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The importance of conducting practice-oriented research with underserved populations

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Conflict of Interest

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Author Contributions

Also included are authors who have conducted POR with general client populations, and who have contributed to the development and organization of this paper.

Abstract

There has been a growing emphasis on dissemination of empirically supported treatments. Dissemination, however, should not be restricted to treatment. It can and, in the spirit of the scientific-practitioner model, should also involve research. Because it focuses on the investigation of clinical routine as it takes place in local settings and because it can involve the collaboration of several stakeholders, practice-oriented research (POR) can be viewed as an optimal research method to be disseminated. POR has the potential of addressing particularly relevant gaps of knowledge and action when implemented in regions of the world that have limited resources for or experiences with empirical research, and/or in clinical settings that are serving clinical populations who are not typically receiving optimal mental care services - specifically, individuals in rural and inner cities that have limited economic and social resources. The establishment and maintenance of POR in such regions and/or settings, however, come with specific obstacles and challenges. Integrating the experiences acquired from research conducted in various continents (Africa, Europe, Latin America, and North America), the goal of this paper is to describe some of these challenges, strategies that have been implemented to address them, as well as new possible directions to facilitate the creation and growth of POR. It also describes how these challenges and ways to deal with them can provide helpful lessons for already existing POR infrastructures.

Keywords: practice-oriented research; practice-based research; low-income; economic marginalization; underserved populations;

There exists a rich history of proposals aiming to integrate research and practice (Goldfried et al., 1980; Goldfried & Wolfe, 1996). Within this historical path, practice-oriented research (POR) represents a conceptual endeavor that aims to amalgamate different traditions that share the common objective of investigating psychotherapy as it unfolds in clinical practice. While encompassing diverse approaches (e.g., patient-focused research, practice-research networks [PRNs]), the overarching aim of POR is to generate practice-based evidence. This evidence complements research conducted in controlled settings, such as efficacy trials, which may not always align with the setting or heterogeneous client populations commonly encountered in routine care (Castonguay et al., 2021; Lutz et al., 2021). Ultimately, POR studies are designed to lead to scientifically rigorous findings without altering the routine conditions of psychotherapy practice. Hence, the clinical relevance of the results obtained is regarded as an inherent hallmark of any POR project (Castonguay et al., 2021).

POR stands as a growing research paradigm that has been undertaken in different clinical settings and regions around the world. There are, however, gaps in clinical populations that have been investigated within the scope of POR. As in psychotherapy research in general (see Barkham et al., 2021), efforts have been made recently to include and investigate a diversity of clients. However, some clinical populations have received limited empirical attention. Among them are individuals that have been underserved clinically, in particular clients with limited economic resources. It is important to note that underserved populations entail a wide range of experiences extending beyond material deprivation or marginalization. In this context, we will employ the term 'low-income and economic marginalization' (LIEM) to address what can arguably be regarded as one of the most impactful forms of exclusion in contemporary society. Material deprivation implies a lack of resources to access basic services and often intersects with various other forms of marginalization. Indeed, identifying as a LIEM individual is intricately connected to experiencing multiple layers of discrimination based on factors such as race/ethnicity, religion, gender identity, sexual orientation, and immigration status, among others (DeFillippis, 2016; Smith, 2010).

The lack of attention given to LIEM populations is not unique to POR. It is rather a pervasive limitation that permeates the entire field (e.g., Lorion, 1974; Zimmerman et al., 2020). Much of the scientific knowledge in clinical psychology and psychotherapy has been predominantly derived from what is often referred to as ‘White, Educated, Industrialized, Rich and Democratic’ (WEIRD) populations (Fonagy & Luyten, 2021) – to avoid using a potentially offensive abbreviation, we will use the term ‘predominantly White in high income countries’ (pWHIC). This situation presents a paradox, because those individuals who are most in need of psychological care not only encounter greater challenges in accessing treatment but are also less likely to receive treatments tailored to their contexts, needs and preferences. This phenomenon known as *the inverse care law* (Hart, 1971), has persisted for many decades, suggesting that the availability of quality healthcare is inversely proportional to the population's need. This disparity can exacerbate inequalities, which is often denominated as *intervention generated inequalities* (Lorenc et al., 2013).

LIEM populations also encounter significant obstacles when attempting to access mental health services (Delgadillo et al., 2018; Hodgkinson et al., 2017; Kazdin, 2018; Patel et al., 2010). There is mounting research showing that LIEM individuals are less likely to seek psychotherapy due to several barriers, such as discrimination, shame, stigma and even knowing that it is possible to seek help (Corrigan, 2004; Husain, 2020; Mbuthia et al., 2018; Sarikhani et al., 2021). Those who manage to overcome these barriers still face fundamental financial and logistical challenges, including health insurance, transportation, or childcare needs (Fernández-Alvarez et al., 2022; Levy & O'Hara, 2010). Upon finally reaching treatment, clients from these populations seem to benefit less on average from treatment (Buckman et al., 2022; Finegan et al., 2018). Furthermore, the "downward drift" hypothesis posits that mental health dysfunctions often lead to adverse circumstances, such as unemployment or social exclusion (Errázuriz et al., 2015), creating a punishing cycle that perpetuates a reciprocal relationship between mental health problems and limited resources (Lund et al., 2011).

The guidelines developed by the American Psychological Association for LIEM populations highlight certain interventions adapted for these individuals, such as flexible scheduling, brief transdiagnostic interventions integrated into healthcare settings, and novel delivery modalities such as technologically supported remote interventions (Juntunen et al., 2022). These characteristics represent practice response to the unique needs of what are referred to as *hard-to-reach* populations. At the core of the traditional dissemination paradigm are treatments, or treatment components, that have been tested in randomized controlled trials (RCTs). These empirically supported treatments have long held an essential place in clinical psychology and psychotherapy. However, they are primarily the product of researchers' knowledge and, as such, tend to prioritize only one of many potential sources of expertise (for a comprehensive review see Castonguay et al., 2013 and Castonguay et al., 2021).

A number of POR studies have focused on LIEM populations, investigating clients' characteristics, as well as issues related the treatment utilization, process, and benefit (e.g., Berzins et al., 2018; Delgadillo et al., 2016, 2018; Falkenström et al., 2019; Finegan et al., 2020; Firth et al., 2020; Kumar et al., 2018). Nonetheless, much remains to be undertaken. The goal of this paper is to foster such efforts, drawing from a wealth of experiences gained through research conducted across various continents (Africa, Europe, Latin America, and

North America) and building upon the insights derived from collaborations between researchers and clinicians (Castonguay & Muran, 2015).

Specifically, we outline the challenges, opportunities, and recommendations related to core aspects of POR as they pertain to understanding and improving the care offered to LIEM populations. By elucidating lessons learned and discerning commonalities and differences from a diversity of in psychotherapy research experiences, these insights have the potential to provide valuable guidance for the establishment and expansion of POR within LIEM contexts.

