

Impact of working in adolescent health workers**Repercussões do trabalho na saúde dos adolescentes trabalhadores**Repercusiones del trabajo en la salud de los adolescentes trabajadores***Aline Alcântara Pimenta¹, Fabiana Cristina Taubert de Freitas², Maria Helena Palucci Marziale³, Maria Lúcia Carmo Cruz Robazzi³****ABSTRACT**

Objective: To identify health repercussions as a result of the work done by teenagers, in an Education Foundation for Work on your health. **Methods:** A cross-sectional descriptive and quantitative study investigated, between April and May 2010, 117 adolescent workers from the city of Ribeirão Preto (SP), using a multidimensional questionnaire. Data analysis was conducted using descriptive statistics. **Results:** The majority were female (72.6%), aged 15 years (80.3%), brown skin (60%), attending high school (74.4%), had family incomes of up to two times the minimum wage, living with three to four family members, and had not previously worked (62.4%). The activity most often performed was that of a receptionist (46.2%) and administrative assistants (37.6%); 92.3% worked four hours a day earning the minimum wage. For 37.6%, work caused health problems, such as pain in various body regions (76.2%) and respiratory problems. **Conclusions:** There were repercussions on the health of adolescents, possibly as a result of the work.

Keywords: Occupational health; Child labor; Working conditions; Adolescent health

RESUMO

Objetivo: Identificar as repercussões à saúde em decorrência do trabalho realizado por adolescentes, em uma Fundação de Educação para o Trabalho em sua saúde. **Métodos:** Estudo transversal, descritivo e quantitativo que investigou, entre abril e maio de 2010, 117 adolescentes trabalhadores da cidade de Ribeirão Preto (SP), por meio de um questionário multidimensional. A análise dos dados ocorreu por meio da estatística descritiva. **Resultados:** A maioria era do sexo feminino (72,6%), com idade de 15 anos (80,3%), cor parda (60%), cursava o Ensino Médio (74,4%); apresentava renda familiar de até dois salários mínimos; morava com três a quatro membros da família e não havia trabalhado anteriormente (62,4%). A atividade mais exercida foi recepcionista (46,2%) e auxiliar administrativo (37,6%); 92,3% trabalhavam quatro horas por dia ganhando meio salário mínimo. Para 37,6%, o trabalho causava alterações à saúde, tais como, dores em várias regiões do corpo (76,2%) e problemas respiratórios. **Conclusões:** Houve repercussões na saúde dos adolescentes, possivelmente, por causa do trabalho. **Descritores:** Saúde do trabalhador; Trabalho de menores; Condições de trabalho; Saúde do adolescente

RESUMEN

Objetivo: Identificar las repercusiones para la salud en consecuencia del trabajo realizado por adolescentes, en una Fundación de Educación para el Trabajo en su salud. **Métodos:** Estudio transversal, descriptivo y cuantitativo que investigo, entre abril y mayo de 2010, a 117 adolescentes trabajadores de la ciudad de Ribeirão Preto (SP), por medio de un cuestionario multidimensional. El análisis de los datos se llevó a cabo por medio de la estadística descriptiva. **Resultados:** La mayoría era del sexo femenino (72,6%), con edad de 15 años (80,3%), color parda (60%), cursaba la secundaria (74,4%); presentaba ingreso familiar de hasta dos sueldos mínimos; Vivía con tres a cuatro miembros de la familia y no había trabajado anteriormente (62,4%). La actividad más ejercida fue la de recepcionista (46,2%) y auxiliar administrativo (37,6%); el 92,3% trabajaban cuatro horas por día ganando medio sueldo mínimo. Para el 37,6%, el trabajo causaba alteraciones a la salud, tales como, dolores en varias regiones del cuerpo (76,2%) y problemas respiratorios. **Conclusiones:** Hubo repercusiones en la salud de los adolescentes, posiblemente, por causa del trabajo. **Descritores:** Salud laboral; Trabajo de menores; Condiciones de trabajo; Salud del adolescente

* A study conducted in a Municipal Foundation of Education for Work in Ribeirão Preto, interior of São Paulo.

