Salud Mental 2015;38(5):337-345
ISSN: 0185-3325
DOI: 10.17711/SM.0185-3325.2015.046

Cross sectional study of mental health services used in five cities of Peru

Marina Piazza,[1,2] Fabián Fiestas[3]

Original article

ABSTRACT

Background
Neuropsychiatric illnesses constitute the prime cause of the burden of disease in Peru.

Objective
The aim of this study was to generate information on 12-month usage of mental health services in the adult urban population of Peru.

Method
As part of the World Mental Health Survey Initiative (WMHSI), this research used a multistage, clustered-area probability sample of 3,930 subjects aged 18-65 resident in Lima, Arequipa, Huancayo, Iquitos, and Tacna between July 2004 and December 2005. The Instrument used was the Composite International Diagnostic Interview (CIDI) that produces DSM-IV/ICD-9 diagnoses by means of computerized algorithms.

Results
In the last 12 months, only one out of every five people who had a mental disorder during this period received any treatment. The average number of treatment visits per year was only three. Some 9.7% of those with any mental disorder received appropriate treatment. People with a low level of education had less access to minimally-adequate treatment (OR = 0.1, 95% CI = 0.0, 0.5). The group with substance use disorders had the least access to treatment in the last 12 months (12.7%).

Discussion and Conclusion
Peru has a wide gap in mental health treatment. This gap emphasizes the need to direct resources towards the screening and treatment of mental disorders.

Key words: Prevalence, services, mental health, Peru.

RESUMEN

Antecedentes
La primera causa de carga de enfermedad en el Perú son las enfermedades neuropsiquiátricas.

Objetivo
El objetivo del presente estudio fue generar información acerca del uso de 12 meses de servicios de salud mental en la población adulta urbana de Perú.

Método
El Estudio Mundial de Salud Mental (EMSM)se desarrolló con una muestra probabilística y multietápica de 3930 participantes de 18 a 65 años de edad en Lima, Arequipa, Huancayo, Iquitos y Tacna entre julio del 2004 y diciembre del 2005. Utilizó la Entrevista Diagnóstica Internacional Compuesta, que proporciona diagnósticos de acuerdo con el DSM-IV y el CIE-10.

Resultados
Sólo una de cada cinco personas que presentaron algún trastorno durante los últimos 12 meses recibió tratamiento durante ese período. En promedio, durante este tiempo recibieron tres atenciones. Sólo 9.7% de las personas con cualquier trastorno durante los últimos 12 meses recibió un tratamiento adecuado. Las personas con bajo nivel de educación tuvieron menor acceso a tratamiento mínimamente adecuado (OR = 0.1; IC 95% = 0.0, 0.5). El grupo con trastornos de uso de sustancias presentó menor acceso a tratamiento en los últimos 12 meses (12.7%).

Discusión y conclusión
En el Perú existe una brecha de atención de salud mental. Las personas de menor educación y las personas con trastorno de abuso de sustancias son el grupo de menor acceso a cualquier tipo de tratamiento adecuado. La brecha de atención pone en evidencia la urgente necesidad de dirigir atención y recursos hacia la detección y tratamiento oportuno de las enfermedades mentales en el Perú.

Palabras clave: Prevalencia, servicios, trastornos mentales, Perú.

Translation of the original version published in spanish in: Salud Mental 2015, Vol. 38 Issue No. 5.

[1] National Center for Public Health, National Health Institution. Lima, Peru.
[2] Faculty of Public Health and Administration, Cayetano Heredia University. Lima, Peru.
[3] Institute for Assessment of Sanitary Technologies (IETSI) of Social and Health Security (ESSALUD). Lima, Peru.
Correspondence: Marina Piazza. Av. Defensores del Morro 2268, Lima 9, Peru. Telephone: 999 607-630. E-mail: mpiazza@ins.gob.pe; piazzamarina@gmail.com
Received first version: August 22, 2014. Second version: May 14, 2015. Third version: July 2, 2015. Accepted: August 3, 2015.

