
OCCUPATIONAL ACCIDENTS INVOLVING TEENAGERS¹

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ABSTRACT: This study was aimed at identifying occupational accidents involving teenagers and carried out in a professional training organization. Cross-sectional, descriptive and quantitative study which investigated 117 teenage workers, using a multidimensional questionnaire. Of all the respondents, 72.6% were women, 80.3% were 15 years old, 60% were dark colored and 62.4% had not worked before. The most popular positions were receptionist (46.2%) and administrative assistant (37.6%). Among those interviewed, 11% had had accidents in the current or previous job and, from these, 76.9% were involved in typical accidents that took place in the afternoon (61.5%). The most injured body parts were legs and feet (46.2%), and the most common injuries were abrasions (30.8%). Children and youth's labor may result in injuries that are known as occupational accidents. This issue should not be viewed only in terms of workplace inspection and occupational health policies. In addition, a greater change is needed in the structure of society to avoid working from being detrimental to health.

DESCRIPTORS: Workers' health. Under-age labor. Workplace-related accident.

ACIDENTES DE TRABALHO OCORRIDOS ENTRE ADOLESCENTES¹

RESUMO: Objetivou-se identificar acidentes de trabalho ocorridos entre adolescentes em uma fundação de educação para o trabalho. Estudo transversal, descritivo e quantitativo que investigou 117 adolescentes trabalhadores, através de um questionário multidimensional. Dos entrevistados, 72,6% eram mulheres, 80,3% tinham 15 anos de idade, 60% eram pardos e 62,4% não trabalhavam anteriormente. As atividades mais exercidas foram recepcionista (46,2%) e auxiliar administrativo (37,6%). Sofreram acidentes no trabalho atual ou anterior 11% dos entrevistados, dos quais, 76,9% foram típicos e ocorreram à tarde (61,5%). Pernas e pés foram os segmentos mais lesados (46,2%), e as escoriações, os principais agravos (30,8%). O trabalho infanto-juvenil pode apresentar agravos, caracterizados como acidentes de trabalho. O enfrentamento desta questão não pode ser pensado apenas no plano da fiscalização dos ambientes de trabalho, de políticas voltadas para a saúde do trabalhador; há necessidade de transformação maior na estrutura da sociedade, para que o trabalho não prejudique a saúde.

DESCRIPTORIOS: Saúde do trabalhador. Trabalho de menores. Acidentes de trabalho.

ACCIDENTES DE TRABAJO SE PRODUJO ENTRE LOS ADOLESCENTES

RESUMEN: Este estudio tuvo como objetivo identificar los accidentes de trabajo se produjo entre los adolescentes en una fundación de educación para el trabajo. Estudio descriptivo, cuantitativo e investigó 117 adolescentes trabajadores a través de un cuestionario multidimensional. De los encuestados, el 72,6% eran mujeres, el 80,3% tenían 15 años, el 60% eran de color marrón y el 62,4% no funcionó antes. Las actividades más populares realizadas fueron las siguientes: Recepcionista (46,2%) y auxiliar administrativo (37,6%). Accidentes sufridos en el trabajo o la anterior del 11% de los encuestados, de los cuales 76,9% eran típicos y se produjo en la tarde (61,5%). Las piernas y los pies heridos segmentos (46,2%) y abrasiones que lesiones graves (30,8%). El trabajo de niños y adolescentes pueden presentar quejas, que se clasifican como accidentes. El enfrentamiento de este problema no puede ser pensada sólo en términos de vigilancia de los lugares de trabajo, las políticas dirigidas a la salud del trabajador, no hay necesidad de una mayor transformación en la estructura de la sociedad, de modo que el trabajo no es perjudicial para la salud.

DESCRIPTORIOS: Salud laboral. Trabajo de menores. Accidentes de trabajo.

