

An Ancient Form of Child and Adolescent Abuse: Work Accidents. Study of 10 Years (2009-2019) in the State of São Paulo



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Abstract

Introduction: According to the Brazilian Law, the Child and Adolescent Statute (ECA) rules and prevents child abuse. It is defined in Article 2 that a child is a person under 12, and an adolescent is between 12 and 18. Also, the Statute forbids the work of children under fourteen in the country. Adolescents above this age are released to work as apprentices, following some conditions in the ECA. Child labor is not only a form of violence but still a public health problem. In mid-2021, the United Nations Children's Fund (Unicef) and the International Labor Organization (ILO) estimated that 160 million children and adolescents carry out work activities, with 79 million performing hazardous work. In Brazil, 1.7 million children and adolescents worked in 2019, according to the PNAD. The causes that lead to child labor are complex, involving social determinants and historical, sociocultural issues, and economic motivations. Early work causes harm to psychosocial and educational development. In addition, an accident at work can cause irreversible impairments in adult life.

Objective: To present the epidemiological profile of work accidents in children and adolescents reported in the State of São Paulo.

Methods: Epidemiological, quantitative, descriptive, and cross-sectional study referring to databases obtained from the Notifiable Diseases Information System (SINAN), made available by the Health Department of the State of São Paulo through a request to the Technical Division of Occupational Health Surveillance - Reference Center for Occupational Health (DVST-CEREST). The study population consisted of all cases with the variable "Injury/Disease," work accident associated with the variables ICD-10 Y96, "Age" between seven and seventeen years, "IBGE Code" 35 corresponding to the State of São Paulo, registered in the period from 2009 to 2019. We use a descriptive statistic (in percentage) to express the results obtained.

Results: We found 13,731 notifications of work accidents involving children and adolescents aged seven to seventeen years old from 2009 to 2019. Regarding sociodemographic data, 76.0% were male individuals (n=10,423), the average age was 16.43 years, and 44% had incomplete or complete high school education (n=6025). Almost half had white skin color (45.0% (n=6149)). We did not find a register about the skin color of 35.0% (n=4178). Of the accident data, 76.0% were typical accidents, 72.0% were registered employees, and 46.2% were part of the economic activity of commerce. The hand was the most affected part of the body (36.0%). Among those injured, 35.7% developed temporary disability, and there were 31 cases of deaths due to work accidents.

Conclusion: The profile of work accidents among children and adolescents is around 17 years old, white, typical accident in the commercial sector, with hand involvement and progressing to cure, in the period from 2009 to 2019. There was a reduction in the number of accidents in previous years. Therefore, it is important to notify and combat child labor so that there is no harm to the physical and psychosocial development of children and adolescents.

Keywords: Work accidents; Child labor; Child; Adolescent; Working conditions

Introduction

Work accidents in Brazil have always been a field of activity related to legal medicine and forensic sciences. It is up to the

forensic doctor to carry out the expert analysis that provides evidence of the accident in cases where the victim seeks compensation for damages suffered through the justice system.

Otherwise, the Child and Adolescent Statute (ECA) is a specific Brazilian legislation targeting the prevention of any form of violence against children and adolescents. It rules and defines as a crime child abuse in all of its manifestations. It also describes a child as a person up to twelve years of age and an adolescent between twelve and eighteen years of age [1]. This concept differs from the Brazilian Society of Pediatrics, which considers a person between 10 and 19 years old to be a teenager, and children below this age group [2].

Also, according to the ECA, any work for minors under fourteen is prohibited. Teenagers above this age can work as young apprentices as long as they are not working at the following conditions: a) night shift, carried out between twenty and two hours one day and five hours the next day; b) dangerous, unhealthy, or painful; c) carried out in places that are harmful to their training and physical, psychological, moral and social development; and d) carried out at times and places that do not allow attendance at school [1].

In mid-2021, the United Nations Children's Fund (Unicef) and the International Labor Organization (ILO) estimated that 160 million children and adolescents work, with 79 million performing hazardous work [3]. In Brazil, the National Household Sample Survey (PNAD) estimated that in 2019, 1.7 million children and adolescents worked [4].

The causes of child labor are complex, involve several social determinants, and are rooted in historical, sociocultural issues, and economic motivations.

These causes appear in three dimensions:

- i. Poverty and the family socioeconomic profile in which the participation of children and adolescents would increase family income;
- ii. The weight of culture in promoting child labor because this population tends to valorize this type of work;
- iii. The absence or fragility of public policies [5].

Early work for children and adolescents causes harm to psychosocial and educational development. In addition, work accidents involving this public can cause irreversible health problems due to physical vulnerability. The medical literature shows that children and adolescents are more susceptible to work-related accidents [6] and that such situations require immediate compulsory notification to the Unified Health System, that is, within 24 hours of becoming aware of the illness, injury, or health event [7]. Besides, child labor has an impact on the individual's psychosocial and intellectual development. Work accidents also can be an essential element in children's health. Thus, this study aims to present the epidemiological profile of work accidents in children and adolescents reported in the State of São Paulo.

