Suicide trends in the early months of the COVID-19 pandemic: an interrupted time-series analysis of preliminary data from 21 countries.

By Pirkis, J. John, A., Shin, S., DelPozo-Banos, M., Arya, V., Aguilar, P. et al , 2021

Articles

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Summary

Background The COVID-19 pandemic is having profound mental health consequences for many people. Concerns have been expressed that, at their most extreme, these consequences could manifest as increased suicide rates. We aimed to assess the early effect of the COVID-19 pandemic on suicide rates around the world.

Methods We sourced real-time suicide data from countries or areas within countries through a systematic internet search and recourse to our networks and the published literature. Between Sept 1 and Nov 1, 2020, we searched the official websites of these countries' ministries of health, police agencies, and government-run statistics agencies or equivalents, using the translated search terms "suicide" and "cause of death", before broadening the search in an attempt to identify data through other public sources. Data were included from a given country or area if they came from an official government source and were available at a monthly level from at least Jan 1, 2019, to July 31, 2020. Our internet searches were restricted to countries with more than 3 million residents for pragmatic reasons, but we relaxed this rule for countries identified through the literature and our networks. Areas within countries could also be included with populations of less than 3 million. We used an interrupted time-series analysis to model the trend in monthly suicides before COVID-19 (from at least Jan 1, 2019, to March 31, 2020) in each country or area within a country, comparing the expected number of suicides derived from the model with the observed number of suicides in the early months of the pandemic (from April 1 to July 31, 2020, in the primary analysis).

Findings We sourced data from 21 countries (16 high-income and five upper-middle-income countries), including whole-country data in ten countries and data for various areas in 11 countries). Rate ratios (RRs) and 95% CIs based on the observed versus expected numbers of suicides showed no evidence of a significant increase in risk of suicide since the pandemic began in any country or area. There was statistical evidence of a decrease in suicide compared with the expected number in 12 countries or areas: New South Wales, Australia (RR 0·81 [95% CI 0·72–0·91]); Alberta, Canada (0·80 [0·68–0·93]); British Columbia, Canada (0·76 [0·66–0·87]); Chile (0·85 [0·78–0·94]); Leipzig, Germany (0·49 [0·32–0·74]); Japan (0·94 [0·91–0·96]); New Zealand (0·79 [0·68–0·91]); South Korea (0·94 [0·92–0·97]); California, USA (0·90 [0·85–0·95]); Illinois (Cook County), USA (0·79 [0·67–0·93]); Texas (four counties), USA (0·82 [0·68–0·98]); and Ecuador (0·74 [0·67–0·82]).

Interpretation This is the first study to examine suicides occurring in the context of the COVID-19 pandemic in multiple countries. In high-income and upper-middle-income countries, suicide numbers have remained largely unchanged or declined in the early months of the pandemic compared with the expected levels based on the pre-pandemic period. We need to remain vigilant and be poised to respond if the situation changes as the longer-term mental health and economic effects of the pandemic unfold.

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Introduction

The COVID-19 pandemic has had profound mental health consequences[1] and there are concerns that it could lead to increases in suicide rates.[2] However, few studies have examined the effects of previous widespread disease outbreaks on suicide. Two systematic reviews collectively

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This research offers a cautionary tale of questioning the general expectation that suicide rates have spiked during COVID. The data the authors reviewed found this not to be the case in high income and middle-income countries. Suicide data often lags behind real time and these authors looked at media and real time reports to better assess the number of suicides occurring in 21 countries.

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KEY FINDINGS

While there were many initial self-reports of increased depression, anxiety and suicidal thinking, this did not translate into higher suicide rates.

There may have been a protective effect during stay-at-home periods that “we’re all in this together” having a beneficial outcome. Likewise, many countries increased resources and relaxed restrictions to access counseling via telehealth.

While these results are positive, caution should be taken now that stay-at-home periods are lifting when may see a reduction in counseling access and a delayed response to the cumulative stress and loss many experienced.

