Mental Health Service Provision in Low- and Middle-Income Countries

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ABSTRACT: This article discusses the provision of mental health services in low- and middle-income countries (LMICs) with a view to understanding the cultural dynamics–how the challenges they pose can be addressed and the opportunities harnessed in specific cultural contexts. The article highlights the need for prioritisation of mental health services by incorporating local population and cultural needs. This can be achieved only through political will and strengthened legislation, improved resource allocation and strategic organisation, integrated packages of care underpinned by professional communication and training, and involvement of patients, informal carers, and the wider community in a therapeutic capacity.

KEYWORDS: Mental health services, low- and middle-income countries, service provision

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Introduction

More than 85% of the world's population live in the 153 low- and middle-income countries (LMICs).[1] More than 80% of people who have mental disorders are residing in LMICs, with mental illness and substance abuse disorders presenting as an important cause of disease burden, accounting for 8.8% and 16.6% of the total burden of disease in low-income and lower-middle-income countries, respectively.[2,3] As an example, in Bihar, one of the most economically deprived areas in India, the number of people suffering from schizophrenia is more than that in the entirety of North America.[4]

Experts predict that by 2030, depression alone is likely to be the third leading cause of disease burden in low-income countries and the second highest cause of disease burden in middle-income countries.[5] Depressive disorders, schizophrenia, bipolar disorder, and alcohol use disorders are among the top 10 causes of disability due to health-related conditions in LMICs, representing a total of 19.1% of all disability related to health conditions.[2] The high incidence of mental illness and substance abuse disorders in low- and lower-middle-income countries can lead into an economic trap of disease burden and social decline. As an example, people with lower socioeconomic status (SES) are at 8 times greater risk of developing schizophrenia than those of the highest SES, but a study in Poland found that 95% of employers said that they would not want to employ a person with schizophrenia for any position.[6] This spiral of the poorest in our societies being at highest risk of developing debilitating disorders, and them in turn being denied income-generating employment opportunities, traps them within poverty and also holds back a demographic of the poorer nations in the world.

Social factors, such as poverty, urbanisation, internal migration, and lifestyle changes, are moderators of the high burden of mental illness in many LMICs. Demographic factors, including a significant proportion of the population being in the younger age range, increase the incidence of severe psychiatric disorders such as schizophrenia. As an example, 21.5% of the population in Pakistan are in the age range of 15 to 24 years[7]; similarly, 47.1% of Saudi nationals and 41% of the total population in the Kingdom of Saudi Arabia (KSA) are below 24 years of age.[8]

Both man-made and natural disasters, such as armed conflict, earthquakes (in Nepal, Haiti), epidemics (such as Ebola and Zika), and famine (Ethiopia), in developing countries increase the incidence of mental and emotional health problems in the affected communities, and at the same time, they divert limited resources to areas other than mental health.

Finally, the cultural views and institutional biases against women and certain sections of communities (eg, religious, certain castes) increase the burden of illness in these population subgroups.

This article aims to highlight the key challenges and opportunities in LMICs when delivering mental health services that

meet the needs of their populations. We begin with an overview of the current status of mental health services in LMICs. We then discuss how the future development and delivery of mental health care in LMICs can be informed and influenced by evidence and successful service models.

Mental Health Services in LMICs

Each country in the LMICs group is on its journey of awareness of the burden of mental illnesses, acceptance by society and policymakers, and allocation of resources for development of mental health services. Therefore, there is a wide variability in the provision of mental health care between countries. Most countries share the mismatch between high need and persistent scarcity of financial resources, workforce, and infrastructure for mental health services.

The proportions of people with a mental disorder who receive treatment are low with an international survey reporting that only 11.1% of severe cases of the mental disorder in China and 10.4% in Nigeria had received any treatment in the previous 12 months.[9] The proportions of people with mental illness who receive evidence-based treatments are likely to be even lower.

