

Injuries in Child Laborers in the Informal Sector in Mexico City, Mexico, 1997

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In the mid-1990s, I was on a temporary assignment through the Pan American Health Organization to Mexico City. During my assignment, I oversaw a collaborative training program in occupational and environmental epidemiology between the Pan American Health Organization and the Mexican Secretary of Health. Through this training program, one student, Dr. Zoila López Sibaja, developed a pilot project to better characterize work-related injuries to children employed in the informal sector.

The growth of the informal employment sector throughout the developing world has the potential to place workers and especially child labor at particularly high risk for work-related injuries. According to the International Labour Organization, in Latin America during the 1990s, the urban informal sector was the primary generator of new jobs.¹ The informal sector is defined by the International Labour Organization as either self-employed workers and their unpaid family members, or workers (either paid or unpaid) in very small businesses (fewer than 5–10 workers), apprentices, contract labor, home workers, and paid domestic workers. The employment conditions of informal workers are based mostly on casual employment relations rather than contractual arrangements with formal labor protections, such as protection under child labor laws. A small but important part of the informal employment sector is street children.¹ *Street children* is a term used for child laborers who work and live in the street and may or may not maintain contact with their families. Although street children face many health risks ranging from violence to drug use, an important priority is protecting them from working conditions that may damage their health and well-being, especially work-related injuries.²

In Mexico, the Federal Labor Law clearly prohibits child labor under age 14; from age 14–16, children may work if they remain in school. However, in 1994 the Mexican Statistics Institute (INEGI) reported that 34.3% of children younger than age 15 were working.³ A joint survey by UNICEF and the government of Mexico City estimated that during the same time period there were over 11,000 street children in the central area of Mexico City, of whom about 1,000 both lived and worked in the streets.⁴

To address the general public health problem of injuries, in 1994, Mexico established the System of Epidemiological Surveillance of Externally Causes Injuries (SVELECE), with the primary objective to count, analyze, and then prevent injuries. According to SVELECE, 13% of the injuries that occurred in 1996 happened in the 5–17-year-old group, and, of the injuries occurring in that age group, 5% happened in the workplace.⁵ Since this data may undercount injuries in children employed in the informal sector, my student's pilot study was designed to estimate the proportion of childhood injuries resulting from work with a focus on informal sector workers.

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In Mexico, those working in the formal employment sector are provided health services for themselves and their families through one of several formal social security systems. Those who lack that coverage can receive free health services at one of the public clinics or hospitals run by the Secretary of Health. This project targeted these public hospitals as the unit of measurement to determine the proportion of childhood injuries that were work-related. The study methods and results described here are taken from the report of this pilot project by Dr. Zoila López Sibaja.⁶ It demonstrates that child labor in the informal sector accounts for about 12% of all injuries in children younger than age 18 seen in these health department emergency rooms. Among those children with a non-work-related injury, 27% reported working either part- or full-time; 7% of these reported experiencing a work-related injury in the previous year.

In 1996, a series of key informant interviews were conducted by Dr. López Sibaja in several halfway houses that had been established to house street children. She visited the halfway houses and administered two questionnaires—one to the personnel responsible for the halfway houses and the other to the young people present in the halfway houses the day of the visit. The primary goal of these interviews was to determine which Mexico City public hospitals these youths were most likely to use. Then, in order to optimize study resources, the emergency room records of the hospitals most frequently used by street children were reviewed and two hospitals were chosen that reported attending to the largest number of childhood injuries. Trained nurses were then stationed in these two hospitals over a two-month period beginning in February 1997, with the goal of collecting information on at least 500 childhood injuries.

A questionnaire was administered to the child, and if this was not possible, to a parent, for every injury seen in a child from the ages of 5–17. The questionnaire included an unstructured question collecting data on the cause and nature of the injury, which was then coded by an epidemiologist from the Mexican General Direction on Epidemiology using standardized methods. Information was also collected on the child's demographics, work status, and school status. The treating physician also provided information regarding the types and severity of injury.

During the two-month period, questionnaires were completed on a total of 584 injured children from 5–17 years of

age, of whom 72% ($n=420$) were male. Of the children involved, 18% were ages of 5–9, 30% were 10–13, and 52% were 14–17. The results of the survey revealed that, of the 584 injured children, 69 (12%) were injured while working. The proportion of injuries associated with work was higher for males and increased with age. There were no work-related injuries among the 109 injured children younger than 10 years of age (Table).

The most frequent types of work-related injuries were traumatic injuries, including sprains, strains, and fractures, (39%) and deep lacerations (38%). Deep lacerations and crush injuries were more common among the work-related injuries (47%) than non-work-related injuries (23%). Work-related injuries were also more severe than non-work-related injuries, with physicians reporting no likely long-term sequelae in 73% of work-related injuries and 81% of non-work-related injuries. There were six cases of amputations and two cases of paralysis among the work-related injuries.