To fulfill this purpose, we convened several research groups specializing in POR. These researchers included Rebecca Drill, who works at the Cambridge Health Alliance in the USA; Fredrik Falkenström from Linnaeus University in Sweden, but with relevant projects for this article in Kenya; Soo Jeong Youn at the Massachusetts General Hospital in the USA; Jaime Delgadillo and Nick Firth from the University of Sheffield in the United Kingdom; Paula Errázuriz from the Pontifical Catholic University of Chile; Clara Paz from the University of the Americas in Ecuador; Héctor Fernández Álvarez from the Aiglé Foundation in Argentina, and Amber O'Shea from Penn State University in the USA. In the initial invitation, organized by Louis Castonguay, Javier Fernández Alvarez, Ryan Kilcullen, and Guadalupe Molinari, these researchers were tasked with addressing three topics:

1. The settings and populations on which their respective POR research focuses.
2. Preliminary lists of challenges and strategies encountered in their research experiences.
3. Recommendations for future empirical efforts.

The material gathered on these topics laid the foundation for the present manuscript.

I. Settings and populations

Table 1 provides an overview of the research contexts of the contributing researchers, distinguishing among investigations involving (1) LIEM individuals in LMICs; (2) LIEM individuals in a non-LMICs; and (3) non-LIEM individuals in a LMICs. The societal or national context is undeniably relevant to psychotherapy, even though there is a limited body of research examining the impact of these contextual factors, including the national political and economic situation, social and logistical infrastructure, the structure, funding, and delivery of healthcare systems, socio-cultural norms, and various other higher-order variables that extend beyond individual attributes. While LIEM populations in LMICs and LIEM individuals in a non-LMICs is what has been often addressed in the literature, we introduce here a less targeted level that is non-LIEM individuals living in a LMICs. Let us consider, for instance, an upper-middle-class client, psychotherapist, or researcher residing in a LMIC. They may contend with recurring economic or political instability and other contextual factors that can significantly impact their daily lives. Notably, LMICs often experience more frequent and intense episodes of political unrest, resulting in greater marginalization and structural challenges (Lynch, 2023).

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The present article involves three distinct populations, which can be categorized into two groups of LIEM populations (in both LMICs and non-LMICs) and a third group of LMICs and non-LIEM populations. This third group involves populations in two South American countries (Ecuador and Argentina) and one East African country (Kenya), presenting a heterogenous settings of adult clients, including a university setting in Ecuador (Valdiviezo-Oña et al., 2022), a hospital setting in Kenya (Kumar et al., 2018) and a private clinical practice setting in Argentina, which includes a specific program for the provision of psychotherapy for underserved populations (Fernández-Alvarez et al., 2022). Both the Kenya and Argentina settings receive referrals from the slums, one of the deepest forms of marginalization.

In terms of clinical characteristics, clients in the Ecuadorian group present principally mild severity, while those clients with severe symptomatology are referred to other services. In the Argentinian group, severe clients are treated (e.g., bipolar disorder, eating disorders or chronic personality disorders) but not in the specific program for underserved populations, which mainly admits clients with mild symptomatology severity. In the Kenya settings, clients with all levels of clinical severity are treated, with a significant prevalence of substance use (more than half of the clients) and psychosis.

Most of the POR infrastructures belong to the non-LMICs and LIEM populations – i.e., underserved people living in high income countries spanning three continents (North America, South America, and Europe). These POR groups involve heterogenous populations across the lifespan (except for children). Settings include community healthcare centers, academic medical centers, public hospitals, and university affiliated hospitals treating clients presenting with a diversity of common mental health disorders.

II. Obstacles

We now introduce similarities and differences in obstacles faced by the various POR groups mentioned above.

Lack of financial resources, incentives, and/or time to conduct or participate in research

The lack of dedicated research funding is a stark reality and a challenge faced by nearly all groups conducting POR research in LIEM populations. However, it becomes especially problematic in LMICs, where the absence of funding means a lack of essential infrastructure to support POR projects. For instance, when it comes to foundational research tasks like data collection, POR initiatives in LMICs often resort to inefficient methods such as paper-and-pencil surveys due to budget constraints that prohibit the adoption of more advanced electronic data collection methods. Even when researchers collaborate with clinicians who have access to computer technology, these providers may be using different platforms or software, making large-scale, systematic, and centralized data collection a challenging or impractical endeavor.

The general economic limitations derived from the macroeconomic situation in LMICs can have far-reaching consequences for POR. For instance, in Argentina, the inflation rate surpasses 100% in 2023, which devalues even the small amount that can be obtained from research grants. Moreover, when achieving international grants, current restrictions on the inflow and outflow of funds, as well as the importation of goods (e.g., technology) from abroad, further complicate the research landscape.

Besides, in Kenya, some of the therapists who were invited to participate in POR studies as part of hospitals' routine care (Falkenström et al., 2019) had previously been accustomed to participating in well-funded research studies originating from the United States, where they received monetary incentives for their involvement. Consequently, when invited to contribute to POR studies that could not offer compensation, they were reluctant to participate. To address some of the financial limitations, the POR group conducting studies in Kenya secured some funding from Swedish public health sector. However, this source of funding introduced its own set of challenges. Alongside bureaucratic obstacles, when non-LIMCs provide funding to LMICs for research initiatives, there is a risk of developing a patronizing relationship. By *patronizing*, we mean a dynamic in which the perspectives and needs of the less economically advantaged countries may not be adequately considered or respected. This is particularly concerning when the research aims to emphasize the pivotal role and expertise of clinicians within these countries. Relying on such funding can also raise questions about the long-term sustainability of empirical efforts and the practical implementation of their findings in clinical routine practice (Chambers et al., 2013; Douglas et al., 2023; Youn, Boswell et al., 2023).

While funding for POR projects in LIEM populations is by no means assured in non-LMICs, infrastructures that financially support research in general are arguably more prevalent in these countries. Besides, being part of an institution with resources can directly or indirectly facilitate the funding of POR projects focusing on LIEM populations. These circumstances in non-LMICs, while making research more accessible, can still present significant hurdles. As an illustration, the productivity and quality standards in non-LIMCs may be more competitive, and it may be challenging to allocate time to these projects compared to LMICs. Therefore, the lack of material resources for conducting research is not the only obstacle, but also a shortage of time and personnel frequently hinders progress.

Organizational reality

In addition to funding limitations, various organizational factors can significantly hinder the integration of research into clinical routine practice. A prevalent obstacle facing POR in general is the difficulty of assessing clients' follow-up appointments since many of them do not return, but this is likely to be exacerbated in LIEM populations due to the disadvantages mentioned earlier regarding health insurance, transportation, or childcare needs.