INTRODUCTION

Children and youth's labor is a socially relevant topic and involves multiple aspects, such as economic, cultural, psychological and physical, amongst others. This type of work has increasingly caught the attention of society and needs to be eradicated, especially when it involves the performance of unhealthy and demeaning activities.¹

On the other hand, in various cases, it is still seen as something natural and necessary among families of lower socio-economic levels. Such view does not take into consideration the implication work has upon health, identity formation and academic life of young people. Therefore, it is important to adopt legal measures and public policies aimed at protecting teenager workers.¹

In recent years, the battle against working at a young age has increasingly taken space on the global public policy agenda, mainly after the creation of the Universal Declaration of Children's Rights in 1989. In Brazil, the Federal Constitution of 1988 and the Statute of Children and Youth of 1990 expressly prohibit this type of work. Such regulatory frameworks allow teenagers over 14 years old to work as apprentices and those over 16 to perform tasks considered safe.²

Decree 5598, issued on 1 December 2005,³ regulated the employment of apprentices, extended their rights and ensured a higher degree of education, professional background, employment relationship and labor conditions that are compatible with their physical, moral and psychological development.

Although the Brazilian legislation is a fore-runner in comparison to other countries, there are economically active children and teenagers in Brazil who are inserted into life and work contexts that impose complex situations of environmental, social and cultural vulnerability. One of the evil effects of this reality is related to their exposure to unhealthy work environments and to children-youth labor, performed under risky situations that compromise the biological and psychological development of the youth, exposing them to health damaging situations that are threatening to the main human right, which is the right to life.²

Being inserted into a working environment at early ages often negatively affects the health of the workers and can result in illnesses and expose them to accidents that frequently cause some permanent damage. Some of these problems do not manifest themselves straight away and can be

seen later, causing irreversible damage at times. It is important to mention that Occupational Accidents (OA) can cause physical or psychological damage, which can be temporary or permanent.⁴

A report conducted by the International Labor Organization showed that, every minute, a child has a workplace accident, presents illness or psychological trauma when facing a child labor regime. There are more than 1400 accidents a day and a total of almost 523,000 a year. In Brazil, there are around 4.2 million working children, and more than half of them perform dangerous tasks. According to the Ministry of Labor, in 2011, the labor inspectors took 3.7 million children and teenagers out of work. In 2010, 5,620 children and teenagers were rescued from this situation. The report also states that, although the total number of children between 5 and 17 years of age working in hazardous conditions decreased between 2004 and 2008, while the number of children between 15 and 17 years of age in these activities showed a real increase of 20% in the same period, going from 52 to 62 million.⁵

A study undertaken in Salvador, in the state of Bahia, showed the high annual rate of not fatal OAs involving teenagers (6.4%), which drops with age in both genders.⁶ In one year, this rate was the same in relation to the age group between 10 and 13, decreased to 4.1% in the group from 14 to 17 and reached 4.8% in the group between 18 and 24 years old. A higher annual frequency of not fatal OAs was found in relation to those under 16 who worked in the rural areas of Rio Grande do Sul state. The comparison with results obtained in other countries is limited, due to the differences regarding the participation of children and teenagers in the workforce.⁶

In addition, there is a reality in Brazil that notoriously affects the analysis of OAs, that is, the underreporting of accidents shown in investigations involving workers of various ages.⁹⁻¹⁰ The fact of not accounting for accidents suffered by workers in the formal workforce is only one aspect of the difficulty in obtaining valid information about OAs in the country. There is ignorance concerning what happens in the informal sector of the Brazilian economy, since there is a lack of an effective information system. One government responsibility, at its different levels, is the control of these accidents and the preservation and promotion of the health of the working population. The development of public policies to deal with this issue requires reliable information about the distribution, classification and determinants of OAs.⁹

Based on the above, there is the need for further studies in relation to the work performed by children and teenagers, in order to disseminate more information about such a complex issue, which led to the development of this research.

AIM

To identify the WAs involving teenagers in a professional training organization through the identification of their socio-demographic profile and professional occupation, types of accidents, place and time of these accidents, part of the body injured and types of injury.

