

# 20 Years of Psychiatric Epidemiology Research with PAHO/WHO

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# Overview

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- Moving from psychological distress to psychiatric diagnosis
- Expanding research to special populations
  - Children
  - Indigenous people
  - Natural disasters
  - Suicide
- Defining and estimating treatment gap
- Burden of disease

# Psychological Distress to Psychiatric Diagnosis

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# Psychological Distress and Alcoholism Uruguay

*Acta psiquiat psicol Am lat. 2001. 47(3): 221-228*

## Trastornos mentales y uso indebido de alcohol en dos comunidades del Uruguay

Robert Kohn, Paulo Alterwain, Itzhak Levav, Gloria Ruocco, Nelly Murillo, Myriam Contrera, Lidia Carzoli, Sheri Della Grotta, Saerome Kim

Se estudiaron indicadores de trastornos mentales y uso indebido de alcohol, así como algunos factores de riesgo involucrados, en dos ciudades del Uruguay. Se entrevistaron 387 personas mayores de 15 años de edad. El cuestionario administrado incluyó la Escala de Desmoralización de la Entrevista de Investigación en Epidemiología Psiquiátrica, el CAGE, el Inventario de Apoyo de la Red Social, autoinforme de enfermedad mental, e ítems socio-demográficos. El 23% de los entrevistados respondió afirmativamente a la Escala de Desmoralización, y el 25,2% a los ítems de autoinforme de enfermedad mental. El 10% de los entrevistados fue identificado como "posiblemente afectado" con problemas de alcohol. Los factores de riesgo de "posible enfermedad mental" incluyeron: género femenino, edad relativamente joven, presencia de posible enfermedad física, y escaso apoyo social. Los factores de riesgo de "posible uso indebido de alcohol" identificados fueron: género masculino, edad relativamente mayor, y carencia de afiliación religiosa. Las elevadas tasas justifican la realización de un estudio confirmatorio del diagnóstico y de intervenciones en la comunidad.

**Palabras clave:** Estudio comunitario - Salud mental - Epidemiología - Alcoholismo - Uruguay.

- Two cities in Uruguay
- Age 15 +
- N = 397
- Demoralization scale and CAGE
- 25.2% probable mental illness
- 10% probable alcoholism

# National Mental Health Survey of Adults in Chile

Article

## Lifetime and 12-Month Prevalence of DSM-III-R Disorders in the Chile Psychiatric Prevalence Study

Benjamin Vicente, M.D., Ph.D.

Robert Kohn, M.D.

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Sandra Saldivia, Ph.D.

Itzhak Levav, M.D.

Silverio Torres, B.A.

**Objective:** Although several epidemiological studies of the prevalence of psychiatric disorders have been conducted in Latin America, few of them were national studies that could be used to develop region-wide estimates. Data are presented on the prevalence of DSM-III-R disorders, demographic correlates, comorbidity, and service utilization in a nationally representative adult sample from Chile.

**Method:** The Composite International Diagnostic Interview was administered to a stratified random sample of 2,978 individuals from four provinces representative of the country's population age 15 and older. Lifetime and 12-month prevalence rates were estimated.

**Results:** Approximately one-third (31.3%) of the population had a lifetime psychiat-

ric disorder, and 22.2% had a disorder in the past 12 months. The most common lifetime psychiatric disorders were agoraphobia (11.1%), social phobia (10.2%), simple phobia (8.8%), major depressive disorder (8.2%), and alcohol dependence (6.4%). Of those with a 12-month prevalence diagnosis, 30.1% had a comorbid psychiatric disorder. The majority of those with comorbidity had sought out mental health services, in contrast to one-quarter of those with a single disorder.

**Conclusions:** The prevalence rates in Chile are similar to those obtained in other studies conducted in Latin America and Spanish-speaking North American groups. Comorbidity and alcohol use disorders, however, were not as prevalent as in North America.

(Am J Psychiatry 2004; 161:1162-1170)

- First, National Survey of Psychiatric Diagnoses in South America
- DSM-III-R diagnosis
- CIDI 2.1
- N = 2978
- Age 15+

# International Consortium of Psychiatric Epidemiology (ICPE)

**Twelve-Month Prevalence Of DSM-IV Disorders In Five Countries, By Type And Severity Of Disorder**

|                                 | Canada<br>(n = 6,320) |     | Chile<br>(n = 2,181) |     | Germany<br>(n = 3,219) |     | Netherlands<br>(n = 6,030) |     | United States<br>(n = 5,384) |     |
|---------------------------------|-----------------------|-----|----------------------|-----|------------------------|-----|----------------------------|-----|------------------------------|-----|
|                                 | Percent               | SE  | Percent              | SE  | Percent                | SE  | Percent                    | SE  | Percent                      | SE  |
| <b>I. Type of disorder</b>      |                       |     |                      |     |                        |     |                            |     |                              |     |
| Mood disorder                   | 4.9%                  | 0.5 | 9.0%                 | 1.3 | 11.9%                  | 0.5 | 8.2%                       | 0.5 | 10.7%                        | 0.6 |
| Anxiety disorder                | 12.4                  | 0.6 | 5.0                  | 1.3 | 11.9                   | 0.5 | 13.2                       | 0.7 | 17.0                         | 0.6 |
| Substance use disorder          | 7.9                   | 0.5 | 6.6                  | 0.9 | 5.2                    | 0.5 | 9.9                        | 0.5 | 11.5                         | 0.5 |
| Any disorder                    | 19.9                  | 0.8 | 17.0                 | 1.8 | 22.8                   | 0.7 | 24.4                       | 1.0 | 29.1                         | 0.7 |
| <b>II. Severity of disorder</b> |                       |     |                      |     |                        |     |                            |     |                              |     |
| None (noncases)                 | 80.1                  | 0.8 | 83.0                 | 1.8 | 77.2                   | 0.7 | 75.6                       | 1.0 | 70.9                         | 0.7 |
| Mild                            | 12.4                  | 0.6 | 8.1                  | 1.1 | 10.8                   | 0.6 | 14.1                       | 0.6 | 13.8                         | 0.4 |
| Moderate                        | 3.6                   | 0.4 | 5.5                  | 0.8 | 6.6                    | 0.4 | 4.2                        | 0.3 | 7.0                          | 0.4 |
| Serious                         | 3.9                   | 0.4 | 3.3                  | 0.6 | 5.4                    | 0.3 | 6.1                        | 0.3 | 8.2                          | 0.5 |

- Latin American surveys are part of ICPE
  - Precursor to World Mental Health Surveys
- Start of global mental health and global burden of mental illness

# Guatemala National Mental Health Survey

## Previous Violent Events and Mental Health Outcomes in Guatemala

Victor D. Ruzo-Polanco, MD, MSCE, Victor A. Lopez-Soto, MD, Robert Kohn, MD, Dawei Ku, PhD, Thomas S. Richmond, PhD, and Charles C. Emswiler, PhD

For 36 years Guatemala experienced a violent civil war in which over 200,000 civilians were killed, 440 villages destroyed, and more than 1 million Guatemalans displaced, both internally and into southern Mexico.<sup>1-3</sup> Those killed included indigenous peoples, laborers, students, religious leaders, and others who were clearly noncombatants.<sup>4,5</sup> In 1996, peace accords were signed between a number of rural-based guerrilla forces and Guatemala's national army.

Nearly three quarters of the people in the world's poorest societies have recently been through a civil war or are still in one. The average civil war lasts approximately 5 years and can be embedded in a societal context that hark the longevity of the conflict itself by making it a culturally "normal."<sup>6,7</sup> Because of cultural normalization and war-torn other factors, both within and outside of Guatemala, the Guatemala Civil War far exceeded the

**Objectives.** We analyzed a probability sample of Guatemalans to determine if a relationship exists between previous violent events and development of mental health outcomes in various sociodemographic groups, as well as during and after the Guatemalan Civil War.

