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COMMENTARY

A long-term process for decolonizing and democratizing community-focused research: the case for MicroResearch in East Africa and in Canada

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Abstract

Academics and multinational pharmaceutical companies from high-income countries (HIC) are major drivers of health research in many low- and low-middle-income countries (LMIC) but have neglected investing in and growing local research capacity. Community-focused health research in LMICs needs to be more locally driven and benefiting. The MicroResearch (MR) workshop program supports teams of local healthcare workers and community experts to identify local healthcare problems. Once a problem is clearly identified, the team then develops a research proposal and is empowered to conduct this research to find solutions to address the problem that fit the local context, culture and resources. Knowledge translation of the findings is a key element in MR. By placing the drivers of change in the hands of locals, the decolonization of the local health research has begun. MR also democratizes health research by extending community health research training beyond local academics and by fostering gender equity. More than half of the local MR research project team leaders, as selected by team members, are women. The success of MR in LMIC has led to its adaptation for use in HIC such as Canada. Decolonization and democratization of community-focused research is practical and achievable and should be seen as best practice in global health research capacity building.

Résumé

Les universitaires et les compagnies pharmaceutiques multinationales des pays à revenu élevé (PRÉ) sont les principaux moteurs de la recherche en santé dans bien des pays à faible revenu et à revenu faible/intermédiaire (PFRRI), mais ils ont négligé d'investir dans le renforcement des capacités de recherche locales. La recherche de proximité en santé dans les PFRRI devrait être plus axée sur les besoins locaux. Un programme d'ateliers de « microrecherche » (MR) aide des équipes de personnels de santé et d'experts locaux à cerner les problèmes de soins de santé sur le terrain. Lorsqu'un problème est clairement défini, l'équipe élabore un plan de recherche, et on lui donne les moyens d'effectuer cette recherche afin de trouver des solutions en harmonie avec la culture et les ressources locales. L'application des connaissances sur les constats de la recherche est un élément clé en MR. Lorsque les facteurs de changement sont entre les mains des résidents, la décolonisation de la recherche locale en santé peut commencer. La MR démocratise aussi la recherche en santé en offrant de la formation en recherche sur la santé communautaire à d'autres que les universitaires locaux et en favorisant l'équité entre les sexes. Plus de la moitié des responsables des équipes de MR locales, sélectionnés par les membres de ces équipes, sont des femmes. En raison de son succès dans les PFRRI, la MR est maintenant adaptée pour être utilisée dans les PRÉ comme le Canada. Il est pratique et réalisable de décoloniser et de démocratiser la recherche de proximité, et cela devrait être considéré comme une pratique exemplaire de renforcement des capacités de recherche en santé mondiale.

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> *Decolonization: "Intellectual liberation from colonizing government organizations, structures and ideas that make those who were colonized feel inferior."* (Mignolo, 2011)

More than a decade ago, the Bamako Accord (2008) emphasized the importance of strengthening local research capacity for health, development, and equity in lower income countries by having the global health research agenda determined by national and regional priorities, i.e. empowering and funding local researchers in low- and low-middle-income countries (LMIC) to ask and answer questions relevant to their country's health needs (World Health Organization, 2008). Although the term "decolonization" was not used, the intent was clear—develop local ownership and leadership for LMIC health research. While calls for decolonization of global health have grown more frequent and louder over the subsequent years, concerns about feasibility have been raised (Abimbola & Pai, 2020). Furthermore, although the percentage of first authors on health research articles from LMIC is increasing, lead authors from high-income countries still predominate (see example for the journal Reproductive Health (Pingray et al., 2020)), demonstrating that high-income country (HIC) colonization of LMIC health research relationships is still disturbingly frequent. Democratizing research is the action of making research leadership opportunities accessible to those outside of the traditional academic research community in both LMIC and HIC.

MicroResearch (MR) (www.microresearch.ca) was founded in 2008 when attention was drawn to the stark gap in health research ownership in Uganda (MacDonald & Kabakyenga, 2008). MR is an innovative, community-focused research training program in LMIC with a vision to support local multidisciplinary MR teams to identify and address local health problems. Before 2008, the vast majority of the health research at Mbarara University of Science and Technology (MUST) in southwest Uganda where JK was the Dean of Medicine was conceived and led by academics from high-income countries with monies from high-income country universities, granting agencies, and/or big multinational pharmaceutical companies. Health professionals at MUST had no say in the research questions posed, nor in the study design and data analysis, and often were not even included as authors in the publications. MR was conceived and developed to try to shift the power over community-focused health research away from those who were "come from aways" to the local MUST health care professionals and to local community members.

MR is steeped in Paolo Friere's principles of participatory action (Freire, 2012), supporting longitudinal deliberative engagement by and with local healthcare workers who identify and conceptualize the health issues to be studied, and direct, conduct, and analyze their research in their own communities (Kollmann et al., 2015; MacDonald et al., 2014). The MR workshop component of the MR program has been accredited by the Faculty of Medicine at Dalhousie University for 40 continuing medical education credits.