Comparisons between high- and low-income countries show a significant difference in the presence of a mental health workforce of psychiatrists, nurses, psychologists, and social workers. Compared with global averages of 3.96 psychiatrists per 100 000 people, China reported 1.55 psychiatrists per 100 000 of the population.[10] Corresponding ratios of psychiatrists per 100 000 individuals in the most populous developing countries of Asia and Africa, ie, India, Pakistan, Nigeria, and Ethiopia, are 0.301, 0.185, 0.06, and 0.04, respectively.[11] Chad, Eritrea, and Liberia, with national populations of 9, 4.2, and 3.5 million, respectively, each have just 1 psychiatrist per 100 000 people, whereas Rwanda, Afghanistan, and Togo each have just 2.[12] Unequal geographical distribution of these limited resources accentuates the problem of poor access to mental health care. For example, the majority of psychiatrists in LMICs are based in the main urban centres, and due to transport issues, they are often not accessible to the rural populations.[13]

Cultural and religious attributes of illness and belief systems that influence help-seeking behaviour further complicate access to services and outcomes for mental health. Many individuals first seek help from complementary practitioners or spiritual or faith healers as they have less faith in the therapeutic interventions as currently delivered. Such inadequacies lead individuals to use both traditional and as well as alternate healers.[14] The stigma of mental illness compounds this issue further as people are more comfortable seeking help from agents that normalise their experiences, such as community leaders. As a consequence, some non–evidence-based interventions are taking a foothold and gaining popularity as alternatives to evidence-based treatments. Although this presents challenges, it is also an area that can be and has been utilised in many countries to engage people with mental illness early. There are global calls for using collaborative approaches with wider communities, psychotherapeutic principles, theories, and techniques to be adapted to LMICs to make them more user-friendly and acceptable while improving outcomes for mental disorders.[15,16]

Some high-income countries, such as the United States, have developed mental health systems that are very expensive, fragmented, and not focused on outcomes relevant for the service users.[17] There are lessons to be learnt from the mistakes of these countries when developing services in LMICs. On the contrary, some LMICs have developed their mental health systems creatively, and useful lessons can be highlighted from the countries that have demonstrated good practice through innovation.[1]

It is important to recognise that many LMICs have significant strengths such as families and communities sharing the burden of mentally ill—more inclusive and permissive approaches to the employment of mentally ill in some countries and communities that normalise psychopathology and thereby reduce stigma.[18] In India, 90% of people with mental illness live with their family.[19] The role of the family is all-pervasive, and families will influence illness-related decisions such as whether and where to seek help, its nature, the need to comply with treatment, and life decisions such as employment and marriage of the individual with mental illness. To harness this resource, some institutions such as the National Institute of Mental Health and Neurosciences in Bangalore and the Christian Medical College in Vellore have created facilities for families to live with patients and thereby participate extensively in their therapeutic programmes.[20] This set-up equips families with skills to become extended therapy providers and can mitigate against lack of available trained practitioners in LMICs.

However, with all its benefits, this familial approach to the care and treatment of mental illness in such countries also spreads the burden of the disease to multiple members of the family, further disadvantaging the economic status of the family, by removing members from national output related activities.

In recent years, much attention has been devoted to understanding the key challenges faced by mental health services in LMICs and generating solutions to improve the limited provision of evidence-based treatments in these countries.[6] We discuss these key challenges here and make recommendations as to how we can create or grasp existing opportunities in LMICs to improve mental health care.

Key Challenges

The challenges facing mental health services in LMICs are related to many factors, including legislation and policy, finances and resources, organisation and planning, and availability of appropriately adapted evidence-based interventions and training. Underlying all of these is each specific

population's worldview and cultural belief system and how it relates to mental health and illness. This can be both a strength and weakness but undoubtedly influences service utilisation.

Saraceno and colleagues[21] studied the barriers to mental health service development through a qualitative survey of international experts and leaders. Their findings highlighted the following key challenges for mental health in LMICs: public health other than mental health takes priority in securing funding, mental health services are complex and confined to central geographical areas, mental health care in primary care settings is difficult to implement, and the low numbers and few types of workers that are trained and supervised in mental health care.

