

## ONLINE APPENDIX

### Sampling

Ipsos Public Affairs, an international policy and market research company, obtained a representative sample of Chilean adults aged 15-90 who lived in provinces across Chile. Regions in the far north and south were not surveyed. Demographic quota sampling cells, used to determine participation eligibility, were constructed from Chilean National Statistics Institute (NSI) census population estimates of region, gender, and age. These estimates, along with topographic data derived from the Military Geographic Institute, were used to construct geographic sampling maps. Due to higher population density and the presence of large apartment buildings, Random Map Selection Software (Ipsos, Santiago) was implemented to generate sampling maps in the Santiago Metropolitan Region. Interviewers approached 11,095 homes and contacted a total of 4,327 eligible individuals; 2,108 participated in the interviews, divided between the epicenter (n=1004) and representative samples from four other major regions in Chile (Santiago metropolitan area, North, Central, and South, n=1104) (a 49% participation rate overall).

Each home was approached at least twice at different times to account for variability in work and activity schedules. If a household was unattended, the interviewer would gather information from neighbors to ensure vacancies were not systematic (e.g., loss of property during the earthquake, tsunami or looting, or lower SES). Information from neighbor reports of work schedule, vacation plans, or relocation of the household to another property was used to locate these individuals. Given that most people who lost their homes from the earthquake subsequently resided in tents on their own property, earthquake-related vacancies were not a predominant issue in interview solicitation (Vásquez J, personal communication, 2013).

Two bilingual psychologists (FJU and HL) translated and back-translated all measures originally written in English and then checked for linguistic and cultural accuracy.

Data from the interviews were entered manually into a database; 5% of all responses were re-entered to check for data entry errors.

### Measures

*Self-efficacy.* Respondents completed the General Self-Efficacy Scale (GSE),<sup>1</sup> a 10-item scale with endpoints 1 (totally disagree) to 4 (totally agree), which assesses beliefs about abilities to perform novel or difficult tasks and cope with adversity. Items were summed to create a continuous scale ranging from 10 to 40; lower scores indicate lower perceived self-efficacy. (Row mean substitution was implemented for 6 participants missing a single item.) This scale has shown adequate reliability across cultures (Cronbach's  $\alpha$ 's range: 0.75-0.91), including some in South America (e.g., Peru).<sup>2</sup> Reliability was excellent in the present study: Cronbach's  $\alpha=0.93$ .

*Economic disadvantage.* The E&E Socioeconomic Classification is commonly used in Chilean epidemiological and market research to classify people into socioeconomic categories. It is calculated using type of employment and education level of head of household. This measure

correlates strongly with household income.<sup>3,4</sup> The E&E is computed by asking respondents the education level (seven possible choices range from “less than primary school” to “graduate degree obtained”) and type of work (six possible choices range from “occasional work/unemployed” to “organization director”) of the head of household. Households are then categorized via a matrix of possible responses and grouped into the greater than 90<sup>th</sup>, 70<sup>th</sup>, 45<sup>th</sup>, 10<sup>th</sup>, and lower than 10<sup>th</sup> percentiles.<sup>3,4</sup> This measure was used as a continuous measure of economic disadvantage in analyses ( $M=3.3\pm 1.00$ , range=1-5).

*Distance from the epicenter.* Interviewers recorded the participant’s municipality during the earthquake; 62 different municipalities were reported. Latitude and longitude were used to estimate participants’ approximate kilometers from the earthquake’s epicenter; distances ranged from 38.4-1991.6 kilometers. A continuous and a five-level categorical variable (0-74 km, 75-199 km, 200-449 km, 450-999, and 1000+ from the epicenter) was calculated.

*Severity of earthquake destruction.* Degree of destruction experienced during the earthquake was assessed using a version of the Modified Mercalli Intensity Scale,<sup>5</sup> commonly implemented to assess earthquake intensity for the non-scientist population. Participants reported their experience of the earthquake the night it occurred, from 1 (not perceptible, hardly felt) to 8 (destructive, forcibly thrown to the ground, many objects were broken, walls collapsed, home was uninhabitable).

## References

1. Schwarzer R, Jerusalem M: Generalized Self-Efficacy Scale; in Measures in Health Psychology: A user's portfolio. Causal and control beliefs. Edited by Weinman J, Wright S, Johnston M. Windsor, UK, NFER-NELSON, 1995
2. Scholz U, Gutiérrez Doña B, Sud S, Schwarzer R: Is general self-efficacy a universal construct? European Journal of Psychological Assessment 18:242–251, 2002
3. AIM: *Grupos socioeconómicos*. Santiago de Chile: Asociación Chilena de Empresas de Investigación de Mercado, 2008
4. Ipsos: *Clasificación de GSE*. Santiago, Chile, 2010
5. Wood HO, Neumann F: Modified Mercalli Intensity Scale of 1931. Bulletin of the Seismological Society of America 21:277–283, 1931

Table

Self-efficacy and Other Predictors of Post-earthquake Substance Use (N=2103)<sup>a</sup> and Healthcare Service Utilization (N=2101)<sup>a</sup>

Variable	Substance Use						Healthcare Service Utilization					
	Model 1			Model 2			Model 1			Model 2		
	OR	95% CI	<i>p</i>	OR	95% CI	<i>p</i>	OR	CI	<i>p</i>	OR	CI	<i>P</i>
Self-efficacy	.92	.88-.96	<.001	.95	.91-.99	.029	.92	.88-.95	<.001	.92	.88-.96	<.001
MD-dx mental health ailments <sup>b</sup>				2.77	1.91-4.02	<.001				.97	.65-1.44	.874
Female gender				.97	.52-1.82	.930				1.42	.82-2.44	.209
Age				1.01	.99-1.02	.499				1.00	.98-1.02	.910
No spouse present (single, widowed, divorced, or separated) <sup>c</sup>				1.97	1.08-3.58	.026				.97	.57-1.63	.895
Economic disadvantage				1.33	1.02-1.73	.034				.96	.74-1.25	.768
Region												
Epicenter (reference group)												
North				.38	.20-.76	.006				.64	.40-1.03	.067
Central				.45	.27-.76	.003				.43	.27-.69	<.001
South				.31	.15-.68	.003				.46	.26-.81	.007
Santiago metropolitan region				1.06	.65-1.73	.812				1.15	.76-1.74	.514
	X <sup>2</sup> (1)=9.16, <i>p</i> =.003, Pseudo R <sup>2</sup> =.027			X <sup>2</sup> (10)=78.39, <i>p</i> <.001, Pseudo R <sup>2</sup> =.144			X <sup>2</sup> (1)=17.45, <i>p</i> <.001, Pseudo R <sup>2</sup> =.036			X <sup>2</sup> (10)=41.84, <i>p</i> <.001, Pseudo R <sup>2</sup> =.055		

<sup>a</sup>N differs due to listwise deletion of missing data

<sup>b</sup>0=no history of anxiety or depressive disorder, 1=anxiety or depressive disorder, 2=both anxiety and depressive disorder

<sup>c</sup>Spouse present (married) comprises the reference group

