Rethinking research processes to strengthen co-production in low and middle income countries

Co-production needs to become an integral part of the training and funding of researchers to ensure research meets everyone's needs, argue **David Beran and colleagues**

Global health research needs to include a greater diversity of stakeholders within the research process. Involving people who are not academics in the co-production of research has many potential benefits: generation of a wider range of ideas; including the needs of people directly affected by the research; inclusion of broader sets of skills and views, values, and epistemologies in designing projects; allowing dialogue, participative decision making processes throughout the development and delivery of research; ensuring uptake of research results; increasing legitimacy and acceptance; and assuring sustainability.[1-5]

However, co-production has its own challenges.[1 6 7] For example, finding practical ways to collaborate with stakeholders outside academia to prepare grant applications and proposals is a substantial challenge. The "negative" costs of co-production are described as the costs of actually doing co-production; personal and professional costs to the researcher; costs to participants; and costs to projects in general of this appraoch.[7] Successful co-production requires the corresponding skills and appropriate tools and resources to include a wide variety of stakeholders. This in turn challenges current training, career progression pathways, and funding processes for researchers. Research funders are key to many of these and include government research councils or foundations, independent foundations, and government development agencies, particularly in low and middle income countries (LMICs). Stakeholders include people with a given health problem, community members, healthcare providers, civil society organisations, and policy makers.

Changes are required in global health research to ensure that co-production is strengthened and help overcome the challenges that researchers face in implementing it. The first obstacle is the pressing challenges in many LMIC settings, ranging from high disease burden to fragmented health systems, poverty, and inequities. These are complex and interconnected problems.[8] Secondly, this complexity necessitates interdisciplinary, multidisciplinary, and transdisciplinary approaches.[9] This requires the recognition by researchers and funders that contributions from a broad spectrum of relevant experts and stakeholders is crucial for co-production[9 10] and that they need to be included in the research process from the beginning. Finally, researchers need to work with existing partners, or identify possible partners, in countries and start adapting or developing new ideas and translating these into a comprehensive research proposal. This process also raises the issue of unequal power relations between different parties involved, in terms of the value placed on their ideas and knowledge. Overcoming these three challenges takes time and requires building trust with academic and non-academic partners in the funding application as well as multiple stakeholders beyond the research proposal.[11] In addition, training, career progression, institutional decisions and investment, and funding processes need to be rethought.

Training and communication are essential

Tackling complex issues in LMICs and engaging in successful co-production requires specific training for researchers in global health theory, policy, and practice,[5 7] as well as increased knowledge and awareness of global health issues by funders and reviewers. Cross-cultural awareness and communication skills are also needed to enable effective communication between partners from different cultural and geographical settings, as well as between researchers and stakeholders with different backgrounds from the same country. For example, as part of the Swiss Programme for Research on Global Issues for Development (r4d programme), the Swiss National Science Foundation organised training on cultural communication, influencing policy makers, etc for researchers it funded.[12] Such training, however, should be part of the foundation of a researcher's skills and not delivered on an ad hoc basis.

Researchers also need training to provide them with the tools and skills for advocacy. In parallel, the role of academic researchers in shaping policy also needs to be defined in the context of co-production. The link between research and advocacy can be straightforward when the evidence generated is directly linked to an issue that is of interest to policy makers.[13] However, simply providing and promoting results to policy makers is different from researchers and other stakeholders advocating for the interests of communities.

Time, resources, and "cost"

Co-production requires more time and investment by researchers than traditional models of research,[1 14] potentially taking time away from other academic activities. Beyond the time needed to actually implement co-production in the development and delivery of research, there is the need to invest in developing relationships, identifying ways of working together, conducting formative research, building a common language, and securing and sharing gains. These efforts are not adequately acknowledged by institutions and funders. The outputs from co-production do not match the metrics commonly used to assess the track record of academics—namely, high impact factor publications—as they may not be a

KEY MESSAGES

- Researchers are being asked to co-produce research with relevant stakeholders, without being given the appropriate tools and resources to do this effectively
- The research agenda and its development and implementation should have more active involvement from lay participants, healthcare providers, policy makers, and other stakeholders
- Training and funding processes need to be rethought and adapted to facilitate co-production more routinely

standard randomised trial or suitable for peer reviewed publications.[8]

Involving stakeholders in co-production also has financial and non-financial costs for researchers, such as the time and "emotional" costs of explaining that the research will address only one of the many needs stakeholders might have.[7] In many LMICs, high staff turnover among collaborating organisations makes it harder to maintain links and relationships.

In Peru, a co-creation process to develop an intervention to improve the diagnosis and management of chronic diseases (diabetes, hypertension, and neurocysticercosis), highlighted divergent views between different stakeholders and the community raised issues that were beyond the "intended" scope of the project.[1] For example, the community priority was improving water and sanitation, whereas the focus of the project was on strengthening the health system. The trust developed through the project and the time invested in the interactions with stakeholders and the community resolved these differences and established common understanding.

Co-production requires having the appropriate skills and the resources to be able to focus energy on these activities, which are usually beyond the scope and duration of time-bounded research projects. These costs need to be accounted for and built into budgets and rules for funding to facilitate the reality of co-produced research in LMICs.