INTRODUCTION

Mental disorders are common in the Peruvian population. According to our reports in a previous study, 29% of the population has presented some mental health disorder during their lifetime[1] and 13.5% had at least one of these disorders in the past year.[2] During that period, anxiety disorders were the most frequent (specific phobia, social phobia, and separation anxiety disorder), followed by mood disorders (major depression, dysthymia, bipolar disorder), impulse control (intermittent explosive disorder, attention deficit hyperactivity disorder, oppositional defiant disorder) and substance use (disorders from abuse of alcohol or other substances).[2]

The high prevalence and chronicity explain that neuropsychiatric disorders represent the primary cause of the burden of disease in Peru, which generates 16% of the total years of healthy life lost, adjusted for incapacity.[3] However, only 2% of the public health budget is designated for the care and treatment of mental health.[4] It has also been reported that alcohol abuse disorders generate economic losses to the country of approximately 254 million dollars per year.[5]

However, human resources with the capacity to deal with this type of problem are scarce. For every 100 000 inhabitants, there are only two psychiatrists, six nurses, four psychologists, and one social worker. These professionals are concentrated in Lima, which has 82% of the psychiatrists in the public health system.[6]

The scarcity of human resources and infrastructure limits access to mental health services. As such, in Lima, of the total population who recognized that they experienced mental health problems, only 24.5% accessed healthcare services.[7] In the case of the sierra and jungle regions, this was significantly lower (13.9% and 14.3%, respectively.[8,9]

The aim of this study was to generate information around the use of mental health services over the past 12 months in five cities in Peru.

METHOD

The present study uses data from the World Mental Health Survey in Peru (WMH-Peru), which used a methodology widely described in the international bibliography.[10] In Latin America, Mexico, Brazil, and Colombia have participated as well as Peru.

Design

The WMH-Peru has a cross-sectional, probabilistic, multistage, and stratified design. The geographical coverage of the study was the urban area of five cities: Arequipa, Chiclayo, Metropolitan Lima (all on the Peruvian coast), Huancayo (sierra), and Iquitos (jungle). The research unit was formed of residents aged 18-65.

The sample framework used comes from the Precenso census, 1999.[11] The sample design used stratification according to geographic and socioeconomic criteria. Through a table of equivalence, the sample framework of each city was subdivided into two substrates: the consolidated substrate, which included conglomerates of the framework based on the 1993 census, and the growth substrate which included conglomerates that had come into being after the census. The sample was designed to generate statistically reliable results for the geographical scope of the metropolitan areas of Lima and Callao and the cities of Huancayo, Iquitos, Arequipa, and Chiclayo. In each city, the primary unit of the sample was the urban section of the census, made up of one or more blocks or partitions of blocks in a large magnitude of households. On average, a UPM [standard municipal unit] contained 80 individual households. A list of dwellings within the (conglomerate) UPM was required before selecting the final sample of homes and the selection of people to survey.

The secondary sampling unit was made up of individual homes existing in the conglomerates. A random selection was made of ten units of households from the area segment list. Finally, the tertiary sampling unit selected people aged between 18 and 65 who were residents in those homes. Eligible people who were resident in the homes were counted, selected by a random person. There was no substitution if the selected person could not be interviewed. The assignation of the sample by researched city was carried out with the power allocation method in terms of the number of homes in each area and the variance of the primary characteristics to investigate.

Participants

The population researched was defined as the set of all individual homes and their usual residents aged 18 to 65 in the areas considered for the study. People who were resident in public or private institutions, barracks, military reserves, or any other type of non-family living arrangement were excluded. The instrument was divided into two parts: 3,930 people responded to part I; and of those, 1,801 responded to part I and part II of the instrument. The present study included the 1,801 people who completed both parts of the instrument (figure 1).

Variables

The instrument used was version 15 CAPI of the Composite International Diagnostic Interview.[12] The CIDI CAPI is a structured diagnostic interview applied face-to-face by surveyors with the support of a portable computer. They followed the criteria of the Diagnostic and Statistical Man-

ual of Mental Disorders (DSM-IV) and the International Classification of Diseases (ICD-10), of being diagnosed with any of 23 conditions at some point in their lifetime, during the past 12 months, and during the past 30 days. Other areas investigated by the instrument are service use, sociodemographic characteristics, employment, finances, factors around marriage and children, social networks, family burden, chronic medical conditions, pharmacodependence, and incapacity.

In order to maximize the information gathered and minimize the time spent collecting information, the instrument was organized into Parts I and II. All subjects answered the first part of the instrument. Only those who had the symptoms of some disorder in the screening section answered the second part. Furthermore, 25% of those who did not present any symptoms in the screening section were also randomly selected to participate in the second part.

A total of 1,801 people responded to both parts, and this made up the sample for the present study.

