

Mental health epidemiological research in South America: recent findings

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This paper aims to review the recent mental health epidemiological research conducted in South America. The Latin American and the Caribbean (LILACS) database was searched from 1999 to 2003 using a specific strategy for identification of cohort, case-control and cross-sectional population-based studies in South America. The authors screened references and identified relevant studies. Further studies were obtained contacting local experts in epidemiology. 140 references were identified, and 12 studies were selected. Most selected studies explored the prevalence and risk factors for common mental disorders, and several of them used sophisticated methods of sample selection and analysis. There is a need for improving the quality of psychiatric journals in Latin America, and for increasing the distribution and access to research data. Regionally relevant problems such as violence and substance abuse should be considered in designing future investigations in this area.

Key words: Epidemiology, mental health, South America, cross-sectional studies, case-control studies

Epidemiological research in mental health has been systematically conducted in South America in the last few decades, alongside the global increase of population-based studies after the advent of the DSM-III. Data derived from these studies provide a broader picture of the distribution and risk factors of mental disorders in the South American region. Such information is relevant, since regional factors, such as ethnic, sociocultural and political variables, may influence both the prevalence and related risk/prognosis factors. In addition, locally collected information can be a more acceptable and valid basis for the decision-making process involving the recognition and treatment of mental disorders in the region. This paper aims to provide a summary of the main epidemiological studies conducted in South America in the past five years, giving priority to those investigations in which more rigorous methodologies were adopted.

METHODS

An electronic search of Latin America and the Caribbean (LILACS) database was performed. This database indexes regional literature from more than 640 journals, and contains around 300,000 citations of literature published since 1982, and abstracts in English, Portuguese, and Spanish.

We selected only population based papers which met the following criteria: a) random methods in the selection of the sample, aiming to maximise representativeness; b) sample size calculation, with pre-defined levels of statistical significance and power; c) clear criteria of inclusion/exclusion; d) explicit methods of analysis; e) adequate report of attrition rates.

RESULTS

Our search strategy generated 140 references for the period of 1999 to 2003, and 12 papers were selected (Table

1). Most of them were prevalence studies. The prevalence of minor psychiatric disorders in South America studies was found to be 20-25%, with the exception of a Chilean study which found a prevalence of 36%. The prevalence of alcohol abuse/dependence ranged from 4 to 12%. The main risk factors found in these surveys were low level of education (completed years in school), low income, old age, and female gender. We found no cohort study published in LILACS indexed journals.

Cross-sectional studies

There are many similarities in terms of design, sampling procedures, and results across studies. Three surveys (two in Brazil and one in Chile) were country multicentre studies, which aimed to provide information on mental disorders for the whole population. Their results suggest that depression, anxiety, and substance use disorders are the most prevalent disorders in the region. There are concerns about the use of psychotropic drugs among adolescents and adults, and the Chilean survey also highlighted the burden of violence against children.

One study conducted in the northeast of Brazil investigated the psychological impact of many hours of daily work, a common situation in developing countries, in 460 women aged 18 to 70 years. Having a paid job in addition to the house work and working more than 10 hours per day were risk factors for minor psychological disorders for these women. Another study focusing on women's mental health reported that 27% of an adult sample from Santiago, Chile, had a depressive disorder, and the main related factors were being a wife in charge of house work, including taking care of children and cooking and cleaning, low education level, and marital separation.