Challenge 1: legislation and policy

Many LMICs lack mental health policies and laws to direct their mental health programmes and services, which is of particular concern especially in Africa and South East Asia.[22] Family and user associations are present in LMICs but do not have a strong influence in the development of policy and procedures; this is a serious oversight considering that the majority of people with mental illness in LMICs are supported by the large family unit as already discussed.[23] The mental health policy and the service guidance by the World Health Organization (WHO) describe the necessary steps to follow but does not detail how this can be contextually relevant to a particular culture.[22] It is not only the lack of policies, but also the content of the existing policies that have an impact. For instance, to what extent do the policies promote integration with the other sectors such as justice, social care, and development of services to ensure a more comprehensive (prevention, promotion, and treatment) and holistic approach to the delivery of mental health services are important. Sometimes, the inadequacy or negative impact of existing policies and how this influences the mental health burden is a factor. An example of a policy that has direct effects on the mental well-being of a population can be found in China, where under the household registration system ('Hukou' system), rural migrants into cities are not entitled to the housing and medical benefits enjoyed by city residents. Evidence suggests that these migrant workers are at increased risks of having mental disorders than the residents in major cities.[24]

Although it is important to have policies, it is equally important to ensure that the policies are relevant and beneficial to the local populations. Implementation of the policies should be adequately planned and change process communicated. An example of a well-designed programme to achieve strategic localisation and implementation of evidence-based policy is PRIME (PRogramme for Improving Mental health carE).[25] The aim of PRIME is to generate evidence on the implementation and scaling up of integrated packages of care for priority mental disorders in primary and maternal health care settings in Ethiopia, India, Nepal, South Africa, and Uganda. Breuer and colleagues[22] described the use of the theory of change (ToC) as part of the PRIME initiative to develop integrated mental health care plans for specific districts in the above countries. This process has resulted in various outputs including an outcomes pathway, key interventions, the major assumptions, and the indicators, with a summary of applied ToC map. Although the authors have described the process as beneficial, they also argued that the approach compromised stakeholder buy-in and bottom-up development of the change process. Considering our discussion of the community as a strength in many LMICs, this is a missed opportunity, and future efforts should make efforts to obtain community feedback and buy-in to make programmes more successful.

Although local policies are very important, world leaders need to consider the role of the global architecture and the civil society in influencing mental health legislation. For example, is mental health given due priority, given its growing contribution to global health? Similarly, the attitudes towards mental health among policymakers have a very important role in mental health policy development and funding allocations.

Challenge 2: finances and resources

Globally, the expenditure on mental health is less than US$2 per year per capita across all countries and less than 25 cents in low-income countries. Many LMICs, including 15 of 19 African countries, allocate less than 1% of their health budgets to addressing mental illness.[26] India, like other LMICs countries, has a federal government with devolved budgets to individual states. The federal budget allocates 4.6% of the gross domestic product (GDP) for health, which works out to per capita sum of US$0.22. Mental health only receives 0.06% of the general health budget. Pakistan spends 3.9% of the GDP on health, of which 0.4% is spent on mental health. The primary sources of mental health financing in descending order are out-of-pocket expenditure by the patient or family, taxes, social insurance, and private insurance.[12] Although it is clear that funding allocation to mental health services is inadequate, it would be helpful to have a benchmark of the ideal distribution of budget for general health and mental health for countries to have a guideline to work towards in each country.

Challenge 3: organisation and planning

Organisation and planning of mental health services needs focussed attention on the infrastructure and systems that allow easy and early access with referral systems, resources including health personnel, evidence-based treatment guidelines and availability of interventions, a mental health information system, links with other sectors, the extent to which mental health is integrated into health and mental health policies, national strategic plans, and district operating plans. Literature highlights the key organisational barriers to mental health care in LMICs being difficulties in access, the

competing public health priorities, low investment in mental health services, a paucity of specialist human resources, and resistance to decentralisation.[22]

The availability of geographically spread practical facilities influences access and outcomes in mental health. Providing treatments in wide rural areas or where transport links are difficult especially when resources are concentrated in one central, usually urban base, is a difficult practical issue common in many developing countries. It might be difficult, indeed impossible, for some clients to return to a health facility for interventions on a regular basis. Alternative strategies using information technology may need to be considered in these situations. Telepsychiatry is being increasingly used even in countries such as the United States to provide services to rural and inaccessible areas, and this technology can easily be transferred and used in LMICs to streamline the provision of mental health services to rural areas.

