvement in program design and decision-making at the organization. After obtaining verbal consent, interviews were audio recorded and transcribed immediately following the interview. Responses were coded for common themes using Atlas.ti and Microsoft Excel. Interview findings were synthesized and supplemented with a desk review of relevant literature.

Findings: Barriers

Six themes were identified as the most common barriers to research uptake.

- **Access to Evidence:** 10 out of 15 participants mentioned inadequate access, the ability to obtain scientific evidence, as a key barrier to research uptake. Reasons for poor access in Nepal were that online academic journals from foreign research institutions are too expensive for programs; and that even if a program subscribes to a journal, poor internet connections in Nepal often prevent them from reading articles. In comparison, implementers do not have easy access to Nepali-generated research because it is rarely published online.

- **Awareness of Evidence:** Programs are not always aware of the latest research, due to a lack of communication between researchers and programs, and time constraints on program staff that make it hard to search through and critically evaluate all available evidence.
- **Strength of Evidence:** Respondents identified "strong" evidence as research that comes from a reputable source, uses good methodology, and minimizes bias. There was particular dissatisfaction with evidence generated by Nepali researchers due to a belief that Nepal's higher education curriculum puts too much emphasis on theoretical instruction and does not provide students (and academics) with the practical and analytical skills needed to conduct strong applied research.
- **Applicability of Evidence:** Most (11/15) informants said that if evidence is not relevant to either the organization's mission or the specific program goal, or it cannot be applied in a local context, it will not be used. Differences in ideologies, timelines, and goals of researchers versus programs may contribute to a misalignment of evidence produced and evidence needed. In particular, there is a lack of implementation science in nutrition and agriculture.
- **Internal Organizational Constraints:** The technical capacity of NGO staff to critically analyze evidence, time constraints, lack of funding for pre-design research, and organizational focus on implementation rather than research were important internal factors preventing research uptake.
- **External Actors (Government and Donors):** Because NGOs often work with government agencies to implement programs and work towards government-supported public health goals, the government's understanding and support of evidence is vital to an organizations' use of it. Informants cited lack of government support for research, low government funding for research, and low understanding of current evidence by government agencies as preventing research uptake. Some agricultural NGOs mentioned that the government line agencies often use outdated agricultural research. Donor agencies can also be very influential on program research uptake because they may encourage or require evidence-based program design. Informants described two main ways that donors facilitate research uptake: requiring that program proposals are based upon scientific evidence, and allowing program implementers the flexibility to change a donor-mandated program design to fit local context and evidence.

Findings: Recommendations

Informants suggested the following recommendations for overcoming research uptake barriers.

- **Access:** Reduce the cost of online academic journals for NGOs and post more Nepali research online.
- **Awareness:** Hold more scientific events where academics can share their research directly with programs and help program implementers understand and prioritize the most relevant evidence.
- **Strength of evidence:** Equip Nepali nutrition and agriculture students with more critical thinking, writing, and statistical analysis skills.
- **Applicability:** Involve program implementers at the beginning of a research project and identify, together, the needs of the target population and the most important issues to research. Provide more evidence of how to implement programs.
- **External Actors:** Support more evidence-based programs through donor mandates and funding of baseline studies and background research. Government agencies should be made more aware of current research so they become more invested in it and value more evidence-based programs.
- **Internal Constraints:** Teach public health and agricultural science students in Nepal more practical and analytical research skills. Provide funding from external donors or through internal budget allocations for a designated staff member to do background research at the organization. Researchers should help program implementers prioritize the relevant research through more communication and knowledge-sharing forums, and publish more meta-analyses of relevant evidence.

Conclusion

Overall, stakeholders characterized research as important for informing program design. Nutrition and agriculture research is not optimally used due to lack of collaboration and communication between researchers and NGOs,

limited access to evidence, low technical capacity of Nepali researchers and program staff, time and funding constraints within organizations, and limited government and donor support for evidence-based programs. To enhance research uptake in Nepal, NGOs, donors, researchers, and government agencies must work together to foster an atmosphere that values evidence-based program design, facilitated by adequate funding, capacity-building initiatives, and increased communication between sectors. Efforts to encourage collaboration between sectors have already begun through initiatives such as the Multi-Sectoral Nutrition Plan and research collaborations that link agricultural interventions with nutritional outcomes. Overcoming the barriers identified in this study can help ensure that the results of these efforts become sustainable, long-term solutions to malnutrition in Nepal.

Supported by USAID through the Borlaug Fellowship in Global Food Security and the Nutrition Innovation Lab- Asia through its partner Johns Hopkins Bloomberg School of Public Health.

References

1. Nepal Ministry of Health and Population, New ERA, and ICF International Inc. *Nepal Demographic and Health Survey 2011*. Kathmandu, Nepal: Ministry of Health and Population; 2011.
2. Government of Nepal National Planning Commission. *Multi-Sector Nutrition Plan: For Accelerating the Reduction of Maternal and Child Under-nutrition in Nepal*. Kathmandu: National Planning Commission; 2012.
3. Liverani M, Hawkins B, Parkhurst J. Political and Institutional Influences on the Use of Evidence in Public Health Policy. A Systematic Review. *PLoS ONE*. 2013;8(10):e77404. Orem
4. Nabyonga Orem J, KaawaMafigiri D, Marchal B, Ssenooba F, Macq J, Criel B. Research, evidence and policymaking: the perspectives of policy actors on improving uptake of evidence in health policy development and implementation in Uganda. *BMC Public Health*. 2012;12(1):109.
5. Young J. Research, policy and practice: why developing countries are different. *Journal of International Development*. 2005;17(6):727-734.
6. Lavis J. Assessing country-level efforts to link research to action. *Bull World Health Organ*. 2006;84(8):620-628.