The psychometric properties of the CIDI have been described in various publications.[13] The instrument has demonstrated adequate validity and reliability between test-retest interviewers. Its translation into Spanish was carried out following the guides developed by the WHO, based on materials that have already been translated (ICD-10, DSM-IV, SF-36, WHO-DAS), cognitive tests of question comprehension, expert judgments, and retranslation of selected questions and of the terms used in the clinical sections. EMSM-Peru developed a pilot test to adjust the instruments.

The collection of data was carried out by the National Institute of Statistics and Computing between July 2004 and December 2005. The response rate was 90.2%.

In order to ensure quality control of the information, extensive field supervision was undertaken. The Ramón de la Fuente Muñiz National Institute of Psychiatry, of Mexico, also provided support in obtaining quality indicators for the information and for control-coverage of the interviewer. Statistical programs were used to detect possible errors and inconsistencies related to the timing of events and missing responses, as well as to introduce the correct values where possible. These programs were designed by the coordinating team of the international project at Harvard University, which closely collaborated with the researchers in Peru in quality control and certification of the database.

The type of services considered in the variable of treatment was quite broad. It included services specializing in general mental health (provided by psychiatrists, mental health specialists like psychologists or counselors, social workers, and telephone services for mental health), as well as those offered by general medical services (general doctors, nurses, and other professionals not mentioned previously). The treatment category also included support services outside of the healthcare sector and those classified as complementary/alternative medicine, as well as religious medicine (offered by religious practitioners, spiritual advisors, healers, self-help groups, or internet help groups).

The treatment received was characterized based on the definition of Adequate Treatment and Minimally Adequate Treatment, in accordance with the guides used by the World Mental Health Survey.[14-16] The variable of adequate treatment over the past year was defined in two ways: eight or more visits in any sector, or four or more visits and a month on medication. Minimally adequate treatment was defined as four or more visits in any sector, or two or more visits and a month on medication.

Access to treatment was estimated for any type of procedure, according to the number of visits made, as well as for the definitions of adequate and minimally adequate treatment. The possible association was also explored between service use, type of disorder, and demographic characteristics.

The sociodemographic variables included were age, sex, education, income, and civil status. Ages were categorized into 18-29, 30-44, 45-54, and ≥ 55 years of age. Level of education was categorized into Low/Middle-Low, Middle-High, and High. Income was also categorized into Low, Medium-Low, Medium-High, and High. The variable of civil status was divided into Single, Separated/Widowed/Divorced, and Married/Co-habiting, (table 1).

Statistical analysis

Data was analyzed to adjust it to the differential probability of selection and for no response. The pattern of service use was examined, estimating the proportion of people in treatment. Of those in treatment, the mean, median, and number of visits were estimated, as well as the likelihood of accessing adequate and minimally-adequate treatment. The association (odds ratio) was estimated between sociodemographic factors and receiving any treatment in the past 12 months using the multivariate logistical regression model, with confidence intervals of 95%. Habitual errors were corrected using the Taylor linearization method, and the Sudaan statistical package, version 8.0.1 (http://www.rti.org/sudaan, last visited on 07.05.2014). Wald's Chi-squared test was used to estimate the significance of the multivariate logistical regression.

An estimation was made of the association between type of disorder and receiving treatment in the past 12 months, through the multivariate logistical regression model, controlled for possible confusers such as age, sex, education, income, and civil status.

Ethical considerations

EMSM-Peru was approved by the Ethics Committee of Peru's National Health Institute. Interviewees were assured

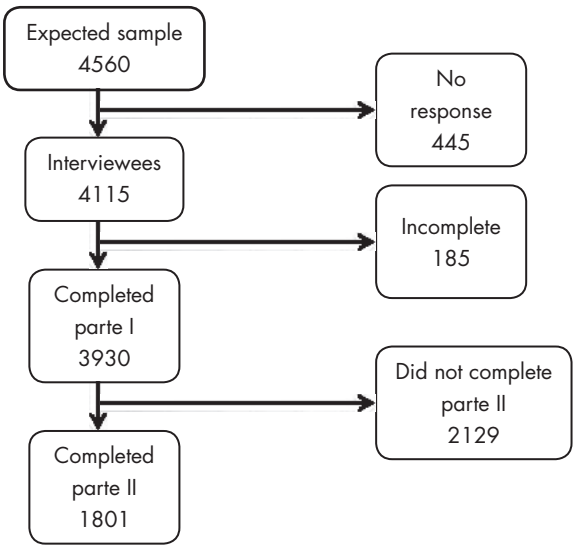

Figure 1. Flowchart of the sample.

that their participation was voluntary and that they could not answer if they wished. They were also advised that the information they provided was confidential and that their personal data would not be published. At the end of the interview, the interviewees were given a list of the healthcare institutions where they could attend if they wished to speak further about the issues covered in the survey.

