

# **When is Child Work Hazardous? Evidence from the SIMPOC Surveys**

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## **Introduction**

In the 1990's, the community of child welfare advocates tabled their ongoing debate over the merits and detriments of child labor, and refocused their attention on the elimination of the most heinous forms of child labor. The member countries of the International Labor Organization (ILO) unanimously adopted Convention 182 (C. 182) that calls for the elimination of the Worst Forms of Child labor as a matter of urgency. C. 182 unambiguously identified three worst forms to be targeted, namely forced and compulsory labor, prostitution and pornography, and illicit activities. The above three, while unambiguous, are difficult to measure using national survey data and difficult to quantify at the national level because of their often hidden and illegal nature. A fourth and less-defined category was also included, called "hazardous work," which is likely to form the largest category of the worst forms. Hazardous work, as defined by the ILO, is "work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety, or morals of children."

The first step in analyzing entry into hazardous work and its effects on children is defining it. This is challenging because of the difficulties in translating ILO standards, which are meant in some ways to be flexible and country-specific, into statistical terms measured by national surveys. Determining what is hazardous and what is not requires new methodologies and access to sufficiently detailed data on children's work and health.

In our paper, we define and demonstrate a methodology for identifying hazardous forms of child work using data from three Central American child labor surveys. Each survey uses different questions to measure work and health and therefore each survey has its own benefits and limitations to measuring children's involved in hazardous forms of work. We explore these differences and identify important commonalities and discrepancies when measuring hazardous child labor. We refine current methods of analysis, which focus on industry and occupation level study, by looking at how the risk of experiencing a health problem is affected by the child's gender, age and level of development. We also treat household maintenance activities as a type of work and consider separately the hazards faced by children who participate in them.

## **Data**

The data used in this study are from the ILO's Statistical Information and Monitoring Program on Child Labor (SIMPOC) program, which was created in response to the growing need for reliable, comparable and gender-sensitive data and information on child labor. We use data from the Costa Rica, Guatemala, and Nicaragua SIMPOC surveys, which each contain measures of child health, work and exposure to hazards.

The SIMPOC surveys have several characteristics that make them particularly useful in measuring and analysing child labor. The surveys samples are designed to capture child work and therefore strata are selected accordingly. SIMPOC surveys collect detailed information on children's activities. For example, information is gathered on the type of work, hours of work, working conditions, workplace characteristics (including its physical and mental safety), parent's perceptions of child work, and hours spent on household chores. In addition, the surveys collect data on the household's basic demographic, social and economic characteristics. Because of the sensitive nature of child labor, special efforts are often taken to train interviewers and inform the public of the purpose of the survey so that honest responses can be collected on children's activities.

For the purposes of our study, the SIMPOC surveys are good data sources because they collect information, at various level of detail, on children's health. As such, SIMPOC surveys allow for the calculation injury and illness incidence rates for children, and the comparison of incidence rates across several categories including activity type, the duration of the activity, and the child's gender. Each survey contains unique questions that are likely to be interesting as well. For example, the Nicaraguan survey asks a similar set of questions on job-related accidents separately to an adult respondent and to the child directly, allowing a comparison between child and parent responses.<sup>1</sup> It also collects information on exposure to a potentially dangerous environment from economically active children. The Guatemalan survey collects detailed time use information for children's paid activities and unpaid home activities, e.g., preparing meals, child care, mending clothing. The Costa Rica survey collects detailed work information from young children, ages five years and older.

### **Theoretical Focus and Research Methods**

We address three research questions in this paper: (1) How can information on children's activities and health be used to identify hazardous forms of work? (2) Do children's characteristics, including gender and development age, affect the risk faced by a working child? (3) Are injury and illness incident rates for children in "non-productive" activities, such as household chores and schooling, lower than those for children in "productive" activities?

Hazardous work is an ILO concept and the ILO provides some guidance on how to identify types of work that are hazardous to children. They suggest, for example, that countries consider work that exposes children to abuse, takes place in unsafe locations, requires the operation of dangerous machinery, exposes children to harmful substances, and long work hours. The ILO guidelines, however, are phrased in terms that remain subject to interpretation. They do not indicate, for example, how countries should determine what is a dangerous height, or what weight constitutes a heavy load. Furthermore, they do not discuss how children's non-market work or the work of self-employed children should be treated.