Table 1 Main recent mental health epidemiological studies in South America

Study	Country/ Year	Population	Main results
Almeida-Filho et al (1)	Brazil/ 1997	Representative sample of the adult population living in three Brazilian urban centers, N=6476	Age-adjusted prevalence of cases potentially in need of care ranged from 19% to 34%. Most prevalent disorders: anxiety (up to 18%); alcoholism (around 8%); depression (up to 10%)
Lima et al (2,3)	Brazil/ 1996	Representative sample of the adult urban population of Pelotas, N=1277	Prevalence of minor psychiatric disorders: 22.3%, higher in the lower social class, elderly, women; use of psychotropics in the previous two weeks: 11.9%; prevalence of alcohol dependence: 4.2%
Costa et al (4)	Brazil/ 2002	Representative urban sample of Pelotas, N=1967	The prevalence of minor psychiatric disorders was higher in people with lower social status and lower income, aged 40 or older, and for females
Parada et al (5)	Chile/ 2002	Representative sample of individuals from four Chilean provinces, N=2978	36% lifetime prevalence of psychiatric disorders (11% agoraphobia, 9% major depression, 8% dysthymia, 6% alcohol dependence). 49% of those with a psychiatric disorder sought medical care
Santana et al (6)	Brazil/ 2001	Random sample of females aged 18 to 70 years in Salvador, Northeast of Brazil, N=460	Being positive on the Adult Psychiatric Morbidity Questionnaire (>7 symptoms) was associated with having a paid job in addition to house work and working more than 10 hours per day
Rojas et al (7)	Chile/ 1999	Representative sample of adult women of Santiago aged 15 to 65 years, N=1188	27% had depression (1.9% severe, 12.5% moderate). Associated factors: low education level, marital separation and house keeping
Kohn et al (8)	Uruguay/ 2001	Two randomly chosen population-based samples of children aged 5 to 15 years (urban and rural), N=115	53% of children had some behavioural or emotional problem. Psychological disorder of the mother was related to a higher risk of problems for the child
Vizcarra et al (9)	Chile/ 2001	Population-based survey; women interviewed in Temuco (Chile), N=422	Psychological aggression by mothers or fathers: 17.5% and 6.8%, respectively. Associated factors: mother impaired mental health, child abuse in parents, parents' alcohol abuse and child emotional problems
Anicama et al (10)	Peru/ 1999	Random sample of Lima metropolitan area population, N=3590	35.4% suffered psychological violence from their partners, 17.4% physical violence. 36.2% of parents psychologically abused their children. 18.6% of mothers had depression during pregnancy
Carlini et al (11)	Brazil/ 2002	Population-based survey (age range 12-65), including the 107 Brazilian cities, N=8589	Alcoholism: 11.2%, higher in men between 18 and 29 years, lower in older subjects. 19.4% used illicit drugs: 9% marijuana, 5.8% inhalants, and 2.3% cocaine/crack
González et al (12)	Chile/ 2001	Representative sample of the population of Santiago, aged 15 to 64 years	Lifetime prevalence of use of marijuana: 19%; cocaine 4.5%; crack 2.2%. Last month prevalence: 3.2%, 0.7%, and 0.3%, respectively
Lopes et al (13)	Brazil/ 1999	Case control study: untreated cocaine users and matched controls, N=208	Alcohol dependence increased risk of cocaine abuse/dependence

Case-control study

One case-control study published in a local Brazilian journal evaluated the role of psychiatric disorders as possible risk factors for cocaine abuse/dependence. A history of alcohol dependence was the only diagnosis associated with an increased risk of cocaine abuse/dependence (relative risk as high as 15). This result is relevant for planning programs directed towards the treatment and prevention of cocaine abuse.

DISCUSSION

Population-based surveys provide useful estimates of the prevalence of mental disorders, which are useful for

planning health actions and for decision-making process. During the five years period of this review, only a few studies from the South American literature were population based; most of the studies were conducted in treatment settings, with unrepresentative samples. Such data are difficult to generalize to the population as a whole, and are not particularly useful for evaluating risk and prognostic factors or design population-based interventions. There is a lack of longitudinal (cohort) studies, which can generate data on the natural history of the disorders and on prognostic factors.

In South America there has been a significant growth in scientific publications in the last five years compared to the past five year periods from 1981 (14). However,

the quality of the scientific production has not increased significantly. Local journals should have more restrictive criteria for accepting papers for publication and a competent peer-review process.

Moreover, an attempt should be made to publish in international journals, which are more widely disseminated. It is notable that some leading South American journals, such as the Brazilian Journal of Psychiatry and Public Health Reports (a Brazilian journal), have published papers in English on a regular basis for several years and are now indexed in MEDLINE.

Results of cross-sectional studies lead to the conclusion that the general practitioner (or a non-specialized physician) is the most active professional in mental health in South America. This epidemiological evidence has as yet not been translated into major or substantial changes in graduate education. It is vital that general medical training enable physicians to identify and deal with the more frequent mental disorders found in general practice and in primary care units.