**Methods.** We used regression modeling, an interaction test, and complex survey design adjustments to estimate prevalences and test potential relationships between previous violent events and mental health.

**Results.** Many (28.8%) participants experienced at least 1 previous serious violent event. Witnessing someone severely injured or killed was the most common event. Depression was experienced by 4.2% of participants, with 8.5% experiencing anxiety, 6.4% an alcohol-related disorder, and 1.3% posttraumatic stress disorder (PTSD). Persons who experienced violence during the war had 4.3 times the adjusted odds of alcohol-related disorders ( $P < .05$ ) and 4.0 times the adjusted odds of PTSD ( $P < .05$ ) compared with the postwar period. Women, indigenous Maya, and urban dwellers had greater odds of experiencing post-violence mental health outcomes.

**Conclusions.** Violence that began during the civil war and continues today has had a significant effect on the mental health of Guatemalans. However, mental health outcomes resulting from violent events decreased in the postwar period, suggesting a nation in recovery. (*Am J Public Health*. 2013;103:764-771. doi:10.2195/42PH.2014.302228)

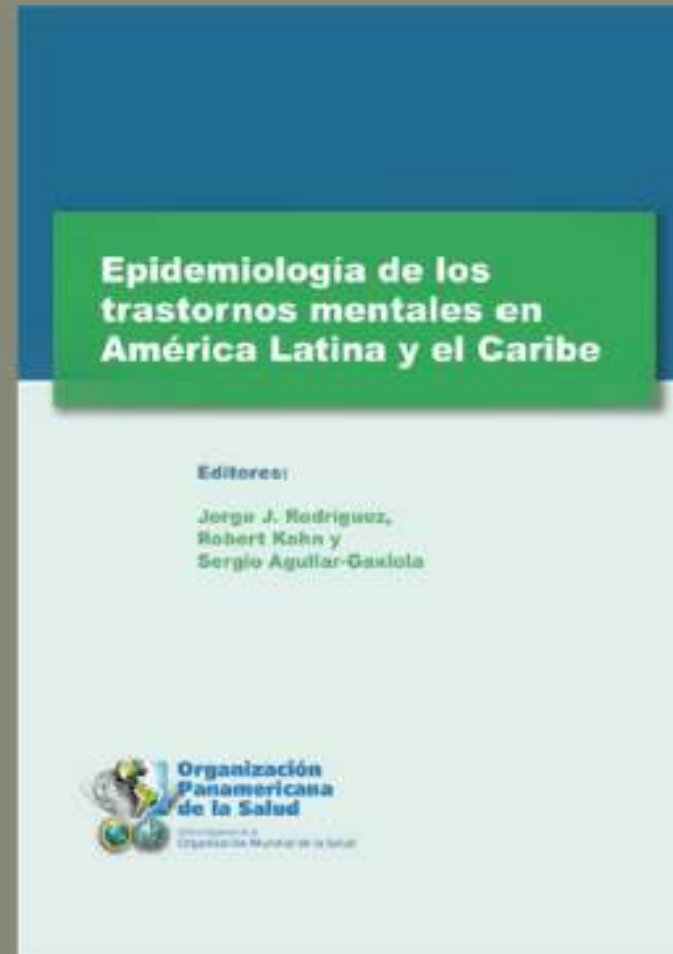
## DSM-IV Diagnosis

## 12-Month Prevalence

|           |      |
|-----------|------|
| Anxiety   | 2.1  |
| Affective | 1.4  |
| Substance | 3.0  |
| Any       | 7.2  |
| Mild      | 7.2  |
| Moderate  | 15.2 |
| Severe    | 27.6 |

CIDI 2.1  
N = 1452  
Age 18 - 65

# Overview on Mental Health in the Region





# 12-Month Prevalence Mental Disorders in Adults

|           | Brazil | Canada | Chile | Columbia | Guatemala | Mexico | Peru | USA  |
|-----------|--------|--------|-------|----------|-----------|--------|------|------|
| Anxiety   | 19.9   | 4.7    | 9.3   | 14.4     | 2.1       | 8.4    | 7.9  | 19.0 |
| Affective | 11.0   | 5.2    | 9.9   | 7.0      | 1.4       | 4.7    | 3.5  | 9.7  |
| Substance | 3.6    | 11.0   | 10.4  | 2.8      | 3.0       | 2.3    | 1.7  | 3.8  |
| Any       | 29.6   | 18.7   | 17.0  | 21.0     | 7.2       | 13.4   | 13.5 | 27.0 |
| Mild      | 33.1   | 44.3   | 18.9  | 35.9     | 57.2      | 40.5   | 20.2 | 35.7 |
| Moderate  | 33.0   | 32.4   | 40.3  | 41.0     | 15.2      | 33.9   | 42.6 | 39.2 |
| Severe    | 33.9   | 23.3   | 40.8  | 23.1     | 27.6      | 25.7   | 37.2 | 25.2 |

## Sources:

Kohn R. Treatment Gap in the Americas a Report for PAHO/WHO, 2013

Piazza M, Fiestas F. Rev Peru Med Exp Salud Publica, 2014

Note: Brazil, Columbia, Mexico, Peru, USA are World Mental Health Surveys

# Expanding research to special populations

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Children

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# Psychological Distress Uruguay

## Factores de riesgo de trastornos conductuales y emocionales en la niñez: estudio comunitario en el Uruguay

Robert Kohn,<sup>1</sup> Itzhak Levin,<sup>2</sup> Paulo Altarwin,<sup>3</sup> Gloria Ruocco,<sup>3</sup> Myriam Cantora<sup>4</sup> y Sheri Della Grotte<sup>5</sup>

### RESUMEN

**Objetivos.** Explorar algunos de los factores de riesgo demográficos que se asocian con la presencia de problemas conductuales o emocionales en los niños, y examinar la posibilidad de una relación entre el estrés psicológico en los padres y trastornos psicológicos en los hijos.

**Materiales y métodos.** En el presente estudio se examinó la presencia de estrés psicológico en los padres y ciertas características sociodemográficas que aumentan el riesgo de sufrir trastornos emocionales en la niñez fueron examinadas en una muestra de niños nacidos en dos comunidades urbanas y una rural. La investigación, que se llevó a cabo en Ciudad Vieja y Barrio Sur, en Montevideo, y en el pueblo de Colonia de Sacramento, abarcó a 115 niños entre los edades de 5 y 25 años. Los padres completaron por sus hijos el Cuestionario de Alterabilidad Psiquiátrica Infantil (QMPI), instrumento para la detección de problemas conductuales que podría ser un índice de trastornos emocionales en los niños. Adicionalmente, ambos padres proporcionaron la información demográfica solicitada en la *Psychiatric Epidemiology Research Interview* (Investigación Social [PERI]) Unidad de Demostración para la Investigación Epidemiológica en Psiquiatría; conversaron el cuestionario CAGE<sup>6</sup> para el consumo del alcoholismo; se sometieron al Social Support Network Inventory (Inventario de la Red de Apoyo Social), y respondieron preguntas sobre su propio estado de salud mental.

**Resultados.** Cincuenta y tres por ciento de los niños tuvieron puntajes mayores de 6 en el QMPI, resultado que señala la presencia de problemas conductuales o emocionales. La auto-percepción de un trastorno emocional y de demoralización en los padres mostró una asociación significativa con un mayor riesgo de problemas conductuales o emocionales en los hijos.

**Conclusiones.** A pesar por nuestros resultados, la salud mental del niño es un problema social y debería ser una prioridad de la epidemiología de la salud en Uruguay.

