

BRIEF REPORT

Mental Health Research on Low- and Middle-Income Countries in Indexed Journals: a Preliminary Assessment

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Abstract

Background: Mental health research focused on low- and middle-income (LAMI) countries is needed in view of the burden of neuropsychiatric diseases and the deficiency of mental health resources in these countries.

Aims of the Study: To examine whether mental health research publications on LAMI countries address issues that are likely to influence public mental health.

Method: Four databases were searched for years 2000 and 2001 with subject headings related to mental disorders, mental health services, somatic therapies and psychotherapy. Countries were categorized into income groups according to World Bank (2000) criteria. The title, index words and abstracts were reviewed.

Results: Almost 55% of publications related to ten LAMI countries. One sixth of research publications related to services/policies, but less than 1% were devoted to economic evaluation. Affective disorders, self-inflicted injuries and mental retardation were under-researched.

Discussion: The geographic spread of internationally accessible mental health research publications is limited. Moreover, publications from LAMI countries often do not address public mental health issues. Use of a single rater might have led to some arbitrariness in classification of articles and some relevant articles would have been missed because of our inability to include all relevant databases.

Implications for Health Care Provision and Use: Sustained support by various stakeholders is needed for research that can inform mental health care provision and use in LAMI countries.

Implications for Health Policies: Scientific research can inform mechanisms that influence policy and public health if adequate attention is paid to dissemination of findings to end users.

Implications for Further Research: There is a need to focus research in LAMI countries on mental health conditions causing high burden that are currently under-researched (e.g. depression, mental retardation, self-inflicted injuries), policy and service issues, and mental health economics.

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Introduction

Mental health research on low- and middle-income (LAMI) countries is needed urgently because of the gross imbalance between the burden of neuropsychiatric diseases¹ and mental health resources in these countries.² Mental health research from LAMI countries can be useful for advocacy, policy development, establishment/expansion of services, education of investigators and greater international and multicultural understanding of mental health.³

Research published in highly internationally recognised journals has the potential to influence policy and service development.⁴ However, mental health research publications from developing countries constitute a small proportion of the total research output on mental health.⁵ Hence, it is even more important that published research from LAMI countries should address issues related to public mental health, e.g. disorders with greatest burden, policy and services, and mental health economics. The present audit was conducted to assess whether mental health research publications on LAMI countries address these issues.

Method

The determination of LAMI countries was based on World Bank⁶ criteria. Four databases for the years 2000 and 2001

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were searched. Cumulative Index to Nursing & Allied Health (CINAHL) indexes about 1200 journals related to nursing and allied health; EMBASE Psychiatry (EMPS), approximately 3500 journals related to psychology, psychiatry, and addictions; MEDLINE, over 4600 journals related to medicine, nursing, dentistry, veterinary medicine, allied health, and pre-clinical sciences; and Sociofile, more than 2600 journals related to sociology and allied disciplines (it covers many health related topics).⁷ The decision whether or not to index a journal in these databases is usually taken by committees (e.g. The advisory committee for Medline, called the Literature Selection Technical Review Committee, consists of authorities knowledgeable in the field of biomedicine, such as physicians, researchers, educators, editors, health science librarians, and historians) based on considerations of policy and scientific quality. EMBASE pays special attention (if other things are equal) to journals from

outside the main publishing areas.⁷ Each of these databases contains many journals included by Thomson-ISI® (a database publishing US company) that ISI evaluates as having high “citation index” and high “impact factor”, on the basis of the citations of their “average article” in a particular period in the ISI covered journals.

