

9th INRICH workshop at Cornell University, Ithaca, NY

Parent-reported health status and its association with multi-dimensional poverty amongst children in Chile

A population-based, structural equation modelling study

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About Chile

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A few words about Chile

Population size ~ 18million

OCDE member since 2010 (GDP >20.000 USD)

Political and social stability during the past 3 decades

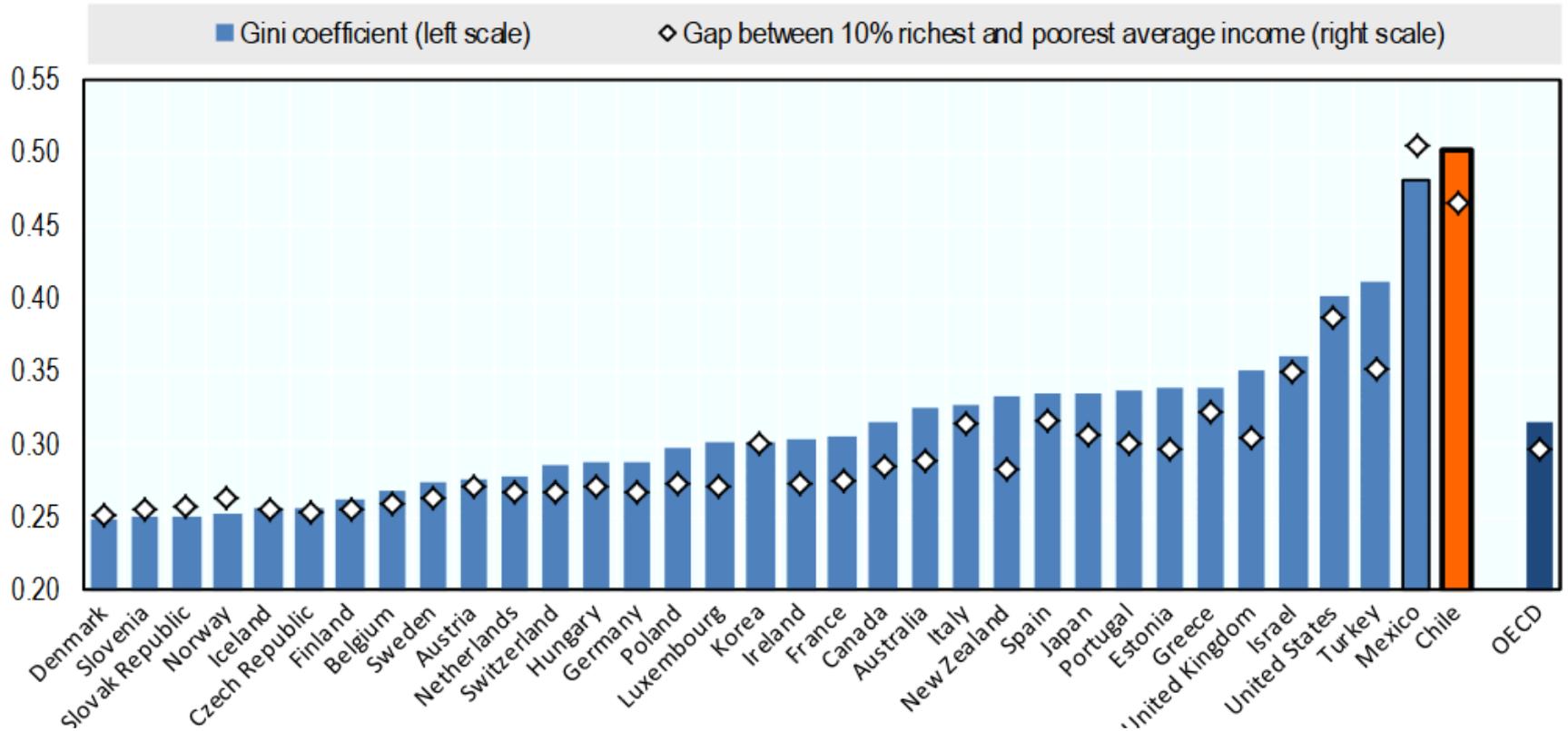
Large socioeconomic inequalities (Gini ~0.46)

