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# Child Labor in Colombia: Physical and Psychological Discomfort at Work in Children Who Work and Attend School

Andrea Morales Reyes  
*Clemson University*

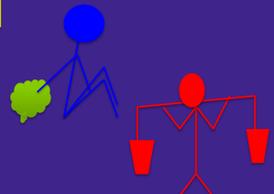
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Andrea Morales, B.A. and Tracie Hefner, MSW

### ABSTRACT

This study examined the health consequences of child labor in Colombia through the use of a dataset on the economic and non-economic activities engaged in by children and adolescents during 2011. The data collection was a collective effort between the Colombian government and the International Labor Organization (ILO). The data was collected on 48,876 children between the ages of 4 and 17 (mean=11.13, SD=3.7). This particular study focused on a subset of the population of children that either worked and attended school (n=3989) or only worked (n=2,118). Univariate Analysis of Variance (ANOVA) was used to determine whether there was a statistically significant difference between these two groups on the basis of physical and psychological discomfort at work. The group of children who worked and attended school was associated with statistically significant lower mean physical (M=.043) and psychological discomfort (M=.023) than the group of children who only worked (M=.066; M=.044, respectively). The higher mean discomfort in children who only worked showed that attending school mitigates children's discomfort at work. By promoting protective factors to deter child labor, the Colombian government could safeguard children's health and development. Education should be at the forefront of these.

**Keywords:** Child labor, Colombia, Health, Mental Health

### BACKGROUND

Child labor was defined in the Encuesta Nacional de Trabajo Infantil (National Survey of Child Labor) as the weekly activities performed by children and adolescents, between the ages of 5 and 17, which produced goods and services in either of the following ways:

- Worked at least an hour in exchange for monetary or in-kind income, or at least an hour without income as a family worker without pay or worker without income in another's family business.
- Was not working in the reference week because of leave or vacation but had a job or was a business owner, or was involved in any production process and there was certainty that he/she would return to work after the leave was up.

Children's physical and mental health can be compromised during child labor. Children who work may experience a myriad of health and developmental issues because of the type of labor they perform and the environment they perform it in. Due to their age and stage in development, children are likely to get physically hurt even performing work that is safe for adults. Children have greater need for food and rest than adults; thus, long shifts of strenuous work can be more harmful for children. They may also be more prone to fatigue caused by malnutrition, skeletal damage from handling heavy loads during their rapid bone growth, and exposure to chemicals which affects their developing organs. Children are also not suited for much of the work designed for adults because they have lower tolerance to heat and noise, and they are unskilled, inexperienced (specially younger children), and lack adequate training and supervision during their labor. These factors put children at greater risk of injury and accidents.

Child labor's mental health outcomes due to abuse, inadequate work environments, poor relationships with peers and superiors, long work hours, and their families' socio-economic situation have been stated in the literature. Children who work may experience higher rates of emotional and behavioral difficulties such as anxiety and depression.

Differences on physical and psychological discomfort between children who work and do not attend school and children who work and attend school were explored in this study. Differences in gender, age and primary activity were also examined.

### METHODOLOGY

This article examined child labor in Colombian through the use of a dataset on the economic and non-economic activities of children and adolescents engaged in during 2011. This data was gathered through the National Survey of Child Labor. The data collection was a joint effort between the DANE, ICBF, the Colombian Ministry of Labor, and ILO. The data was collected between October and December 2011 on 48,876 children. This study reduced the sample to only include children who reported having had a job the week previous to taking the survey. Frequencies, descriptive statistics, and cross-tabulations were computed to examine demographics as well as labor and school statistics. The statistical analyses were conducted using 22.0 SPSS software.

#### Creation of Scales:

In order to assess "discomfort" two scales were created. The first scale assessed physical discomfort and included the following 16 items: (1) I get tired at work, it requires great strength; (2) I need to work in uncomfortable positions; (3) I have no time to rest; (4) I constantly hurt my hands; (5) There are noises and vibrations; (6) There is poor lighting; (7) There are weather variations or abrupt changes in temperature; (8) Tasks must be performed underground, underwater, in dangerous heights, or in enclosed spaces; (9) There is exposure to toxics (e.g. acids, poisons, gases, x-rays, harmful sun rays); (10) There are strong smells or a lot of dust in the work environment; (11) The work requires a great deal of physical effort (e.g. bad body posture, manipulation or transportation of heavy loads, strenuous exercises); (12) I'm exposed to bug bites or other animal bites; (13) My work requires handling dangerous machinery, equipment or tools; (14) I lack the adequate work tools; (15) I'm at risk of electric shock; (16) My shifts are very long, at night, or with short or insufficient breaks.