RESULTS

The sample size of the EMSM-Peru was 3,930 people in the short version of the instrument and 1,801 people in the longer version. In both cases, 51.6% were women. The present analysis included 360 people who had some type of mental health disorder over the past 12 months.

Access to treatment for people with mental health disorders

Only 19.1% (standard error, SE, 2.7) of the people who presented some disorder over the past 12 months received some type of treatment during that period. Access to the service varied according to type of disorder. Over the past 12 months, only 27% (SE 3.4) of those who presented mood disorders received treatment (figure 2). The proportion who used the services was lower for people with anxiety disorders (18.8%, SE 3.5). People with substance abuse disorders had the lowest level of access to mental health services: only 12.7% (SE 5.2) of people in that group received any kind of treatment over the past 12 months prior to the interview.

Table 1. Demographic correlates of prevalence over 12 months of DSM-IV mental disorders and treatment

	Any disorder			Any treatment		
Variable	OR	95% CI		OR	95% CI	
Sex						
Male	1.00			1.00		
Female	1.27	0.96	1.69	2.06	1.41	3.00
Age (years)						
18-29	2.12	1.07	4.22	0.98	0.33	2.92
30-44	1.98	1.09	3.60	1.42	0.57	3.53
45-54	1.47	0.94	2.31	0.85	0.31	2.32
≥ 55	1.00			1.00		
Income						
Low	1.18	0.70	2.00	0.57	0.30	1.08
Medium-low	0.82	0.50	1.33	0.43	0.21	0.90
Medium-high	0.89	0.50	1.57	0.45	0.25	0.80
High	1.00			1.00		
Civil status						
Married/co-habiting	1.00			1.00		
Separated/widowed/divorced	2.44	1.27	4.67	1.93	0.96	3.90
Single	1.13	0.92	1.39	1.20	0.69	2.12
Education						
Low	1.13	0.74	1.73	0.77	0.29	2.01
Average-low	1.28	0.82	1.99	0.72	0.26	1.99
Average-high	1.09	0.73	1.64	0.80	0.42	1.50
High	1.00			1.00		

Analyzed with the long-version sample (n=1801).
* Severity defined as severe/moderate compared to mild (*n* = 391 in this column).

Table 2. Percentage of people with a disorder who received adequate treatment and minimally adequate treatment over the past 12 months

Type of mental health disorder present over the past 12 months	% who received adequate treatment	% who received treatment minimally adequate	People with disorders *n*
Any anxiety disorder***	5.8 (SE 3.5)	47.8 (SE 6.6)	53
Any mood disorder**	9.9 (SE 5.1)	57.5 (SE 7.6)	39
Any disorder***	9.7 (SE 2.6)	50.3 (SE 5.2)	78

* SE = Standard error.
** weight of part I.
*** weight of part II.

Number of mental health treatments received

The average number of visits received by people with any mental health disorder over the past 12 months was only three. The number of visits received was similar for people with mood and anxiety disorders. The number of people with substance abuse disorders was lower (n = 57) and it was not possible to include this type of disorder in the present analysis.

Adequate and minimally adequate treatment

According to this definition, only 9.7% of people with any disorder over the past 12 months received adequate treatment (table 2). This proportion was greater for people with a mood disorder.

For the definition of minimally adequate treatment, it was observed that access over the past 12 months was 50.2% for people who had any mental health disorder during that

Table 3. Demographic characteristics associated with receiving treatment over the past 12 months