### Palabras clave

Salud mental, Uruguay, infancia, problemas conductuales.

Después de la restauración de la democracia en el Uruguay en 1985, el Ministerio de Salud, con el apoyo de

la Organización Panamericana de la Salud (OPS), lanzó un programa nacional para la promoción de la salud

mental. Este programa tenía un componente epidemiológico destinado a determinar la frecuencia y distribución de los trastornos mentales en adultos y niños.

Nuestros factores propios del ambiente familiar pueden aumentar el riesgo que corre un niño de tener problemas conductuales o emocionales. La distribución familiar (1, 2) —la presencia de conflictos entre los padres, la

<sup>1</sup> Departamento de Psiquiatría y Clínica Hospital de Buenos Aires, Hospital Sion, Universidad de Buenos Aires, UBA, Dirección General de Salud, Buenos Aires, Argentina; <sup>2</sup> Departamento de Psiquiatría y Human Resources, Barbra Hospital, 345 Barksdale Blvd., Providence, RI 02864, EE.UU.; Tel: (401) 455-6577, fax: (401) 455-6566; correo electrónico: Robert.Kohn@brown.edu; <sup>3</sup> Ministerio de Salud, Tel Aviv, Israel

<sup>4</sup> Ministerio de Salud Pública, Observatorio General de la Salud, Unidad de Salud Mental, Montevideo, Uruguay; <sup>5</sup> Universidad de la República, Departamento de Medicina Preventiva y Social, Facultad de Medicina, Montevideo, Uruguay; <sup>6</sup> La sigla CAGE se refiere a un breve cuestionario de detección de problemas de consumo de alcohol, que incluye las siglas C (consumo excesivo), A (abstinencia), G (guilt), E (eye-opening) y S (stop drinking).

- Two cities in Uruguay
- Age 5 - 15
- N = 115
- QMPI
- 53% probable emotional or behavioral problem
- Demoralization in parents increases risk of emotional or behavioral problem in child

# Child and Adolescent Psychiatric Disorders in Chile



- Only national survey in South America
- DISC-IV DSM-IV
- N = 1558
- Ages 4 - 18

# Key Findings

**Table 3** Multivariate logistic regression of 12-month prevalence rate of DSM-IV mental disorders including impairment (*N* = 1558)

|                               | Anxiety disorders |           | Affective disorders |            | Disruptive disorders |           | Substance use disorders |            | Any disorder |           |
|-------------------------------|-------------------|-----------|---------------------|------------|----------------------|-----------|-------------------------|------------|--------------|-----------|
|                               | OR                | 95% CI    | OR                  | 95% CI     | OR                   | 95% CI    | OR                      | 95% CI     | OR           | 95% CI    |
| <b>Gender</b>                 |                   |           |                     |            |                      |           |                         |            |              |           |
| Male                          | 1.0               |           | 1.0                 |            |                      |           |                         |            | 1.0          |           |
| Female                        | 2.0*              | (1.2-3.3) | 2.2                 | (0.9-5.6)  |                      |           |                         |            | 1.4          | (1.0-2.1) |
| <b>Age (years)</b>            |                   |           |                     |            |                      |           |                         |            |              |           |
| 4-11                          |                   |           | 1.0                 |            | 1.0                  |           |                         |            | 1.0          |           |
| 12-18                         |                   |           | 2.0                 | (0.9-4.5)  | 0.3***               | (0.1-0.6) |                         |            | 0.5***       | (0.3-0.7) |
| <b>Family income</b>          |                   |           |                     |            |                      |           |                         |            |              |           |
| Poverty ≤ 2                   | 1.0               |           |                     |            |                      |           | 1.0                     |            |              |           |
| Poverty ≤ 5                   | 0.6               | (0.3-1.1) |                     |            |                      |           | 0.1**                   | (0.04-0.5) |              |           |
| Poverty ≤ 8                   | 0.4**             | (0.2-0.8) |                     |            |                      |           | 0.6                     | (0.1-2.8)  |              |           |
| Poverty > 8                   | 0.4*              | (0.1-0.8) |                     |            |                      |           | 0.8                     | (0.2-2.4)  |              |           |
| Family Functioning            | 0.6               | (0.3-1.1) | 0.4                 | (0.1-1.3)  | 0.4**                | (0.2-0.8) | 0.2***                  | (0.1-0.4)  | 0.5***       | (0.4-0.7) |
| <b>Family psychopathology</b> |                   |           |                     |            |                      |           |                         |            |              |           |
| No                            | 1.0               |           | 1.0                 |            | 1.00                 |           | 1.0                     |            | 1.0          |           |
| Yes                           | 3.1**             | (1.4-7.0) | 5.5**               | (1.6-18.7) | 2.9**                | (1.4-6.2) | 1.4                     | (0.4-5.2)  | 2.8***       | (2.0-3.9) |
| <b>Family Structure</b>       |                   |           |                     |            |                      |           |                         |            |              |           |
| Both parents                  | 1.0               |           | 1.0                 |            | 1.00                 |           |                         |            | 1.0          |           |
| Single parent                 | 1.7               | (0.9-3.0) | 2.8*                | (1.3-5.9)  | 2.3**                | (1.3-3.9) |                         |            | 2.3***       | (1.6-3.3) |
| Other                         | 2.0               | (0.9-4.5) | 3.4*                | (1.3-8.5)  | 1.2                  | (0.6-2.5) |                         |            | 1.6          | (0.9-3.1) |

# 12-Month Prevalence Mental Disorders Children - Adolescents

|                    | Taubaté<br>Brazil | Chile | Columbia | Mexico<br>City | Puerto<br>Rico | USA<br>NCS-A |
|--------------------|-------------------|-------|----------|----------------|----------------|--------------|
| Anxiety            | 19.9              | 9.3   | 14.4     | 8.4            | 7.9            | 19.0         |
| Affective          | 11.0              | 9.9   | 7.0      | 4.7            | 3.5            | 9.7          |
| Impulse<br>control |                   |       |          |                |                |              |
| Substance          | 3.6               | 10.4  | 2.8      | 2.3            | 1.7            | 3.8          |
| Any                | 29.6              | 17.0  | 21.0     | 13.4           | 13.5           | 27.0         |
| Mild               | 33.1              | 18.9  | 35.9     | 40.5           | 20.2           | 35.7         |
| Moderate           | 33.0              | 40.3  | 41.0     | 33.9           | 42.6           | 39.2         |
| Severe             | 33.9              | 40.8  | 23.1     | 25.7           | 37.2           | 25.2         |

Sources:

Kohn R. Treatment Gap in the Americas a Report for PAHO/WHO, 2013

Indigenous

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# 12-Month Prevalence Mental Disorders Indigenous People

|                  | Guatemala<br>Maya | Chile<br>Mapuche | USA Southwest<br>Tribe | USA Northern<br>Plains Tribe |
|------------------|-------------------|------------------|------------------------|------------------------------|
| <b>N</b>         | <b>409</b>        | <b>75</b>        | <b>1446</b>            | <b>1638</b>                  |
| <b>Anxiety</b>   | <b>1.5</b>        | <b>3.9</b>       | <b>7.5</b>             | <b>10.1</b>                  |
| <b>Affective</b> | <b>1.2</b>        | <b>6.0</b>       | <b>7.3</b>             | <b>4.6</b>                   |
| <b>Substance</b> | <b>2.7</b>        | <b>7.0</b>       | <b>10.5</b>            | <b>17.5</b>                  |
| <b>Any</b>       | <b>6.6</b>        | <b>15.7</b>      | <b>21.0</b>            | <b>24.3</b>                  |

Sources:

Kohn R. Treatment Gap in the Americas a Report for PAHO/WHO, 2014

# Disaster

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# Hurricane Mitch Honduras 1998 2-Year Adult Longitudinal Study



CIDI 2.1 PTSD Module  
N = 800 T1; 590 T2  
Age 15+

Data not shown – Child survey 200  
children and their parents

| PTSD           | %                       |
|----------------|-------------------------|
| 12- Months     | 10.9                    |
| 24-Months      | 12.1                    |
| Acute Stress   | 2.4                     |
| Remission      | 64% with PTSD T1        |
| Onset after T1 | 28% of all PTSD         |
| Chronic        | 0.8% (16% of all PTSD)  |
| Resilient      | 74.6% (all respondents) |

# Pre and Post Chilean Earthquake 2010 and Tsunami Child Study



| Diagnosis  | Pre Disaster | Post Disaster |
|------------|--------------|---------------|
| Anxiety    | 6.3          | 7.5           |
| Mood       | 3.8          | 2.5           |
| Disruptive | 9.7          | 9.1           |
| Substance  | 0.9          | 2.2           |
| Any        | 15.9         | 17.5          |

DISC DSM-IV  
N = 354 T1; 320 T2  
Ages 4 – 18  
Near Epicenter Concepcion  
3 months pre-disaster  
1 year post-disaster

If examined as cross-sectional post-disaster study exposure is significant risk

Data on parents not shown

# Pre and Post Chilean Earthquake 2010 and Tsunami Adult Study



CIDI 2.1 PTSD Module  
N = 2839 T1; 1708 T2  
Ages 4 – 18  
Near Epicenter Concepcion  
7 years pre-disaster  
1 year post-disaster

| Diagnosis | Pre Disaster | Post Disaster |
|-----------|--------------|---------------|
| PTSD      | 4.3          | 26.7          |
| Mood      | 13.9         | 13.1          |

Post-Disaster PTSD Linked to  
Disaster but not Pre-disaster

First study to show prospectively  
that pre-disaster psychiatric  
disorders increase the vulnerability  
to develop PTSD following a major  
traumatic event

# Suicide

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# PAHO Suicide Reports

## SUICIDE MORTALITY IN THE AMERICAS

REGIONAL REPORT

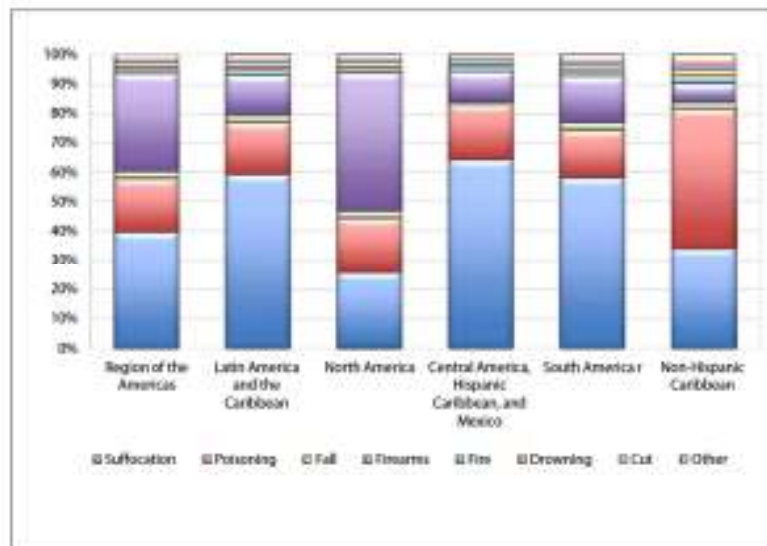


Pan American  
Health  
Organization



World Health  
Organization  
OFFICE FOR THE AMERICAS

Figure 4.1. Suicide methods used in the Region of the Americas and its subregions, percentage of total for both sexes, 2005-2009.



# Defining and estimating treatment gap

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# Treatment Gap Defined

## The treatment gap in mental health care

Robert Kohn,<sup>1</sup> Shekhar Saxena,<sup>1</sup> Izhak Lewin,<sup>1</sup> & Benedetto Saraceno<sup>1</sup>

**Abstract** Mental disorders are highly prevalent and cause considerable suffering and disease burden. To compound this public health problem, many individuals with psychiatric disorders remain untreated although effective treatments exist. We examine the extent of this treatment gap. We reviewed community-based psychiatric epidemiology studies that used standardized diagnostic instruments and included data on the percentage of individuals receiving care for schizophrenia and other non-affective psychotic disorders, major depression, dysthymia, bipolar disorder, generalized anxiety disorder (GAD), panic disorder, obsessive-compulsive disorder (OCD), and alcohol abuse or dependence. The median rates of untreated cases of these disorders were calculated across the studies. Examples of the magnitude of the treatment gap for WHO regions are also presented. Thirty-seven studies had information on service utilization. The median treatment gap for schizophrenia, including other non-affective psychosis, was 32.2%. For other disorders the gap was: depression, 58.2%; dysthymia, 56.0%; bipolar disorder, 58.2%; panic disorder, 55.9%; GAD, 57.5%; and OCD, 57.3%. Alcohol abuse and dependence had the widest treatment gap at 78.1%. The treatment gap for mental disorders is universally large, though it varies across regions. It is likely that the gap reported here is an underestimate due to the unavailability of community-based data from developing countries where services are scarce. To address this major public health challenge, WHO has adopted in 2002 a global action programme that has been endorsed by the Member States.

**Keywords** Mental health services/utilization; Health services accessibility; Schizophrenia/therapy; Anxiety disorder/therapy; Mood disorder/therapy; Compulsive personality disorder/therapy; Psychotherapy; Epidemiologic studies; East of Africa; Americas; Europe (source: MeSH, NLM).

**Mots-clés** Service santé mentale/utilisation; Accessibilité service santé; Schizophrénie/thérapeutique; Trait anxieux/thérapeutique; Troubles humeurs/diagnostic; Personnalité compulsive/thérapeutique; Alcoolisme/thérapeutique; Etude épidémiologique; Coste maladie; Amérique; Europe (source: MeSH, INSERM).

**Palabras clave** Servicios de salud mental/utilización; Accesibilidad a los servicios de salud; Esquizofrenia/terapia; Trastornos de ansiedad/terapia; Trastorno del humor/terapia; Trastorno de personalidad compulsiva/terapia; Psicoterapia; Estudios epidemiológicos; Coste de la enfermedad; América; Europa (source: MeSH, INSERM).

**الكلمات المفتاحية** الاستفادة من خدمات الصحة النفسية/تيسر الحصول على الخدمات الصحية; معالجة اضطرابات القلق; معالجة اضطرابات المزاج; معالجة اضطراب الشخصية compulsive/تعالج; اضطراب تعاطي الكحوليات; الدراسات الوبائية; تكلفة المرض; التغطية الصحية; أوروبا; والشرق الأوسط وشمال أفريقيا; آسيا - جنوب - شرق آسيا; أمريكا; أوروبا (source: MeSH, INSERM).

Bulletin of the World Health Organization 2004;82:858-866.

- Absolute difference between the true prevalence of a disorder and the treated proportion of individuals affected by the disorder
- Percentage of individuals who require care but do not receive treatment
- If disability is to be reduced bridging of the treatment gap must occur

# Belize Treated Prevalence Study

transcultural  
psychiatry

March  
2000

ARTICLE

## An Anthropological and Epidemiological Overview of Mental Health in Belize

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**Abstract** While the use of epidemiological and anthropological methods to determine health risk factors is growing, combined work in the area of psychiatric epidemiology is still limited. This article presents a preliminary overview of the mental health needs and resources in Belize using historic, demographic, epidemiologic and ethnographic methods to survey both the needs and societal resources available to the ethnically heterogeneous population of this country. The projected epidemiological data suggest that the Belizean population is underserved, although these data by themselves fail to account for traditional therapeutic resource utilization and cultural conceptions of mental health, illness, risk and efficacy. On the basis of our initial findings, we conclude that there is a need to complement this study with cultural epidemiological research to achieve a more comprehensive understanding of the mental health situation in Belize.