As publicly funded mental health care is often difficult to access by rural communities in LMICs, there is a growing recognition that mental health services should be integrated into primary care so that the availability of evidence-based treatments can be widened and provided in a setting that is less stigmatising. As an example, in India, mental health services are integrated into primary health services with support and supervision from mental health teams at the district level. This system was set up to counter the stigma of mental illness and makes treatment available to rural communities. However, not all districts are covered under this programme, and many primary health care physicians have not received any up-to-date training in mental health. This demonstrates the lack of organisational planning in this important area. Individuals who cannot be treated at the primary care level are referred to mental health outpatient facilities, psychiatric wings of general hospitals, or dedicated psychiatric facilities. However, lack of resources is a key challenge in these facilities.

In some countries like the KSA, mental health services in primary care settings remain limited to prescribing a restricted list of antidepressants. This is due to restrictive national policy on the scope of practice of primary care providers. Psychopharmacology is the standard treatment for most mental health problems even among the most vulnerable populations, such as children and adolescents in many LMICs.[27] In a recent survey of 63 mental health professionals from different regions of the KSA, the most common intervention used in clinical practice was pharmacotherapy (71%), followed by supportive therapy (40%), cognitive therapy (23%), combined approach (17%), psychodynamic and family therapies (8%), and group therapy (6%).[28] There is some evidence that response to psychotropic medication may be influenced by ethnicity; therefore, the dosages of medications required in some LMICs may be different than the Western countries. Local guidelines based on some quality research could optimise pharmacotherapy for populations of individual countries.[29]

Challenge 4: evidence-based interventions and training

Psychotherapeutic interventions are not included in mainstream treatments in many LMICs. This can be attributed to 2 main reasons: lack of resources and inadequate training. Moreover, in some countries, the religion and political landscape have a role to play too. As an example, in the KSA, up until the end of the 20th century, literature on psychoanalysis and psychoanalytic theory were banned due to the influence of religious scholars from the early decades of the century who declared much of Freud's contributions to be heretical based on a very poor and superficial understanding of some of his ideas.[28]

Despite the strong evidence for its effectiveness, cognitive behaviour therapy (CBT) remains underutilised in clinical settings internationally due to the limited availability of comprehensive training programmes and qualified CBT mental health professionals.[30] In addition, as currently delivered, CBT has been criticised as being West-centric and not in tune with different cultural beliefs. Scorzelli and Scorzelli[31] conducted a survey of students in India and found that 82% of respondents felt that principles underlying CBT conflicted with their values and beliefs: 46% relating to their cultural or family values and 40% relating to their religious beliefs. Examples of beliefs held by some cultures that are incompatible with a West-centric CBT approach are our destiny is fixed and based on our previous good or bad deeds, people do not have free will and are controlled by a high power, the individual must abide by the rules and the values of their family or community to have a meaningful and conflict-free life, females will always need support from a stronger individual.

Although cultural relevance is essential and practice needs to be adapted to fit a variety of cultural backgrounds, this carries its challenges and should follow evidence-based methodology.[32] Cost-effectiveness of adapted interventions will need to be evaluated in LMICs. Such adaptation of therapies requires specialised training and research which tends to suffer in economic downturns. Theory would suggest that training becomes one of the first casualties in cost-reducing public institutions; where private firms can gain a competitive advantage by heightened investment in training in a period of fiscal tightening, public entities such as in health care have no such incentives.

The use of physical activity and sport has received little attention with respect to improving mental health in LMICs. Evidence is well established that physical activity plays a major role in improving psychological, physical, and social health for individuals living with disorders such as depression, anxiety, schizophrenia, bipolar, and much more.[33] Sport, too, can have a profound impact on overall mental well-being, specifically helping individuals living with mental illness develop a sense of purpose, strengthen their self-esteem, and working towards deepening their self-confidence.[34] The concept of physical well-being would appeal naturally to many cultures in LMICs

where somatisation is often the key presentation of mental health problems.