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INTRODUCTION

Child-juvenile work happens in different regions around the world, with larger proportions in poor countries. In Brazil, in 2008, there were 92.5 million people aged 5 years or older working, 4.5 million of whom were between 5 and 17 years old, 993 thousand of them children between 5 and 13 years of age. Occupied people represented 10.2% of the population between 5 and 17 years of age, 0.7 percentage point less than in 2007⁽¹⁾.

Young people between 16 and 18 years old can enter the job market with guaranteed labor and social security rights. In special circumstances, work for those between 14 and 16 years old is permitted, but as apprentices, included in a technical-professional training program that is offered in compliance with Brazilian laws and guidelines⁽²⁾. The law started to regulate the hiring of apprentices; rights were expanded, guaranteeing a higher education level, professional education, a job contract and work conditions compatible with their physical, moral and psychological development⁽³⁾. By including the protection of adolescent workers at its core, this legislation can guarantee their dignified insertion in the job market and contribute to construct effective alternatives to break with the cycle of poverty, violence and social inequity⁽⁴⁾.

Positive and beneficial aspects are attached to adolescents' entry into the workforce⁽⁵⁾, in the sense that it contributes to their growth as people or citizens, incorporating feelings of self-esteem and accomplishment in their personality, provided that these are compatible and balanced with their energetic potential⁽⁶⁾. Positive repercussions, from the adolescent's perspective, are the development of interpersonal relationship and communication skills, personal, intellectual and physical development, independence and freedom, time occupation, help for the family and better living conditions⁽⁷⁾. The work performed can contribute to the formation of these young people's personality, the enhancement of their self-esteem and their sense of responsibility, besides offering opportunities to gain qualification with a view to starting their professional career⁽⁵⁻⁸⁾.

This work, however, can also entail negative effects for their physical and education development, impeding their dedication to extracurricular, play and social activities characteristic of their age, entailing isolation among their peers and relatives, and can be responsible for school delay⁽⁹⁾. Such damage is difficult to overcome, as there is a proper time to experience the different education phases of adolescence⁽⁹⁻¹⁰⁾. As apprentices, adolescent work has been legitimized but, frequently, the productive aspect prevails on education, besides the fact that appropriate health and safety conditions are

not always present at work⁽¹¹⁾.

The health area is still incipient in research on the relations between health and work, contributing to the lack of knowledge about how different types of work affect health⁽¹²⁾. In nursing, knowledge production has been predominantly oriented towards the identification of work situations in the area and timidly directed at problems like child work, among others⁽¹³⁾.

In view of the importance of studies related to this theme of child and adolescent work, further research is possible, stimulating studies on childhood and adolescence, with a view to demystifying the innocuousness of work.

OBJECTIVES

Identifying the repercussions for health as a result of adolescent work at a *Fundação de Educação para o Trabalho* (Education for Work Foundation).

METHODS

Descriptive and cross-sectional study with a quantitative approach, accomplished in Ribeirão Preto, an interior city in São Paulo State.

In this city, a municipal education for work foundation exists, aimed at promoting adolescents' right to professionalization; actions towards the prevention and eradication of child work and the promotion of professional qualification and employment for young people. Through enrollments, the adolescents who contact the Foundation are registered and distributed to the job market⁽¹⁴⁾. In April 2010, 330 adolescents were registered, which were forwarded to the professional education courses offered on a weekly base by the National Service for Commercial Education (SENAC).

Inclusion criteria were: adolescents whose responsible adults agreed with the minors' participation in an interview and signed the Informed Consent Term (ICT); adolescent present at the SENAC professional education courses at the time of data collection, between 14 and 17 years of age; who understood the formulated questions and had been active in the job market for at least three months.

In compliance with these criteria, 117 adolescents served as the research subjects. For data collection purposes, part of a multidimensional questionnaire was adopted⁽⁵⁾, properly authorized, in order to effectively achieve the outlined goal. This addressed the following themes: socio-demographic aspects (age, gender, self-referred color, marital status, education level, family composition, housing conditions) and work conditions (place and time of work and work-related health problems).

