

What can participatory Theory of Change development add to implementation science in global mental health?

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Although there is increasing evidence for what works to improve mental health globally, many successful interventions are not implemented in practice (Bauer & Kirchner, 2020). Implementation science, which systematically researches how best to improve the implementation of research findings in routine practice (Eccles & Mittman, 2006), is increasingly being applied to improve the implementation and uptake of mental health interventions globally (McKay et al., 2020; Myers et al., 2024; Rose et al., 2022; Seward et al., 2021; Singla et al., 2021).

Implementation science in global mental health

Implementation science has contributed substantially to understanding, evaluating and systematizing many aspects of implementation. These include the process of implementation, for example, the Quality Implementation Framework (Meyers et al., 2012), and the determinants of successful implementation, exemplified by the Consolidated Framework for Implementation Research (Damschroder et al., 2009). It also encompasses the outcomes of successful implementation, for example, Proctor's implementation outcomes (Proctor et al., 2009), as well as implementation strategies, such as the ERIC taxonomy (Powell et al., 2015). Additionally, it



addresses optimal research designs for measuring implementation effectiveness (Wolfenden et al., 2021).

However, in the field global mental health, with its explicit focus on equitably improving mental health (Patel & Prince, 2010), implementation science methods and frameworks developed in well-resourced settings are harder to apply (Bartels et al., 2022). Many implementation science approaches ignore the existing challenges and inherent complexity of the implementation contexts (Sarkies et al., 2022) and ignore equity considerations (Brownson et al., 2021). However, low resource settings (and low – and middle- income countries in particular), often have substantial barriers to the implementation and scale up of evidence-based interventions. These include limited financial, material and human resources, inadequate supply chains and lack of suitability of the interventions for the socio-cultural environment (Bulthuis et al., 2020; Mugisha et al., 2017; Saraceno et al., 2007). However, low-resource settings may also have many facilitators to implementation including political will, advocacy, developing strategic plans, collaboration and partnership, which can facilitate scale up (Bulthuis et al., 2020). Communities may be valuable resources to support implementation and scale up (Selamu et al., 2015).

Addressing implementation challenges in under-resourced health systems often goes beyond existing frameworks and taxonomies. The detailed strategies outlined in the ERIC taxonomy of implementation strategies were developed by and with North American stakeholders (Waltz et al., 2015) and are often adequate to describe implementation strategies in detail. For example, community engagement activities such as village talks and meetings with district managers would both be classified as “conduct educational meetings” despite their different purpose and format. In addition, complex global mental health interventions often include multiple interventions and outcomes at different levels. For example, anti-stigma talks by volunteers in the community may be important both to reduce stigma as well as function as an implementation strategy to increase acceptability and uptake of a primary healthcare based mental care intervention (Breuer, Subba, et al., 2018; Jordans et al., 2016).

Program theory and Theory of Change

All well-designed interventions, programs and policies are underpinned by an implicit program theory – a theory about how and why that specific program brings about a set of outcomes. Hawe (2015) proposes that having a robust and clear a priori program theory is an important step in understanding whether an intervention is likely to work prior to implementation and evaluation. Similarly, Moore and Evans (2017) argue that we need to carefully theorise how interventions work in order to implement and evaluate them. Although, there is some recent work by Smith et al. (2020) who adapted the pipeline logic model for implementation research, there is less guidance on how program theory can be developed.

Participatory Theory of Change (ToC) is increasingly being used to develop and make explicit a priori program theories during intervention development in global mental health

(Abayneh et al., 2018; Asher et al., 2015; Erica Breuer et al., 2016; Breuer et al., 2023; Chibanda et al., 2016). ToC is flexible approach that can be used at a meso, micro and macro level to support the development of contextually relevant implementation strategies and interventions in global mental health. It provides a framework which we can use to unpack causal pathways and mechanisms of interventions while also understanding the long term outcomes and impact of the program (De Silva et al., 2014). In addition, a good ToC can be used to provide a framework for evaluating the intervention (E. Breuer, M. J. De Silva, et al., 2016).