Among both males and females, a large percentage of work-related injuries occurred while they were commuting to work: 28% for males and 25% for females. Injuries occurring while commuting to work are considered work-related injuries in Mexico. To analyze the remainder of the work-related injuries, the occupations of the injured children were classified into five groups: (1) streets workers, (2) domestic workers, (3) workers delivering services to homes such as distributors of bottled water and garbage collectors, (4) retail employees including workers in stores, markets, and food establishments, and (5) construction and construction helpers.

The results revealed that males had the most work-related injuries occurring in construction workers and construction helpers (38%), followed by workers in stores, markets, and restaurants (23%); for females, most injuries occurred in workers in stores, markets, and restaurants (50%). The most common causes of injuries were contact with equipment or objects (41%) and falls (19%). Although the numbers were small, violence was an important cause of injury among those working in the streets (two out of three injuries) and among those injuries that occurred while commuting to work (four out of 21 injuries).

Of the 20 construction-related injuries, physicians reported some sequelae in 45%, which included four amputations and one case of paralysis. Of the 18 injuries occurring

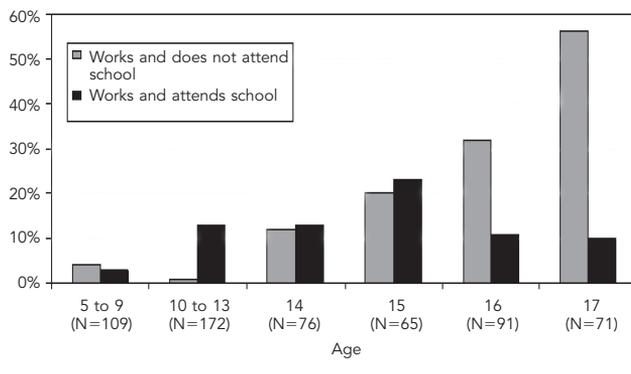
Table. Distribution of injuries by cause, gender and age in two Mexico City public hospitals, February–March 1997

Age	Gender	Total injuries	Work-related		Recreational		Other cause	
			Number	Percent	Number	Percent	Number	Percent
5–9	Male	71	—	—	38	54%	33	46%
	Female	38	—	—	21	55%	17	45%
10–13	Male	120	6	5%	48	40%	66	55%
	Female	52	1	2%	19	37%	32	61%
14–17	Male	229	55	24%	55	24%	119	52%
	Female	74	7	9%	10	14%	57	77%
5–17	All	584	69	12%	191	33%	324	55%

in retail establishments, 28% had sequelae, including two amputations; of the 19 injuries occurring while commuting to work, only 5% had sequelae. Among the 515 who were injured due to a non-work-related cause, 137 (27%) reported working some time during the previous year; of those, 7% reported an accident at work during the last year.

Of the 584 children in the study, 97% lived with their families and less than 1% percent would be classified as street children, living and working on the street. Of those injured on the job, 84% lived with their families and a small, but perhaps important group (10%) lived with their bosses or in the workplace. Among the study participants who reported working during the last year, the proportion who were not in school increased from 34% among 10–13-year-olds to 48% among 14-year-olds, and 84% among those age 17 (Figure). The number of hours that the young people who attended school worked was on average 27 hours per week; of those who worked and did not attend school, the average was 56 hours per week. The income of those who worked and attended school averaged 105 pesos per week, while those who worked and did not go to school earned 200 pesos per week. The exchange rate at the time of the study was about eight pesos to the dollar.

Figure. Percent of injured children seen in two Mexico City public hospitals who reported working only and working plus going to school during the previous year, February–March 1997



Dr. López Sibaja's pilot study highlights the problems associated with one very important population of child laborers. These children, who primarily come from families with few financial resources, are entering the workforce before age 16, are working within the informal sector where they are likely to have few safety protections, and a significant portion of these child laborers do not remain in school once they start working. This pilot study points to the need for a number of public health prevention programs. Most important, creating programs that will allow these children to remain in school may provide opportunities to obtain safer and better employment in the future. Public health initiatives should also be supported that create and disseminate information to these children and their employers regarding the potential hazards they face at work and how they can be prevented. This will require innovative occupational safety and health prevention programs that provide practical recommendations for improving safety. Such programs will benefit child laborers as well as other informal sector workers who may not be reached by other occupational safety and health protection programs.

The findings and conclusions in this report are those of the author and do not necessarily represent the views of the National Institute for Occupational Safety and Health.

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