Organizational obstacles can be particularly serious when investigating LIEM populations in LMIC. For instance, in Kenyan hospitals where repeated assessment of process and outcome were permitted, researchers have grappled with a scarcity of consultation rooms available for conducting therapy. This has led to chaotic situations, such as clients spending extended hours in the waiting room for a therapy room or having to sit on long benches alongside numerous other clients while filling out questionnaires.

Yet, organizational barriers can be prevalent when working with LIEM populations in non-LMICs, especially in the public sector. In Chile's public health sector, for example, therapy sessions are infrequent and often brief, and the treatment duration is shorter than clinically recommended. Moreover, the therapeutic process frequently involves multiple therapists. Administrative bureaucracy in Chilean public health sectors can further hinder data collection and acquiring essential information such as session schedules. These difficulties may be attributed to the fact that despite Chile has experienced significant economic growth over recent years, its infrastructure for addressing mental health needs continue to resemble those of a LMIC.

Organizational barriers are not limited to the public sector. In private practice, for example, clients may attend the sessions more regularly; however, therapists within the same organization may have consultation rooms scattered across various locations, as is the case of Aiglé Foundation in Buenos Aires. This geographical dispersion can contribute to a more insular nature of practices themselves, which hinders the standardized and centralized data collection process, as well as the daily contact needed to actively foster a reciprocal POR spirit.

Clinical reality

The clinical realities of LIEM populations are remarkably diverse due to their intersectionality, making research projects intrinsically challenging. First and foremost, to properly account for, let alone investigate such diversity, require large sample sizes, which may optimally be collected by establishing and maintaining infrastructure for standardized data collection, such as a repository and archival data pool. This can be especially difficult to achieve in LMICs.

Even in non-LMICs where more resources are available, research should more properly address unique reality of LIEM populations. For example, LIEM-related factors such as unemployment are often negatively associated with treatment outcome, yet research usually inadequately accounts for these variables, relying on single, potentially arbitrary variables like education to represent the spectrum of socioeconomic influences. Intersectionality and the multifaceted nature of deprivation may further complicate matters by necessitating the collection of a broader range of variables, potentially increasing data sensitivity and re-identification risks.

Additionally, for LIEM populations in both LMIC and non-LMIC, symptom-based outcome measures may not be the most relevant. Other types of outcomes, such as life functioning metrics (e.g., school attendance, graduation, job obtainment, recidivism) might be just as appropriate, but these are less frequently recorded in routine practice (e.g., Youn, Valentine, et al., 2019). In the public health system in the United Kingdom, where considerable research resources are available, POR faces questions about whether to focus more on "upstream" public health issues, such as referral uptake and making, rather than organizational processes and psychotherapy processes and outcomes. This kind of POR, which may be more attuned to the clinical reality of LIEM, can be more challenging as relevant data is often more difficult to collect, and not typically routinely recorded.

Clients' realities and experiences

Stigma related to mental health as a barrier to treatment is not unique to LIEM populations, but it may be exacerbated in contexts of deep marginalization and limited resources (e.g., Youn et al., 2020). In poor and collectivistic communities around the world, mental health issues may not be recognized as health challenges (Choudhry & Bokharey, 2013). Accordingly, discussing them with others may not be encouraged or even actively discouraged (Abera et al., 2015). Mistrust related to healthcare providers and settings also runs deep in some of these communities due to historical experiences, which can decrease help seeking via traditional avenues (Abera et al., 2015; Bignal et al., 2015). Additional factors hindering the utilization of traditional services include health problems, lack of access, and limited support, such as childcare and permission to take time off from work (Fernández-Alvarez et al., 2022). In LMICs, this harsh reality is even more pronounced, with significantly fewer public health programs available to assist people living in a state of deep marginalization (De la Parra et al., 2019). Consequently, the same factors that negatively impact the utilization and provision of care often hinder the conduct of research in these settings (De la Parra, 2013). Moreover, due to varied educational levels in LIEM individuals, existing psychotherapy questionnaires may not be appropriate to accurately capture their challenges, raising questions about the psychometric value of using instruments developed in pWHIC populations to assess needs and preferences before, during, and after treatment (Fernández-Alvarez et al., 2022; Paz et al., 2021).

Stigmatization is also prevalent in non-LMIC countries, where concerns about confidentiality and mistrust of legal and political authorities are experienced by marginalized individuals (Javed et al., 2021). These individuals often face internalized and externalized stigma, which further compounds experiences of systemic marginalization and oppression (Cole & Cawthon, 2015; Masuda et al. 2012). Perceived stigma can deter individuals from self-disclosing, seeking treatment, and building a trusting rapport with their practitioner. Conversely, practitioners who hold stigmatizing beliefs about clients' identities are less likely to be effective in their treatment approaches (Barksdale & Molock, 2009).

Cultural norms and attitudes toward research

POR heavily relies on the presence of a research culture within a center or an institution. However, in many parts of the world, especially in LMICs, this culture has yet to emerge or at least to bloom. For instance, in Latin-American countries, filling out questionnaires, a fundamental aspect of any psychological research project, is not a typical experience, making it hard for clients to understand why they are asked to do so and for therapists to see how this fits with their way of conducting therapy. Compounding the lack of experience using questionnaires is ideological resistance, observed among some clinicians in Chile for instance, against research in general and especially against research teams led by people of higher socioeconomic status.

As it is common elsewhere (Boswell et al., 2015), therapists in LMICs often harbor concerns about being assessed and the potential negative impact this could have for their careers. This apprehension is not limited to practitioners alone. In countries like Kenya, resistance has been observed from organizations when it comes to recording routine data, including outcomes, client information, therapist data, or organizational data. It appears that various stakeholders in mental health care may not fully believe in or understand the concept of research confidentiality. Parallelly, because POR is not common in many countries, researchers face challenges in trying to explain the importance of POR to their Institutional Review Board.

Problems with data collection and data analysis

Previous sections have highlighted several barriers related to data collection, which can subsequently lead to difficulties in analyzing and interpretating the collected data. One additional challenge is the presence of substantial missing data. Missing data can often be linked to systematic factors related to socioeconomic and underserved communities, irrespective of the countries where they live in. These factors may encompass issues such as limited literacy or education, including digital literacy, non-native language proficiency, discomfort with the data requested, skepticism or resistance, and numerous other factors. While imputation methods can offer a means to address missing data within participants, care is still needed regarding how to handle and interpret such missing data. Moreover, missing data may also extend to whole-participant data. In other words, individuals may opt not to participate in a research project due factors such as those above, thereby introducing bias to the entire sample. This issue cannot be easily solved through imputation methods (Bolland et al., 2017).

The predictability of missing data means that there will be risks when conducting POR during which necessary data for specific projects or clinical questions will be infeasible to collect proactively, especially if large sample sizes are required. Alternatively, the use of retrospective datasets may be very limited in some clinical contexts or cannot be used due to restrictions imposed by Institutional Review Boards and government regulations, as it is the case in Ecuador, for example. Even where routine datasets are available, they are constrained by the variables that are routinely collected. As a result, socioeconomic and other related important variables are often not collected, restricting the range of research questions that can be explored.