**Key words:** anthropology • Belize • epidemiology • mental health services • psychiatric nurse practitioner

Vol 27(1): 27-72 | 1361-4411/2000/\$17.00-72011001  
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Projected 6-month prevalence rates in Belize based on Puerto Rican rates

| Disorder            | Treated prevalence |      | Expected prevalence using Puerto Rican data |      | Undertreated in Belize |
|---------------------|--------------------|------|---|------|------------------------|
|                     | (n)                | (%)  | (n)   | (%)  |                        |
| Schizophrenia       | 410                | 0.20 | 1112  | 0.6  | 63                     |
| Affective disorders | 270                | 0.14 | 2454  | 1.3  | 89                     |
| Anxiety disorders   | 48                 | 0.02 | 6190  | 3.3  | 99                     |
| Other               | 210                | 0.10 | 20,608                                      | 11.0 | 99                     |
| Any disorder        | 929                | 0.50 | 30,373                                      | 16.0 | 97                     |

# Attitudes Toward Mental Illness Dominica

## Attitudes towards mental illness in the Commonwealth of Dominica

Robert Kohn,<sup>1</sup> David Sharma,<sup>2</sup> Christopher P. Gamble,<sup>3</sup>  
and Itzhak Levav<sup>4</sup>

**ABSTRACT** Little is known about the perception of mental illness in the English-speaking Caribbean. This study was conducted in 1995 to determine the attitudes, knowledge, and help-seeking practices for emotional disorders in the Commonwealth of Dominica. Two groups in Dominica were surveyed: 67 community leaders, consisting of nurses, teachers, and police officers; and 133 community members grouped into five socioeconomic strata that were collapsed to three for the analysis. All the respondents were asked to identify and suggest management of individuals with psychosis, alcoholism, depression, and childhood hyperactivity, as depicted in case vignettes. The person in the psychosis vignette was diagnosed as suffering from mental illness by 44.0% of the leaders and by 71.2% of the community members. However, in each of the three other vignettes, fewer than 30% of the respondents thought that mental illness was present. The person with alcoholism was viewed as having a serious problem by only slightly more than half of the respondents. Fewer than half of the respondents thought that the individuals with depression or hyperactivity had serious problems. The community leaders did somewhat worse in recognizing mental illness than did the community members. Respondents were most likely to refer a family member with emotional problems to a medical practitioner. In conclusion, education about mental health problems is needed in Dominica. Especially concerning was the lack of knowledge on mental illness among nurses, teachers, and police officers. But it is professionals directly involved in the pathway to care.

Dominica is one of the largest of the Windward Islands. It is located in the Eastern Caribbean between the French islands of Guadeloupe and Martinique. Dominica has a population of over 71,000, of whom 16,000 reside in Roseau, the capital. A former British colony, Dominica gained its independence in 1978. Although only 29 miles long and 16 miles wide, its mountainous terrain makes access to the capital difficult for most of the villagers. The country is predominantly Roman Catholic. Dominica has the only surviving Carib indigenous population, estimated at some 2,000 persons. Although English is Dominica's official language, the majority of the population also speaks French Creole. While the island's economy is based primarily on agriculture, the country is not self-sufficient in food production.

A 1995 poverty assessment survey for Dominica showed that 27% of households live in poverty and are unable to adequately meet basic needs, including nutritional ones (1). However, undernutrition of young children is extremely low, at a rate of 1.4%. The unemployment rate is estimated to be approximately 9.5%. Although there is no compulsory education, in 1993 93.6% of the population between the ages of 5 and 19 were registered in school. Primary school has been completed by 67.1% of the population. The functional literacy rate is estimated to be 10.5%. A well-developed primary care system serves each of Dominica's ten parishes, or administrative divisions.

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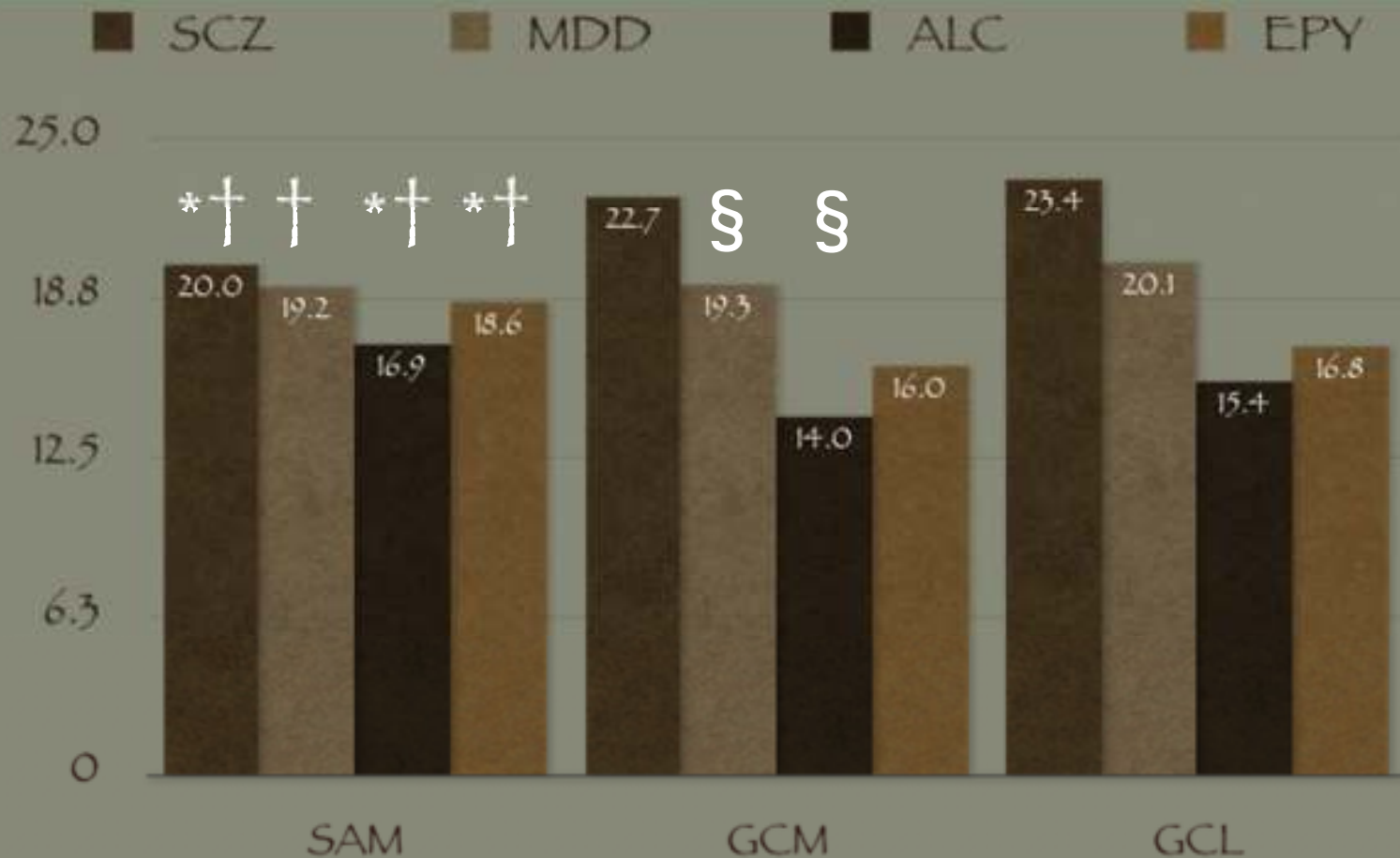
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| Vignette   | Mental Illness |      | Serious Problem |      |
|------------|----------------|------|-----------------|------|
|            | CM             | CL   | CM              | CL   |
| Psychosis  | 71.2           | 84.0 | 70.2            | 80.6 |
| Alcoholism | 21.1           | 14.8 | 55.7            | 59.0 |
| Depression | 24.6           | 18.6 | 49.6            | 30.6 |
| ADHD       | 28.9           | 18.3 | 44.4            | 40.0 |