The second scale measured psychological discomfort using the following 14 items: (1) I do not enjoy doing the activities I do at work; (2) The activities I do at work bore me; (3) I am forced to do the activities I do at work; (4) I am ashamed of the activities I do at work; (5) I am insulted, humiliated, or utterly pressured at work; (6) My pay is poor; (7) The work I perform gives me shame or embarrassment; (8) The relations among co-workers are not good; (9) My work hours are too long; (10) I have few or no breaks at work; (11) There are inappropriate physical or psychological occurrences at work (e.g. threats, insults, sexual harassment, beatings, etc.); (12) There is pressure or harassment from authorities at work; (13) Tasks at work are monotonous or repetitive; (14) There is presence of gangs or illegal groups at work. For each of the previous questions there are two possible answers: (1) Yes, (2) No. All of these items were obtained from the National Survey of Child Labor.

#### ANOVA:

The univariate general linear model was used to compare differences between the discomfort means of working children who attended school and those who did not. Differences between females and males' physical and psychological discomfort were assessed, as well as differences between age groups (5-14 and 15-17 years of age) and primary activity during the past week (i.e. work or study). Descriptive statistics, means, significant level, and degrees of freedom were reported.

### RESULTS

#### Frequencies and Descriptive Statistics:

By 2011, over a fourth of the 45 million Colombians were children between the ages of 5 to 17. Over 77% of this young population was between the ages of 5 and 14 and about 23% were between 15 and 17. The majority of this population were male (53%). The national child labor rate in Colombia was 13%; while the child labor rate for children between the ages of 5 and 14 was 8.6%, and for 15 to 17 years was 27.7% in the reporting year. Females had a lower rate of child labor than males, 8.9% and 16.6% respectively.

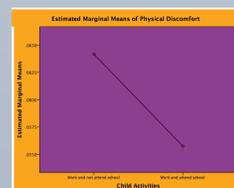
The national school attendance rate was 92.6%: 93.5% for females and 91.8% for males. The school attendance rate for children between the ages of 5 and 14 was 96.2%, and for 15 to 17 years was 81.2%. In the reference year, 67.4% of the population between 5 and 17 years of age performed housework. The main housework performed by females consisted of general cleaning and household maintenance (91.0%), doing the dishes (82.9%), and running errands or grocery shopping (74.0%). Housework performed by males focused on running errands or grocery shopping (82.7%) and general cleaning and household maintenance (81.8%). The child labor rate extended to cover housework was of 15.4%.

Of the children engaged in labor, a total of 3,989 both worked and went to school during the reference period (65.3%), while 2,118 children worked and did not attend school (34.7%). Most of the children who do not work go school (91.1%). While 87.2% of children who worked and studied spent most of their time studying, 55.6% of the children who only worked spent their time working. The three main reasons children reported for working were: (1) Duty to participate in the family business (27.6%); (2) To have their own money (34.9%); (3) Must help with household expenses (8.9%). Over half of the children who worked (54.7%) reported receiving no earnings (either monetary or in kind).

#### Scale Reliability and Factor Analysis:

Scale	KR20	KMO	Bartlett's test
Physical discomfort	0.702	0.818	$\chi^2(153)=13422.243, p<0.001$
Psychological discomfort	0.604	0.759	$\chi^2(105)=8514.732, p<0.001$

**The analysis revealed that children who work but did not attend school, males, 15-17 year olds, and children who primarily spent most of their time working, reported statistically significant higher means of physical and psychological discomfort than their respective counterparts.**