Pitfalls in the interpretation of data

Interpreting data in research involving LIEM populations across the world presents several challenges. One challenge is the risk of oversimplifying LIEM populations and their associated effects. As previously mentioned, LIEM populations are characterized by a high level of heterogeneity, and the effects of various realities they experience are often complex and cumulative in nature. A case in point is the multi-faceted nature of socioeconomic deprivation. Detected effects of such deprivation are often the result from cumulative impact of numerous overlapping predictive factors rather than a single variable. This complexity can increase the risk of confounding, where correlations are mistakenly attributed to proximal correlates rather than the actual causal variables. Moreover, these effects may manifest at multiple levels of clustering (e.g., client, household, neighbourhood/community, clinical organisation, or country level) which are difficult to model statistically and to interpret appropriately (Firth et al., 2023). Taking together, the heterogeneous and complex characteristics of LIEM populations suggests that most observed effects should be viewed as context-specific rather than universal. Any observed effects may also interact with other variables. Hence, it is essential to replicate research across different clinical, demographic, and geographic contexts. Contexts with smaller sample pools (e.g., involving rarer socioeconomic or demographic characteristics, or settings where fewer clients are seen or able to be recruited) may be more vulnerable to misinterpretation as sample sizes may be smaller, key characteristics less frequent, and therefore statistical analyses may be more challenging.

Another recurring issue arises from the conceptual framework within which interpretations of the findings are made, where results can be negatively attributed to the structural marginalization of LIEM populations. This challenge underscores the importance of interpreting data with an awareness of potential bias, thereby avoiding unfounded negative interpretations.

Writing and Publication challenges

POR groups, especially in LMICs, do not always have full-time or even part-time researchers within their teams. The lack of time, experience, and/or expertise in writing scientific articles represents a significant challenge for the dissemination of much needed findings on underserved populations across the world. POR may still be viewed by some as being less scientifically legitimate compared with other types of research, such as RCTs. Furthermore, researchers in small countries, like Ecuador, encounter the additional obstacle of having their studies rejected due to the assumption about the limited generalizability and interest of data collected in such countries. Language can pose an additional challenge for non-English speaking researchers, who, to participate in mainstream research, must write in a language that is not their own. Moreover, publication fees may be much more difficult to pay for researchers from LMICs.

III. Strategies to mitigate obstacles

Lack of financial resources, incentives, and/or time to conduct or participate in research

The success of POR often hinges on the active participation of clinicians (Castonguay et al., 2013). While providing financial compensation to therapists might seem a straightforward way to motivate them and increase their involvement in research projects, it may not be the most effective method for promoting intrinsic motivation. Driven by genuine interest and personal investment, intrinsic motivation can be a more powerful determinant of clinicians' commitment, and their active collaboration with researchers based on the mutual interest to enhance psychotherapeutic practice by articulating practice and research efforts (Castonguay et al., 2013).

POR groups have developed ways to cultivate intrinsic motivation, as demonstrated by organizations like the Aiglé Foundation in Argentina. In settings where resources for research are limited, engaging therapists in research activities is achieved by conducting projects that therapists perceive as useful for their clinical practice (Fernández-Alvarez et al., 2015). For instance, an effective engagement strategy involves transcribing the first psychotherapy session. This activity serves multiple purposes, including assisting supervisors in providing feedback to therapists, facilitating therapists' presentations to other practitioners in training programs, and enabling researchers to explore what occurs during the first session.

At Aiglé, different spaces of interaction have been created, maintained, and promoted to facilitate engagement and collaboration of therapists. These spaces primarily focus on a psychoeducational task, in which researchers describe their work and suggest how it can benefit therapists in their clinical practice. Rather than being one-way, didactic process, this psychoeducational task aims to promote a bidirectional exchange fostering the decision making considering the needs and perspectives of both researchers and therapist. This shared decision-making extends across the entire research process, entailing aspects such as the selection of research questions, study design, treatment modalities, settings, and myriad other components, both significant and minor, of the research protocol.

Spaces of interactions should include various stakeholders, especially if the number of stakeholders is large. The collaboration between them is likely to benefit from having a *local champion* (Youn, Xiao et al., 2019). At Aiglé Foundation, for example, one of the local champions is an early career researcher and clinician who holds weekly meetings with clinicians and supervisors to track the progress and obstacles of research projects, something that is considered a fruitful strategy to increase the participation of therapists in research.

A valuable conclusion drawn from these meetings is the importance of conveying to clinicians that the monitoring of outcome data is an integral part of the treatment process, rather than a research-related task. It is equally important for clinicians to convey this same message to their clients. This is important in any POR infrastructure, but it may gain particular significance when working with LIEM populations (in both LMICs and non-LMICs), due to many of obstacles related to the client and cultural realities abovementioned.

In various POR infrastructures, it is common to involve therapists as authors in presentations and publications. In LMICs this may be a particular appealing initiative because it is very uncommon to publish papers as a clinician, let alone in a journal of scientific recognition. However, such opportunities could be extended to a variety of stakeholders. In Ecuador, for example, supervisors and administrators have also contributed to writing papers – taking great interest in describing their centers and the data they have collected. Like clinicians, the involvement of these partners is difficult to secure due their limited time. In addition, recognizing their expertise in publications, having short meetings, and respecting their time and needs have been key in enhancing their participation in the research process.

In a more general way, an organizational climate that recognizes and reinforces the value of research can promote successful POR initiatives. For example, some institutions, even with limited resources, provide financial support to clinicians involved in research. This support includes seminars, therapist training programs, funding for conferences fees, subscriptions to research journals, and small funding for research projects.

Needless to mention, these initiatives are less likely to materialize in LMICs given the limited economic resources. Within the context of such limitations, however, it is important to mention that POR initiatives may be well-suited for specific funds. An example is a group of Ecuador led by Clara Paz who received a research grant from the Society for Psychotherapy Research (SPR) that prioritizes applicants who face structural, contextual, and cultural challenges, due to the venue in which they work, their gender/racial/ethnic/sexual identity preference, or lack of institutional or governmental support. With this award, a web-based application was developed to facilitate data collection (https://www.marbarsystem.com/).

Organizational reality

The challenges related to financial resources in conducting POR are often accompanied by organizational obstacles that require considerable investments and time to be addressed. These challenges may include a lack of suitable rooms and restrictions of services in terms of both treatment options and available therapists. However, the possibility of modifying or creating novel procedures is often more feasible in contexts where the systems of care are less structured. High-income countries typically have more resources for research but may also have well-established and highly structured clinical and research processes that can be rigid, time-consuming, and difficult to modify. In the United Kingdom, for example, approvals to conduct healthcare research require a study protocol to go through several iterations of reviews and permissions by multiple stakeholders, many of whom do not have domain-specific expertise.

