

Absenteeism among Chilean Preschool Children

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Background/Context:

In recent years, governments across the world have invested in early childhood education and development programs as a proven strategy to close income achievement gaps and promote educational attainment and earnings. Chile is one of such countries that made early life investment a national priority; with its nationwide early childhood development *Chile Crece Contigo* and fee waiver for the poorest 40%, preschool enrollment of 4-year-olds expanded from 35% to 80% between 2003 and 2012 (Ministerio de Educación, 2012).

One serious yet less known barrier in realizing the full benefits of early childhood education is the problem of *absenteeism*, a habitual pattern of unplanned and/or unexcused absence from the enrolled program. Children who are absent by default receive less of school-based interventions than those who attend schools thereby the “dosage” of the intervention may not be enough. Recent literature from the United States indicates that the prevalence of absenteeism is particularly high among preschool students at 20-27% in Baltimore (Connolly & Olson, 2012) and at 36-45% in Chicago (Ehrlich et al., 2014). Moreover, chronic absenteeism—defined as missing 10% or more school days a year—during preschool years is found to be a strong predictor of being chronically absent from school throughout elementary school years (Balfanz & Byrnes, 2012).

In Chile, preschool absenteeism is prevalent. A recent analysis of a sample of preschools in Santiago that participated in *Un Buen Comienzo*—a preschool teacher professional development intervention aiming to improve instructional quality—indicates that participating children missed 23.2% of school days on average (Arbour et al., 2016). Moreover, as much as 66% of children were chronically absent from preschool.

Objective:

This paper aims to provide an analysis that describes the extent of the absenteeism problem among Chilean preschoolers in order to provide basis for policy-makers to address the issue. More specifically, the paper intends to answer the following five aspects of the preschool absenteeism issue in Chile:

- *The extent of the absenteeism issue in Chile.* In Chile, how prevalent is the issue of absenteeism among preschool students (ages 4 and 5) enrolled in pre-kindergarten programs?
- *Correlational analysis.* What student, family, teacher or classroom, school, and geographical characteristics explain the variation in the distribution of preschool absenteeism?

- *Pattern.* Do we see that students experiencing absenteeism during preschool years continue to be absent from school during kindergarten, elementary, middle, and high school years?
- *The effect.* What is the impact preschool absenteeism on children's educational and developmental outcomes during preschool years and during elementary grades?
- *Mechanism.* What are the channels through which preschool absenteeism affect children's educational and developmental outcomes? What are factors that can mitigate the effect? For example, can excellent teachers and high-quality instruction buffer the negative effect?

Data Collection and Analysis:

The main dataset used for the empirical analysis of this research is the nationwide database of student-level microdata for pre-kindergarten, elementary, middle, and high school students collected and published by the Chilean Ministry of Education (*Ministerio de Educación de Chile*). The first bulk of analyses focuses on approximately 200,000 four-year-old children who entered preschools in 2011. Key variables in this dataset are student's schools (i.e., type, location, etc), monthly attendance records, grades, and academic assessment data (i.e., 2nd and 4th grade Sistema de Medición Calidad de la Educación, SIMCE). The student data are linked with other relevant survey data such as student's teachers, school, and parents through SIMCE survey. Moreover, children's later educational outcomes (e.g., national 2nd grade reading assessment scores in 2014, and national 4th grade mathematics, language, and science assessment results in 2016) are tracked by linking the data from later years. In order to approximate teacher quality, data from National Teacher Assessment are merged. The same analysis will be done for the pre-kindergarten cohort of 2012 and 2013.

Research Design:

In order to provide causal estimates of the effect of preschool absenteeism, the proposed method is to use Instrumental Variables (IV). The number of rainy days in a year and air quality have been used as instrumental variables to estimate the effect of political participation; applying similar ideas, this paper examines the number of rainy days, as well as air quality as an exogenous variation in preschool attendance. In addition, neighborhood-level fixed effects may be added to the estimating second-stage equation. Another IV we will examine to estimate the effect of preschool absenteeism on student outcomes is the quarter-of-birth.

Conclusions:

The problem of absenteeism has been a crucial topic with important policy implications, but its mechanisms and the extent of problems in early grades as well as early childhood have not been explored enough. The unique Chilean context and availability of publicly available administrative data provides an opportunity to provided descriptive evidence on the issue of absenteeism during preschool years. The identification strategy of the causal analysis is still exploratory and can be improved as the research project moves on the next phase.