#### ANOVA:

Discomfort Score	Work and Study			95% CI		Only work			95% CI		Test of Between-Subjects Effects	
	N	M	SD	Lower	Upper	N	M	SD	Lower	Upper	F	df
<b>Physical</b>	3989	0.043	0.001	0.04	0.045	2118	0.066	0.002	0.062	0.07	100.750**	1
Females	1674	0.032	0.093	0.038	0.044	643	0.04	0.073	0.058	0.065	77.064**	3
Males	2315	0.050	0.084			1475	0.077	0.105				
Age: 4-14	2407	0.038	0.072			779	0.0537	0.087				
Age: 15-17	1582	0.051	0.088	0.042	0.047	1339	0.0731	0.104	0.06	0.068	73.196**	2
Work	401	0.068	0.01			1177	0.0816	0.011				
Study	3588	0.04	0.075	0.052	0.059	941	0.0464	0.077	0.061	0.068	115.838**	2
<b>Psychological</b>	3989	0.024	0.001	0.022	0.026	2118	0.045	0.001	0.042	0.048	144.423**	1
Females	1674	0.022	0.059	0.021	0.025	643	0.0416	0.079	0.041	0.047	74.483**	2
Males	2315	0.025	0.057			1475	0.0462	0.078				
Age: 4-14	2407	0.021	0.051	0.023	0.027	779	0.0342	0.071	0.041	0.046	92.441*	2
Age: 15-17	1582	0.028	0.067			1339	0.051	0.081				
Work	401	0.041	0.076			1177	0.0562	0.0859				
Study	3588	0.022	0.056	0.03	0.035	941	0.0305	0.064	0.041	0.046	128.162**	2

Note. \*p<0.05; \*\*p<0.005. N=Sample Size. M=Mean. SD=Standard Deviation. CI=Confidence Interval.

### CONCLUSION

The group of children who worked and attended school was associated with statistically significant lower mean physical and psychological discomfort than the group of children who worked and attended school. This study suggests that school attendance does have an effect on physical and psychological discomfort scores.

The higher mean physical and psychological discomfort in children who work and do not attend school indicate the benefit of education. Also, the lower discomfort means in children that do not attend school but spend most of their time studying suggest that studying mitigates discomfort at work. When children attend school, they may have a larger social support system in their lives than children who do not attend school. They may also have more outlets to release their stress in a health manner since school presents the opportunity to learn and play with other children their age. Their education may help them cope better with the discomforts at work. Children are at a developmental stage in which they have the right to spend their time studying, playing, and resting. They also have the human right to life, protection from exploitation, and to grow and develop in a healthy manner. Although working can pose a great risk to children's health and development, working and attending school mitigates children's physical and psychological discomfort at work. Children's health and development should be safeguarded by promoting protective factors to deter child labor or at least mitigate its effects. Education is one of those protective factors. In addition, closer attention needs to be paid to educational programs outside the classroom in order to reach children who do not attend school.

Any opinions, findings, and conclusions or recommendations expressed in this poster are those of the author and do not necessarily reflect the views of the DANE, ICBF, the Colombian Ministry of Labor, or ILO.

### REFERENCES

- Basu, K. (1999). Child labor: Cause, consequence, and Cure, with remarks on International labor standards. *Journal of Economic Literature* 37(3), 1083-1119.
- Child Labor Research Initiative, University of Iowa Labor Center, & University of Iowa Human Rights. (2004). Child labor and health: Adult education workshop. Retrieved from [http://www.continuetolearn.uiowa.edu/laborctr/child\\_labor/materials/documents/CLPEPhealthhandouts.pdf](http://www.continuetolearn.uiowa.edu/laborctr/child_labor/materials/documents/CLPEPhealthhandouts.pdf)
- DANE. (PDF document). Encuesta Nacional de Trabajo Infantil 2011: Boletín de Prensa. Retrieved from <https://www.dane.gov.co/index.php/mercado-laboral/trabajo-infantil> accessed on October 2012.
- DANE. (PDF document). Encuesta Nacional de Trabajo Infantil 2011: Presentación. Retrieved from <https://www.dane.gov.co/index.php/mercado-laboral/trabajo-infantil> accessed on October 2012.
- Edmonds, E. V. (2007). Child labor. Nber Working paper series. Working paper 12926.
- Thabet, A., Matar, S., Carpintero, A., Bankart, J., & Vostanis, P. (2011). Mental health problems among labour children in Gaza Strip. *Child: Care, Health, and Development*. 37(1), 89-95.

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### CONTACT INFORMATION

Andrea Morales  
morales@clemson.edu  
Graduate Research Assistant  
Institute on Family and Neighborhood Life  
Clemson University