Conversely, POR groups working in LMICs may encounter fewer barriers and have more freedom to incorporate creative or unorthodox solutions. For example, in many LMICs there are no clear standards to keep the data stored which may facilitate the possibility to start recruiting data without a large or well-established infrastructure. However, this flexibility may also lead to the collection of data under limited research regulation and, therefore, to an increased risk for potential for ethical violations. In such cases, the ethical standards of the institution conducting research become crucial.

A bright side of the lack of funding is that research groups in LMICs are used to dealing with scant resources, and this state of familiarity can enhance creativity and collaborative efforts to conduct POR. This has been previously described as the *richness of shortage* (Fernández-Alvarez et al., 2015). For example, a small online clinic is being set up in Chile to train novel therapists and to collect data, while offering low-cost short-term psychotherapy treatments. The clinic belongs to PsiConecta (www.psiconecta.org), an NGO created to democratize the access to mental health of Spanish-speaking populations around the world. Since there are no other institutions involved, all the procedures of the clinic are being developed to conduct POR research and implement a feedback system with no external organizational barriers. This illustrates the flexibility and opportunities that may be present in contexts with limited established structures and resources. Nonetheless, there is likely a threshold beyond which the scarcity of resources can make conducting research extremely difficult and stressful.

Clinical reality

Traditional methods of mental health care may not be sufficient to meet the diverse needs of LIEM clients. For instance, research suggests that clients facing higher levels of complexity, which is characterized by various disadvantages, may benefit more from high intensity interventions (Delgadillo et al., 2017). While matching of interventions to specific types of clients has not been studied with LIEM populations, it is likely that tailored interventions might be beneficial. These personalized interventions should entail the flexibility to adapt treatment contexts, such as the treatment setting and modality, to align with each client's clinical needs and preferences (Delgadillo & Lutz, 2020).

From a methodological perspective, it is imperative that interventions for LIEM populations are rigorously investigated. Studies should possess both internal and external validity and be developed in collaboration with stakeholders. As part of this design and implementation process, data collection should incorporate assessments of relevant individual and contextual factors, whenever possible. This comprehensive approach is necessary to capture the complexity of variables and their potential interactions associated with mental health issues, which can significantly impact the process and outcome of therapy. As POR has demonstrated that usual care is often less effective in addressing the mental health needs of these communities (Delgadillo et al., 2018; Finegan et al., 2018, 2020; Firth et al., 2023), there is a call to reevaluate traditional therapy for these populations (e.g., Youn et al., 2021) and to include context and systemic/community-level interventions in program development (e.g., Youn, Sauer Zavala et al., 2019).

Clients' reality and experiences

An inescapable starting point for any endeavor aimed at addressing the experiences of stigmatization and mistrust, as well as systemic obstacles - spanning occupational, social, and health domains- that hinder members of many communities to utilize and benefit from mental health service, is to acknowledge them. Taking the reality of these individuals into account and integrating their perspectives into the establishment of clinical and research procedures is not just essential but lies at the core of the principles of community-based participatory research (Wallerstein & Duran 2006). These principles should serve as explicit and systematic guidance for POR projects conducted in various regions of the world. This approach has the potential to facilitate the establishment of partnerships with community partners, enabling the investigation and personalization of treatments tailored to the needs of LIEM populations. Moreover, it is also likely to enhance the successful implementation and long-term sustainability of interventions (Chambers et al., 2013; Douglas et al., 2016; Youn et al., 2019). In the context of stigma, it is crucial to meet these populations where they are and to confront the challenge of reaching underserved clients through unconventional delivery methods, such as community organizations, schools, churches, and community members (Youn et al., 2019). Additionally, there is a need to validate instruments for use with different populations and in various modes or formats to ensure their accessibility and appropriateness for specific LIEM populations and contexts (Falkenström et al., 2018; Paz et al., 2020; Paz et al. 2021).

Cultural norms and attitudes toward research

One strategy employed to address the challenge of therapist ambivalence, lack of interest, or negative reactions toward participating in research was implemented in Ecuador. This approach involved conducting workshops with therapists to explain the implications of using outcome measures in clinical practice and the associated benefits. While therapists initially exhibited enthusiasm during the workshops, they were not fully committed to incorporating outcome measures into their practice. Some cited time constraints as a barrier to offering these measures to their clients and engaging in the research process. Importantly, this aligns with the existing evidence, which indicates that similar barriers to implementing routine outcome monitoring exist in the Global North, including countries like the United

States (Boswell et al., 2015), the Netherlands (Bovendeerd et al., 2023) and Norway (Solstad et al., 2021), among others.

As a solution, the Ecuador team opted to provide training to psychotherapists in the clinics where they work. These trainees were encouraged to disseminate the use of the outcome measures to other therapists, including established providers and colleagues, upon completing their training. This approach yielded more positive results in terms of the adoption of outcome measures in clinical practice. The evolving positive attitudes of therapists toward research can be considered a valuable indicator of the success of a POR infrastructure, as such infrastructure aims to create a fertile common ground where therapists can also be researchers without major alterations to their usual clinical work. While several studies have assessed attitudes towards research among psychotherapists (e.g., Areas et al., 2022; Farfallini et al., 2018; Gyani et al., 2014; Taubner et al., 2016; Thurin et al. 2012), there are currently no available examples examining changes in attitudes as an outcome variable to evaluate the success of a POR or PRN infrastructure.

Considerable effort has also been invested in the Ecuadorian team to explain to clients how these measures work. Trainees play a pivotal role in providing information during individual meeting with clients and addressing their questions about the content of the questionnaires. In addition, the Ecuadorian team has found that some routine outcome monitoring measures can be excessively lengthy and exhausting for clients. Therefore, adapting data collection processes by using shorter versions for session-by-session assessments may be a suitable way to accommodate the individual needs of each POR infrastructure. While many of these aspects are not unique of Ecuador or other LIMCs (indeed, all these aspects are usually described in POR literature), it is important to acknowledge that these challenges are also prevalent within LIMCs and LIEM populations.

Problems with data collection and data analysis

POR researchers have developed several strategies to address missing data in clinical routine research, especially in settings where data collection faces significant barriers. One effective approach involves providing reimbursement to subjects for completing assessments, either at regular intervals (e.g., after every three completed questionnaires) or upon project completion. Alternatively, participants can be offered a chance to win a single prize of higher value, such as entry into a random drawing for a $100 gift card (even if the funds come from the research team, with each member contributing). Studies on participation in behavioral health research indicate that these small incentives can effectively sustain participation (Abdelazeem et al., 2022; Kypri & Gallagher, 2003). Having said that, it is important to mention that these strategies are not specifically for LIEM populations or POR projects but applied in research in general. Moreover, these are strategies that necessarily entail having funding, and therefore are more likely to apply for non-LMICs.