CM = Community Members  
CL = Community Leaders (Teachers, Nurses, Police)

# Stigma Mental Illness Mayan and Non-Mayan Guatemala



\* SAM vs GCM; † SAM vs GCL; § GCM vs GCL

Adjusted gender, age, education, knowing someone with mental illness

# Training Primary Care Physicians Treat Depression

*Psychological Medicine*, 2005, 35, 35–45. © 2004 Cambridge University Press  
DOI: 10.1017/S0033291704002764 Printed in the United Kingdom

## Training Latin American primary care physicians in the WPA module on depression: results of a multicenter trial

ITZHAK LEVAY, ROBERT KOHN, IVAN MONTOYA, CARLOS PALACIO, PABLO ROZIC, IDA SOLANO, WILLIAMS VALENTINI, BENJAMIN VICENTE, JORGE CASTRO MORALES, FRANCISCO ESPEJO UIGUETA, YAMINI SARAVANAN, CLAUDIO T. MIRANDA\* AND NORMAN SARTORIUS

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### ABSTRACT

**Background.** In order to improve care for people with depressive disorders and to reduce the increasing burden of depression, the American Regional Office of the World Health Organization has launched a major region-wide initiative. A central part of this effort was directed to the primary care system where the diagnosis and treatment of depression are deficient in many countries. This study evaluated the materials developed by the World Psychiatric Association in a training program on depression among primary care physicians by measuring changes in their knowledge, attitudes, and practice (KAP).

**Method.** One hundred and seven physicians and 6174 patients from five Latin American countries participated in the trial. KAP were assessed 1 month before and 1 month following the training program. In addition, the presence of depressive symptoms was measured in patients who visited the clinic during a typical week at both times using the Zung Depression Scale and a DSM-IV/ICD-10 major depression checklist.

**Results.** The program slightly improved knowledge about depression and modified some attitudes, but had limited impact on actual practice. There was no evidence that the diagnosis of depression was made more frequently, nor was there an improvement in psychopharmacological management. The post-training agreement between physician diagnosis and that based on patient self-report remained low. The physicians, however, seemed more confident in treating depressed patients after training, and referred fewer patients to psychiatrists.

**Conclusions.** Traditional means of training primary care physicians in depression have little impact on clinical practice regardless of the quality of the teaching materials.

- PCP not improved in making diagnoses
- Poor agreement with patient self-report
- Antidepressant use increased

Phase 1 – 1 month prior to training  
Phase 2 – 1 month after training

98 PCP

3084 Patients Phase 1

3090 Patients Phase 2

Countries: Argentina, Brazil, Chile, Colombia, Costa Rica

# Treatment Gap 2005

## Investigación original / Original research

### Los trastornos mentales en América Latina y el Caribe: asunto prioritario para la salud pública

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**Forma de citar** Kohn R, Levav I, Caldas de Almeida JM, Vicente B, Andrade L, Caraveo-Anduaga J, Saxena S, Saraceno B. Los trastornos mentales en América Latina y el Caribe: asunto prioritario para la salud pública. *Rev Panam Salud Pública*. 2005;18(5):229-40.

**RESUMEN** **Objetivo.** La creciente carga de trastornos mentales que afecta a las poblaciones de América Latina y el Caribe es demandada, ya que para hacer caso omiso de ella. Por lo tanto, es una necesidad imperiosa conocer la prevalencia de los trastornos mentales y la brecha de tratamiento, que está dada por la diferencia entre las tasas de prevalencia tratadas y las de las personas que han sido evaluadas, que en algunos casos es grande por la existencia de diagnósticos oportunos. Si se dispone de mayor información, se hace más fácil: 1) abogar mejor por los intereses de las personas que necesitan atención, 2) adoptar políticas más eficaces, 3) formular programas de intervención más sostenibles y 4) adoptar servicios en conjunción con las necesidades observadas.

**Métodos.** Los datos se obtuvieron de evaluaciones epidemiológicas en América Latina y el Caribe entre 2000 y 2004. En esas investigaciones epidemiológicas se usaron instrumentos diagnósticos estandarizados y se realizaron tasas de prevalencia. Las tasas brutas de algunos trastornos psiquiátricos en América Latina y el Caribe se estimaron a partir de las tasas brutas y mediana ajustadas de los individuos, ajustadas por sexo. También se exploraron los datos correspondientes al uso de servicios de salud mental para poder calcular la brecha en el tratamiento según trastornos específicos.

**Resultados.** Los trastornos más frecuentes (entre otros la esquizofrenia) tuvieron una prevalencia media ajustada de entre el uno por ciento de 2.0%, la depresión mayor, de 4.3%, y el alcohol o la dependencia del alcohol, de 5.7%. Más de la tercera parte de las personas afectadas por trastornos psiquiátricos, más de la mitad de las afectadas por trastornos de ansiedad, y cerca de tres cuartas partes de las que sufrían de dependencia del alcohol no habían recibido tratamiento psiquiátrico alguno, así en los servicios especializados o en uno de tipo general.

**Conclusiones.** La actual brecha en el tratamiento de los trastornos mentales de América Latina y el Caribe sigue siendo alarmante. Además, los datos actuales probablemente subestiman el número de personas con trastornos. La metodología epidemiológica y los cambios en la complejidad profesional aconsejados ante más la brecha en la atención en América Latina y el Caribe, a su vez que se fortalecen sistemas públicos de salud mental o que se actualicen los existentes, presentando incluso en ellas la extensión de los programas y servicios.

**Palabras clave** Salud mental, trastornos mentales, servicios de salud mental, atención en salud, políticas de salud, América Latina, Región del Caribe.

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| Disorder                | Median |
|-------------------------|--------|
| Non-affective Psychosis | 44.4   |
| Major Depression        | 57.9   |
| Dysthymia               | 58.0   |
| Bipolar Disorder        | 62.2   |
| Generalized Anxiety     | 58.2   |
| Panic Disorder          | 58.9   |
| OCD                     | 59.9   |
| Alcohol Use Disorder    | 76.0   |

# Treatment Gap Adults 2013

|                      | <b>Anxiety disorders</b> | <b>Affective disorders</b> | <b>Substance use disorders</b> |
|----------------------|--------------------------|----------------------------|--------------------------------|
| Canada-CCHS          | 69.4                     | 58.9                       | 76.2                           |
| Chile-ECPP           | 39.0                     | 50.0                       | 74.5                           |
| Colombia-WMH         | 82.4                     | 84.8                       | 92.5                           |
| Guatemala            | 97.1                     | 95.1                       | 97.0                           |
| Mexico-WMH           | 77.8                     | 86.8                       | 82.9                           |
| USA-NCS-R            | 43.6                     | 57.8                       | 61.9                           |
| <b>Americas</b>      | <b>56.2</b>              | <b>66.3</b>                | <b>70.6</b>                    |
| <b>Latin America</b> | <b>76.3</b>              | <b>83.2</b>                | <b>85.3</b>                    |
| <b>North America</b> | <b>46.3</b>              | <b>57.9</b>                | <b>63.4</b>                    |