	Percentage of people with a disorder who received treatment	
	adequate in the past 12 months	minimally adequate in the past 12 months
Age		
18-29	0.7 (0.2, 2.2)	0.3 (0.1, 1.6)
30-44	0.7 (0.2, 2.9)	0.3 (0.1, 1.6)
45-54	0.4 (0.1, 2.1)	3.4 (0.2, 55.1)
55+	1.0 (1.0, 1.0)	1.0 (1.0, 1.0)
Significance of Wald-Chi test	3 gl* = 1.4, p = 0.712	3 df =18.0, p < 0.001
Education		
Low/average-low		**0.1 (0.0, 0.5)**
Average-high		1.2 (0.3, 5.5)
High		1.0 (1.0, 1.0)
Significance of Wald-Chi test		2 df=19.3, p < 0.001
Income		
Low	0.4 (0.2, 0.8)	1.0 (0.2, 6.1)
Medium-low	0.5 (0.2, 1.3)	1.1 (0.1, 9.9)
Medium-high	0.5 (0.1, 1.5)	0.7 (0.1, 5.8)
High	1.0 (1.0, 1.0)	1.0 (1.0, 1.0)
Significance of Wald-Chi test	3 gl = 6.9, p = 0.076	3 df = 0.3, p = 0.950
Civil status		
Single	1.1 (0.4, 2.9)	0.6 (0.3, 1.5)
Separated/widowed/divorced	1.1 (0.4, 3.1)	1.1 (0.3, 4.1)
Married/co-habiting	1.0 (1.0, 1.0)	1.0 (1.0, 1.0)
Significance of Wald-Chi test	2 gl = 0.1, p = 0.957	2 df = 1.3, p = 0.509
Sex		
Male	0.8 (0.4, 1.9)	0.9 (0.4, 1.9)
Female	1.0 (1.0, 1.0)	1.0 (1.0, 1.0)
Significance of Wald-Chi test	1 gl = 0.2, p = 0.638	1 df = 0.1, p = 0.759

* df = degrees of freedom.

Table 4. Type of disorder associated with receiving treatment over the past 12 months

	Likelihood of people with a disorder receiving in the past 12 months	
	adequate treatment	minimally adequate treatment
Any anxiety disorder		
Yes	1.3 (0.4, 4.0)	0.5 (0.1, 2.5)
No	1.0 (1.0, 1.0)	1.0 (1.0, 1.0)
Significance of Wald-Chi test	1 df* = 0.2, p = 0.663	1 df = 0.9, p = 0.339
Any mood disorder		
Yes	**2.6 (1.3, 5.1)**	0.7 (0.1, 5.6)
No	1.0 (1.0, 1.0)	1.0 (1.0, 1.0)
Significance of Wald-Chi test	1 df = 8.0, p = 0.005	1 df = 0.2, p = 0.680
Any substance abuse disorder		
Yes	0.8 (0.2, 2.8)	1.4 (0.2, 12.0)
No	1.0 (1.0, 1.0)	1.0 (1.0, 1.0)
Significance of Wald-Chi test	1 df = 0.1, p = 0.732	1 df = 0.1, p = 0.741

* df = degrees of freedom.

period. Comparing the proportion who accessed minimally adequate treatment per type of disorder, it was shown that this was 57.4% for people with a mood disorder and 47.7% for those with an anxiety disorder. Once again, the small sample size of people with substance abuse disorders impeded the ability to make statistical inferences for this group.

Demographic characteristics associated with receiving mental health treatment over the past 12 months

People with a low level of education had less access to minimally adequate treatment (OR = 0.1; 95% CI = 0.0, 0.5) compared to those with a higher level of education. No association was found between access to treatment over the past 12 months and other sociodemographic characteristics analyzed, such as age, income, civil status, and sex (table 3).

Type of disorder associated with receiving mental health treatment over the past 12 months

It was evaluated whether there were differences between people with mental health disorders over the past 12 months per type of disorder in terms of access to treatment. People who had any type of mood disorder over the past 12 months had 2.6% greater likelihood of accessing adequate treatment than those who had a different type of disorder, as shown in table 4. On the other hand, the likelihood of accessing treatment was similar among those who had any anxiety disorder and those who did not (i.e., $p \geq 0.05$). Equally, the likelihood of accessing treatment was similar among those who had a substance abuse disorder compared to those who did not (i.e., $p \geq 0.05$).

DISCUSSION AND CONCLUSION

The present study demonstrates that the majority of people with a mental health disorder over the past 12 months did not receive any type of support. In other words, of the total number of people with mental disorders, only 19% accessed treatment services in the past year. It was observed that the use of services varied importantly according to type of disorder. The group of disorders with the greatest access was anxiety disorders, of which only one in three received treatment. The group with the least access was those with substance abuse, where only one in ten people received any type of support in the past 12 months. These figures show that in general, access to treatment services for people with mental health disorders is very limited in Peru, even for urban populations. They also show that there are differences by type of mental disorder, given that those with substance abuse disorders have the least opportunity to receive support.