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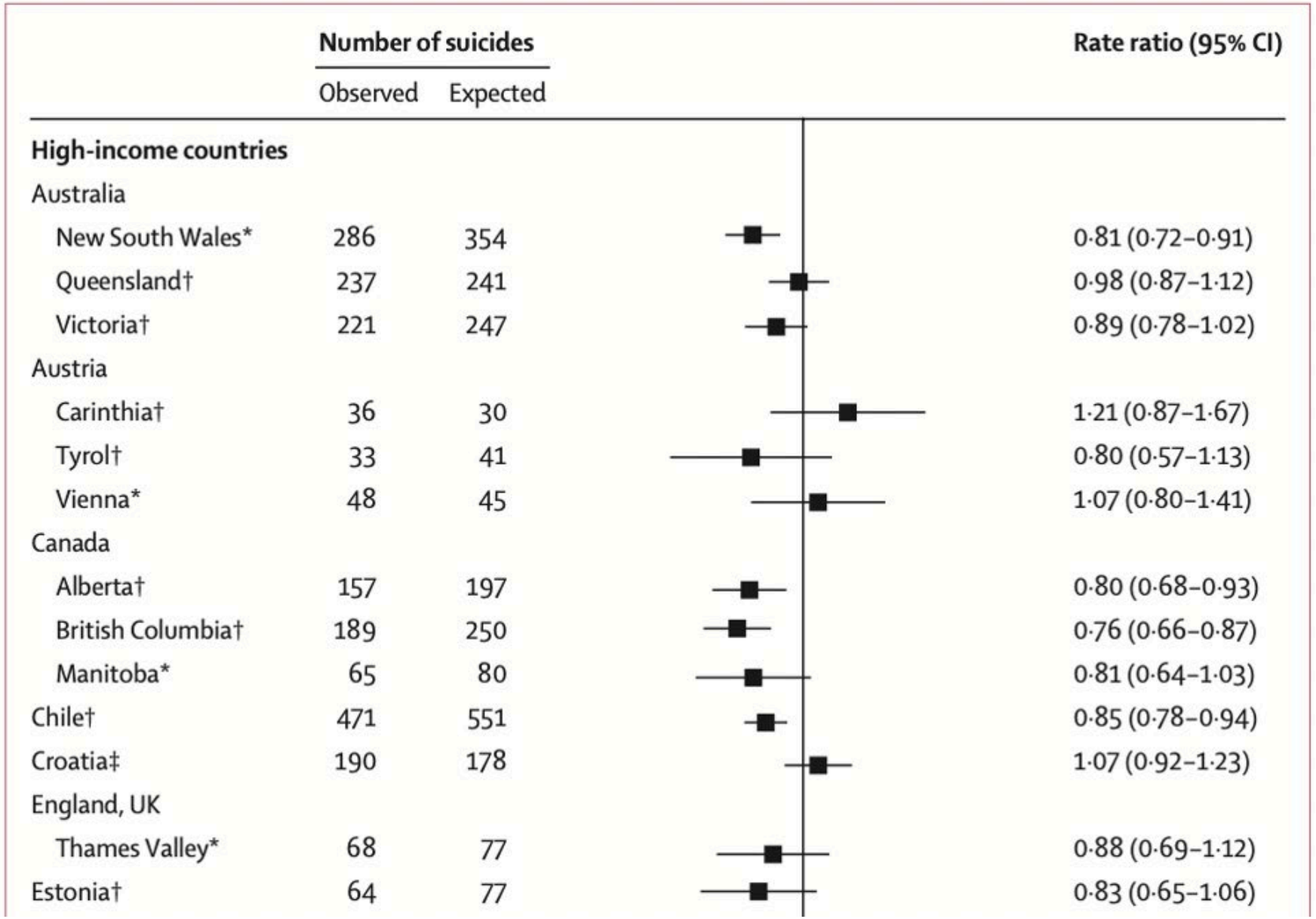

	Number of suicides		Rate ratio (95% CI)
	Observed	Expected	
High-income countries			
Australia			
New South Wales*	286	354	0·81 (0·72–0·91)
Queensland†	237	241	0·98 (0·87–1·12)
Victoria†	221	247	0·89 (0·78–1·02)
Austria			
Carinthia†	36	30	1·21 (0·87–1·67)
Tyrol†	33	41	0·80 (0·57–1·13)
Vienna*	48	45	1·07 (0·80–1·41)
Canada			
Alberta†	157	197	0·80 (0·68–0·93)
British Columbia†	189	250	0·76 (0·66–0·87)
Manitoba*	65	80	0·81 (0·64–1·03)
Chile†	471	551	0·85 (0·78–0·94)
Croatia‡	190	178	1·07 (0·92–1·23)
England, UK			
Thames Valley*	68	77	0·88 (0·69–1·12)
Estonia†	64	77	0·83 (0·65–1·06)