Another way to increase participation, and reduce missing data, is to proactively reach out clients. Clients can be called before their first therapy appointment to inform them about the research study. Additionally, calls can be made ahead of the due date to remind clients about upcoming assessments and when they are expected. Ideally, research assistants can manage this tracking process, and they can also assist clients in completing self-report questionnaires over the phone. Previous research has shown that providing preparatory information, multiple points of contact, and reminders can bolster research participation (Frohlich, 2002).

Missing data is, to some extent, inevitable and reflects the challenge of balancing the desired number of measures with participant fatigue. To address this tension, it is vital to make case-specific decisions, guided by POR principles, when determining which measures to use and how frequently to collect data. These principles include using questionnaires that are not only psychometrically robust but clinically helpful, without imposing an undue burden or causing drastic change in clinical routines and, ultimately, ensuring that the collected data can lead to immediate action (see Castonguay et al., 2021). Resolving such tension in ways that maximize empirical and clinical priority may be best achieved by an active collaboration between stakeholders, an approach strongly emphasized in POR literature.

Even when appropriate and successful decisions have been made to reduce missing data, it would be optimal to pay careful attention to how to analyze data with such missing data. This involves engaging in conversations with data providers and inputters in advance and during the research, maintaining a high level of care in data preparation and cleaning, and being aware of potential caveats related to this type of data, such as systematic factors driving missing data (e.g., language and educational level of clients). In addition, it is advisable to be transparent about the balance between pre-registration and open science on one hand and the understanding that pre-registrations can be adjusted in response to data weaknesses on the other. This adaptive approach allows stakeholders to respond appropriately and ensures the research remains robust and rigorous.

Pitfalls in interpretation of data

Sophisticated methodological and statistical techniques are essential for addressing the complexity of LIEM populations, considering their intersectionality and heterogeneity, while simultaneously enhancing the internal and external validity of research endeavors. These advanced methods, which encompass multilevel models, structural equation models, and their integration, provide the means to investigate interactive patterns while accounting for vital sociodemographic and clinical variables.

To thoroughly dissect multifaceted phenomena such as socioeconomic deprivation, research entailing large sample sizes (e.g., national, standardized) that can result in high powered datasets and analyses are required. Given that effects related to LIEM populations can manifest across various levels of clustering, multilevel analyses (including, for example, neighborhood and clinical organizations) are also necessary. Parsing out these variables (which are unavoidably nested in naturalistic settings) allows for an investigation of socioeconomic background less as a mono-effect (e.g., using education level as a single operationalization of socioeconomic status) and more as a constellation of potential effects.

Irrespective of the expertise levels of various stakeholders, the above-mentioned pitfalls in data interpretation should be seriously considered. Interpretation should be recognized as involving a set of key skills that entails trying to prove oneself wrong, sense-check, sensitivity check, triangulation of evidence, discussion with critical friends. Such skills, especially if implemented in the context of multidisciplinary collaboration, should be in the toolbox of any POR project or PRN infrastructure.

Writing and Publication challenges

Among the alternatives that have been proposed to face the challenges of writing is to seek feedback from people not involved in the research to ensure consistency in style of writing and comprehension of content**.** More concretely, the use of “author scorecards” to determine the weight of each co-author’s significance of contribution to a given manuscript has been used in some POR groups, such as the one led by Rebecca Drill. While scorecards serve as helpful rubrics in determining who should be included as an author, and which author has made the most significant contribution, they offer limited guidance on how to determine importance of *co-author placement*. The order of authorship should be discussed at the beginning of a project, with the understanding that the agreed upon order may change once the project and writing gets underway. This may hinder delays in the writing process because of the lack of clarity concerning who should be in charge of leading the publication.

Regarding the publication of POR findings, the field has witnessed numerous calls for POR papers, including for papers demonstrating the meaningful impact of research coming from small countries. The effect of such calls can be seen in special issues devoted to POR in several different journals, such as the inaugural series in *Psychotherapy Research* (Castonguay & Muran, 2015), the subsequent series in *Revista Argentina de Clínica Psicológica* (Fernández-Alvarez & Castonguay, 2018) and the latest series published in *Studies in Psychology* (Altimir et al., 2022), among other editorial endeavors. These initiatives highlight the importance of disseminating POR research and its contributions, particularly from smaller countries, in various academic publications.

IV. General recommendations

More POR and research on LIEM populations

Research conducted exclusively on pWHIC populations and relying only on experimental designs, such as RCTs in laboratory contexts, hinders the generalization of psychotherapy findings (Beutler & Forrester, 2014), most particularly to underserved settings. Prioritizing internal validity in such research has also limited the relevance of results in real world settings. Collaborative POR involving a wide range of mental health service stakeholders, including clinicians, administrators, researchers, policy makers, and clients, has the potential to address knowledge and actions gaps. For example, generating practice-based evidence and conducting POR in LIEM populations may help identify profiles of clients that are more likely to benefit from specific treatments, and uncover different important factors such as therapist, center, and national service effects that facilitate therapeutic change (Castonguay et al., 2021). Importantly, this research avenue is likely to shed light on the influence of cultural specificity and different cultural realities on psychotherapy outcomes for LIEM individuals (Sue et al., 2022).

This does not mean that experimental research cannot be conducted in real world settings, but for this type of research to yield the most valuable PBE it should actively involve therapists at every stage, thereby avoiding what has been termed *empirical imperialism* (e.g., Castonguay et al., 2010; 2013; 2019). To maximize therapists' input, studies should encourage and utilize research on how therapists engage with research, including what clinicians want to know and which studies that they are willing to participate in (Tasca et al., 2015; Youn, Xiao et al., 2019), as well as the experiences of practitioners in conducting research (Castonguay et al., 2010; Garland et al., 2006), and clinicians' experience in using research based interventions (Goldfried et al. 2014; Martin et al., 2012). At more micro or local levels, the design of most, if not all, POR studies could benefit from the insights of practitioners through structured surveys and in-depth interviews to incorporate their preferences, attitudes, and barriers into the research protocol.

To facilitate the development of practical and actionable practice-based evidence, it is of paramount importance that research, either in the form of RCTs or alternative methodologies, avoids imposing restrictions or additions to usual care that will not be sustained beyond the study. Furthermore, research protocols should not place undue burdens on the clinical routine or demand drastic changes. Instead, the focus should be on enhancing psychotherapy as it is naturally conducted within real-world settings. It is worth noting that psychological services for LIEM populations are generally delivered within the public sector, where a variety of challenges are plentiful. For example, the clinical burden on therapists and public systems, especially (but not only) in LMICs, often face overwhelming workloads, making it impossible to provide weekly 45 to 50-minute sessions. Instead, sessions are often limited to once a month or even less frequent, typically of 20-30 minutes. Considering these challenges, POR research should be viewed as a pathway to inform the field about interventions in real world contexts which include resource-limited contexts.