Multiple databases were used because the topic area of interest required the adoption of a biopsychosocial rather than a purely biomedical model. Studies have found that the overlap among databases (including the 4 used in this study) for topics and journals in the mental health field is limited and no database (including MEDLINE) alone would yield the majority of relevant articles.^{8,9}

The search strategy was based on relevant subject headings related to mental disorders, mental health services, psychiatric somatic therapies, psychotherapy and LAMI countries for each database. After removing duplicates and

Table 1. Top Ten Low- And Middle-Income Countries for Mental Health Publications

Rank	Country (World Bank Income Level)	Proportion of LAMI Publications (%)	Publications of local origin (%)
1.	India (LIC)	9.6	76.7
2.	South Africa (UMIC)	7.9	85.7
3.	Brazil (UMIC)	7.4	86.4
4.	Russian Federation (LMIC)	6.8	76.9
5.	China (LMIC)	5.4	51.0
6.	Poland (UMIC)	4.4	94.9
7.	Mexico (UMIC)	3.9	72.5
8.	Turkey (LMIC)	3.4	90.0
9.	Republic of Korea (UMIC)	3.1	89.1
10.	Thailand (LMIC)	3.0	79.6

Note. LIC: Low-income category, LMIC: Lower-middle income category, UMIC: Upper-middle income category

Local Origin: The principal author’s address is in the relevant country

Proportion of LAMI Publications: the numerator is the number of articles that refer to the country and the denominator is the total number of publications that refer to all LAMI countries.

Proportion of Local Origin: the numerator is the number of local publications (see above) and the denominator is the total number of articles that refer to that country.

Table 2. Journals Publishing More than 1% of the Research on Low- and Middle-Income Countries

Name of the journal	Publication (%)
Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii	1.8%
South African Medical Journal	1.7%
Journal of College of Physicians and Surgeons Pakistan	1.5%
Lancet	1.5%
Transcultural Psychiatry	1.3%
Zhurnal Nevrologii i Psikhiatrii Imeni S. S. Korsakova	1.2%
Social Science and Medicine	1.2%
Psychiatria Polska	1.1%
British Journal of Psychiatry	1.1%
Social Psychiatry and Psychiatric Epidemiology	1.1%

Note. For publications the numerator is the number of mental health articles that refer to LAMI countries published in the relevant journal and the denominator is the total number of mental health articles that refer to LAMI countries.

publications that were not directly related to mental illnesses (e.g. behavioural factors affecting physical disorders), 1881 publication from 115 countries remained. The abstracts, titles and index words (only the latter if abstracts were not available) were reviewed. Each publication was screened for the country from or to which it was related, country of origin (determined by the address of the principal author), type of article, theme of article and the mental disorder/condition(s) addressed. Classification of articles was done by a single rater (PM), who was trained by discussing 4 groups of 50 articles each with the first author (SS). By the fourth group of 50 articles, the concordance on classification of articles was high as ambiguous articles were grouped separately. In the final classification, all ambiguous articles were discussed by the rater and the first author. A formal reliability exercise was not done for this reason.

Data Analytic Procedures

Descriptive statistics in terms of percentages were used.

Results

Low-, lower-middle, and higher-middle income countries were the focus of 24.9%, 30.8%, and 39.0% of articles, respectively. Almost 55% of articles were focused on ten countries (**Table 1**). The principal author was based in a LAMI country in 72% of publications (range 51%-95%).

Five of the “top ten” journals publishing mental health research from LAMI countries were edited in these countries (**Table 2**). Lancet had the largest contribution (1.5%) amongst the journals edited in high-income countries.

Table 3. Description of Publications from Low- And Middle-Income Countries

Description of publications	Proportion of articles (%)
Type of article	
Original research and meta-analyses*	63.2
Descriptive articles	17.7
Reviews, case reports and editorials	9.9
Other articles	8.9
Themes of publication	
Assessment and questionnaires	32.1
Mental disorder/condition(s)	17.7
Epidemiology	12.8
Services	10.3
Biology and genetics	7.7
Policy, programme and legislation	6.1
Psychosocial interventions	5.1
Pharmacological, surgical and electroconvulsive interventions	5.0
Education and training	1.3
Financing/economics	0.5
Others	1.4
Mental disorder/condition(s) addressed by the study	
Substance abuse	15.2
Physical illnesses with psychiatric problems	12.0
Child and adolescent mental disorders	10.9
Multiple mental disorders	8.4
Neurotic, stress-related and somatoform disorder	6.4
Mental health issues related to HIV	6.2
Affective disorders	5.4
Organic disorders	5.1
Schizophrenia and psychotic disorders	5.1
Adult behaviour and personality disorders	4.4
Suicide and self-inflicted injuries	3.3
Mental retardation	0.9
Others	16.9

