



Mental Health Research in the Global Era: Training the Next Generation

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Psychiatric disorders are among the leading cause of disability worldwide, yet fewer than 25 % of affected individuals are estimated to have access to treatment. In many low-income settings, it is estimated that less than 10 % of affected individuals are able to access basic mental health care and, even when they do, it is often below minimum ethical and clinical standards [1]. The discipline of global mental health is dedicated to reducing mental health disparities within and between countries by preventing mental disorders and improving access to psychiatric treatment, particularly in low-resource settings [2].

The study of cross-cultural mental health dates back to the late 1800s, when European psychiatrists and anthropologists began to identify and document locally specific mental diseases in their colonies [3]. Transcultural psychiatry branched into two research traditions: “relativists,” who were focused on characterizing culture-bound syndromes, and “universalists,” who sought to identify universality across cultures in the manifestation of mental disorders [2]. Both research traditions emerged from a colonial paradigm, wherein Western researchers studied the non-Western “other.” Whereas relativists relied primarily on qualitative and ethnographic methods [4], universalists employed epidemiological methods to estimate the cross-cultural prevalence of mental disorders, as defined by Western criteria.

Cross-cultural mental health research has evolved significantly from its colonial roots to what is now a global partnership

model emphasizing interdependency, bi-directional knowledge generation and transfer, and shared ownership (see Fig. 1). Though the relativist and universalist perspectives still exist, most global mental health researchers have gravitated towards an integrationist perspective, recognizing both broad universality in mental disorders across cultures as well as meaningful cross-cultural variation. Global mental health research now requires an interdisciplinary approach to bridge multiple perspectives and address complex questions related to cultural adaptation, effectiveness, dissemination, and implementation. It is grounded in the social justice and human rights perspective that all people have the right to health and mental health [5], with an emphasis on creating sustainable interventions to reduce mental health disparities. This paradigm shift has many implications for the training of the next generation of global mental health researchers, including both identifying and developing critical new skill sets to propel the field forward.

Global Partnerships and the “New” Global Mental Health Researcher

The global partnership model for mental health research is based on the idea that investigators from high- and low-resource settings work collaboratively to identify and address barriers and facilitators to mental well-being across diverse settings. The role of mental health researchers from high-income countries has shifted from being the sole experts (as in the colonial model) to building a cohesive team of interdisciplinary experts through partnerships with local researchers. Critically, this type of partnership can form the infrastructure to support the work’s continuity and success with greater capacity building and ownership at the local level, possibly also reducing the likelihood that a hierarchical power dynamic develops between investigators

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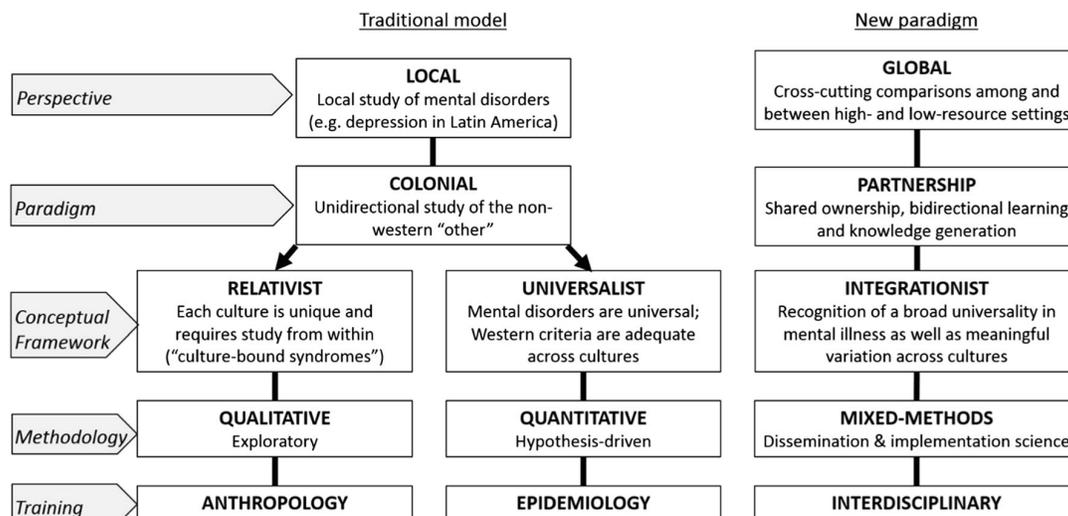


Fig. 1 History and evolution of global mental health research and training

from high- versus low-resource settings. Global mental health researchers are increasingly able to foster collaborations between more and less developed countries to address cross-cutting challenges in ways that were not previously possible. Similarly, community-based participatory research partnerships are steadily addressing mental disparities common among cultural minorities in high income countries [6].