Despite the value of physical activity and sport, only a few studies have examined their impact on mental health in LMICs. A recent review by Hamilton and colleagues[35] on the mental health impact of sport and physical activity programmes for adolescents in postconflict areas found three poorly executed studies. Studies were conducted in Uganda and Sierra Leone, mostly focused on boys, and showed mixed results with respect to symptom alleviation. The potential for physical activity and sport to be part of recovery is tremendous, but further research and training is needed to ensure relevant programmes are developed in a culturally appropriate manner and are sustainable.

Opportunities

Globalisation and advances in media and communication across the world have resulted in increased awareness and a better understanding of mental health issues by the public in all countries.[36] There are increased training opportunities for psychiatrists and psychologists in LMICs, and local universities are supporting knowledge transfer for alternatives to institutionalisation and pharmacological treatments. In some countries, this awareness has also led to the formation of associations of psychotherapies such as the Pakistan Association of CBT and the Indian Association of CBT. These associations have begun the work of culturally adapting CBT interventions and testing their efficacy in their countries.

Despite these developments and increased awareness, in many LMICs and especially in the rural areas, culturally explained attributions to illness determine pathways into care, and often these do not lead to mental health professionals. Many people with mental illnesses prefer to see a faith healer or religious leader. Although this can present delays in accessing appropriate mental health care, knowledge of local cultural beliefs can suggest different ways of developing services. There are good examples where alternative pathways into care have been strategically used to engage people with mental health problems. For example, in Thailand, temples are the first port of call when people are unwell. To improve engagement of patients with mental illness, some psychiatric hospitals have actively integrated Buddha's teachings into community mental health work.

Some recently developed and successful therapies such as mindfulness-based CBT or yoga and mindfulness based cognitive therapy (Y-MBCT) are based on Buddhist teachings as well as on the ancient scriptural philosophies of the Vedas that many members of LMICs are familiar with and find it easy to accept and practise. One important aspect of Y-MBCT is that it could be used for wellness of families and caregivers as well as of persons with illness, and joint family practises can reduce stigma and isolation.[37]

It is common in many Chinese, Japanese, Malayan, Tahitian, and other cultural groups to somatise psychological and emotional distress symptoms to different body parts, eg, abdomen, liver, intestines, or heart. The reason for this is that somatic symptoms are explained through a perceived imbalance in body functions and are considered less stigmatising than psychiatric symptoms. Appropriate training in physical and mental health care at primary and secondary care level can help identify mental health problems early, even when they manifest as physical complaints. Also, resources need to be utilised to conduct quality research in different countries to fine-tune the understanding of psychopathology and the effectiveness of various interventions for that particular country.[15,38]

Family support systems and the larger community can be open and accepting of individuals with mental illness in most LMICs. A growing body of evidence through randomised trials now demonstrates that affordable and clinically effective interventions can be provided by the lay health workers in community–a process termed *task shifting*. Task shifting involves the rational redistribution of tasks among health workforce teams. Specific tasks are moved, where appropriate, from highly qualified health workers to health workers with shorter training and fewer qualifications to make more efficient use of the available human resources for health.[39] One example is community-based rehabilitation for people with schizophrenia in rural India,[40] which can be a feasible, acceptable, and efficient intervention for many people with psychotic disorders in low-resource settings. Community-based rehabilitation is a model of community care based on the active participation of people with physical disabilities and their families in rehabilitation that takes specific cognisance of prevailing social, economic, and cultural issues. A longitudinal study of outcomes in 207 patients with chronic schizophrenia contrasted community-based care (CBR) with outpatient care. The study reported feasibility of CBR with lower baseline disability scores, family engagement with the programme, medication adherence, and being a member of a self-help group as positive outcomes.[40]

Another example is group interpersonal therapy that has been found to be highly effective in treating depression in rural Uganda[41] and in adolescent girls surviving war and displacement in northern Uganda.[42] CBT delivered by Lady Health Workers in rural Pakistan has markedly improved postnatal depression, and benefits have been evident in children whose mothers received adapted CBT, including reduced episodes of diarrhoea and a greater likelihood of receiving immunisations.[42]

Culturally adapted low-intensity CBT for depression and psychosis has been developed and tested in both primary and the secondary care in Pakistan.[43–46] There is also evidence that evidence-based interventions can be delivered by a family member at no cost to the system.[46] These ideas might be less relevant in countries where financial resources are not a huge issue (eg, some Middle Eastern countries).