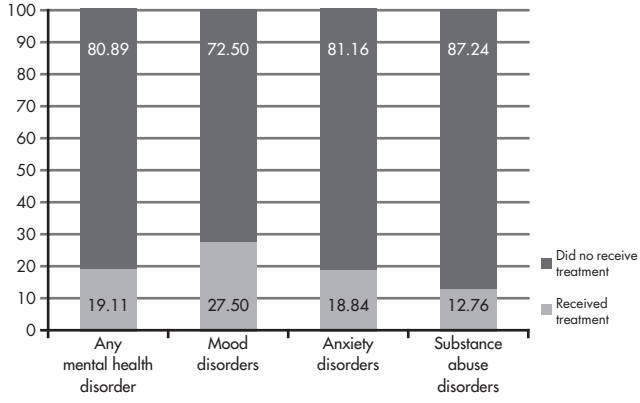

Figure 2. Percentage of people with mental illness who received treatment over the past 12 months.

Other epidemiological mental health studies in Peru have reported that, among urban residents who have a need for mental health treatment over the past six months, only between 15% and 25% received any type of treatment.[7-9] Given the chronic nature of mental health disorders, this lack of treatment represents an important loss of the opportunity to modify the course of the illness, becoming an unnecessary and avoidable burden, as well as generating considerable financial and social cost to the country.

The study differentiated between service use according to two definitions of treatments in evidence-based clinical guides: adequate treatment and minimally adequate treatment. According to the definition of adequate treatment, the study generated evidence which maintains that in the cities investigated, for every ten people with mental health disorders present over the past 12 months, only one received any type of treatment. Using the definition of minimally adequate treatment, it was seen that out of every 100 people who needed treatment, only 50 received it. These results place Peru in an inadequate situation in terms of the provision and use of services in this key area of healthcare.[17,18]

The second aim was to determine the predictors of mental health treatment in Peru. The study gave evidence that the opportunity to access adequate treatment is scarcer for people with a lower level of education. These results are consistent with other epidemiological studies in the country which found that lack of money was the main reason for not seeking treatment. In this case, of those who advised perceiving the need to seek healthcare treatment for mental health, 47% expressed lack of money as the main reason not to do so.[7-9] Equally, these results are consistent with those obtained by the Mental Health Study in Mexico and in studies in the US.[18,19] In this way, it can be seen that faced with the limited mental health services on offer from public institutions, the possibility of receiving support depends on the ability to pay for it privately. As such, people with mental health problems who have fewer financial resources find themselves at a disadvantage, which can lead to a catastrophic cost. This situation contributes to relegating and excluding this population even more. Recently, Social Security for Health in Peru, EsSalud, has incorporated screening and treatment of some mental disorders into its coverage at all levels of treatment.[20] This measure is an important piece of progress for the 22% of the population which has EsSalud Social Security.[21]

The present study demonstrates that access to adequate and minimally adequate services is as reduced for men as it is for women. Conversely, access to any form of mental health treatment was greater in women than in men, if we use the broad definition used in the Method section of this work. In other words, given the limited treatment on offer for mental illness, women seek support elsewhere to a greater extent than men. This lack of formal services may lead the population to expose itself to informal treatment options which may involve controversial practices, some of which may even violate human rights.

Healthcare systems are successful when people remain healthy; or rather, they can become ill and have access to healthcare services. In this case, they follow their treatment, limiting damage or rehabilitating themselves, and they are satisfied with these services which improve their quality of life and level of health.[22] Access to quality mental health services is a right underscored by the International Covenant on Economic, Social, and Cultural Rights, signed by Peru in 1978.[23] With this Covenant, the state recognizes the right of every Peruvian to be as mentally and physically healthy as possible and to provide the means necessary to meet that objective. Equally, Article 7 of the Political Constitution of Peru establishes the right to the protection of health of people with mental and physical disabilities. Furthermore, the country has Guidelines for Action on Mental Health and the National Health Strategy for Mental Health and a Culture of Peace, which is an important regulatory framework for action. However, the present study highlights the important of translating this regulatory framework into the provision of services.*

Although the present study has not provided characteristics of the treatment received in terms of the use of medication, it is important to note that it has been described that around 50% of healthcare establishments do not have antidepressants or antipsychotics available, and that 90% or more do not have the other four types of psychiatric medications.[24] In other words, the availability of medications used in the treatment of mental illness in Peru is less than other low- or middle-income countries.