Data were collected between April and May 2010. The adolescents were recruited to fill out the questionnaire

at SENAC. First, the data collection instrument and ICT were explained in detail to solve the subjects' doubts, and to allow them to transmit this information to their parents or responsible adults. Next, they took the ICT to their responsible adults and those who consented were included in the study. The main author applied the questionnaires to the apprentices and, if doubts arose during their completion, they immediately received explanations on how to proceed.

Approval for the research project was obtained from the Institutional Review Board at the University of São Paulo at Ribeirão Preto College of Nursing, under Protocol No 1046/2009. The project was also forwarded to the Foundation Head and received authorization for data collection at SENAC.

For data analysis, the validation process through double data entry in a Microsoft Excel® worksheet was accomplished. Later, the data were transferred to Epi Info® software and subject to descriptive analysis. The health problems were characterized according to the International Classification of Diseases and Health Related Problems (ICD-10)(15) and the activities performed were coded according to the names of the Brazilian Classification of Occupations⁽¹⁶⁾.

RESULTS

Concerning age, 94 (80.3%) out of 117 subjects were 15 years old. The age variable, expressed in years, was: minimum 14 years; maximum 16 and mean 15.15(±0.42) years. Eighty-five young people (72.6%) were female; 87 (74.7%) attended secondary education, 60 (51.3%) were mulatto and two adolescents (1.7%) had one child each.

As for income, 108 (92.3%) gained half a minimum wage per month and 74 (63.2%) informed a family income of up to two minimum wages per month. At the time of data collection, the minimum wage amounted to R\$510. Regarding housing conditions, 68 (58%) lived in homes with 5 to 7 people, 72(61.5%) informed that the house was family-owned and comprised between 5 and 8 (47.1%) or between 1 and 4 (46.3%) rooms.

Table 1 - Adolescents affiliated with the *Fundação de Educação para o Trabalho*, according to the activities developed. Ribeirão Preto (SP) – 2010 (n=117)

Activity developed	No	%
Receptionist	54	46.2
Administrative Aid	44	37.6
Office-boy	15	12.8
Telephone operator	2	1.7
Typist	1	0.9
Stockroom Aid	1	0.9
Total	117	100

The subjects were asked whether they had worked before starting at the Foundation and what they did. Seventy-seven (65.8%) informed that they had not worked before; 40 (34.2%) indicated that they developed some activity. It was evidenced that the activity most working adolescents performed demanded no professionalization.

As for their inclusion in the Foundation, 102 (87.2%) mentioned they had been there between six years and less than one year. The Foundation guarantees the adolescent's stay for up to two years; some are able to get another job before the end of that term though, or leave for other reasons.

When asked about the activities they performed at the workplaces, most answers referred to their occupations. This information is displayed in Table 1.

Fifty-four (46.2%) of the interviewed subjects were receptionists. These workers perform different activities, such as: receivers and provides client support services, answers the telephone and provides information at the establishments: schedules interviews or appointments and receives clients or visitors; schedules services, organizes information and plans daily work. Another activity 44 subjects (37.6%) reported was that of administrative aid, including: support services in human resources, administration, finance and logistics; attending suppliers and clients and processing a range of documents. Next, the third option, which 15 (12.8%) adolescents mentioned, was office-boy, characterized boy: transporting correspondence, documents, objects and financial resources, performing bank and mail services; helping with secretarial work and meal services; operating office equipment; transmitting oral and written

Table 2 – Citations by 44 adolescents affiliated with the *Fundação de Educação para o Trabalho*, according to the number of health problems. Ribeirão Preto, SP, 2010 (n=92 citations).

ICD 10	Health problems	No	%
R51	Headache	25	27.2
M79.6	Pain in limb	19	20.7
M54	Dorsalgia	17	18.5
T78.4	Allergy, unspecified	9	9.8
H57.1	Ocular pain	7	7.6
J20	Acute Bronchitis	3	3.3
J45	Asthma	2	2.2
K29.7	Gastritis, unspecified	2	2.2
M79.1	Myalgia	2	2.2
J30.4	Allergic rhinitis, unspecified	1	1.1
M40	Kyphosis and Lordosis	1	1.1
A90	Dengue fever	1	1.1
J11	Influenza, virus not identified	1	1.1
M41	Scoliosis	1	1.1
D50	Iron deficiency anaemia	1	1.1
Total		92	100

messages.