Task shifting often involves a stepped care approach. Araya and colleagues[47] have used this approach successfully in Santiago, Chile. They found that nearly 70% of the patients treated for depression using a stepped care programme recovered, compared with 30% of patients who were treated as usual,

at an additional cost of just 216 Chilean pesos (US$0.32) per depression free day.

Transdiagnostic psychological treatments have been suggested as a pragmatic solution to achieving scalability through task shifting using nonspecialist caseworkers. The transdiagnostic approach focuses on identifying the common and core maladaptive temperamental, psychological, cognitive, emotional, interpersonal, and behavioural processes that underpin a broad range of diagnostic presentations[48] and targeting these factors in treatment.[49] Research in this area has begun, and recently Rahman and colleagues[50] reported the effectiveness of a multicomponent behavioural intervention delivered by lay health workers to adults with psychological distress in primary care settings.

Peer workers or mental health service users who have recovered can provide support, share personal experiences, and facilitate recovery for individuals who are currently experiencing mental illness. The role of peer workers and caregivers to potentially deliver evidence-based mental health interventions needs to be explored and expanded. One approach would be to train recovered service users and employ them in the mental health workforce. They can be located in their communities and help support and help individuals who become ill.[14] Although this approach is not without its challenges, it can be an opportunity for the rehabilitation of mentally ill individuals combined with an expansion of the mental health workforce that is less expensive.[51]

To scale up services using such community-based approaches, some changes would be required, including revising the roles of different professionals with appropriate responsibility and accountability. Systems for quality assurance to maintain fidelity to the intervention over a period of time are required. Although there is potential, further evidence is needed to establish the effectiveness of these approaches in LMICs.

Next Steps and Actions

There have been numerous calls at various levels to scale up the provision of mental health services and evidence-based treatments in LMICs.[52] A commitment and global architecture to influence development of mental health services as priority is needed. The United Nations Human Rights Council[53,54] adopted a Resolution on Mental Health and Human Rights that provides an impetus to address human rights in mental health and also signals a commitment by countries to achieve this. Different countries are developing mental health services at a different pace, so the onward journey should follow an iterative process with a targeted approach based on local culture and population needs.

The Global Mental Health[52] initiative estimated that to provide services on the necessary scale, an additional cost of US$2 per person per year in low-income countries and US$3 to US$4 in lower middle-income countries is required, which is modest compared with the requirements for scaling-up services to treat cancer, another major contributor to the global burden of disease. We would argue that each country needs to conduct its own gap analysis while taking into account their areas of strengths to develop their expenditure plan. Countries need to set aside resources for quality research so that they better understand culture-specific psychopathology, adapt existing practices, and develop new ways of working that are relevant to the local population. A series of core and secondary goals and indicators to track the progress that countries make towards achievement of mental health service goals need to be identified. A priority-setting exercise to identify gaps in the evidence base in global mental health for some categories of mental disorders has already been conducted.[52] Next steps need to include strategic implementation of legislative and organisational plans and a system of evaluation that enable remodelling and restructuring of policy and practice based on the guiding principles of WHO.

Conclusions

Despite these promising activities and the publication of high-profile reports in several countries, progress in mental health service development has been slow in most LMICs. Many of the barriers to improving mental health services can be overcome by political will, social enlightenment, and a public movement to improve the care of people who suffer with mental health problems. Scaling up mental health services in LMICs requires flexible policies, adequate resources, effective interprofessional communication, and evidence-based training, supplemented with an evaluation plan to measure successes against specific benchmark criteria. A number of opportunities exist in LMICs, including evidence of integrated stepped care packages through a task-shifting approach and collaborative arrangements with families and wider communities that enable proper care within limited resources. Mental health treatments and training programmes in LMICs need to be responsive to the local culture, incorporate a public health approach, and embrace the diverse needs of the population.

Author Contributions

SR and NF conceptualised the article. All other authors contributed to the development of the structure and arguments for the paper. All authors made critical revisions and approved the final version of the paper.

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