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Einfluss von natürlichen Lithiumsalzvorkommen auf die Suizidmortalität in Chile 2000–2009: Eine geographische Analyse [Impact of natural lithium ressources on suicide mortality in Chile 2000-2009: a geographical analysis].

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Abstract

Background: There is increasing evidence for the hypothesis that lithium salts at naturally occurring levels in drinking water may have a moderating effect on suicide rates of the exposed population. The aim of this study was to examine whether the lithium rich Atacama region in Chile is associated with lower suicide mortality in comparison to other regions.

Methods: Suicide data was acquired from the Chilean Ministry of Health. Socio-economic variables (rate of unemployment, urbanity, median household income, percentage of indeginous population) were obtained for all regions of Chile from the national statistical institute. We calculated annual suicide rates per 100,000 for each group for the years 2000–2009 and tested the hypothesis that suicide rates are lower in lithium rich regions in comparison to other regions of Chile.

Results: The lithium rich Atacama Desert shows a significantly lower suicide rate (9.99 per 100,000) in comparison to other parts of Chile (12.50 per 100,000) ($t = 4.75$, $df = 18$, $p < 0.001$).

Conclusions: Chilean regions rich in naturally occurring lithium salts show lower suicide mortality rates in comparison to other regions. Although causality cannot be proven by this design, these findings add to previous findings and warrant further research on the effects of naturally occurring low-dose lithium on health.