Children concentrated in poorer families



A few words about Chile

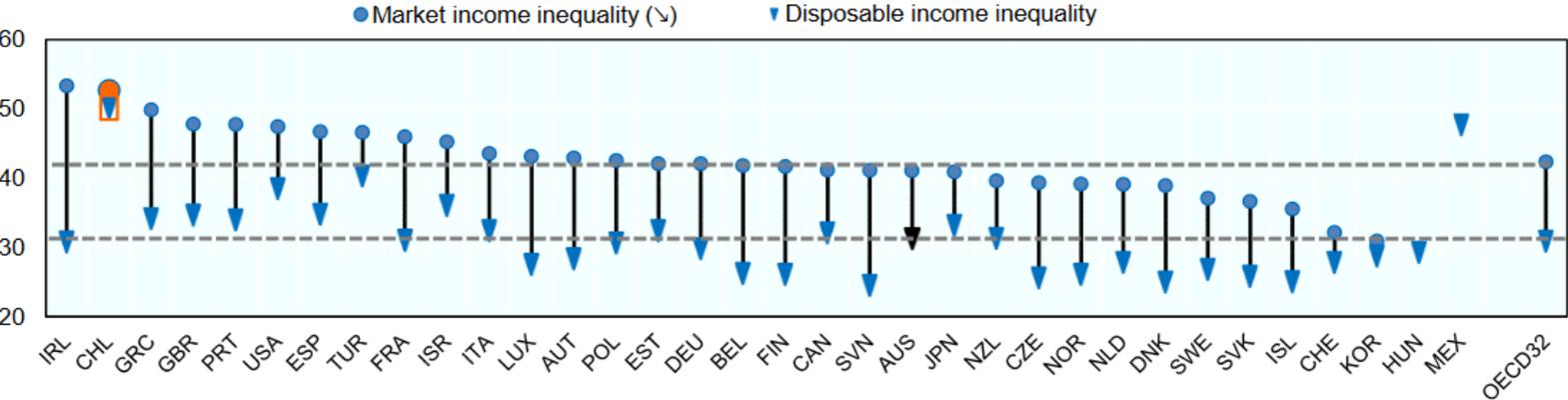
Level of income inequality, 2013 or latest year



A few words about Chile



Effect of social protection measures on the redistribution of population income inequality



Redistribution is measured as the percentage difference between inequality (Gini coefficient) of gross market income and inequality of disposable income for the working-age population.

Self-reported health status (SRH)

1. Subjective health assessments: a **valid health status indicator** that can be used in cohort studies and population health monitoring (Miilunpalo et al 1997).
2. They have been used in most countries and have **reliably predicted mortality and some morbidity** in both general population and sick population (Curtin et al 1999; Kim et al 2016; Hoffman et al 2015).
3. SRHS also related to **other relevant aspects** of health and wellbeing like extreme age groups, self-efficacy, health literacy, ethnicity, gender, and others (e.g. Riazi et al 2004; Streed et al 2017; Borrell et al 2008; Lim et al 2017; Whaley et al 2011...).
4. There are studies reporting a **socioeconomic gradient in SRHS**, including Chile (Cabieses et al 2015).

Multidimensional poverty (MDP)

1. MDP has been measured for decades (Landis et al 1971), but included in Chile only since 2013 (CASEN survey) (Chilean Ministry of Social Development, 2013).
2. The MDP framework -utilizing a comprehensive set of information- provides a **compelling value** added to solely income poverty measurement (Wagle 2008).
3. The concept of MDP has **been acknowledged cutting across the disciplines** (among economists, public health professionals, development thinkers, social scientists, policy makers and international organizations) and included in the development agenda (Mohanty 2011).
4. There are studies on MDP in children and its association with **health outcomes** (e.g. Roelen et al 2011; Mohanty 2011; Araujo et al 2015,...).

The study

The aim was to explore, through structural equation modelling (SEM), the relationship between multidimensional poverty and parent-reported health status; and to explore whether access to health care could mediate this relationship, amongst children (<18 years) living in Chile in 2013.



The methods

The National Socioeconomic Characterization Survey (CASEN) is held every 2-3 years in Chile and it is used for social policy decision making in this country.

CASEN survey considers a representative sample of households at the national level and collects information on socioeconomic status (e.g. income, occupation, housing and education), in order to estimate the level of poverty and income distribution in Chile.