Platforms for exchange

Investment in creating platforms to enable equal exchanges facilitates relationships between researchers and stakeholders.[6 9] For example, the James Lind Alliance brings together people with specific health needs, carers, and clinicians to identify and prioritise research gaps with the aim of improving care.[10] Other organisations have institutionalised this multistakeholder approach—for example, the UK's National Institute for Health and Clinical Excellence, the faculty of medicine at the University of Montreal, and the Welsh ALPHA (Advice Leading to Public Health Advancement) group, where people representing certain interest groups or with a certain disease sit on decision making panels.[15-17] Such platforms ensure that people with specific health problems can present their expertise and perspective[2] rather than academics or funders setting priorities, and enables research to reflect societal concerns.[4] These platforms should operate as an interface and allow for exchange and dissemination to occur between science, social organisations, and policy makers.

Platforms can also empower stakeholders and foster the development of relationships and partnerships that facilitate power sharing and enable co-production.[18] The example from Peru shows how a co-production approach enabled stakeholders to transition from key informants during the formative research, to active partners in co-creating solutions, and finally towards direct or indirect involvement in implementing the intervention they helped produce.[1]

Strong and equitable partnerships with buy-in and engagement of all partners, as well as funders, are the foundations of an effective co-production process in global health research. Many guidelines exist to help develop and foster partnerships, such as the 11 principles outlined by the Swiss Commission for Research Partnerships with Developing Countries.[19] In addition, tools such as the Research Fairness Initiative ensure due diligence in establishing partnerships.[20] Furthermore, co-production itself can be seen as a tool for empowerment and partnerships,[5] with funders having a role in promoting equitable partnerships.[21]

Increasing evidence and uptake

Some validated approaches and guidelines to help direct and apply co-production processes already exist.[16] The UK's National Institute for Health Research[3] provides five principles: "Sharing power, including all perspectives and skills, respecting and valuing the knowledge of all those working together on the research, reciprocity, and building and maintaining relationships."[22 21] Critics of co-production argue there is an absence of evidence for implementing co-production and that most research focuses on promoting the wider use of co-production or reflects a theoretical discourse that is not easily translated into actions. More evidence about the effectiveness of co-production compared with the usual academic approaches is lacking.[10 18 23] However, this discussion leads to a vicious cycle: if co-production is not considered "scientific enough" through a lack of evidence for funders and journals to support it, then the chances of funding and creating evidence diminish further. From a development perspective, co-production is seen as an essential tool in achieving the sustainable development goals,[23] where research is needed to address a wide range of intermingled complex challenges. However, many development agencies' remits have not included funding or support to research and academic institutions for partnering related activities.

Funders have an influential role in shaping the research agenda by making certain elements an essential part of their funding process—for example, public engagement is now part and parcel of research.[24] With development funders increasingly funding research in LMICs, researchers will have to meet new metrics and requirements.[25] Researchers will need to continuously adapt their approaches and CVs to meet these changes in an evolving funding environment. Therefore, funders should encourage the integration of co-production as an essential component of research to ensure that research has a larger impact on society, improving the health and wellbeing of those being "researched."

Although the benefits of co-production outweigh the challenges, changes are needed in the conceptualisation of co-production in research in LMICs for this to become part and parcel of research with adequate funding (table 1). Our experience suggests that one important change is to refer to people with health conditions as partners in co-production not patients. Describing people as "patients" often narrows their contribution to a specific disease, while ignoring complexity in health outcomes and underplays the holistic views they bring as individuals.

Researchers also need protected time and resources to truly work in a co-productive way with their partners and stakeholders, both at the stage of developing a proposal and in the conduct of the research. Innovations such as engagement platforms need to be created to enable this knowledge to be integrated from the outset of the research process. Co-produced research tends not to fit traditional calls for funding around vertical disease or specific themes or generate standard outputs, including academic publications, since it tends to be more horizontal in nature, scope, and engagement.[8 26] Metrics to evaluate researchers and assess the successful implementation of co-production beyond high impact publications should be developed.

More radical rethinking would consider funding partnerships rather than projects. The concept of co-production might be better integrated beyond the requirements of a single study, instead being built and sustained over a range of activities over time under the umbrella of an organisational partnership. Rather than

Table 1 | Summary of elements needed to strengthen co-production

	Training	Resources	Engagement
Researchers and academic institutions	Develop training programmes adapted to co-production methods	Provide resources and infrastructure for the development of institutional partnerships	Institutionalise engagement mechanisms with stakeholders, including policy makers and social organisations
	Foster multidisciplinary, interdisciplinary, and transdisciplinary training	Develop guidelines and methods for co-production	
		Provide key frameworks for the establishment of equitable partnerships	
	Provide cross-cultural, communication and advocacy training		
Funders	Support training programmes and invite non-academic participants to participate	Ensure adequate time is available to include co-production throughout the development and conduct of research projects	Include lay people within decision making processes
		Adequately fund projects in line with local needs	Fund engagement mechanisms and platforms with policy makers and social organisations
		Support the development of partnerships beyond (and in addition to) one-off projects	
		Support the development of new approaches and methods in co-production	

expecting one project to fit the bill of a "perfect" co-production project, resources should be put into fostering a series of meaningful interactions with key partners from high income countries as well as LMICs, within and beyond academia. This would nurture co-production efforts in the spirit of equitable partnerships. Academic institutions globally will also need to incorporate a long term view towards meaningful partnerships, leading to institutional incentives and investment, to break the problem of funders continuously setting the agenda, turning into short lived partnerships.

The current challenge for researchers is knowing whose needs they should prioritise: the communities in which they are working, policy makers in the country where they are working, policy makers in the country funding the research, or the funder? Arguably, the model we operate is "who pays the piper calls the tune." Change is required for researchers, funders, and stakeholders to jointly decide what tune will be played, and also the instrument(s) that are used.

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