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Health system strengthening for mental health in low- and middle-income countries: introduction to the Emerald programme

Graham Thornicroft and Maya Semrau

Summary

This paper gives an overview of the Emerald (Emerging mental health systems in low- and middle-income countries) programme and introduces the subsequent seven papers in this *BJPsych Open* thematic series. The aims of the Emerald research programme were to improve mental health outcomes in six low- and middle-income countries (LMICs), namely Ethiopia, India, Nepal, Nigeria, South Africa and Uganda, by building capacity and by generating evidence to enhance health system strengthening in these six countries. The longer-term aim is to improve mental healthcare, and so contribute to a reduction in the large treatment gap that exists for mental disorders. This series includes papers describing the following components of the Emerald programme: (a) capacity building; (b) mental health financing; (c) integrated care (d) mental health information systems; and (e) knowledge transfer. We also include a cross-cutting paper with recommendations from the Emerald programme as a whole. The inclusion of clear mental-health-related targets and indicators within the United Nations Sustainable Development Goals now intensifies the need for strong evidence about both how to provide effective treatments, and how to deliver these treatments within robust health systems.

Declaration of interest

None.

Keywords

Global mental health; health systems; health system strengthening; healthcare delivery.

Background

This thematic series in *BJPsych Open* reports on the work and findings of the Emerald (Emerging mental health systems in low- and middle-income countries) programme.[1] Emerald was funded over 5 years (2012–2017) by the European Union's 7th framework programme to support health system strengthening research related to mental health. In this context a health system is defined as 'the sum total of all the organizations, institutions and resources whose primary purpose is to improve health'[2] within which the World Health Organization (WHO) has identified six core system components (see Fig. 1).

The challenge

At present, health systems fail people with mental disorders in every country worldwide. At best only a third of people with mental disorders are treated in some high-income countries, and at worst fewer than 5% of people with mental disorders in low- and middle-income countries (LMICs) receive any treatment or care.[3–6] This large disparity between true levels of need and actual treatment rates is referred to as the 'treatment gap'. This gap is due, in part, to the substantial under-resourcing for mental health, which results in far too few human resources for mental health and a reliance on a small number of beds in tertiary hospitals. Stigma and discrimination may also contribute to the treatment gap because people do not access services or are exposed to human rights abuses. The gap exists even though the substantial contribution of mental disorders to the global burden of disease is increasingly recognised,[7,8] as well as their cross-cultural applicability and relevance to sustainable development.[9,10] Although there are now several high-quality sources that synthesise information on effective interventions for people with mental disorders,[11–13] far less developed is our understanding of what elements must be put in place at the national, regional and community levels to support the long-term delivery of effective mental health services.[14,15]

The aims of the Emerald programme were to improve mental health outcomes in six LMICs (Ethiopia, India, Nepal, Nigeria, South Africa and Uganda) by building capacity and by generating evidence to enhance health system strengthening, thereby improving mental healthcare and so contributing to a reduction in the mental health treatment gap. The key characteristics of the six Emerald country sites are shown in Table 1. These countries all face the formidable mental health system challenges that are common across LMICs, such as weak governance, a low resource base and poor information systems. The six countries were invited into the programme as a result of the commitment of local researchers and policymakers to engage in this programme, and to provide a rich comparison of sites in relation to their geographical, economic, sociocultural and urban/rural contexts, in order to strengthen the generalisability of the findings.

The five components of the Emerald programme

The Emerald programme entailed the coordination of the following five components (called work packages).

Capacity building

This work by Sara Evans-Lacko, Charlotte Hanlon, Atalay Alem and colleagues is described in paper two of this *BJPsych Open* thematic series,[18] which builds upon previous reports.[19–26] The Emerald programme has successfully supported the doctoral (PhD) studies of ten students across the six LMICs (three from Ethiopia, two from India, one from Nepal, one from Nigeria, two from South Africa, one from the UK). In addition, three Masters-level teaching