It also considers **healthcare provision entitlement** (has/has not healthcare entitlement) and other demographic variables (age, sex, migration status, rurality, ...).

CASEN 2013 total sample size= 218 491 individuals from 66 725 households, representing 17 273 117 people residing in Chile in 2013.

Multidimensional poverty is a binary (poor/not poor) variable obtained from 12 items organised into 4 dimensions: education, health, social security and housing. By definition, a household experiences multidimensional poverty when it has a deficiency in 25% or more (3/12) of the indicators.

4 Dimensions	12 items & poverty measurement
Education	<ol style="list-style-type: none"> 1. No attendance (≥ 1 child 4-18 years old not attending school) 2. School lag (≥ 1 person ≥ 21 years old attending school) 3. Under-expected school achievement (≥ 1 person ≥ 18 years not finished school)
Health	<ol style="list-style-type: none"> 1. Under/Overnourished (≥ 1 child 0-6 years old under or over nourished by IMC) 2. No healthcare provision (≥ 1 person with no healthcare provision entitlement) 3. No access to health services (≥ 1 person could not access last 3 months/12 months)
Work & Social security	<ol style="list-style-type: none"> 1. Unemployment (≥ 1 person ≥ 18 years old willing to work but unemployed) 2. No social security (≥ 1 person ≥ 18 years old working but without social security) 3. No pension (≥ 1 person should but is not receiving pension (disability, retirement, etc)).
Housing	<ol style="list-style-type: none"> 1. Overcrowding ($\geq 2,5$ persons per bedroom) 2. Poor quality household (transient camp or ceiling/floor/walls below acceptable standard) 3. No sanitization (no clean water; no sewage)

Parent-reported health status is a unique ordinal variable that ranges from 1 to 7 (1=the worst / 7=the best possible health). For under 18 years old this was reported by parents.

The methods

Using data from under 18 years old participants of CASEN 2013 (n=56,811, weighted N=4,413,728), two SEM models were adjusted:

1. The first one (**Model 1**) considered the crude relationship between household multidimensional poverty, parent-reported health status and access to health services (healthcare provision) of the child.
2. In the second model (**Model 2**), we adjusted Model 1 by five covariates (sex, age, being an immigrant, household income and rurality).

In both cases direct and mediated relations were explored.

Both models were assessed using the Mean Root Square Error Approximation (RMSEA<0.05) and the Comparative Fit Index (CFI>0.95).