Concerning health problems, the data are displayed in Table 2.

Out of 117 subjects, 44 reported health problems. Among the problems mentioned, 76.2% referred to pain in different body segments (headache 27.2%, limb pain 20.7%, back pain 18.5%, ocular pain 7.6 % and myalgia 2.2%). Other important citations were related to respiratory problems like: unspecified allergy (9.8%), acute bronchitis (3.3%), asthma (2.2%) and unspecified allergic rhinitis (1.1%).

DISCUSSION

Most adolescents were 15 years (80.3%) old and ages ranged between 14 and 16 years, in line with national standards for apprentice activities. As for gender, 72.6% were women, a reality that differs from evidence in other studies^(5-7,17), appointing that men are included in the job market earlier. It is known that the number of young working girls is frequently underestimated in statistical data, which generally do not take into account non-remunerated work in and outside the family group⁽¹⁸⁾.

Two adolescents mentioned they had a child (1.7%). These young women's responsibility is even greater; besides their triple journey, they are also mothers. A majority was taking secondary education (74.4%) and 25.6% primary education. According to the Brazilian education system's year-age adaptation, secondary education corresponds to adolescents between 15 and 17 years old. Thus, 27 adolescents were "delayed" with regard to the course year they should be taking. School delays have also been verified in other studies, which can be due to different reasons, such as the young people's lack of interest in studying, lack of motivation by the school or overload due to the double journey (study and work) before their body was physically prepared for this^(5,7,9). Attending school is a prerequisite for adolescents to continue in the Municipal Foundation. They cannot repeat the same year and should prove that they attended school for control purposes.

Most subjects were mulatto (51.3%), in line with other studies^(9,17). Concerning housing, the number of residents per house showed that most families comprise between five and seven people. In Brazil, the mean number of people per domicile in 2008 was 3.3 for the urban zone⁽¹⁹⁾. This average tends to be higher in families with working adolescents, suggesting that this factor can collaborate to the children's entry in the job market. Together with adults' unemployment or one of the parents' absence, this can make adolescents start to work early to help with family income or even be the only income source⁽²⁰⁻²¹⁾.

The apprentice salary varies depending on the place and hour load; half a minimum wage for four hours of

work per day, in line with the study results, and one minimum wage for eight hours of work per day⁽⁵⁻⁷⁾. This comes with social benefits like: uniform, transportation aid, professional qualification courses, meals and pedagogical, social and family accompaniment⁽³⁾.

Family income ranged from one to two minimum wages and suggests that young workers transfer part of their salary to their family^(5-7,22-23). The number of families with a per capita family income of up to half a minimum wage dropped from 32.4% to 22/6% in ten years⁽¹⁹⁾. In 2008, however, half of the Brazilian families was still living on less than R\$415 per capita. The actual problem is not that families often stimulate or even demand that their children start working below the age determined in the Child and Adolescent Law, but that unequal income distribution places countless families below the poverty line⁽¹⁹⁻²³⁾.

Concerning the work performed before entering the Foundation, 34.2% indicated that they developed some kind of work. In a study accomplished in Pelotas - RS, 4,924 individuals between 6 and 17 years of age were interviewed: out of 466 working children, 70% were between 14 and 17 years old, 25% between 10 and 13 years, 5% between 6 and 9 years, while 88% were part of the informal market. The fact shows that a large number of children/adolescents start working before the age recommended in Brazilian legislation⁽²⁴⁾.

A research found that, out of 66 interviewed subjects, half had previous work experience⁽⁷⁾, as opposed to the present research data, and that few had an official job contract, in compliance with labor legislation, an aspect not addressed in this study. The fact demonstrates the informality of adolescent work and its invisibility towards society. This reality, however, tends to be modified, as the technical-professional education law for young people tends to be ruled by guaranteed access and obligatory attendance of primary education; time for work activities; adequate professional training, formalizing the young people's employment situation⁽³⁾.

A similar reality was identified among apprentices in Uberaba, a city in Minas Gerais, evidencing that 36% were office boys; 25% worked as administrative aids and 16% were receptionists⁽⁵⁾. Other possibilities for apprentices are the banking sector⁽²⁾, administration, supermarkets, food services, attendance in snack bars and similar establishments⁽²⁵⁾. In this study, apprentices' job activities in administrative services were predominant, although other experiences are also possible and legally expected to happen.