Modern technology has greatly facilitated this “new” role for global mental health researchers—particularly for those based in high-income countries—to serve as bridges between high- and low-resource settings. Whereas significant in-country time is essential to gain in-depth understanding of a new culture and context, as well as to build local research capacity among local partners, global mental health researchers from high-income countries increasingly split their time between high- and low- and middle-income countries and rely on online interaction to coordinate efforts, with considerable benefits to both parties. Not only has this led to significant cost savings and increased efficiency, but it has also reduced what is often a considerable strain on local systems unwittingly caused by visiting researchers. Many low- and middle-income country collaborators have competing clinical, teaching, or government responsibilities, limiting the possibility of extended engagement as hosts. Moreover, many low- and middle-income country sites lack adequate office space, phones, access to printers, statistical and administrative support, or even reliable power and internet connectivity for visiting global mental health researchers from high-income countries to conduct necessary activities to support continued research (e.g., analyzing data, writing manuscripts, obtaining grants). As a result, periodic intensive, structured visits (2–5 weeks) are often preferable for

both parties to maximize productivity while minimizing burden on both sides. Whereas new collaborative partnerships in settings with limited research infrastructure may require significant initial in-country investment and support, well-established and experienced partnerships require progressively less.

Within this new global partnership paradigm, researchers and mental health professionals from low- and middle-income countries play an increasingly vital role. Indeed, the involvement of local researchers as investigators is now a critical requisite for most global health funding opportunities [7]. The comparison of “outside” and “inside” perspectives between foreign and local investigators is essential for data interpretation; this bidirectional exchange can generate invaluable insights not otherwise evident. Professionals from low- and middle-income countries who have not yet received advanced research training, but have rich cultural insights, motivation, and political or community cache, are well-positioned to engage in targeted research training programs in partnership with global mental health researchers from other settings.

Training the Next Generation of Global Mental Health Researchers

Dissemination and implementation science is central to mental health research in the global era [8]. This field is concerned with identifying, understanding, and overcoming barriers to the adoption, adaptation, integration, scale-up, and sustainability of evidence-based practices across diverse settings [9]. It is a science dedicated to taking clinical research from the laboratory to complex real-world settings with a focus on

system-level uptake and long-term sustainability. It involves the iterative triangulation of qualitative and quantitative data (mixed-methods), which is critical for assessing local mental health needs; developing, adapting, and testing tools and interventions; and monitoring and evaluating of outcomes at the patient, provider, and system levels [10].

A majority of the evidence base in psychiatric research comes from high-income countries, which is of great value, but cannot simply be transported from one setting to another. Evidence-based tools and treatments must be “translated” across cultures, which requires far more than linguistic adaptation but achieving and retaining the conceptual, content, technical, and criterion equivalence of the intervention [11], as well as balancing fidelity (to the original intervention) and fit (for a novel context) [12]. Global mental health researchers confront significant challenges when implementing and disseminating tools across diverse social, cultural, and political contexts, where there may be considerable variation in local knowledge, norms, attitudes, and beliefs about mental illness, including stigma, which can be a significant barrier to treatment access at the individual, community, and policy levels [4, 13]. Global mental health research in low- and middle-income countries must also overcome significant human and material resource limitations and find innovative ways to leverage existing systems of care through strategies such as task sharing, wherein non-mental health specialists are trained to deliver basic psychotherapeutic interventions with expert supervision [2]. Rapid ethnographic methods such as free-listing, card sorting, protocol analysis, and qualitative interviews (individual and group) are commonly employed for the adaptation of brief screening tools [11, 14, 15] and evidence-based interventions [12, 16, 17].

Another critical training area for today’s global mental health researchers is ethics specific to global health research. In addition to ensuring ethical conduct of human subject research, which applies to any setting, targeted training must aim to ameliorate the historic tendencies of researchers from high-income countries to be the “lead” in work conducted in low- and middle-income countries and emphasize safeguards to ensure balanced bidirectional collaboration, such as shared authorship in local and global journals [12]. Since the lack of access to mental health treatment in many low resource settings has led to significant human rights abuses, preventing coercion among research participants in settings with high poverty and low literacy is also essential. Finally, it may be difficult to create a randomized controlled study design in low-resource settings that is ethical given that “treatment-as-usual” may be equivalent to “no treatment at all”. Global mental health trainees must apply and develop alternative strategies to confront these challenges such as sequencing designs, using historical controls, and building in protections for vulnerable subjects.