LIEM populations are disproportionately affected by stressors such as the COVID-19 pandemic and they also have even more challenges accessing care to address these heightened needs (Cubrich et al., 2022; Kola et al., 2021). True innovation entails thinking outside the box to address the needs of these populations. For instance, in terms of implementation, researchers must carefully evaluate if it is more efficient to disseminate less effective research that can reach more people. In other words, evaluate the efficiency of the interventions considering their impact not only at the individual but also at the societal level. These considerations lead to a range of clinical and ethical issues, particularly concerning the allocation of scarce resource available. For example, while RCTs are often considered the gold standard for evaluating intervention impacts, some RCTs include a waiting list group that does not receive immediate care. Moreover, increasing accessibility for research participants necessitates taking into consideration various factors such as clients' life burdens, literacy/language skills, issues around confidence, engagement, and sensitivities related to collection of certain data. In this sense, it is essential to reject deficit-based approaches and instead emphasize empowerment, agency, and the social construction of knowledge when conducting empirical work on underrepresented and marginalized groups. Relatedly, therapists must be prepared to challenge the tendency to have low expectations for underserved clients' responsiveness to treatment, as research has shown that client engagement and responsiveness play an instrumental role in therapeutic outcomes (Constantino et al., 2021). This includes being careful not to exercise overprotective attitudes, which may require self-reflection (e.g., awareness of countertransference issues) and specific training (Castonguay & Hill, 2023).

It should also be mentioned that more research is needed related to financial deprivations that are not typically associated with LIEM populations. A case in point are college students with limited financial resources. A crucial facet of this research is understanding employment experiences during college and the complex interplay between working and various aspects of their college experiences (O'Shea & Kaplan, 2018). This is especially important for students who are at a higher risk of marginalization and exclusion within higher education. In the context of the growing prevalence of mental health challenges among college students (Xiao et al., 2017), it is worth studying how engagement in paid employment relates to mental health help-seeking behaviors.

To maximize the impact of POR more generally, fostering dialogue and collaboration among POR groups becomes essential. This collaboration should aim to identify commonalities and disparities in their research focus and methodologies, paving the path for more cohesive and effective future research efforts. While the nature of research designs and statistical analyses should remain diverse, there is a clear need to establish a core battery of measures. These measures, selected based on assessment focus, stage of development, and psychometric qualities, would serve as a toolbox for POR groups to consider when planning their studies or research programs. Such an approach holds the potential to facilitate the aggregation of data from various sources, allowing for large-scale investigations that would otherwise require substantial financial resources. Along with standardizing measures, the development of design principles entailing different aspects of the research process (i.e., sampling procedures, data collection, and the dissemination of results) could enhance access, inclusivity, and the overall relevance of empirical endeavors. By collectively working towards these goals, POR groups are likely to maximize the value and reach of their contributions.

More resources are needed

A recurring topic throughout the entire manuscript is the need to increase the availability of financial support for POR, especially in LMICs. Traditional large governmental grants are less likely to serve as a predominant funding source, given the prevalent emphasis on biomedical and experimental research. This underscores the need for innovative thinking, encouraging POR researchers to explore non-traditional sources of support, such as private foundations, for-profit, and non-profit organizations, even small-scale investments which can play a vital role in addressing specific yet critical needs, like ensuring the availability of phones for client follow-up.

Do what is feasible

Evaluating the feasible scope of activities within the means of a research group is crucial. Some POR groups face limitations in terms of financial resources, time, staffing, and may lack access to experienced graduate students or assistant researchers who can undertake demanding tasks like independent coding of sessions or data handling. It is imperative that each research group selects projects that align with their available resources and capabilities. No study should be considered too small, particularly those that aim to gain deeper insights into one’s own work environment and how it can be improved. One of the reasons why the POR paradigm is well-suited for clinical infrastructures or research groups with limited financial resources, is that its goal is to allocate available resources to projects that can enhance routine clinical practices and seamlessly integrate into daily procedures.

Sense of community

POR holds a unique potential to create a sense of community that can operate as a driver of better treatments and a work environment that prioritizes the well-being and engagement of clients, therapists, and researchers alike. For example, individuals living in extremely poor conditions may face obstacles in accessing consultation rooms located in city centers. Rather than expecting them to engage in a therapeutic process that occurs in a context disconnected from their everyday reality, doing home visits can be a feasible and effective means of facilitating therapeutic change. Another example may be to meet the need where it exists, leveraging community organization staff as deliverers of interventions at the organizations that directly serve the LIEM populations (e.g., Youn, Valentine et al., 2019).

The use of technologies may help to reduce implementation challenges

The provision of real-time information on treatment progress may make current interventions more flexible and personalized for both clients and therapists. Also, if the monitoring and feedback system is automatized it can be less time consuming. Ambulatory assessment using technological platforms has fostered the systematization of data collection and contextual information of clients, including psychophysiological measures using wearables (Lutz, 2022). This is particularly true for infrastructures of non-LMICs, in which the universities or institutions may have technological platforms that can be used by their researchers. However, even for research centers from non-LMICs, affordability typically depends on securing research grants.

Implementing these technologies presents several challenges, including concerns from both therapists and clients about continuous monitoring, the need for regular battery charging, and reliable internet connectivity, among other issues. These challenges are particularly pronounced in LMICs, where limited resources and issues such as severe safety concerns pose additional obstacles. For example, at the Aiglé Foundation in Buenos Aires, an anecdotal incident highlights these challenges when attempting to incorporate biosensors through smartwatches. In this case, a client did not adhere to the continuous use of the smartwatch out of fear of being robbed.

The implementation of monitoring technology may advance treatment personalization for LIEM populations at a local level, by creating an implementation structure that will benefit the clinic(s) where mental health services are provided.

Furthermore, it could serve as a building block to create much-needed research infrastructures within these clinics, allowing for both ongoing quality assurance projects and innovative psychotherapy research initiatives that may lead to the continuous refinement of personalization of care.

Monitoring technology, however, raises critical issues. Most of these technological advances rely on artificial intelligence and machine learning, and it is imperative to discuss their role in our current societies as well as their impact on psychotherapy. For example, the fact that they have emerged from dominant societies has led to what has been called the *algorithm unfairness* (Chen et al., 2021). This could be problematic for pWHIC populations due to a range of factors, including bias in generated data (i.e., algorithms are trained on dataset that may not adequality represent the diversity of underserved populations), cultural insensitivity (i.e., algorithms may fail to account for cultural differences in values, beliefs and behaviors), reinforcing existing inequalities (i.e., algorithms can perpetuate existing social, economic, or racial inequalities), among others (Mhasawade et al., 2021).