One strategy to reduce the gap in mental healthcare is to integrate these services with primary care, with non-specialist healthcare staff who can carry out screening and diagnosis, and direct the patient to having mental health assessment by a specialist who will monitor treatment and manage the more complex cases.[25] From this perspective, the Peruvian Ministry of Health (MINSA) started producing clinical practice guides in 2008 for depression, psychosis, gender-based violence, and problems related to the use of psychoactive substances; however, these are not updated and are rarely used by healthcare staff.[26] The challenge is not only to strengthen the provision and quality of services, but rather to transform the healthcare system itself, implementing evidence-based approaches for integrated and efficient treatment of mental illness and other chronic conditions.

One limitation of the present report is that the data was collected in 2004 and 2005. On the other hand, the sample

* Peruvian Ministry of Health. National health strategy for mental health and a culture of peace. Lima: Ministry of Health - General Management for Health Promotion, 2006.

Translation of the original version published in spanish in: Salud Mental 2015, Vol. 38 Issue No. 5.

only included the urban population where the gap in access had to be greater than in the urban context.

In conclusion, there is a gap in mental health treatment in Peru which translates into a low percentage of the urban population accessing minimally adequate treatment, and an even lower percentage which accesses adequate treatment. People with a low level of education are an especially vulnerable group in terms of their access to healthcare treatment, and people with substance abuse disorders are the group with the least access to any type of adequate treatment.

Financing

The World Mental Health Survey in Peru was developed in collaboration with the WHO's World Mental Health Survey (WMH) which had financing from the National Institute of Mental Health in the United States (NIMH; R01 MH070884), the John D. and Catherine T. MacArthur Foundation, the Pfizer Foundation, the United States Public Health Services (R13-MH066849, R01-MH069864, and R01 DA016558), the Fogarty International Center (FIRCA R03-TW006481), the Pan-American Health Organization, and the pharmaceutical companies Eli Lilly, Ortho-McNeil, GlaxoSmithKline, and Bristol-Myers Squibb. The authors are grateful to the Coordination Center for Gathering and Analysis of Data of the WMH for its support in implementing the fieldwork and for advice on data analysis. None of the founders participated in the design, analysis, interpretation, or preparation of this article. A complete list of WMH publications can be found at http://www.hcp.med.harvard.edu/wmh. The World Mental Health Study in Peru was financed by the National Health Institute of the Peruvian Ministry of Health (MINSA), with additional financial support from the Pan-American Health Organization.

Conflicts of interest

The authors do not declare any conflicts of interest.

Acknowledgements

The authors are grateful to Ron Kessler, Nancy Sampson, and Colleen Bouzan (Harvard University), María Elena Medina-Mora and Guilherme Borges (National Institute of Psychiatry), Jorge Rodríguez and María Edith Baca (Pan-American Health Organization), Sergio Aguilar Gaxiola (California State University, Fresno), and to the local technical team who participated in the review of the instrument during the initial phase of the study.