Dissemination and Implementation Science Training Opportunities

There is a growing need for formal training in dissemination and implementation science, reflected by the high demand for National Institutes of Health (NIH) training opportunities [18]. Currently, there are few resources for formal training opportunities in dissemination and implementation and even fewer focused on global mental health. There are unique training needs specific to global mental health dissemination and implementation science that may not be fully captured in existing training programs. Specific skills include how to assess feasibility, appropriateness, and acceptability of task shifting/sharing models; considerations regarding sustainability, cost effectiveness, and maintenance of research activities following research studies in low-resource settings; and efforts to adapt, if necessary, leading frameworks and models for dissemination and implementation research for resource-limited global settings [19, 20].

Efforts by the NIH to summarize existing dissemination and implementation training opportunities have pointed to NIH-funded summer training institutes [21], select Masters and PhD programs (approximately five), individual graduate courses, Clinical and Translational Science Award courses, and ongoing webinars [18, 22]. There are also technical assistance workshops offered at NIH dissemination and implementation conferences where trainees and other researchers new to the field can receive feedback from dissemination and implementation experts. Training gaps for dissemination and implementation identified by the NIH were the lack of doctoral-level training programs and the need for specific programming for decision-makers and practitioners.

The Veterans Affairs (VA) Center for Implementation Practice and Research Support supports researchers focusing on implementation science efforts in the VA setting (e.g., Quality Enhancement Research Initiative; QUERI). The center develops and disseminates resources for QUERI researchers on dissemination and implementation strategies and methods, such as the “QUERI implementation guide” that walks researchers through the steps of implementation research. Such models and frameworks have been developed and tested in the VA system; for example, the Consolidated Framework for Implementation Research (CFIR), which includes numerous resources to facilitate its implementation and a website with interactive tools, interview guides, observation templates, and example qualitative codebooks based upon the CFIR model [23]. Another useful resource for implementation tools and online learning modules is through the National Implementation Research Network’s Active Implementation Hub [24]. Training opportunities are offered within the Global Implementation Conference (GIC), for instance, Masters-level classes through the Implementation Academy through GIC that focus on key topics relevant to impactful dissemination and

implementation of research globally [25]. The Special Programme for Research and Training in Tropical Diseases also published an “Implementation Research Toolkit” to standardize the process of dissemination and implementation research around the world to allow for country- and region-level comparisons in dissemination and implementation strategies [26]. Specific doctoral training programs also have an emphasis on global health and implementation science, such as the PhD in global health metrics and implementation science in the Department of Global Health at the University of Washington [27]. The Global Health Sciences Department at the University of California, San Francisco offers short courses in implementation science that have particular relevance to global health [28]. There have also been symposia and conferences in the past few years focusing on implementation science and global health sponsored by FHI 360 in September 2014 [29], focusing on dissemination and implementation related to health services research in low- and middle-income countries and the 2010 Implementation Science and Global Health Satellite Meeting following the 3rd Annual NIH Conference on the Science of Dissemination and Implementation [30].

Yet, additional resources are needed to promote training opportunities in dissemination and implementation science that specifically focus on global mental health. Below are two case examples of dissemination and implementation-oriented global mental health training programs that can serve as models.

Training in Global Mental Health: Case Examples

Two examples of global mental health training opportunities for researchers based in a high- and low-income country, respectively, are the National Institute of Mental Health (NIMH) T32 Post-Doctoral Research Dissemination and Implementation Fellowship in Global Mental Health at Columbia University/New York State Psychiatric Institute (T32 MH096724) and the Portuguese-Speaking African Countries (Países Africanos de Língua Oficial Portuguesa - PALOP) Mental Health Implementation Research Training Program in Mozambique funded by the Fogarty International Center/NIMH (D43 TW009675-01). These two training programs seek to train early-career global mental health researchers in the knowledge and skills needed for effective and collaborative dissemination and implementation research in this new global partnership paradigm in mental health research. Both programs operate as fellowships, including formal training activities, hands-on research, and mentorship with a focus on dissemination and implementation science. Given the abundance of mental health interventions that have already demonstrated efficacy, the training is oriented more towards research methodology (adapting,

implementing, disseminating, and scaling up evidence-based practices) than the development of new interventions. Limited resources are leveraged by punctuating consistent online interaction with strategic, intensive, and structured visits of 2–5 weeks.