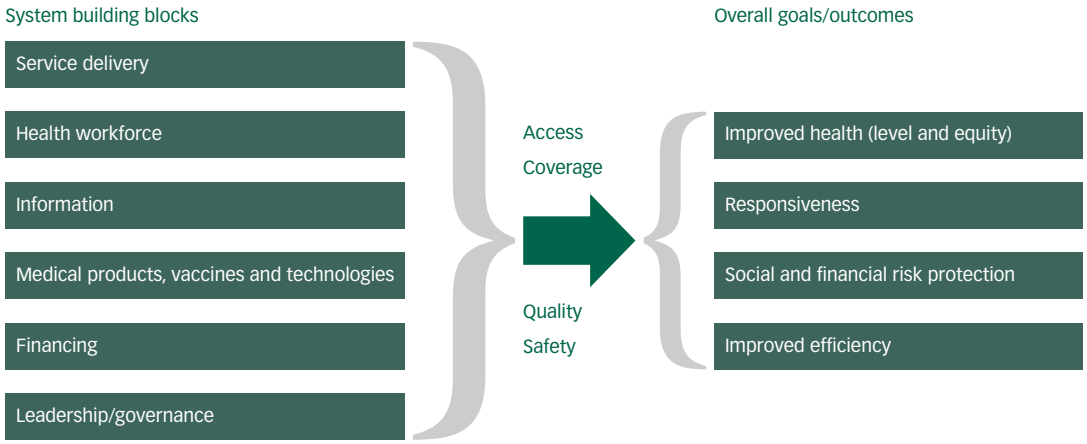

Fig. 1 The World Health Organization (WHO) health system framework (figure); page 3, 2007. Everybody's Business – Strengthening Health Systems to Improve Health Outcomes: WHO's Framework for Action. https://www.who.int/healthsystems/strategy/everybodys_business.pdf.

modules with 28 submodules (see Appendix) have been developed that can be integrated into ongoing Masters courses, as well as three short courses for: (a) researchers; (b) policymakers and planners; and (c) patients and caregivers, to build capacity in mental health systems research within Emerald countries and beyond. These training materials are available for open access to relevant staff in countries worldwide using a Creative Commons licence.

Mental health financing

Paper three in this *BJPsych Open* thematic series considers strategies for sustainable mental health system financing in LMICs,[27] led by Dan Chisholm, Crick Lund and Sumaiyah Docrat.[28–30]

Integrated care

Within Emerald, we have deliberately approached the scaling up of services to identify and treat many more people with mental disorders in LMICs by integrating these activities into mainstream primary and community healthcare services. Paper four in this series[31] is coordinated by Inge Petersen and Fred Kigozi, and discusses the key barriers and facilitators related to such integrated care.[14,32–36]

Mental health information systems

Knowledge of how health systems perform, in order to manage and improve them, is crucial yet such data are most often missing, scarce

Table 1 Indicators of development, health resources and the mental health system in the Emerald country sites

	Ethiopia	India	Nepal	Nigeria	South Africa	Uganda
Administrative health units in which Emerald was implemented	Sodo	Sehore (Madhya Pradesh)	Chitwan	Oshogbo	Kenneth Kuanda District (NW Province)	Kamuli
Population of administrative health units	165 000	1 311 008	575 058	288 455	632 790	740 700
Country-level indicators						
Economic and financial						
World Bank resource category	Low	Lower-middle	Low	Lower-middle	Upper-middle	Low
% Gross domestic product spent on health	5.9	4.2	5.3	5.0	8.4	7.3
% health budget spent on mental health	Not known	0.06	0.17	0.40	4.50	0.44
Service availability (per 100 000)						
Mental health out-patient facilities	0.06	0.33	0.08	0.03	6.85	0.08
Psychiatric beds in general hospitals	0.04	0.82	1.0	0.20	2.70	1.24
Beds in mental hospitals	0.35	1.47	0.20	2.53	19.50	1.48
Human resources (per 100 000)						
Psychiatrists	0.04	0.30	0.13	0.12	0.27	0.09
Nurses	0.59	0.17	0.27	0.60	9.72	0.76
Psychologists	0.02	0.05	0.02	0.02	0.31	0.02
Governance						
Mental health policy and/or legislation that is up-to-date (i.e. updated in past 10 years) and in accordance with international human rights	Yes (policy) No (legislation)	No	No	Yes	Yes	No
Workforce capacity and training						
Most primary healthcare doctors had mental health training in past 5 years	No	No	No	No	Not known	Yes
Primary care nurses can independently diagnose and treat mental disorders	No	No	No	Yes	No	Yes
Information systems						
Data on number of out-patients with mental disorders	Not known	No	Yes	No	No	Yes
Data on number of people with mental disorders treated in primary healthcare	Yes	No	No	No	Yes	Yes

