SUPPLEMENTARY MATERIAL

REPORTS OF HUMAN AND ENVIRONMENTAL HEALTH IN CHAÑARAL, CHILE: A CASE OF ENVIRONMENTAL INJUSTICE AND TOXIC METALS

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Scholarly articles visited

Table S1. Postgraduate research in public health, law, and urban studies

Year	Authors	Research Type	Population (sample)	Pollutant(s)	Method	Reported evidence
Online studies						
2009	Cortés, S	Ph.D. Thesis	204 adults	As, Ni, Cu, Hg, Pb	Risk perception questionnaire; urine sample for the measurement of arsenic, copper, nickel, mercury, and lead.	Children in the area had higher levels of arsenic (As) and nickel (Ni) compared to non-exposed cities, but similar to exposed cities. Copper (Cu), mercury (Hg), and lead (Pb) levels exceeded those found in both non-exposed and exposed populations. Moreover, a significant portion of respondents, 71%, expressed a heightened community risk perception related to air, water, and soil contamination, with 49% showing elevated personal risk perception, specifically regarding water contamination.
2014	Yohannessen, K		1896 students aged between 6 and 15 years old	$MP_{2.5}$	Panel-type longitudinal study and spirometry analysis.	There are significant negative associations between average and maximum levels of PM2.5 and forced vital capacity. The respiratory function of the students is affected by increases in PM levels, particularly by fine particles.
2015	Cáceres, D		140 students aged between 6 and 15 years old	NA, Mg, L, Si, P, S, Cl, K, Ca, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Ga, Ge, As, Se, Br, Rb, Sr, Y, Zr, Mo, Pb, Ag, Cd, In, Sn, Sb, Ba, La, Hg, Pb	Panel-type longitudinal study with the administration of a respiratory health questionnaire and spirometry analysis.	The metal/metalloid concentrations in $MP_{2.5}$ were higher in indoor school microenvironments, particularly in classrooms. This relationship was especially strong during the winter. The average correlation between distribution patterns for metals was high, indicating that the source of the metals indoors is the particulate matter infiltrating inside the school from the surrounding neighborhood.
2023	Valdivia, N	Master´s thesis	Two groups of women, social leaders, and	Not applicable	Semi-structured interviews.	For women in the community, collective articulation processes are important to activate a network of community support.

			caregivers of those with illnesses			
Year	**Authors**	**Research Type**	**Population (sample)**	**Pollutant (s)**	**Method**	**Reported evidence**
			Individuals from the community			Address environmental issues in the territory.
Studies without online access						
2005	Centrón, A.,	Lead levels in children exposed to mine tailings in Chañaral. Thesis for the degree of master's in public health, in the area of epidemiological deepening. School of Medicine, University of Chile.				
2005	Aguirre, O	Exposure to arsenic in urban populations near a source of tailings contamination in the city of Chañaral. Thesis for the degree of master's in public health, in the area of epidemiological deepening. School of Medicine, University of Chile.				
2015	Mesías, S	Chemical and mass composition of fine particulate matter in microenvironments of educational establishments near mine tailings, Chañaral. Chile. Thesis for the degree of master's in public health. School of Medicine, University of Chile.				
2017	Toro, D	Proposal for the legal regulation of mining environmental liabilities: Chañaral and Andacollo tailings cases. Thesis for the master's degree in environmental law. School of Law, Universidad de Chile.				
2017	González, P	Chañaral, a city condemned to the grave of tailings? A study of perceptions of environmental suffering in contaminated territory. Thesis submitted for the degree of master's in urban development. Institute of Urban and Territorial Studies, Pontificia Universidad Católica de Chile.				