Main results

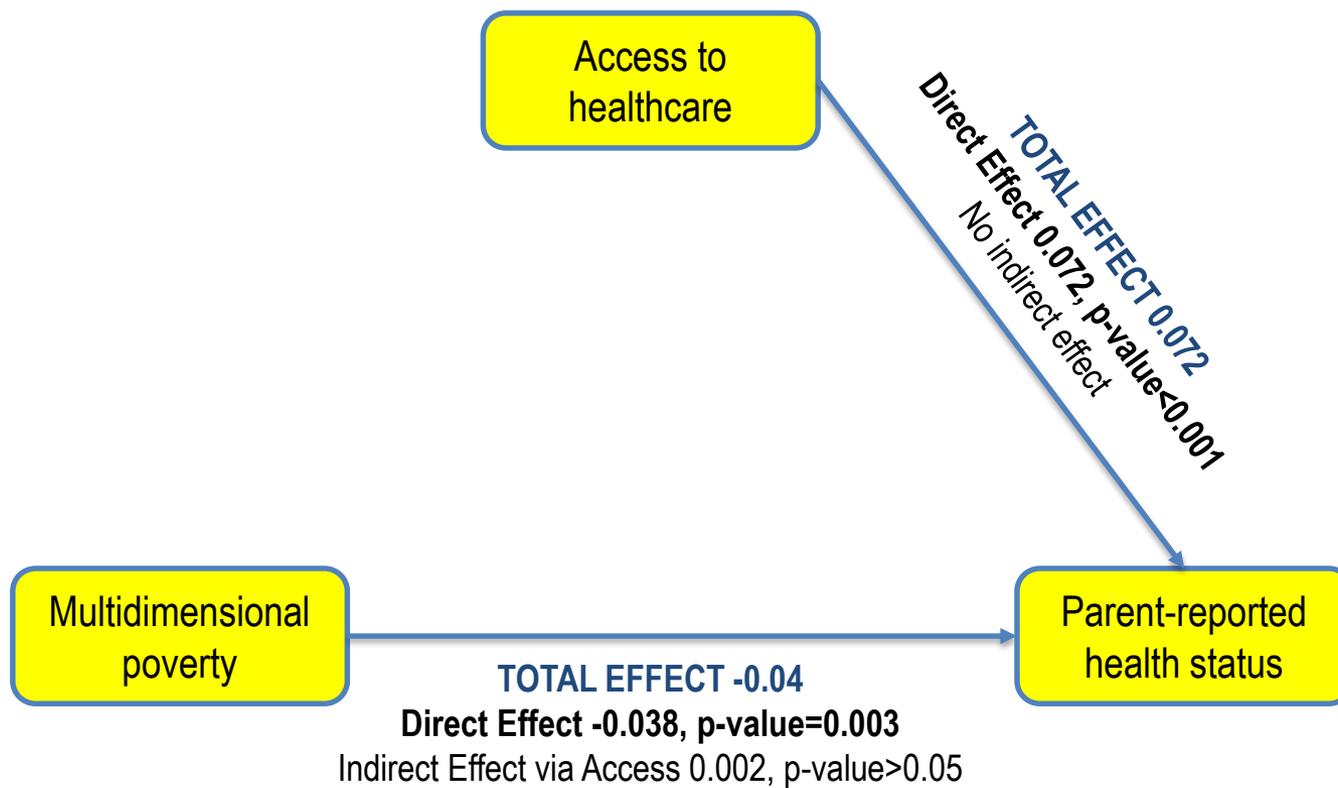
Models 1 and 2 fitted the data appropriately (Model 1: RMSEA=0.0, CFI=1; Model 2: RMSEA=0.02, CFI=0.95).

In **Model 1** a significant direct effect was observed between MDP and PRHS of the children (Bstd=-0.04, p-value=0.003). That is, children living in MDP had lower PRHS.

Access to healthcare also had a direct and significant effect on parent-reported health (Bstd=0.072, p-value<0.001).

However, no mediator effect was found for access to healthcare in the relationship between poverty and children's health status (p-value=0.102).