The local MR sites own the research from beginning to end, using the tools supplied by MR infrastructure to engage in a radical process to decolonize and democratize medical research. Each MR team is supported by a volunteer local coach throughout their MR research proposal development, submission, and revision to address international and regional peer review comments and suggestions to ensure scientific quality. A volunteer international HIC content area expert coach is then linked to support the MR team and their local coach from the final scientific approval stage, through ethics submission, project execution, data review, report development, manuscript submission, and knowledge translation.

MR recognizes that most people trained in MR will not become academic researchers, but they can gain the skills to recognize pertinent researchable local health concerns, collect methodologically robust evidence, and explore potential solutions to these problems. This strengthens health research skills at the community level and grows the capacity of the health systems and supports development of networks beyond the local community.

MR has also democratized health research training in LMIC by extending it beyond local academics and health professionals to include a wide range of community members including accountants, businesspeople, lawyers, and community developers. MR has also achieved gender equity not by intentional initial design but by the local MR sites' deliberative MR workshop participant recruitment strategies (Arkell et al., 2015) (see Fig. 1). A review in 2016 found that although fewer than 20% of MR workshop participants were involved in research in any capacity prior to their MR workshop, over 80% of those trained in the local 10-day MR workshops continued to be active in community-focused research 1 to 5 years after the MR workshop (Abdalla et al., 2018).

As of January 2022, over 1100 have been trained in 43 in-person or virtual MR workshops, with 126 small projects launched (50 completed) and 49 LMIC author-led publications in peer-reviewed journals. Many of the projects have resulted in meaningful changes to health practice and/or policy in LMIC. For example, one MR project from southwest Uganda examined the traditional practices and customs in the care of newborns by mothers in selected villages (Beinempaka et al., 2014) and noted the practice of putting herbs on the umbilical cord despite advice from the Ugandan Ministry of Health to let the cord dry and fall off. Another MR project done by a different MR team in a rural community closer to Kampala, Uganda, determined that the most common cause of neonatal death in rural villages was cord-related sepsis (42% of 72 neonatal deaths in the preceding year) (Grant et al., 2014). Both presented their work at a MR Forum in Nairobi, Kenya, in 2013 and noted that their studies were complementary. They then presented their findings to the Ministry of Health who were respectful of the data because the research had been led by local Ugandans, not by the "come from aways", and that the work was of quality as it had been published in peer-reviewed high-income-country journals. The two team leaders were asked what could be done to address this cord-related sepsis problem. They noted that traditional customs such as putting herbs on the fresh umbilical cord are very hard to change. They suggested asking the local communities if putting chlorhexidine gel on the freshly cut cord would be acceptable. A small MR-funded knowledge translation project found the community would accept that as the cultural practice could continue. The Ministry of Health with help from the Aga Khan Foundation developed a not-for-profit pharmaceutical company to make essential medicines, including the chlorhexidine gel, called "umbi-gel", that is now available across Uganda, Kenya, and Tanzania and is being tested in other countries with similar cord care cultural practices. While no formal evaluation of the impacts of these research and knowledge mobilization efforts has been conducted, a 2021 study unrelated to MR found that only 6.8% of neonatal deaths were now related to sepsis in a rural district of Northern Uganda (Arach et al., 2021).

Thus, MR has shown that high-quality community-focused health research in LMICs can be conceived and carried out by local researchers when supported by local MR training, volunteer local and international coaching, and small grants. The outcomes of these small projects have been far reaching with impact on health outcomes even beyond the local communities where the MR was done. MR is also a low-cost, low-resource efficient program. By 2016, 27 workshops had been undertaken and supported, with over 700 Africans trained in MR community-focused research skills, and 50 team proposals launched and funded, with 22 completed and 22 publications, all for less than $500,000 CAD (MacDonald et al., 2016). Note that funding costs did not include any costs for reviewers or coaches as these were both given in-kind.

MR Strategic Thinking/Doing virtual meetings in November 2021 with many participants from LMIC illustrated the degree of local participation, leadership, enthusiasm, and support for MicroResearch. The need for ongoing decolonization and democratization of community-focused research was highlighted. Strategies to make MR in LMIC locally and nationally sustainable were noted as priorities.

Some encouraging trends can be seen. Institutions in LMIC are now embedding MR training strategies into undergraduate and postgraduate health care professional training locally (Onguka & Wechuli, 2019). MR is starting to garner local in-country financial support, but this needs to increase so there is less/no dependence on high-income countries for MR small grant funding. Growing the culture of enquiry is now seen as crucial in these LMIC MR sites if local health problems are to be identified and solved to improve local health outcomes now and in the future.