Methods

The study is a quantitative and descriptive epidemiological study with a retrospective longitudinal design based on data obtained from the Notifiable Diseases Information System (SINAN), made available by the Health Department of the State of São Paulo through a request to the Technical Division of Health Surveillance of Labor - Reference Center for Occupational Health (DVST-CEREST).

The study population consisted of all cases with emphasis on the variable "Injury/Disease" work accident with the variable "Code (ICD10)" corresponding to ICD-10 Y96, involving children and adolescents with the variable "age" between 07 and 17 years old, notified in the State of São Paulo whose corresponding variable "Code (IBGE)" is 35, and registered in the period from 2009 to 2019. The file received was in .xlsx format. The data obtained was analyzed and processed in a Microsoft Excel spreadsheet. The data obtained was analyzed and optimized into tables. We use a descriptive statistic (in percentage) to express the results obtained. Three records that presented "indeterminate" sex in the field excluded them from the study. In the file, 356 notifications of work accidents in children and adolescents occurred in other municipalities outside the State of São Paulo. However, the notifications were registered/computed in the State of São Paulo, so they were in the study. This study does not require approval by the Human Research Ethics Committee because it uses secondary data from public databases without possibly identifying individuals.

Results and Discussion

The present study sample covered 13,731 notifications of work accidents involving children and adolescents aged 7 to 17 years, distributed from 2009 to 2019. It showed an increasing number of notifications, with a peak in 2012, with 2,043 cases, and from this year onwards, there was a drop, with the lowest number of notifications occurring in 2019, with 552 cases. This decline may be related to improving programs to eradicate child labor and other social programs [5,8]. However, we must consider the underreporting of cases [9-12].

Regarding sociodemographic data, 76.0% of the events occurred in males (n=10,423). The proportion remains the same when evaluating different age groups. The predominance of male cases is similar to the results found in accidents among adults [13,14]. However, there is much Brazilian research conducted by Xavier and collaborators (2020), Pimenta and collaborators (2013), and Santana and collaborators (2003), which showed that the majority of accident victims were women - 55.9%, 72.6%, and 54.0%, respectively [15-17]. The average age of those injured in São Paulo during the period studied was 16.43 years, with 91% of accidents occurring at 16-17 years of age. The average is close to the study by Pimenta and collaborators (2013), who found an

average of 15.15 years in a group essentially of teenagers, whose range was 14 to 17 years [16]. In the present study, we reported six accidents involving children under seven.

Almost half of the victims (45.0%) had white skin color (n=6,149), but 35.0% (n=4,178), we did not find any information about. Data from 2018 from IBGE indicate a rate of 51.0% of children and adolescents up to 19 years of age with white skin color in the country's Southeast region, where the State of São Paulo is located [18]. Therefore, the higher frequency of cases among white people may be related to the more significant presence of this physical characteristic in the data source population.

There was a higher frequency of secondary education (44.0%) (n=6,025), but 43.0% (n=5,971) of notifications did not have information in this field. The study by Pimentel and collaborators (2013) carried out in Ribeirão Preto – SP16 also indicated a higher frequency at this same level of education. However, Xavier and collaborators (2020) found a higher frequency of cases among people with incomplete primary education in a rural occupational environment [15]. Regarding the type of accident, 76.0% were typical; that is, they occurred at the place and time of work, and 21.0% happened on the way home to work or vice versa. Like the study by Pimenta and collaborators, there was a more significant predominance of typical accidents [16].

Of the accidents recorded, 5,847 (42.6%) had the work accident report (CAT) opened, 2,385 (17.4%) did not open the CAT, and 5,499 (40.1%) were completed as “ignored,” “do not apply” or was incomplete. When we analyze the information from the opening of the CAT concerning the accident number that presented “Registered Employee with a Signed Card,” there is a discrepancy in the communication number. 9,957 (72.5%) were registered employees with a formal contract, and the CAT completed. A similar finding can be seen in statistics in the adult population, leading us to conclude that the failure to open the CAT is still a problem that needs to be discussed [19].

As for economic activities, the majority worked in commerce (46.18%), a similar result to studies on the adult population in the Eastern Region of São Paulo in 2017 (48.2%) [14]. In the research by Santana and collaborators (2003), accidents among male workers predominated in the commercial category, but among female workers, the activities of domestic workers predominated [17]. The hand was the most affected part of the body in accidents (36.0%). Compared to the adult population, injuries to the upper limbs are also the most frequent injuries (45%) [14]. Regarding the outcome, most cases progressed to cure (44.7%) and 35.7% to temporary disability. There were 31 cases of death due to work accidents (0.22%). In other words, work accidents cause physical and psychological losses, causing problems in economically active life and reducing work potential [20].

Conclusion

From the above and observed, regarding work accidents in children and adolescents registered in the State of São Paulo through the Notifiable Diseases Information System (SINAN), the most frequent profile was of adolescents with white skin color, occurring in the place or time of work, in the commercial sector, with involvement of the hands and progressing to cure. Giving visibility to this information is essential to establish preventive actions aimed at the public most susceptible to accident situations. It also reveals the existence of work among children and adolescents at an age prohibited by Brazilian legislation and posing a risk to their health and safety.

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