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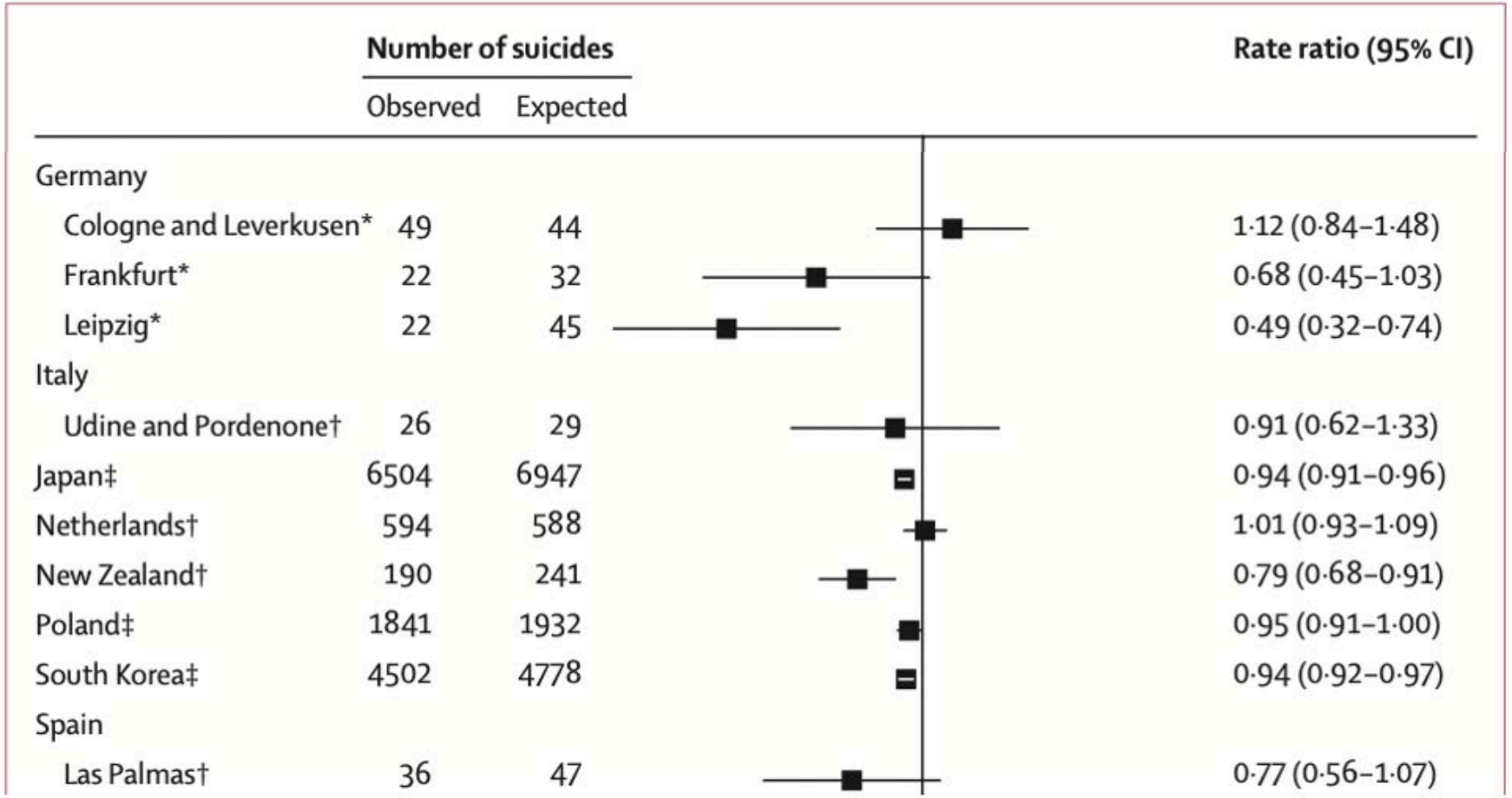