Main results Model 1 crude



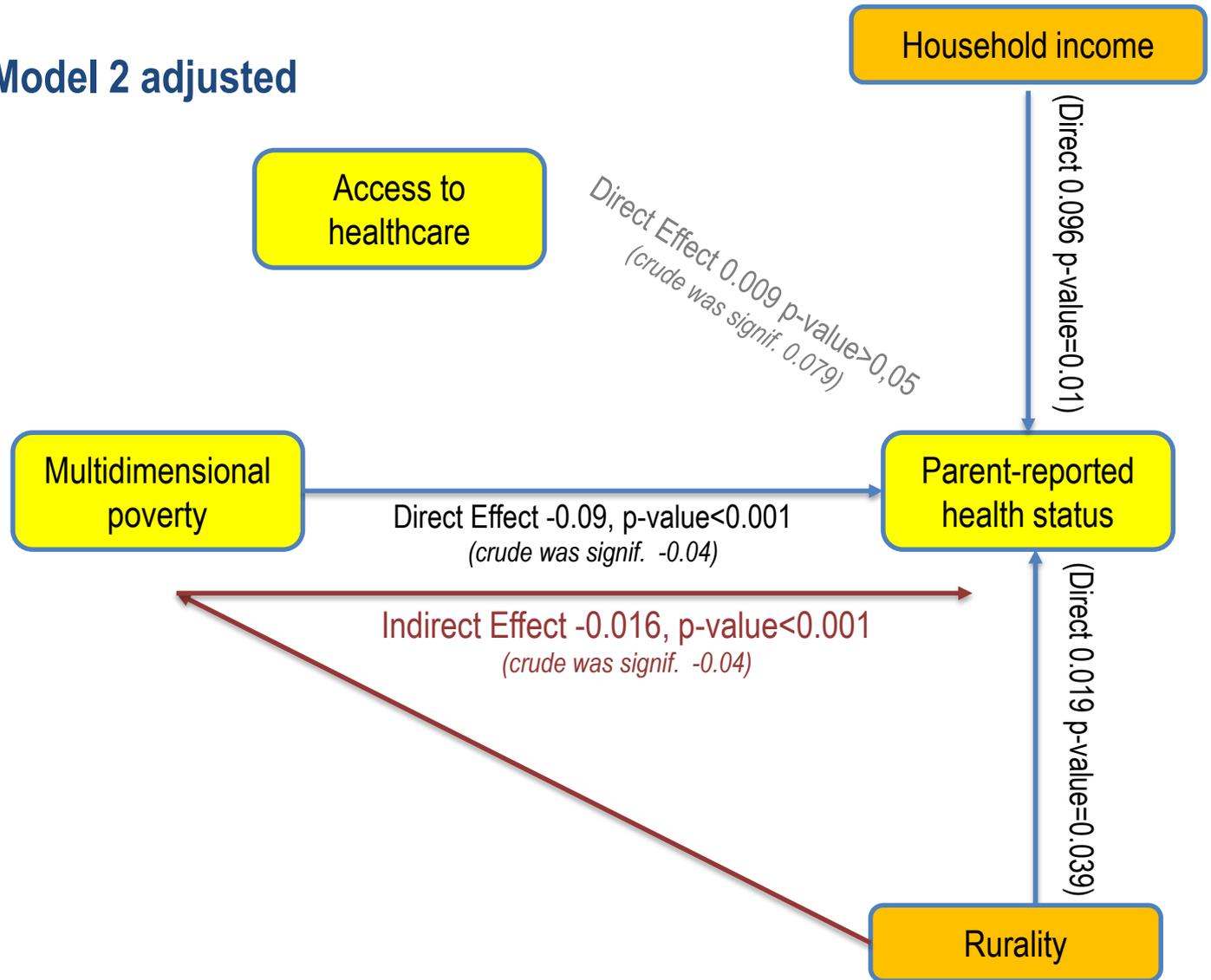
Main results

In the adjusted **Model 2**, the direct effect of MDP on PRHS of the children was maintained, but the effect of access to healthcare on children's health status disappeared (p-value=0.77).

The variables age, sex and migration did not show significant direct or indirect relationships with parent-reported health.

Nevertheless, both household income (Bstd=0.096 p-value=0.01) and rurality (Bstd=0.019 p-value=0.039) showed significant direct relationships with PRHS of the children. That is, children from higher household income and from urban households presented better levels of parent-reported health.

Main results Model 2 adjusted





Final reflections

This is the first study in Chile to assess the relationship between multidimensional poverty and parent-reported health status of children.

Using SEM is a strength as it provides better quality outputs.

Findings prove the strong relationship between household poverty and health status in children.

In Chile, a country that aims for universal access to healthcare, being entitled to a health system is not enough to mediate such relationship.

Further analysis should explore type of healthcare provision and effective use as potential mediators. Also, assessing the four dimensions of MDP separately and exploring differences within specific subpopulations (ethnic groups, immigrants, etc.)

The research programme's work on social vulnerability including immigrants to Chile:

Logos: UDD Universidad del Desarrollo, Facultad de Medicina Clínica Alemana - Universidad del Desarrollo, Programa de Estudios Sociales en Salud, Fondecyt Fondo Nacional de Desarrollo Científico y Tecnológico 1113042, 65 AÑOS

La migración internacional como determinante social de la salud en Chile: evidencia y propuestas para políticas públicas

Cabieres B / Bernales M / McIntyre AM



Logos: Ministerio de Salud, Migraciones, Sjsm Servicio Nacional de Migraciones, INCAMI, WFHM, SOCHEPI, Universidad Chilena de Desarrollo Científico y Tecnológico, Universidad del Desarrollo

Vulnerabilidad social y su efecto en salud en Chile

Desde la comprensión del fenómeno hacia la implementación de soluciones

Vulnerabilidad social y su efecto en salud en Chile



Báltica Cabieres, PhD
Margarita Bernales, PhD
Alexandra Obach, PhD
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Proessaudd Salud

✓ Amigos ▾ Sugerir amigos

✓ Siguiendo ▾ Mensaje ...

Biografía Información Amigos 7 amigos en común Fotos Más ▾