REFERENCES

1. **Fiestas F, Piazza M. Prevalencia de vida y edad de inicio de trastornos psiquiátricos en el Perú urbano: estudio epidemiológico en cinco ciudades de la costa, sierra y selva del Perú. Revista Peruana de Medicina Experimental y Salud Pública Rev Perú Med Exp Salud Pública 2014; 31(1):39-47.**
2. **Piazza M, Fiestas F. Prevalencia de trastornos mentales en el último año y uso de servicios: Resultados del Estudio Mundial de Salud Mental en El Perú. Rev Perú Med Exp Salud Pública 2014; 31(1):30-38.**
3. **Velásquez A. La carga de enfermedad y lesiones en el Perú y las otras prioridades del plan esencial de aseguramiento universal. Rev Perú Med Exp Salud Pública 2009;26:222-231.**
4. **Ministerio de Salud. Informe sobre los servicios de salud mental del subsector Ministerio de Salud del Perú 2008. Lima: Ministerio de Salud-OPS-OMS; 2009.**
5. **DEVIDA, 2010: Impacto social y económico del consumo de drogas en el Perú.**
6. **Kohn Robert et al. Los trastornos mentales en América Latina y el Caribe: asunto prioritario para la salud pública. Rev Panam Salud Pública [online]. 2005, vol.18, n.4-5, pp. 229-240. ISSN 1020-4989. http://dx.doi.org/10.1590/S1020-49892005000900002 (revisado el 5.8.2014).**
7. **Instituto Nacional de Salud Mental. Estudio epidemiológico en salud mental 2002. Anales Salud Mental 2002;18(1, 2):13-81.**
8. **Instituto Nacional de Salud Mental. Estudio epidemiológico de salud mental en la sierra peruana 2003. Anales Salud Mental 2003;19(1,2):25-102.**
9. **Instituto Nacional de Salud Mental. Estudio epidemiológico de salud mental en la selva peruana 2004. Anales Salud Mental 2004;21(1,2):25-98.**
10. **Kessler RC, Ustun TB. The World Mental Health (WMH) Survey Initiative Version of the World Health Organization (WHO) Composite International Diagnostic Interview (CIDI). Int J Methods Psychiatr Res 2004;13(2):93-121.**
11. **Instituto Nacional de Estadística e Informática. Censos Nacionales 2007: XI de Población y VI de Vivienda. Lima 2008.**
12. **Andrew G, Peters L. The psychometric properties of the Composite International Diagnostic Interview. Soc Psychiatry Psychiatr Epidemiol (1998)33:80-8.**
13. **World Health Organization. Procedures for the development of new language versions of the WHO Composite International Diagnostic Interview (WHO-CIDI). Ginebra; 1998.**
14. **American Psychiatric Association. Practice guideline for treatment of patients with schizophrenia. 2nd ed. Washington, DC: American Psychiatric Association Press; 2004.**
15. **American Psychiatric Association. Practice guideline for treatment of patients with bipolar disorder. 2nd ed. Washington, DC: American Psychiatric Association Press; 2002.**
16. **American Psychiatric Association. Practice guideline for treatment of patients with panic disorder. Washington, DC: American Psychiatric Association Press; 1998.**
17. **Organización Panamericana de la Salud. Epidemiología de los trastornos mentales en América Latina y el Caribe. Washington, D.C.: OPS; 2009.**
18. **Medina-Mora ME, Borges G, Benjet C, Lara C et al. Prevalencia de trastornos mentales y uso de servicios: Resultados de la Encuesta Nacional de Epidemiología Psiquiátrica en México. Salud Mental 2003;26(4):1-16.**
19. **Wang PS, Lane M, Kessler RC, Olfson M et al. Twelve-month use of mental health services in the U.S.: Results from the National Comorbidity Survey Replication (NCS-R). Arch Gen Psychiatry 2005;62(6)629-640.**
20. **Seguro Social de Salud (EsSalud). Resolución de Gerencia General 1207- 2013: Cartera de servicios de salud de complejidad creciente del Seguro Social de Salud (EsSalud). Lima: Gerencia Central de Prestaciones de Salud, EsSalud; 2013.**
21. **Instituto Nacional de Estadística e Informática. Condiciones de vida en el Perú: julio-agosto-setiembre Lima, Perú; 2011.**
22. **Subsanar las desigualdades de una generación: alcanzar la equidad sanitaria actuando sobre los determinantes sociales de la salud. Informe final de la Comisión sobre Determinantes Sociales de la Salud. Ginebra: OMS; 2008.**
23. **Pacto Internacional de Derechos Económicos, Sociales y Culturales adoptado y abierto a la firma, ratificación y adhesión por la Asamblea General en su resolución 2200 A (XXI), de 19 de diciembre de 1966. Aprobado por Perú por Decreto Ley N° 22129 de 28 de marzo de 1978. Instrumento de adhesión de 12 de abril de 1978. Depositado el 28 de abril de 1978. Fecha de entrada en vigencia el 28 de julio de 1978.**

Translation of the original version published in spanish in: Salud Mental 2015, Vol. 38 Issue No. 5.

24. **Hodgkin D, Piazza M, Crisante M, Gallo C et al. Disponibilidad de medicamentos psicotrópicos en establecimientos del Ministerio de Salud del Perú. Rev Perú Med Exp Salud Pública 2014;31(4):660-668.**
25. **World Health Organization and Calouste Gulbenkian Foundation. Integrating the response to mental disorders and other chronic diseases in health care systems. World Health Organization. Ginebra: 2014.**
26. **Gálvez-Buccollini JA, Fiestas F. Necesidad de evaluar las guías clínicas peruanas de tratamiento para trastornos mentales. Rev Perú Med Exp Salud Pública 2011;28:698-699.**

Translation of the original version published in spanish in:
Salud Mental 2015, Vol. 38 Issue No. 5.