The ToC of a future intervention and its implementation strategies is usually developed in workshops which include people with lived experience, health professionals, future program implementers and managers (Breuer et al., 2014; Kokota et al., 2023). The workshops usually start with identifying the challenges and facilitators related to the intervention and implementation and then ask the stakeholders to identify the potential impact of the intervention. Then the group identifies the short-, medium- and long-term outcomes which need to be in place for the impact to occur as well as the activities needed to reach these outcomes. The group also articulates the assumptions underlying the program. The additional evidence underlying the intervention and its ToC as well as the evaluation framework is usually developed by researchers after the workshop. These are usually represented visually on a ToC map. A ToC can also be developed during the implementation of an intervention or at the point of evaluation, using other data such as program documents, observations and interviews (E. Breuer, L. Lee, et al., 2016).

Once the ToC has been developed with an outline of the intervention and implementation strategy, co-design strategies can be used together with ToC to operationalize these and to develop a formalized intervention and implementation strategies. As the project progresses, the ToC is refined to become more precise and detailed in line with the implementation and evaluation of a set of interventions and their implementation strategies. For example, in the Psychosis Recovery Orientation in Malawi by Improving Service and Engagement (PROMISE) we are using a series of ToC workshops to iteratively develop the intervention and implementation strategies to implement the identification and referral of people with psychosis by community health workers in Malawi (Lawrie et al., 2023).

Using Theory of Change together with Implementation Science in global mental health

There is much potential for participatory ToC development to be used together with implementation science in global mental health (Seward et al., 2021). ToC can support implementation science by clarifying how interventions and implementation strategies will effect change. This a priori program theory, which can be peer-reviewed by others to assess the likelihood of the program having an effect, can provide a flexible but systematic way to understand how multiple interventions and implementation strategies are linked and clarify which constructs need to be evaluated (De Silva et al., 2014). A key advantage of participatory ToC is that it provides a formal way in which stakeholders can participate in intervention development rather than being consulted superficially. Inclusion of stakeholders helps to develop

contextually relevant interventions which actively incorporate the contextual changes required to implement the intervention. This serves both to gain stakeholder buy-in and to allow stakeholders to offer solutions to complex problems (Breuer et al., 2014). For example, during ToC workshops for the development of a district mental healthcare plan, policy makers were able to provide solutions to access psychotropic medications during implementation and supported the subsequent addition of these medications on the free drug list (Breuer, Hanlon, et al., 2018). In addition, ToC can also be used to understand the changes in the system needed to reach the long term impact (Breuer et al., 2021).

However, using participatory ToC does require specific facilitation and ToC development skills and requires substantial time investment on the part of the researchers and other stakeholders to ensure that ToCs can adequately guide the research and intervention development.

We have provided some useful guidance documents in Box 1.

Box 1. Theory of Change Guidelines

The Mental Health Innovation Theory of Change toolkit (Mental Health Innovation Network, 2014)

PROMISE Theory of Change workshop guidance (Kokota et al., 2023)

STRiDE Theory of Change Workshops: Guidance and Resources (Breuer et al., 2019)

Implementation science can also formally influence and strengthen participatory ToC. One example is using implementation frameworks such as the Theoretical Domains Framework to understand and choose implementation strategies based on theory rather than those suggested by stakeholders and researchers in workshops. Taylor et al. (2023) recently showed that only about 20% of intuitive implementation strategies developed by stakeholders were based on implementation science theory. Implementation scientists can be included in participatory ToC to help guide the development and choice of implementation strategies, frameworks, models and theories and measuring implementation in the same way that mental health experts are included in the development of a mental health intervention. However, implementation science models, frameworks, theories and taxonomies need to be developed for and applied in various global settings not just in high income countries. This would help global health researchers to describe, use and formally test these to generate additional global evidence for implementation science.

In summary, participatory ToC development is a useful adjunct to implementation science approaches in global mental health. It allows researchers to work with stakeholders to develop contextually relevant implementation strategies and interventions in global health settings. Implementation science should also be more formally integrated into the ToC process to draw on the wealth of systematized knowledge to understand how best to implement interventions into routine care.

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