Source: Originally published in Semrau *et al*[1] Data taken from the World Health Organization (WHO)'s *Mental Health Atlas*[16] and WHO's *AIMS*.[17]

or of poor quality in LMICs. Paper five in this series led by Mark Jordans and Oye Gureje describes the practical utility of new mental health system indicators developed by the Emerald team,[37] and paper six led by Shalini Ahuja[38] sets out our findings of how such indicators can best be implemented.[39,40]

Recommendations paper

Although the evidence generated by programmes such as Emerald can make original contributions to the scientific literature, more important is whether such information is actionable, namely can be communicated to those who are in a position to practically apply this information to improve treatment and care. José Luis Ayuso-Mateos and colleagues set out in paper seven what has been learned within Emerald on how to successfully achieve such forms of knowledge transfer.[41]

In our conclusion, paper eight presents a series of recommendations by the Emerald team for the strengthening of mental health systems in LMICs, taking a cross-cutting approach over the five different work packages that were implemented during the programme.[42]

Conclusions

The field of global mental health is now undergoing a remarkable transformation with a long overdue appreciation of the scale of the contribution of mental disorders to the global burden of disease,[8,43] and the potential for greater community cohesion and workplace productivity if people with these conditions are properly treated and supported. The inclusion of clear mental-health-related targets and indicators within the United Nations Sustainable Development Goals[44–46] now intensifies the need for strong evidence about both how to provide effective treatments, and how to deliver these treatments within robust health systems.

Graham Thornicroft, Professor of Community Psychiatry, Centre for Global Mental Health and Centre for Implementation Science, Institute of Psychiatry, Psychology and Neuroscience, King's College London, UK; **Maya Semrau**, Research Fellow in Implementation Research, Centre for Global Health Research, Brighton and Sussex Medical School; and Centre for Global Mental Health, Institute of Psychiatry, Psychology and Neuroscience, King's College London, UK

Correspondence: Graham Thornicroft, David Goldberg Centre, Institute of Psychiatry, Psychology and Neuroscience, King's College London, De Crespigny Park, London SE5 8AF, UK. Email: graham.thornicroft@kcl.ac.uk

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The Emerald programme was led by Professor Graham Thornicroft at KCL. The project coordination group consisted of Professor Atalay Alem (AAU), Professor José Luis Ayuso-Mateos (UAM), Dr Dan Chisholm (WHO), Dr Stefanie Fülöp (ARTTIC), Professor Oye Gureje (UI), Dr Charlotte Hanlon (AAU), Dr Mark Jordans (HealthNet TPO; TPO Nepal; KCL), Dr Fred Kigozi (BNH), Professor Crick Lund (UCT), Professor Inge Petersen (UKZN), Dr Rahul Shidhaye (PHFI) and Professor Graham Thornicroft (KCL).

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Appendix

Masters-level teaching modules in health system strengthening developed by Emerald (Source: originally published in Semrau *et al*)[1]

Module 1: Mental health system components	Module 2: Mental health systems research methods	Module 3: Mental health system contexts – areas of special attention
1.1 Introduction to mental and neurological disorders	2.1 Mental health epidemiology	3.1 Stigma and discrimination
1.2 Health systems concepts and approaches	2.2 Methods to evaluate mental health interventions	3.2 Child and adolescent mental health
1.3 Mental health policy	2.3 Economic evaluation	3.3 Older adults
1.4 Leadership and governance	2.4 Qualitative research methods	3.4 Suicidal behaviour
1.5 Service organization	2.5 Collaborative care in mental health	3.5 Systems research in humanitarian settings
1.6 Promotion and prevention	2.6 Service user and action research	3.6 Women/maternal/ gender issues
1.7 Health systems financing	2.7 Research ethics	3.7 Culture and mental health
1.8 Human resources	2.8 Implementation science	
1.9 Information systems and monitoring and evaluation	2.9 Knowledge translation	
1.10 Interventions and technologies, delivery systems and essential treatments	2.10 Survival skills for researchers	
1.11 Human rights/ equity		

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