* Meta-analyses were included with original research because meta-analyses are usually considered higher order research projects that analyze and frequently pool statistical results from other studies.

Less than two-thirds of the articles reported original research (Table 3). One-third of publications were on assessment and questionnaires and one-sixth on services and policies. There were very few articles on financing/economics (0.5%). Categorization according to disorder(s) revealed that the largest proportion of publications were on substance abuse (15.2%), physical illnesses with psychiatric problems (12.0%), and child and adolescent mental disorders (10.9%).

Discussion

Of the limited mental health research publications focused on LAMI countries (1.4% of articles in EMBASE Psychiatry to 6.8% of articles in Sociofile), more than half related to ten of 158 countries. India and China have been noted as large contributors of mental health publications in an earlier study also.⁵ The ten LAMI countries contributing most to mental health research probably have a relatively large research manpower base. Even in these countries, some (e.g. China, Mexico), had a high proportion of articles with foreign-based researchers as principal authors.

Effective dissemination of research is necessary for its utilization. The presence of several journals edited in LAMI countries in the list of "top ten" journals, highlights the importance of strengthening such journals and sensitizing indexing systems to the needs and conditions in LAMI countries, to enable more journals based in LAMI countries to get indexed in international databases.¹⁰ The fact that the Lancet (among journals edited in a high-income country) publishes the highest number of mental health articles from LAMI countries should counter fears that a policy of supporting research publications from these countries will lower the standards of journals.¹⁰

Our audit and an earlier qualitative (and substantive) review of studies on mental health economics from developed and developing countries¹¹ suggest that economic research from developing countries needs particular attention as such research (e.g. cost-utility analysis and cost of illnesses) will provide useful information to support rational planning and choice of intervention. The present study also suggests that the priority accorded to research on affective disorders, self-inflicted injuries (including suicide) and mental retardation should be increased in view of their current and projected burden.¹

Pincus *et al.*¹² suggested that editorial policies may be partly responsible for the proportionate increase and decrease in publications related to clinical psychobiology and policy and services, respectively. Such changes could be detrimental to LAMI countries, whose policy and service needs are paramount. An increase in the representation of LAMI countries on editorial/review boards of journals may counter possible biases against issues of the poor.^{13,14}

The limitations of the study include: (i) a lack of comprehensive coverage of research in LAMI countries (e.g. publications in non-indexed journals, publications exclusively indexed in other databases like PsychLIT, BIREME (Bibliotheca Regional da Medicina/Regional

Medical Library) based in Sao Paulo, Brazil, etc.), (ii) use of a single rater (classification of articles can be arbitrary because medical research does not fall into neat domains), and (iii) inability to use other public health criteria such as cost of illnesses and prioritization by various stakeholders for assessing the importance of studies due to absence of relevant data that we found from LAMI countries on these criteria.

In contextualizing the study, it should be noted that despite the presence of successful examples, mental health services research has had limited influence on public health¹⁵ probably because policy development and implementation require major political and bureaucratic efforts. However, scientific research informs mechanisms (e.g. media, powerful advocates) that influence policy and public health.^{16,17} Similarly, research published in highly internationally recognised journals may influence mechanisms that influence policy rather than the policy itself.¹⁷ Highly internationally recognised journals have a comparative advantage in influencing these mechanism even in LAMI countries because of the low penetration of most non-indexed journals even in their own countries.¹⁸

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