MATERIAL AND METHODS

This is a quantitative, descriptive and cross-sectional study, undertaken in a Municipal Foundation for Professional Training located in Ribeirão Preto, São Paulo state, Brazil. Such organization has the aim to promote teenagers' right of vocational training; through enrolment, it registers young people who contact it, introduces them into the workforce and forwards them to professional training courses offered by the National Service for Commercial Education (SENAC).¹¹

In April 2010, there were 330 teenagers enrolled in this organization. The inclusion criteria of study participants were the following: those undertaking SENAC's professional training courses during the data collection period, aged between 14 and 17; those who understood the questions asked in the questionnaire and those who were active in the workforce for at least three months.

The participants were 117 teenagers who fit such criteria. To perform the data collection, part of a duly authorized multidimensional questionnaire¹² was adopted in order to effectively achieve the outlined objective. The following themes were addressed: socio-demographic aspects and working conditions (place of work and working hours, whether they had ever had a OA, their details or whether there were any work related injuries).

Data collection took place between April and May 2010. The teenagers were recruited to fill out SENAC's questionnaire. Firstly, they were given a detailed explanation about the data collection instrument and the Informed Consent Form (ICF), in order to clarify any doubts they had, and also to enable them to pass such information to their parents or guardians. The teenagers took the ICFs to their legal guardians for signing, and those who

were allowed to participate were included in this study. The questionnaires were distributed to the teenagers by the first author of this study, who also individually clarified any doubts they had about their completion.

Before starting data collection, the project was sent to the Research Ethics Committee of a Tertiary Education Institution and approved (registration number 1046/2009), and forwarded to the organization directors; data collection at SENAC was also authorized.

The data collected were codified and inserted into a Microsoft Excel® spreadsheet; they were later transferred to the program Epi Info® version 3.5.1 and analyzed descriptively. The injuries were classified according to the International Classification of Diseases and Health Related Problems (ICD-10)¹³ and the activities performed were coded according to the Brazilian Classification of Occupations.¹⁴

RESULTS AND DISCUSSION

With regard to the objective of identifying the socio-demographic profile and professional occupation of the workers, 80.3% were 15 years old, the minimum age was 14, the maximum was 16 and the average age was 15.15 (± 0.42); 72.6% were women; 74.4% were in high school and 25.6% elementary school. The majority (51.3%) considered themselves dark colored, which coincides with other studies about working teenagers¹⁵⁻¹⁶ 58% lived in a house with five to seven people and also informed (92.3%) to have a personal income of half the minimum wage a month (the minimum wage was R\$510.00 at the time of data collection) and a family income of up to two minimum salaries a month (63.2%).

65.8% of the participants stated that they had not been employed before enrolling in the Foundation for Professional Training; the positions they performed at the time of the interviews were: receptionist (46.2%), administrative assistant (37.6%), attendant (12.8%), telephone operator (1.7%), typist (0.9%) and warehouse assistant (0.9%), positions not considered prestigious. Such positions, especially the first three, are similar to those performed by teenage workers in Uberaba, in the state of Minas Gerais.¹²

In a research undertaken in Pelotas, in the state of Rio Grande do Sul, 4,924 people between the ages of 6 and 17 were interviewed. Of the 466 working teenagers, 70% were between 14 and

17, 25% between 10 and 13 and 5% between six and nine; 88% were employed in the informal workforce, which shows that they started working before the age recommended by the national legislation.¹⁷

A large portion of the people interviewed (87.2%) stated that they had been attending the mentioned organization for six months to a year. The organization ensures up to two years of attendance to the teenagers. However, some of them find another job before the end of this period or quit the organization for other reasons.

As for identifying the types of accidents suffered, place and time of the accidents, body part injured and type of injury, the results are displayed below.

Of the 117 participants interviewed, 13 (11.1%) reported to have suffered OA in their current or previous job.

Table 1 describes some of the OA characteristics the interviewed teenagers reported.