	Number of suicides		Rate ratio (95% CI)
	Observed	Expected	
Germany			
Cologne and Leverkusen*	49	44	1·12 (0·84–1·48)
Frankfurt*	22	32	0·68 (0·45–1·03)
Leipzig*	22	45	0·49 (0·32–0·74)
Italy			
Udine and Pordenone†	26	29	0·91 (0·62–1·33)
Japan‡	6504	6947	0·94 (0·91–0·96)
Netherlands†	594	588	1·01 (0·93–1·09)
New Zealand†	190	241	0·79 (0·68–0·91)
Poland‡	1841	1932	0·95 (0·91–1·00)
South Korea‡	4502	4778	0·94 (0·92–0·97)
Spain			
Las Palmas†	36	47	0·77 (0·56–1·07)

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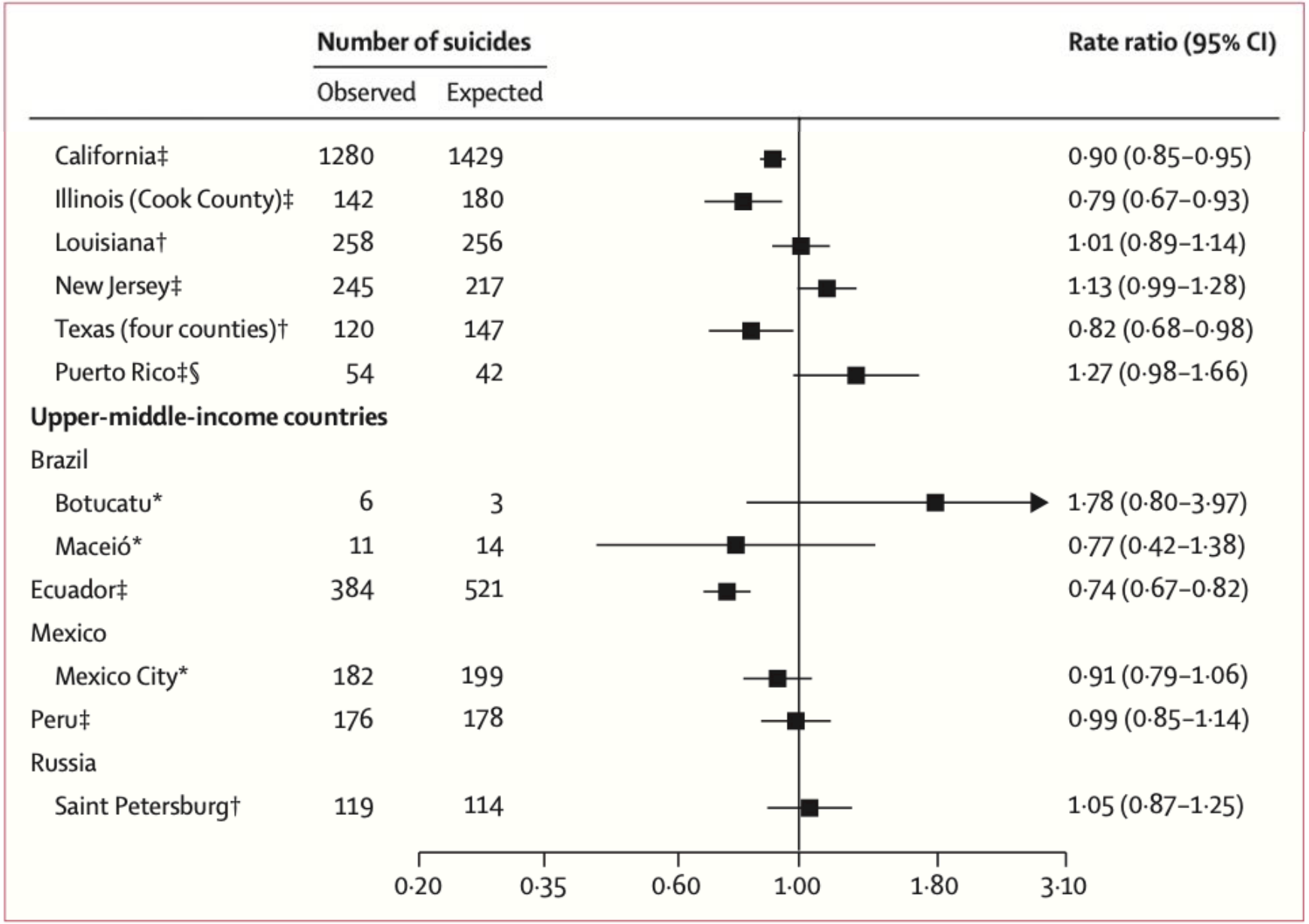

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