

# **1324 Prison Suicides in 10 Countries in South America: Incidence, relative Risks, and ecological Factors**

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**Supplementary Table 1** Sources of data for suicides in prison and general populations, incarceration rates and occupancy of prisons in ten South American countries

Country	Suicides in prison populations	Suicides in general populations ages 25 to 54	Total general population ages 25 to 54	Incarceration rate	Occupancy of prisons
Argentina	Procuración Penitenciaria de la Nación	WHO Mortality Database <sup>a</sup>	UN Data <sup>c</sup> , World Bank <sup>d</sup>	Sistema Nacional de Estadísticas sobre Ejecución de la Pena, Ministerio de Justicia y Derechos Humanos	Procuración Penitenciaria de la Nación
Bolivia	Dirección General del Regimen Penitenciario	WHO Preventing Suicide: A Global Imperative <sup>b</sup>	Instituto Nacional de Estadística, World Bank <sup>d</sup>	Instituto Nacional de Estadística, World Bank <sup>c</sup>	-
Brazil	Levantamento Nacional de Informações Penitenciárias Departamento Penitenciário Nacional	WHO Mortality Database <sup>a</sup>	UN Data <sup>c</sup> , World Bank <sup>d</sup>	Levantamento Nacional de Informações Penitenciárias Departamento Penitenciário Nacional	Levantamento Nacional de Informações Penitenciárias Departamento Penitenciário Nacional
Chile	Gendarmeria de Chile	WHO Mortality Database <sup>a</sup>	UN Data <sup>c</sup> , World Bank <sup>d</sup>	Gendarmeria de Chile	Gendarmeria de Chile
Colombia	Instituto Nacional Penitenciario y Carcelario	WHO Mortality Database <sup>a</sup>	UN Data <sup>c</sup> , World Bank <sup>d</sup>	Instituto Nacional Penitenciario y Carcelario	Instituto Nacional Penitenciario y Carcelario
Ecuador	Registros administrativos de Centros de Privación de Libertad, Ministerio de Justicia, Derechos Humanos y Cultos	WHO Mortality Database <sup>a</sup>	UN Data <sup>c</sup> , World Bank <sup>d</sup>	Registros administrativos de Centros de Privación de Libertad, Ministerio de Justicia, Derechos Humanos y Cultos	Registros administrativos de Centros de Privación de Libertad, Ministerio de Justicia, Derechos Humanos y Cultos
Guyana	The Guyana Prison Service	WHO Mortality Database <sup>a</sup>	UN Data <sup>c</sup> , World Bank <sup>d</sup>	The Guyana Prison Service	The Guyana Prison Service
Paraguay	Dirección General de Establecimientos Penitenciarios y Ejecución Penal	WHO Mortality Database <sup>a</sup>	UN Data <sup>c</sup> , World Bank <sup>d</sup>	Dirección General de Establecimientos Penitenciarios y Ejecución Penal	-
Peru	Instituto Nacional Penitenciario	WHO Mortality Database <sup>a</sup>	UN Data <sup>c</sup> , World Bank <sup>d</sup>	Instituto Nacional Penitenciario	Instituto Nacional Penitenciario
Uruguay	Instituto Nacional de Rehabilitación	WHO Mortality Database <sup>a</sup>	UN Data <sup>c</sup> , World Bank <sup>d</sup>	Instituto Nacional de Rehabilitación	Instituto Nacional de Rehabilitación

a = [http://apps.who.int/healthinfo/statistics/mortality/causeofdeath\\_query/](http://apps.who.int/healthinfo/statistics/mortality/causeofdeath_query/)

b = [https://www.who.int/mental\\_health/suicide-prevention/world\\_report\\_2014/en/](https://www.who.int/mental_health/suicide-prevention/world_report_2014/en/). Data available only for 2012

c = <http://data.un.org/Default.aspx>

d = <https://data.worldbank.org/>

- = no information available

**Supplementary Table 2** Mean incarceration rates and occupancy rates of prisons in 10 South American countries

Country	Incarceration rate per 100 000 population <sup>a</sup>	Occupancy rate of prisons <sup>a</sup>	Years of observation
Argentina	155	93%	2009-2017
Bolivia	101	-	2001-2017
Brazil	332	183%	2014-2016
Chile	256	107% <sup>b</sup>	2000-2017
Colombia	248	152%	2012-2017
Ecuador	132	147%	2006-2017
Guyana	250	127%	2001-2017
Paraguay	176	-	2013-2017
Peru	232	214%	2012-2017
Uruguay	263	110%	2010-2017