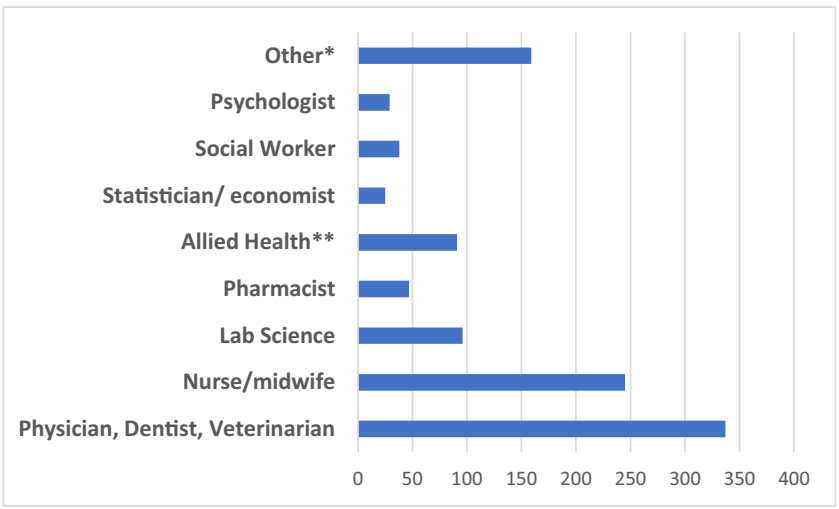

Fig. 1 Backgrounds of MicroResearch international graduates from 48 workshops including Standard, Writing, Train the Trainer, and Post-Graduate Thesis training workshops held in Kenya, Tanzania, Uganda, Malawi, Ethiopia, Rwanda, Nepal, and Guyana during the period 2008 to January 2022: total 1143; females 49.48%; males 50.52%. *Other: computer sci, ethno-botanist, librarian, accountant, development officer, management secretary, lawyer, engineer. **Allied Health: occupational therapist, dental technologist, nutritionist

In HIC, "Ivory Tower" academics often lead the research programs to study and address inequities in communities, especially in marginalized communities, with community members/leaders present as partners or collaborators but not as the initiators, developers, and directors of the community-focused research. The success of MR in LMIC led to its adaptation in Nova Scotia, Canada, in 2016 to help decolonize and democratize local community-focused health research. As of January 2022, 126 people have been trained during 11 in-person or virtual MR workshops. Six locally developed and led community-focused proposals have been launched, with 3 completed with reports/papers pending. As with MR International, the breadth of participants' backgrounds is wide-ranging, from local health care professionals, to first responders such as police and paramedics, sea captains, data management experts, community activists, entrepreneurs, and recent immigrants and refugees with health care backgrounds.

MicroResearch principles for community-focused research can work in both LMIC and HIC. While this bottom-up, locally owned and led program needs academic coaches and peer-review support as well as small funding, it is feasible and adaptable, and the outcomes have been impressive—changes in local health care practice, health policies and lives saved, and growth of local researcher leaders, research teachers, and problem solvers. Follow-up qualitative studies have been launched to assess personal impact of MicroResearch on participants in both LMIC and HIC MR settings. At the 2021 virtual MR International Forum, several multi-country networks were organized by the participants. At the 2022 MR Forum, African MR Network leaders reported back on successes and failures of these networks. At the instigation of local MR sites, MR principles and processes are being incorporated more widely into undergraduate and postgraduate health professional education at several MR sites in 4 countries, i.e. now beyond the published report from Kabarak University in Kenya (Onguka & Wechuli, 2019). MicroResearch sites and alumni are keen to work on growing local in-country support for funding for small and midsize community-focused MR-type research projects. The impact of these MR site initiatives will take time to accrue. More sites in LMIC have asked for MR sites to be developed at institutions in their country. The future will tell how far and wide MR spreads in LMIC and how it will fare in different HIC communities.

Given the successes of MR to date in decolonizing and democratizing local community-focused research, these two threads need to be woven into the fabric of all local site community-focused research in LMIC and in marginalized and vulnerable population research in HIC. These principles must become the norm in review assessment criteria for research applications to high-income-country funding organizations such as, in Canada, the Canadian Institutes of Health Research and the International Development Research Centre. As well, LMIC and HIC MR sites must work to grow in-country support, both political and financial, for local researcher-driven community-focused research. There must be a push to include these principles in community research education both at the graduate and undergraduate levels, so they become a standard of practice in all countries.

For these two MR principles to be embraced widely will require a rethinking of the funding application and review processes, not only to ensure these two principles are embraced but also to ensure a wider range of funding amount opportunities are offered. Bigger does not always beget better research questions and outcomes. Lower funding limits may attract a wider range of applicants (democratization) and encourage local applicants who otherwise would be unlikely to be able to compete with "come from away" academics with long research track records (decolonization). Local community ownership may also increase the value seen in the research questions and trust in the research findings by the local community and local health care professionals. Leaders in funding organizations in communities and regionally, nationally, and internationally as well as leaders in academia and in nongovernmental global health organizations must embrace the need for these changes and support them if community-focused research is to be fully decolonized and democratized.

MicroResearch has shown decolonization and democratization of community-focused health research is practical and achievable in LMIC and HIC and should be seen as an example of a best practice in building global health community-focused research capacity.

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Declarations

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