Table 1 - Distribution of teenagers enrolled at the Foundation for Professional Training, according to the workplace accidents suffered and their features. Ribeirao Preto-SP, Brazil, 2010 (n=13)

Variables	n	%
Place of accident		
At the workplace	10	76.9
Going to work	2	15.4
Returning from work	1	7.7
Time of accident		
Morning	3	23.1
Afternoon	8	61.5
No answer	2	15.4
Body part injured		
Legs/feet	6	46.2
Multiple	3	23.1
Hands/fingers	2	15.4
Torso	1	7.7
Arm/forearm/elbow	1	7.7
Type(s) of injury(ies)		
Abrasions	4	30.8
Multiple injuries	3	23.1
Bruises	2	15.4
Burning	1	7.7
Sprain/stretch/dislocations	1	7.7
Cuts	1	7.7
Insect bites	1	7.7

A large part of the OAs (76.9%) were described as typical, i.e. they happened at the work-

place or on the way to the workplace (23.1%), and this information coincides with other investigations.^{7-9,18-19} More than half of these accidents (61.5%) happened during the afternoon and the most affected body parts were the legs and feet (46.2%); in relation to the types of injuries, four (30.8%) reported abrasions.

OAs are a serious health issue because they affect a large number of workers, including young people of productive age. They are sudden accidents that take place while performing their duties, regardless of the employment status and welfare situation of the injured workers, and cause potential or immediate damage to health, as well as body injuries or functional disorders, which result directly or indirectly in death, loss and permanent or temporary reduction of the ability to work. This also includes the accidents that occur in any situation where the worker is representing the company's interests or acting in defense of its assets, as well as those which occur on their way from home to work and vice versa.²⁰

A study involving data collected through the medical records of a municipal emergency service in Ribeirão Preto, SP during one year, showed that 56 children and teenagers had OAs and that they injured more boys (64.3%), aged between 11 and 17, 12.4% of whom were registered in the medical records as "assistant" to someone else when the accident happened. Most of the accidents (60.7%) were typical and 51.8% of the participants had their upper limbs injured as a result of cutting objects.¹⁹

A research undertaken in the city of Ipatinga-MG in 2008, which investigated the occurrence of OAs involving teenagers, concluded that 42% of these workers claimed to have been victims of accidents at the workplace and 14.9% had to stay away from work for this reason. More than half (51.4%) were not legally registered; cuts and punctures were the most common injuries (27.5%); burn was the main injury (26.9%); and the most affected body parts were the legs and fingers (40.4%). Young males were more affected than young females; the age range of the majority was between 16 and 17 years old. A significant number of commuting accidents could be noted (18.5%), which indicates a close relationship between production process and city violence.¹⁸ These data differ from those found in this study, which showed the afternoon period as the period with the largest number of OAs (61.5%), legs and feet (46.2%) as the most affected body parts and abrasions (30.8%) as the type of injury more commonly seen.

CONCLUSION

Despite all the campaigns undertaken to eradicate and/or regulate children and youth's labor in Brazil, this is still a concerning reality. Labor involving children and teenagers continues to happen in the country in various areas and in different production sectors, in general under poor conditions that put the health of this vulnerable population group at risk. Workplace accidents that affect this group can be considered as the tip of the iceberg that shows the real exploitation situation of these young workers.

In this study, the accidents registered showed to be mostly typical, occurring predominantly in the afternoon and causing abrasions to the lower limbs. Even though no highly serious accidents were registered among the participants, the occurrences indicated the poor and risky working conditions these workers are subject to.

Given this situation, the government organizations in charge need to increase workplace inspections so that they are not unsafe, risky and unhealthy, and also to ensure compliance with the legislation that prohibits and/or regulates the work of children and teenagers in the country. It is also important to mention the importance of public policies aimed at creating jobs, increasing salaries and improving population income, which would help to eradicate this kind of labor and, consequently, its negative effects on the health of children and teenagers.

On the other hand, this issue cannot only be considered in relation to workplace inspections and policies focused on the workers' health, even though they are essential. The eradication of this kind of labor and of the ruthless exploitation of adult labor is undergoing a major change in the structure of society, where labor can be a source of life and joy and not alienating, a destroyer of potentialities, health damaging and a life reaper, as seen in the alarming statistics about occupational accidents in the country.

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