Most subjects informed no health problems (62%), which is a paramount factor with regard to adolescent workers, who are not accustomed to this triple journey: work, study and attending the professionalizing course. The work process causes exhaustion in occupational

health, which often takes the form of physical illness⁽⁵⁾.

A research in Rio Grande do Sul, aimed at analyzing work-related problems involving economically active children and adolescents, demonstrated in 2007 that 11,944 problems were notified, 310 of which affected children and adolescents. In this group, (98.4%) were accidents and (1.6%) illnesses. As for the age range, 9% were between 5 and 13 years old, 12.3% between 14 and 15 years old and 78.7% between 16 and 17 years old. Most problems were wrist and hand traumas, and the five disease cases were bone-muscle disorders⁽²⁶⁾. The bodily exhaustion the workload provokes beyond the individual's organic limits, as well as occupational, muscle and visual fatigue, associated with insufficient nutritional intake, seem to be the precipitating factor for the development of the detected health problems⁽²⁷⁾.

Social policies aimed at fighting against this type of work should be outlined not only with a view to the young people's withdrawal from work, but also the creation of preventive actions, involving pertinent institutions for children and their families⁽²⁸⁾.

CONCLUSION

The results revealed the existence of health

REFERENCES

- Instituto Brasileiro de Geografia e Estatística. Pesquisa Nacional por Amostra de Domicílios 2008 - Pnad 2008: Mercado de trabalho avança, rendimento mantém-se em alta e mais domicílios têm computador com acesso à Internet. [citado 2010 Jun 10]. Disponível em: http://www.ibge.gov.br/home/presidencia/noticias/noticia_visualiza.php?id_noticia=1455&id_pagina.
- Brasil. Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Ações Programáticas Estratégicas. Trabalho infantil: diretrizes para atenção integral à saúde de crianças e adolescentes economicamente ativos. Brasília: Ministério da Saúde; 2007.
- Brasil. Presidência da República. Casa Civil. Subchefia para Assuntos Jurídicos. Decreto N° 5.598, de 1° de Dezembro de 2005. Regulamenta a contratação de aprendizes e dá outras providências. Brasília (DF): Presidência da República; 2005.
- Santos ME. Trabalho e violência em adolescentes estudantes: uma contribuição do enfermeiro [dissertação]. Rio de Janeiro: Faculdade de Enfermagem da Universidade do Estado do Rio de Janeiro; 2009.
- Rezende MP. O impacto do trabalho precoce na adolescência: um estudo de enfermagem [tese]. Ribeirão Preto: Escola de Enfermagem de Ribeirão Preto da Universidade de São Paulo; 2008.
- Forastieri V. Children at work: health and safety risks. 2nd ed. Geneva: International Labour Office; 2002.
- Silveira CA. Benefícios e malefícios do trabalho sob a ótica de adolescentes trabalhadores [tese]. Ribeirão Preto: Escola de Enfermagem de Ribeirão Preto da Universidade de São Paulo; 2008.
- Martins IS, Fischer FM, Oliveira DC, Teixeira LR, Costa LA, Marinho SP, Perestrelo JP, et al. Crescimento e trabalho de estudantes de ensino fundamental e médio em São Paulo, Brasil. Rev Saúde Pública. 2002;36(1):19-25.
- Silveira RC. Repercussões do trabalho no aproveitamento escolar de crianças e adolescentes: retrato de uma realidade [tese]. Ribeirão Preto: Escola de Enfermagem de Ribeirão Preto da Universidade de São Paulo; 2008.
- Oliveira DC, Sá CP, Fischer FM, Martins IS, Teixeira LR. Futuro e liberdade: o trabalho e a instituição escolar nas representações sociais de adolescentes. Estud Psicol (Natal). 2001;6(2):245-58.
- Fischer FM, Martins IS, Oliveira DC, Teixeira LR, Latorre MR, Cooper SP. Occupational accidents among middle and high school students of the state of São Paulo. Brazil. Rev Saúde Pública. 2003;37(3):351-6.
- Ferreira MA. Trabalho infantil e produção acadêmica nos anos 90: tópicos para reflexão. Estud Psicol (Natal). 2001;6(2):213-25.
- Marziale MH. Contribuições do enfermeiro do trabalho na promoção da saúde do trabalhador. Acta Paul Enferm. 2010;23(2):vii-viii.
- Prefeitura Municipal de Ribeirão Preto. Fundet - Fundação de Educação para o Trabalho. 2010. Disponível em: <http://www.ribeiraopreto.sp.gov.br/fundet/i11principal.php>. Acesso em: 19 de fev de 2010.
- Organização Mundial da Saúde. CID-10: classificação estatística internacional de doenças e problemas relacionados à saúde. 10a ed. São Paulo: EDUSP; 2007.
- Brasil. Ministério do Trabalho e Emprego. Classificação brasileira de ocupações: CBO 2002. Brasília: TEM; 2002.
- Alberto MF, Nunes TS, Cavalcante CP, Santos DP. O trabalho infantil doméstico em João Pessoa - PB: um diagnóstico rápido à luz das piores formas de trabalho infantil. Brasília: OIT; 2005.