a = Means based on the years of observation for suicides in prison populations

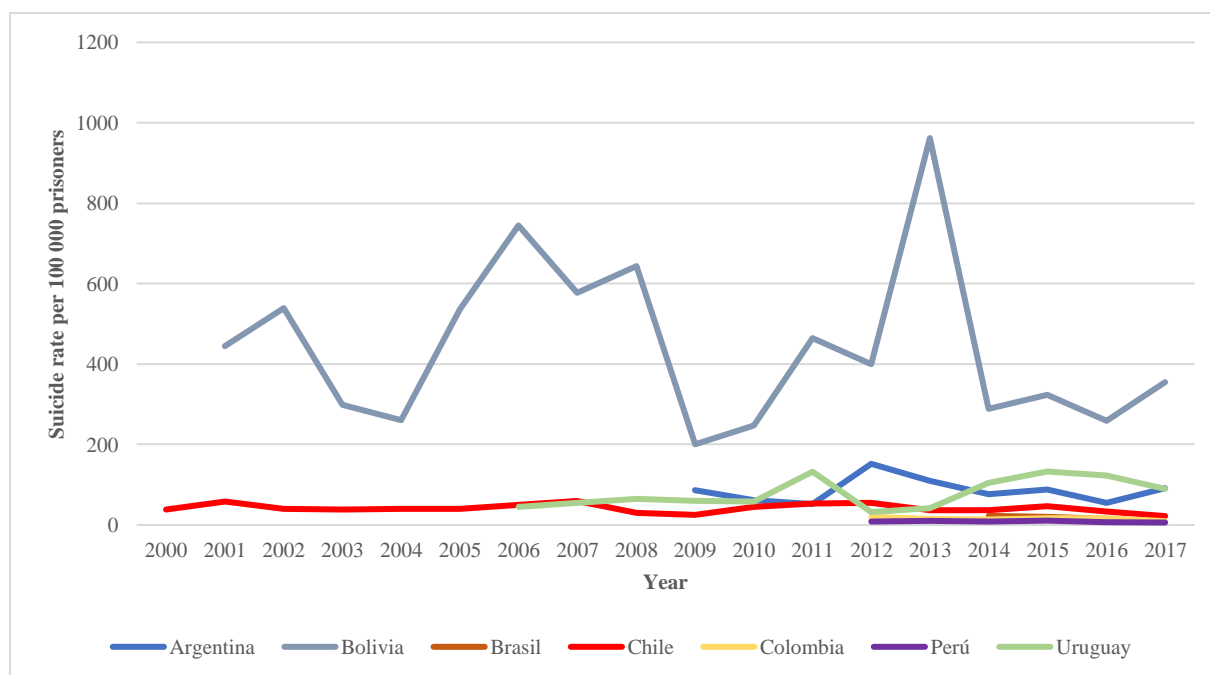
b = Only available for 2012-2016

- = no information available

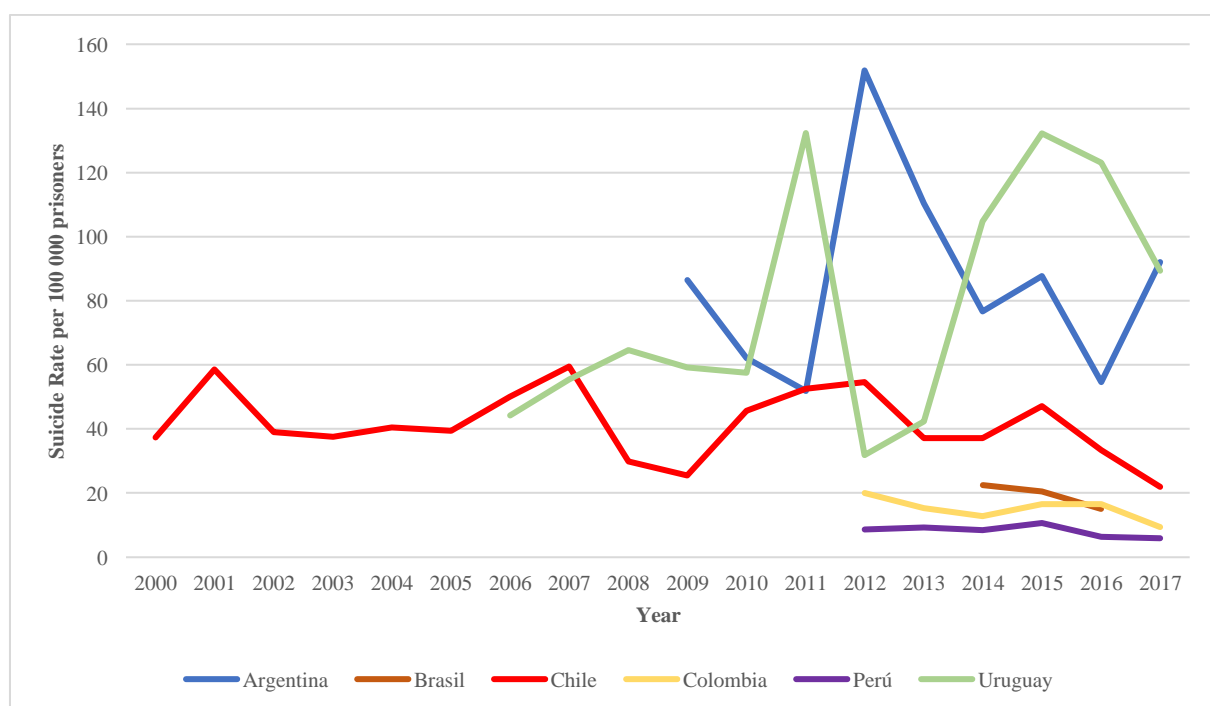
**Supplementary Table 3** Total numbers of prison deaths and suicides in six countries