To mitigate the risk of such problems, it is crucial to generate data in an environment where transparency and data protection is guaranteed, especially for people who may not fully understand the implications of providing their data and have limited data literacy. While acknowledging the challenges and costs of creating systems that generate data from the population itself, such systems can prevent the imposition of data that are unrelated to specific population's needs. Therefore, to meet the unique requirements of LIEM individuals it is necessary to develop specific machine-learning-based systems for the measurement-based personalization of psychotherapy interventions tailored to these underserved populations.

In a clinical context, these systems should assist clinicians in personalizing their treatment based on specific client and therapist variables. Notably, the treatment expectations of LIEM clients may diverge from those of less marginalized clients. These potentially different treatment expectations might influence both clients' participation and their overall satisfaction with the treatment process. LIEM clients may encounter confusion regarding the procedures and objectives of treatment, often stemming from their familiarity with programs and services offered by humanitarian aid or social assistance agencies. Therefore, it is paramount to accurately assess and address these treatment expectations as an essential initial step in the therapeutic process, recognizing the significance of clients' preconceptions and ideas about psychotherapy.

Integrate research knowledge into clinical work, training, and organizational routine

As stated previously, the aim of POR is to seamlessly integrate research and practice to better understand and, ultimately, improve clinical routine, training, and the organizational reality. Many POR groups engage in process and outcome monitoring, not only to publish research findings but also to enhance treatment outcomes. One way to achieve this goal is to integrate data into clinical supervision. To begin with, this can address clinicians' concerns that the data is primarily used for research purposes or as a non-transparent evaluation of their performance. Rather, it can serve as evidence for clinicians that the collected data is genuinely employed to improve the quality of care, benefiting both clients and therapists. In addition, this practice can help recognizing therapists' unique skills and areas of intervention focus, allowing for a better alignment of their strengths with specific client profiles. In this context, supervision can be a platform for increasing clinicians' motivation to collect data, as research is shown to be an intrinsic part of clinicians' ongoing training and professional development. Of course, such potential usefulness of routine outcome data is not restricted to LMICs. In the context of the lack of clear clinical guidelines in these countries, it may gain a particular significance as a safeguard for effective clinical practice.

Research findings should also be distributed to clinicians outside the bounds of supervision, as a source of knowledge that they can incorporate on their own into their practice. Furthermore, findings can help the institution to handle complex tasks, such as referral, or evaluate organizational-level outcomes (Youn, Jaso, et al., 2023). For example, outcome data of clients who have been treated in multiple therapies within a training clinic can help ensure smoother transitions during transfer to another clinical site.

Implementing research skills

Research demands a range of skills, some of which are particularly relevant when conducting POR with LIEM populations. Firstly, there is the importance of striving for conceptual clarity in defining the terms under investigation. Prioritizing definitions and categorizations that are endorsed by research participants is crucial. Additionally, researchers should approach their work with a critical thinking perspective, encompassing the entire research process. This includes designing studies that ideally combine highly powered, high-quality quantitative research with high-quality qualitative research. It also involves analyzing data, such as identifying contextual factors and examining their relationship with client, therapist, process, and outcome variables. Finally, it extends to the interpretation of findings, which should be done with the utmost care and rigorous critical processes. This may involve techniques like triangulation, collaboration, and testing to failure, where a theory or interpretation is pushed to its limits in an attempt to identify potential weaknesses or contraindications. These skills are especially pertinent when conducting research with LIEM populations, as they ensure that the research is both methodologically sound and ethically informed.

Programmatic combination of research methods

Ideally, POR should involve a multi-steps loop: Collecting data from a naturalistic site, examining the data collected to identify target(s) for potential enhancement of care in the site, developing a protocol to positively impact the identified target(s), and implementing and testing the effects of the protocol in the same site (Castonguay et al., 2015).

An example of such programmatic, and multi-methods, POR with LIEM is currently spearheaded by Fredrik Falkenström and his colleagues in Kenya. This endeavor will begin with the mapping of client outcomes in regular practice using routine outcome monitoring. Subsequently, the researchers intend to employ growth mixture modeling to identify subgroups of clients who are not experiencing improvement and may even be deteriorating. Quantitative and qualitative research methods will them focused on these specific client groups, with the goal of identifying the unique characteristics of these clients, including their symptoms, diagnoses, or other relevant factors. This will be followed by comprehensive literature searches to identify treatment approaches that have proven effective for clients with these characteristics. Finally, pragmatic randomized trials will be conducted to investigate methods selected from the literature search for clients identified as not benefiting from treatment. In parallel, qualitative interviews are planned with therapists and with good outcome clients, trying to identify cultural adaptations of psychotherapeutic treatment methods that seem to be effective in these contexts. This comprehensive approach serves as a prime example of the POR process, which seeks to understand and enhance mental health care – while be responsive to the distinctive needs of LIEM populations in LMICs, within the specific cultural and clinical settings of these regions.

Conclusion

The POR approach offers a promising avenue for addressing the unique challenges faced by LIEM populations in both LMICs and non-LMICs settings. To maximize the feasibility of POR and its meaningful impact, we propose the following action items for stakeholders:

1. **Collaboration:** It is a defining feature of POR to promote a collaborative approach by fostering partnerships between researchers, clinicians, and various stakeholders to facilitate the integration of research findings into clinical practice. Therefore, it is of paramount important to encourage regular meetings and open dialogue to ensure that research is perceived as a tool for improving the therapeutic process. As previously mentioned, this collaboration should optimally take place at an

international level, fostering partnerships between countries and regions to facilitate the sharing of measures, research methodologies, and the construction of large datasets. Among other clinical and empirical benefits, what could emerge from these collaborative efforts are the exchanges of knowledge (including what has been investigate, what should be investigated, and how), design of research projects, and the planification of future data sharing, analysis, and dissemination. This approach aligns with one of the core principles of POR: *Work locally but collaborate globally* (Castonguay, 2011). In the context of POR for LIEM populations and LMICs, the creation of networks with the aim of collecting data at different sites is of great relevance both in terms of diversity of expertise and sample sizes. We believe that the time is ripe to set a common agenda to gather the same data in different contexts. This may enable researchers to identify variables related to underserved populations that affects the course of therapy, as well as to define the extent by which these variables play a role in the treatment outcomes of marginalized persons living around the world.

2. **Support Ethical and Culturally Sensitive Research:** It is essential to prioritize the ethical conduct of research in diverse cultural and socioeconomic contexts, recognizing that context matters and that research methodologies should be tailored to the unique preferences and needs of the populations served. Besides, it is vital the inclusion of LIEM populations in decision-making processes to ensure research aligns with their expectations and values. This should be an intrinsic hallmark of POR.

As a general conclusion, conducting POR in underserved settings, whether in LMICs or marginalized communities within non-LMICs, inherently requires including the specificity of each clinical context. Therefore, the general challenges, strategies and implications outlined in this article must be adapted to each setting and circumstance with cultural competence and a strong commitment to improving the quality of life for these populations.

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