Source:

Kohn R. Treatment Gap in the Americas a Report for PAHO/WHO, 2013

# Treatment Gap Children 2013

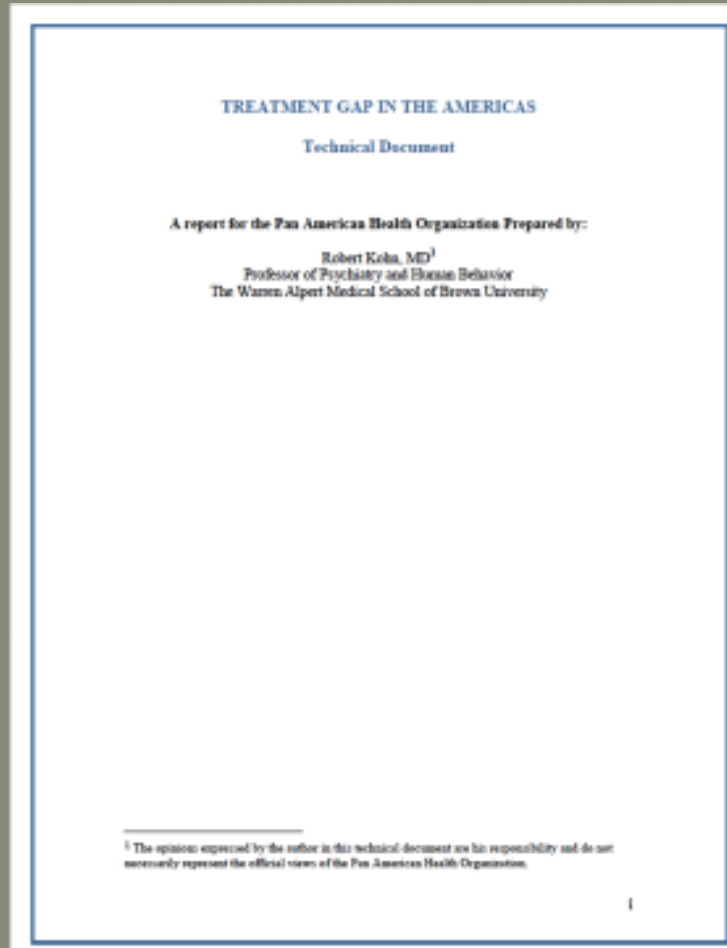
|               | <b>Anxiety disorders</b> | <b>Affective disorders</b> | <b>Impulse Control</b> | <b>Substance use disorders</b> |
|---------------|--------------------------|----------------------------|------------------------|--------------------------------|
| <b>Chile</b>  | 66.2                     | 73.9                       | 62.7                   | 73.1                           |
| <b>Mexico</b> | 86.7                     | 80.7                       | 82.9                   | 77.8                           |
| <b>USA</b>    | 82.2                     | 62.3                       | 51.1                   | 62.0                           |
| <b>Mean</b>   | 78.4                     | 72.3                       | 65.6                   | 71.0                           |
| <b>Median</b> | 82.2                     | 73.9                       | 62.7                   | 73.1                           |

Source:

Kohn R. Treatment Gap in the Americas a Report for PAHO/WHO, 2013



# Treatment Gap Indigenous 2013



|                                      | <b>Any Disorder</b> |
|--------------------------------------|---------------------|
| <b>Guatemala Mayan</b>               | <b>82.0</b>         |
| <b>Chile Mapuche</b>                 | <b>92.4</b>         |
| <b>USA Southwest<br/>Tribe</b>       | <b>33.4</b>         |
| <b>USA Northern<br/>Plains Tribe</b> | <b>36.4</b>         |

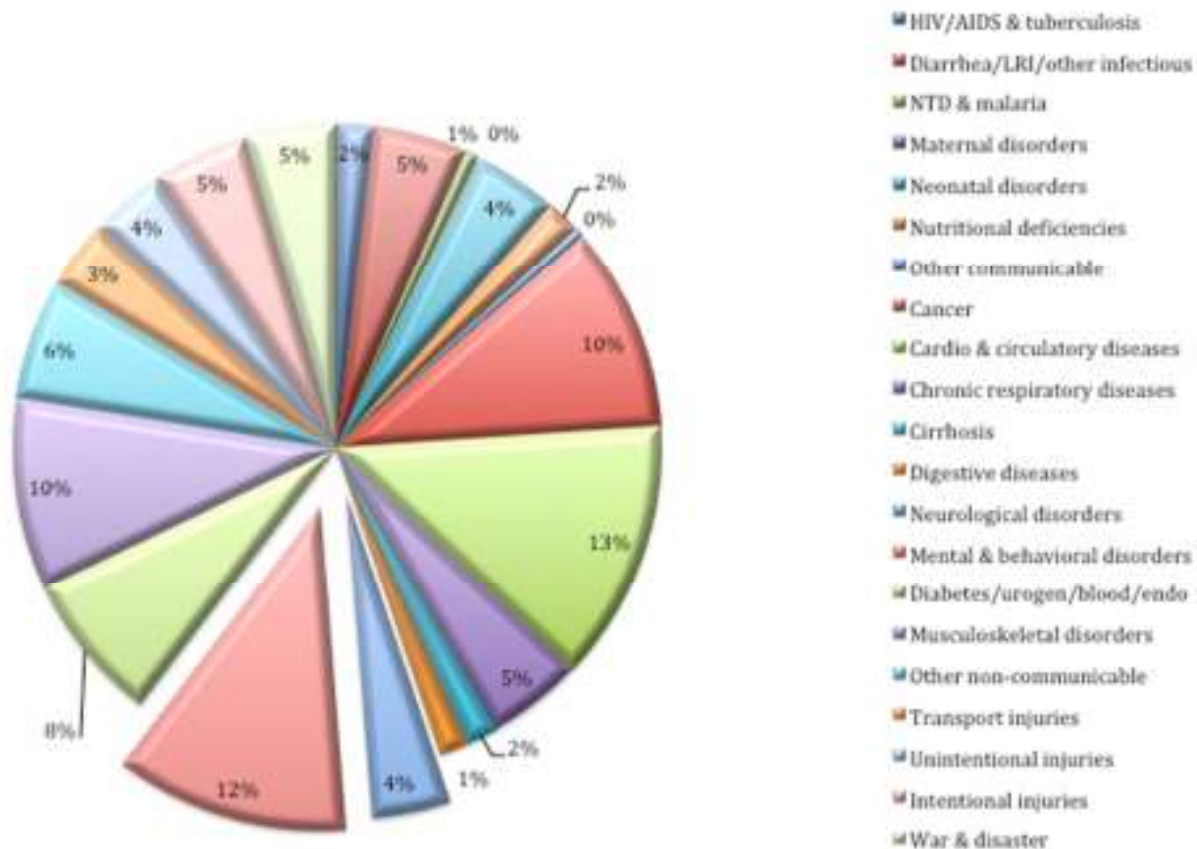
# Treatment Gap Schizophrenia

| Subregion                     | GBD  | LAC<br>Prevalence | Eaton |
|-------------------------------|------|-------------------|-------|
| Latin America & the Caribbean | 58.4 | 75.2              | 38.0  |
| Caribbean                     | 45.2 | 58.6              | -3.6  |
| Latin America                 | 59.5 | 76.2              | 40.5  |
| Central America               | 79.6 | 88.0              | 70.0  |
| South America                 | 75.1 | 85.4              | 63.5  |
| Mexico                        | 93.7 | 96.3              | 90.8  |
| Brazil                        | 25.9 | 56.5              | -8.9  |
| Low Income Countries          | 76.0 | 85.9              | 64.7  |
| High Income Countries         | 56.4 | 73.9              | 34.8  |