18. Silveira RC, Robazzi ML. As crianças e os adolescentes trabalhadores acidentados no trabalho e atendidos em unidade básica distrital de saúde em Ribeirão Preto (SP). *Ciênc Cuid Saúde*. 2006;5(2):158-65.
19. Instituto Brasileiro de Geografia e Estatística. Síntese de Indicadores de Saúde 2009 - SIS 2009: em dez anos, cai de 32,4% para 22,6% o percentual de famílias vivendo com até meio salário mínimo per capita. 2009. Disponível em: http://www.ibge.gov.br/home/presidencia/noticias/noticia_visualiza.php?id_noticia=1476&id_pagina=1. Acesso em 24 mai 2010.
20. Frankilin RN, Pinto EC, Lucas JT, Linné M, Peixoto R, Sauer MT, et al. O trabalho precoce e riscos à saúde. *Adolesc Latinoam*. 2001;2(2):80-9.
21. Oliveira BR, Robazzi ML. O trabalho na vida dos adolescentes: alguns fatores determinantes para o trabalho precoce. *Rev Latinoam Enferm*. 2001;9(3):83-9.
22. Fernandes AC. O trabalho do adolescente como aprendiz na cidade de Campinas, Estado de São Paulo [tese]. Ribeirão Preto: Escola de Enfermagem de Ribeirão Preto da Universidade de São Paulo; 2008.
23. Guimarães RM, Romanelli G. A inserção de adolescentes no mercado de trabalho através de uma ONG. *Psicol Estud*. 2002;7(2):117-26.
24. Facchini LA, Fassa AG, Dall'agnol M, Maia MF. Trabalho infantil em Pelotas: perfil ocupacional e contribuição à economia. *Ciênc Saúde Coletiva*. 2003;8(4):953-61.
25. Serviço Nacional de Aprendizagem Comercial - SENAC. Programa Aprendizagem. 2010 [Internet]. [citado 2010 Jul 10]. Disponível em: <http://www.sp.senac.br/jsp/default.jsp?newsID=a15761.htm&testeira=1409&gclid=CMWE6emaxqMCFQvs7QodTkC4Yg>.
26. Gnoatto AS, Gleich C, Nussbaumer L, Luedke R, Dapper V. Saúde integral de crianças e adolescentes economicamente ativos: agravos relacionados ao trabalho notificados no sistema de informações em saúde do trabalhador no Rio Grande do Sul em 2007. *Bol Epidemiol*. 2009;11(1). Disponível em: <http://www.saude.rs.gov.br/dados/1240946151745V11%20N1.pdf>. [citado 2010 Jul 10].
27. Asmus CF. Avaliação do processo produtivo em mineração de diamantes e suas repercussões sobre a saúde dos adolescentes garimpeiros [tese]. Rio de Janeiro: Faculdade de Engenharia da Universidade Federal do Rio de Janeiro; 2001.
28. Cacciamali MC, Tatei F. Trabalho infantil e o status ocupacional dos pais. *Rev Econ Polít*. 2008;28(2):269-90.