	Total number of prison deaths	Suicide of total) (%)	Years of observation
<b>Argentina</b>	365	79 (21.6%)	2009-2017
<b>Brazil</b>	4797	371 (7.7%)	2014-2016
<b>Chile</b>	2266	313 (13.8%)	2000-2017
<b>Guyana</b>	155	3 (1.9%)	2000-2016
<b>Paraguay</b>	198	12 (6.1%)	2013-2017
<b>Uruguay</b>	476	87 (18.3%)	2006-2017

**Supplementary Figure 1** Annual suicide rates per 100 000 prisoner populations between 2000 and 2017 in seven countries with more than five suicides per year (to be shown in colour online)



**Supplementary Figure 2** Annual suicide rates per 100 000 prisoner populations between 2000 and 2017 in six countries with at least five suicides per year (excluding Bolivia as outlier)  
(to be shown in colour online)



**Supplementary Table 4** Numbers and rates of suicide in male prisoners compared with the male general population in South America

Country	Total number of suicides in male prison populations	Years of observation	Annual suicide rate per 100 000 male prison population	95% CI	Annual suicide rate per 100 000 male general population aged 25-54	Rate ratio	95% confidence interval	P-value
Argentina	71	2009-2017	84.1	64.5 to 103.6	13.9	6.1	4.8 to 7.7	<.001
Bolivia	271	2001-2017	-	-	16.2	-	-	-
Brazil	338	2014-2016	18.6	16.6 to 20.5	12.3	1.5	1.4 to 1.7	<.001
Chile	300	2000-2017	45.9	40.7 to 51.0	24.1	1.9	1.7 to 2.1	<.001
Colombia	99	2012-2017	14.1	11.3 to 16.9	10.2	1.4	1.1 to 1.7	<.001
Ecuador	40	2006-2017	17.2	11.8 to 22.5	12.6	1.4	1.0 to 1.9	.049
Guyana	3	2001-2017	-	-	63.2	-	-	-
Paraguay	9	2013-2017	16.1	5.6 to 26.6	11.4	1.4	0.7 to 2.7	.300
Peru	30	2012-2017	7.2	4.6 to 9.8	2.4	3.0	2.1 to 4.4	<.001
Uruguay	62	2010-2017	84.7	63.7 to 105.8	31.9	2.7	2.1 to 3.4	<.001

**Supplementary Table 5** Numbers and rates of suicide in female prison populations compared with the country- and age-matched female general populations in South America

Country	Total number of suicides in female prison populations	Years of observation	Annual suicide rate per 100 000 female prison population	95% CI	Annual suicide rate per 100 000 female general population age 25-54	Rate ratio	95% confidence interval	P-value
Argentina	8	2009-2017	107.3	33.0 to 181.6	3.3	32.1	16.0 to 64.2	<.001
Bolivia	6	2001-2017	-	-	8.5	-	-	-
Brazil	33	2014-2016	28.9	19.1 to 38.8	3.1	9.3	6.6 to 13.1	<.001
Chile	13	2000-2017	24.7	11.3 to 38.1	5.2	4.7	2.7 to 8.1	<.001
Colombia	7	2012-2017	14.0	3.6 to 24.4	1.8	7.6	3.6 to 16.0	<.001
Ecuador	1	2006-2017	5.3	0 to 15.6	3.4	-	-	-
Guyana	0	2001-2017	-	-	13.9	-	-	-
Paraguay	3	2013-2017	84.0	0 to 179.1	3.4	-	-	-
Peru	5	2012-2017	19.2	2.4 to 36.0	.9	21.3	8.8 to 51.4	<.001
Uruguay	8	2010-2017	162.1	49.9 to 274.3	8.9	18.2	9.0 to 36.6	<.001

**Supplementary Table 6** Linear Regression Analyses with suicide rates of prison populations as dependent variable and year as independent variable

Country	Years	Beta coefficient ( $\beta$ )	95% CI	P-value
<b>Argentina</b>	9	-0.05	-10.23 to 10.10	.981
<b>Brazil</b>	3	-0.96	-16.35 to 8.92	.167
<b>Chile</b>	18	.31	-1.54 to .51	.305
<b>Colombia</b>	6	-0.66	-3.32 to .73	.150
<b>Peru</b>	6	-0.60	-1.66 to .50	.209
<b>Uruguay</b>	12	.57	-0.07 to 11.68	.052