Data is based on weighted prevalence from 38 LAC countries that completed the WHO-AIMS from 2004 - 2014

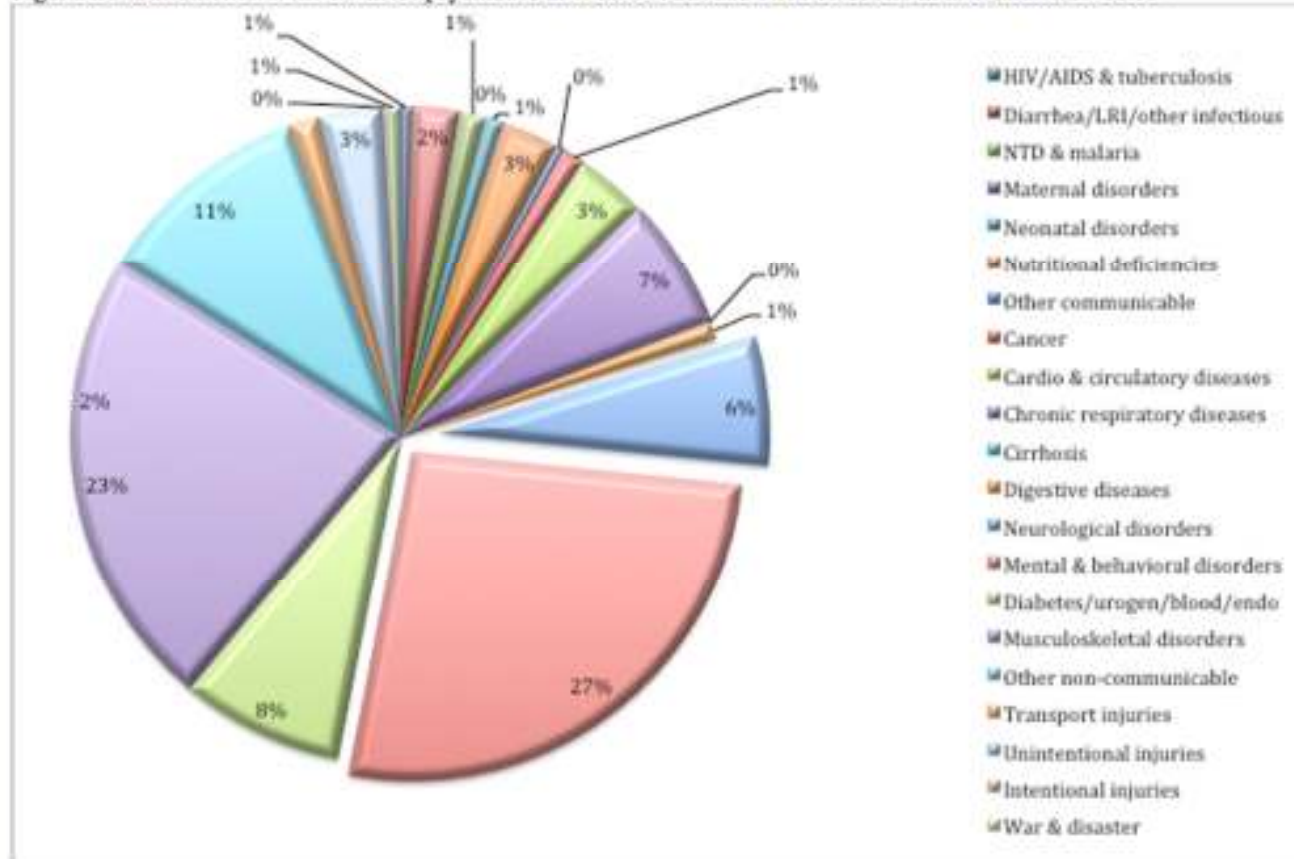
# Global Burden Disease DALY 2010

Figure 1. Distribution of DALY for neuropsychiatric disorders relative to other disorders in the Americas – 2010

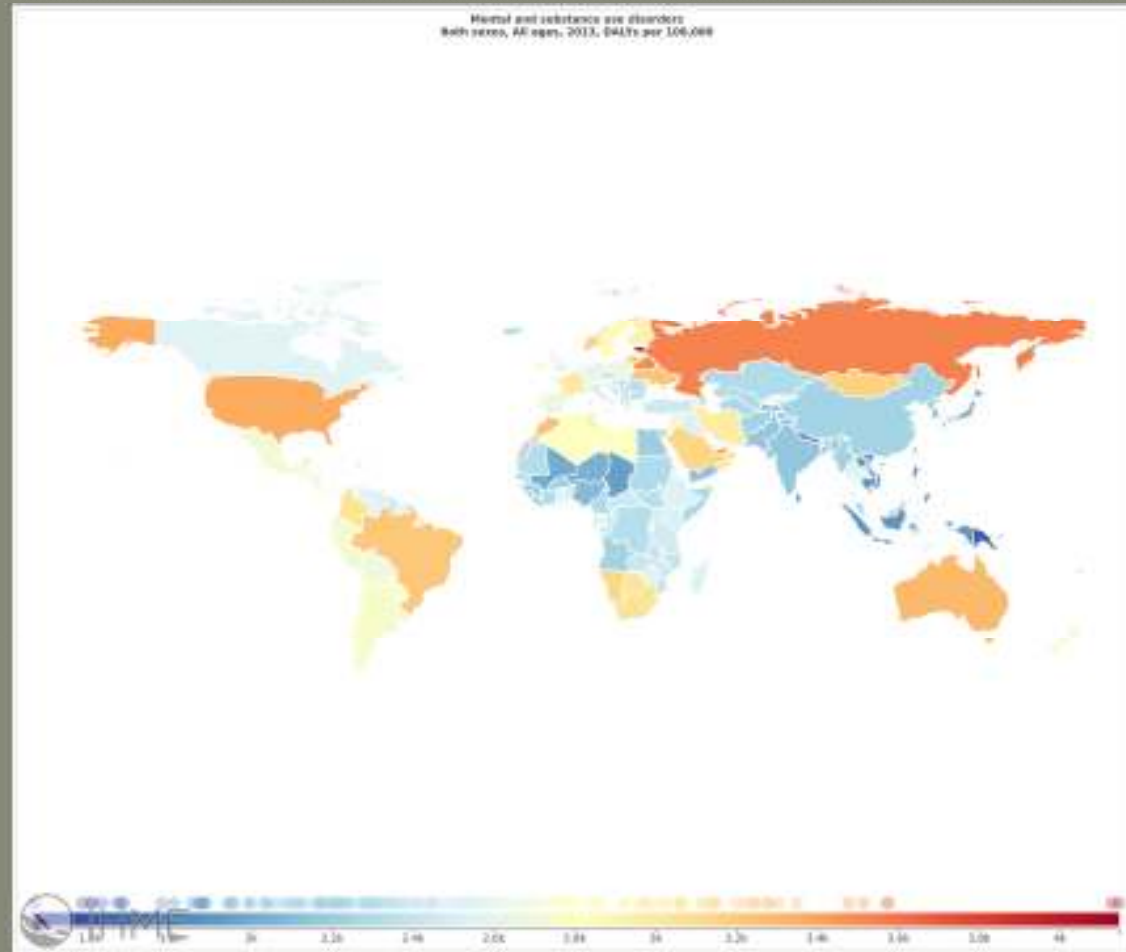


# Global Burden of Disease YLD 2010

Figure 4. Distribution of YLD for neuropsychiatric disorders relative to other disorders in the Americas – 2010



# Global Burden of Disease DALY 2013



# Global Burden of Disease YLD

## 2013