The change in demographic profiles, in particular the move from the rural setting to the urban environments in the last few decades, with a majority of the population living in cities that have populations of over half a million inhabitants, could explain in part the excess of minor psychiatric disorders (mainly anxiety states) observed in population-based studies. This migration has resulted in an aggravation of the precarious living conditions, employment insecurity, lack of leisure, and violence arising because of social inequities. It is important to carry out research and develop policies to care for mental health in the more deprived urban centers.

In conclusion, epidemiological research in South America has experienced a significant improvement in terms of the number of published papers, although the quality of research conducted has not increased satisfactorily. Future research should consider local needs, cultural/ethnic features of the populations and current relevant issues such as crime, violence, and substance misuse. Rather than increasing the number of journals, actions regarding the quality and regularity of publication and the distribution of published reports among mental health workers should have priority.

References

1. Almeida-Filho N, Mari JJ, Coutinho E et al. Brazilian multicentric study of psychiatric morbidity. Methodological features and prevalence estimates. *Br J Psychiatry* 1997;71:524-9.
2. Lima MS, Beria JU, Tomasi E et al. Stressful life events and minor psychiatric disorders: an estimate of the population attributable fraction in a Brazilian community-based study. *Int J Psychiatry Med* 1996;26:211-22.
3. Lima MS, Hotopf M, Mari JJ et al. Psychiatric disorder and the use of benzodiazepines: an example of the inverse care law from Brazil. *Soc Psychiatry Psychiatr Epidemiol* 1999;34:316-22.
4. Costa JSD, Menezes AMB, Olinto MTA et al. Prevalence of minor psychiatric disorders in the City of Pelotas, Brazil. *Rev Bras Epidemiol* 2002;5:164-73.
5. Parada BV, Stevenson PR, Saldivia BS et al. Estudio chileno de prevalencia de patología psiquiátrica: DSM-III-R/CIDI, ECPP [Chilean study of prevalence of psychiatric disorders]. *Rev Méd Chile* 2002;130:527-36.
6. Santana VS, Loomis DP, Newman B. Housework, paid work and psychiatric symptoms. *Rev Saúde Pública* 2001;35:16-22.
7. Rojas G, Araya R, Fritsch R et al. Mujer y depresión en Santiago de Chile: resultados preliminares [Depression among women in Santiago, Chile: preliminary results]. *Psiquiatr Clin (Santiago de Chile)* 1999;36:11-7.
8. Kohn R, Levav I, Alterwain P et al. Factores de riesgo de trastornos conductuales y emocionales en la niñez: estudio comunitario en el Uruguay [Risk factors in emotional and behavioral disorders in children: community study in Uruguay]. *Panam Salud Pública* 2001;9:211-8.
9. Vizcarra LMB, Cortés MJ, Busto L et al. Maltrato infantil en la ciudad de Temuco: estudio de prevalencia y factores asociados [Child abuse in Temuco, Chile: prevalence and risk factors]. *Rev Méd Chile* 2001;129:1425-32.
10. Anicama J, Vizcardo S, Carrasco J et al. Estudio epidemiológico sobre la violencia y comportamientos asociados en Lima Metropolitana y Callao [Epidemiology study about violence and associated behaviour in Lima and Callao]. Lima: MINSA (Ministry of Health), 1999.
11. Carlini EA, Galduróz JCF, Noto AR et al. I levantamento domiciliar sobre o uso de drogas psicotrópicas no Brasil: estudo envolvendo 107 maiores cidades do País - 2001. [Population study on the use of psychotropic drugs in Brazil, involving 107 major cities of the country - 2001] São Paulo: SENAD - Secretaria Nacional Antidrogas, 2002.
12. González MI, Rojas G, Fritsch R et al. Chile: magnitud del consumo de drogas ilegales en Santiago [Chile: use of illegal drugs in Santiago]. *Rev Chil Neuropsiquiatria* 2001;39:195-202.
13. Lopes CS, Coutinho ES. [Mental disorders as risk factors for the development of cocaine abuse/dependence: case-control study] [Article in Portuguese] *Rev Saude Publica* 1999;3:477-86.
14. Zago MA, Mari JJ, Carvalheiro JR et al. Área de ciência da saúde. Ciência no Brasil. In: Medicina. Parcerias estratégicas. Edição Especial, Academia Brasileira de Ciências, 2002:4.