Post-Doctoral Global Mental Health Research Fellowship: Interventions that Make a Difference (T32)

The NIMH-funded T32 post-doctoral fellowship in Global Mental Health at Columbia University/New York State Psychiatric Institute was created to train the future generation of global mental health researchers (T32 MH096724). The fellowship has two foci: (1) deployment-focused intervention research and (2) intervention dissemination, implementation, and services. The first focus trains fellows on how to develop and deploy interventions in low-resource settings. These interventions directly address components of mental health prevention, recognition, assessment, and treatment and are field tested for efficiency and clinical utility. The second focus trains fellows in intervention dissemination, implementation, and services research, such as studying the effective adaptation and implementation of evidence-based tools interventions in low-resource settings [11, 12]. By design, the fellowship is highly interdisciplinary. Fellows come from a variety of fields and receive mentorship from faculty across Columbia University, including psychiatry, public health, medicine, social work, and clinical psychology (Teachers College), and faculty members from all of these disciplines participate in a weekly global mental health seminar which serves several functions including targeted training in relevant topics, case presentations by faculty and fellows, idea development, and a journal club. Fellows receive support in developing an independent research project in an innovative area of global mental health intervention and dissemination research, which is intended to develop into a long-term research agenda. Current areas of research being led by fellows include integrating depression treatment in primary care in Brazil, preventing family violence and promoting mental health in Uganda, a stepped-care program for internally displaced women in Colombia, and suicide prevention among youth in Mongolia. To conduct these projects, each fellow partners with local researchers and agencies in their specific country. Fellows are based in New York City and travel to their sites of research on average two times per year for 2–3 weeks, and more if they are able to obtain independent pilot funding to support the work. Additionally, fellows have the opportunity to take courses, attend seminars and conferences, and contribute to on-going research of their mentors. Most fellows engage in several research projects, with the goal of developing expertise in a topical research area with cross-cutting relevance and applicability across diverse low-resource settings.

Portuguese-Speaking African Countries Mental Health Implementation Research Training Program (D43)

The Portuguese-Speaking African Countries Mental Health Implementation Research Training Program in Mozambique funded by the Fogarty International Center/NIMH, described elsewhere [13], aims to address the dearth of evidence-based mental health research and services that exist in Portuguese-speaking African countries, starting in Mozambique. It consists of a three-country partnership between Columbia University/New York State Psychiatric Institute and Vanderbilt Institute for Global Health in the USA, Universidade Eduardo Mondlane in Mozambique, and the Federal University of São Paulo in Brazil. As is common in low- and middle-income countries, Mozambique faces a deficit in mental health professionals (13 psychiatrists and 56 master's or PhD psychologists for 23.5 million people). Furthermore, a significant need exists to build capacity in mental health implementation science among local researchers to determine the most effective means of adoption and up-take of evidence-based interventions throughout the country. The program trains fellows (local mental health professionals with an interest in research) in the same two areas as the T32 fellowship: (1) deployment-focused intervention research and (2) intervention dissemination, implementation, and services research. Given a significant stigma against persons with mental disorders, special attention is given to the ethical considerations of conducting mental health research. A unique aspect of this training program is its three-way collaboration between a high-, a middle-, and a low-income country: USA, Mozambique, and Brazil. Fellows receive training and mentorship from each of the four universities, with the goal of fostering partnerships and cross-expertise training. Fellows develop individual research projects on mental health implementation, so as to develop the next cadre of researchers from low- and middle-income countries and simultaneously reduce the mental health treatment and research gap in Portuguese-speaking African countries.

While still in their early stages, these two training programs have been met with significant interest and demand. Their joint connection with Columbia University allows for the collaboration and mutual learning between fellows in both programs in areas of common interest. During an early intensive training phase, Mozambican fellows spent 1 month in New York City during which time the T32 fellows actively participated in activities. During the next intensive training phase took place in Mozambique; one of the more advanced T32 fellows accompanied the principal training directors from Columbia University and the Federal University of São Paulo to participate in training activities and further cultivate active collaborations and partnerships between fellows across both programs. The continued interaction between fellows will foster bidirectional training, research partnerships, and true

global mental health research development. Both programs face the challenge of limited research funds to support pilot projects and practical learning; as with the T32 fellowship program, Mozambican fellows must seek external funds to start research.

In conclusion, the field of global mental health research has evolved significantly from its colonial roots to what is now a global partnership paradigm, with new challenges and training needs for the next generation of researchers. Advances in technology have helped to facilitate a “new” role for global mental health researchers as bridges between high- and low-resource settings, building mutually dependent and beneficial collaborations between actors in foreign and host countries. Global mental health researchers from high-income countries are also increasingly able to expand their research perspective from micro- (place-based) to macro- (cross-cutting) issues by fostering collaborations between high- and low-resource settings, as well as between low-resource settings, to accelerate learning and reduce the mental health treatment gap at a global level. Given the many complexities involved in global mental health research and focus on sustainable and scalable implementation, the next generation must be provided with adequate tools to use mixed-methodologies within the dissemination and implementation science framework and critical training in research ethics.

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