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<sup>1</sup> Our preliminary findings indicate that adults are likely to report fewer job-related accidents than are children.

In the first part of our paper, we will compare and contrast the information collected in each of the three surveys that we use, and demonstrate how each can be used to measure various aspects of health risk faced by children. We will discuss, for example, how and if information in each survey can be used to identify the conditions under which certain occupations and industries can be considered hazardous; how well the data permit a comparison between health outcomes of children in various activities; and whether the data are rich enough to perform more sophisticated analysis of the determinants of children's entry into hazardous work, once the forms are identified.

In the second part of our paper we will compute injury and illness incident rates while controlling for child and job characteristics. This is a refinement of current methods of identifying hazardous work that typically consider all work in a given industry or occupation to be uniformly dangerous. This practice may overstate the risk faced by older children or children who have access to adequate protective gear and training. Given that child work is necessary for some households' survival, broad classification of hazardous work may not benefit all working children. In contrast, current methods often fail to recognize the dangers faced by children working at home. We include children working at home, in economic work (e.g., household business) and non-economic work (e.g., household chores), in our analysis. This allows for a more accurate calculation of the risk faced by working children when compared to non-working children, who are not free from health risks in their own activities.

We control for developmental age in the computation of incidence rates to address the differential risk faced by younger and older workers. Recently, the US Centers for Disease Control and Prevention have identified developmental factors which combined with various types of work may increase the risk of workplace injury and illnesses experienced by youth workers. Among the factors they identified were “young workers may lack the experience and physical and emotional maturity needed for certain tasks” and that “young workers are experiencing rapid growth of organ and musculoskeletal systems, which may make them more likely to be harmed by exposure to hazardous substances or to develop cumulative trauma disorders.”<sup>2</sup>

We also compare children participating in household chores and investigate the hazards experienced by children particularly girls in these activities and children that combine household chores with other forms of work. Household chores do not fall under typical definitions of children's work, commonly based on the concept of “production,” however they may pose similar hazards as more formal work (Levison and Murray-Close, 2004).<sup>3</sup> Numerous studies have underscored the importance of considering household chores when studying child labor because of the large proportion of girls who participate in these activities. For primarily girls, household chores are often at the expense of schooling and can pose certain health hazards depending on the types and conditions of work. The

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<sup>2</sup> U.S. Centers for Disease Control and Prevention, 2003, "Preventing Deaths, Injuries and Illnesses of Young Workers," National Institute for Occupational Safety and Health Publication No. 2003-128

<sup>3</sup> Deborah Levison and Marta Murray-Close, 2004, "Challenges in Determining How Child Work Affects Child Health," *forthcoming in Public Health Reports*.

hazards associated with cooking (burning), cleaning (exposure to cleaning agents), and ironing (burning) outside the home still exist when the activities are carried out inside the home. They may be even more dangerous because they are less regulated inside the home. Children who spend long hours conducting household chores and then long hours at work may also have increased risk of workplace injury owing to exhaustion.

### **Expected Findings**

Our preliminary results from the Guatemala data reveal several interesting characteristics of children's work and health outcomes. We find that a significant proportion of children perform household chores, an activity that is frequently considered to be "non-productive." These children often put in long hours, making a significant contribution to household operations, and are not at all immune from injury. Guatemalan children who engaged in household maintenance and those who did market work had similar rates of health problems. We also find that incidence rates vary across the type of household activity performed by the child.

We observe a clear gender dimension in how time is allocated. Guatemalan boys tend to specialize in market work or home-maintenance work and are less likely than girls to mix market and home-maintenance work. Boys engaged in economic work tended to be older, average age is 13.5 years, than boys who specialized in work at home, average age is 10.9 years.

We expect to find non-trivial injury and illness rates for children who engage in non-market work in Costa Rica and Nicaragua. And, expect to find a similar gender dimension in those countries as well. The unique features of the Costa Rica and Nicaragua surveys will allow us to consider any additional risk of injury or illness for very young workers (Costa Rica) and to control for exposure to workplace hazards (Nicaragua).