Occupational hazards, illness and injuries faced by child labourers

Salman Javed,[1] Naima Shah,[2] Mohammed Yousuf Memon[3]

Abstract

Objective: To assess hazards, injuries and illnesses faced by child labourers in their working environment.

Methods: The cross-sectional study was conducted in a squatter settlement in Sultanabad, Karachi, in January and February, 2011. A total of 190 children, aged 9-14 years were interviewed through structured pre-tested questionnaire at their workplaces. They were asked about their health, illness, working hours, frequency of work related illness, frequency and severity of injuries they received during work and various other associated factors. SPSS 17 was used for statistical analysis.

Results: The mean age of the children was 12.60±1.47 years. Of the total, 140 (78.4%) said they had got injured while working during preceding 3 months; 64 (33.7%) had high frequency of injuries; 13 (6.8%) had severe and 59 (30.6%) had moderate type of injuries; 114 (60.0%) said their illness was 'sometimes' work-related or due to the working environment; 159 (83.2%) were unaware of the occupational hazards they were facing; and 142 (74.7%) had no adult supervision at work. A significant association was found between the occupational related illnesses and the working environment of the participants (p=0.03).

Conclusion: Majority of the child labourers were found to be facing unsafe working conditions, and encountered frequent work-related injuries and illnesses.

Keywords: Child labour, Work-related injuries, Work-related illness. (JPMA 63: 139; 2013)

Introduction

The International Labour Organisation's (ILO) Minimum Age Convention 138 in 1973 stated that the minimum age for employment "may not be set lower than the age of completion of compulsory schooling and, in any event, not less than 15 years (initially 14 years in the case of developing countries)."[1] No country is free of child labour[2] and over 170 million children worldwide are employed as child labourers.[3] However, the problem is much more severe in developing countries,[4] where more than 20 million children aged 5 to14 years, are employed in various jobs.[5,6] Child labour not only deprives the young and growing individuals of the basic human rights,[5] such as education, access to healthcare facility and proper sanitation, but often exposes the children to a variety of hazards (e.g. unsafe machinery, falling objects, chemicals, cruel employers) that can seriously affect their well-being.

The Human Rights Commission of Pakistan (HRCP) in 2001 estimated that there were around 11 to 12 million child labourers in the country out of which only 3.3 million were on the pay roll.[7] Despite the presence of provision in the Constitution of Pakistan to ensure the removal of child labour, this has not been possible due to corruption in society.[8] A number of foreign firms have moved to Pakistan because of the availability of cheap child labour.[9,10] Many studies have shown that poor socio-economic condition and the lack of education on the part of parents are the two strongest determinants of child labour.[11] It is evident that poverty is the major cause, which breeds most forms of child labour[2] and children working along with other family members, are often able to fulfill their own and their family's basic needs of life. Thus, by preventing child labour, the problems arising from poverty are likely to be aggravated, making the situation worse for children as well as their families.[12,13]

Due to these 'push factors,' the children are often victims of exploitation and continuously struggle to cope with the unprincipled employers who use child labour to cut production costs, even at the risk of jeopardising the lives of children who are exposed to dangerous work. They are often the worst paid of all workers, and work long hours. More often than not, the physical, mental or moral well-being of the child is endangered, either because of the nature of the job or the conditions in which it is carried out.[14] Thus, the study set out to identify the various hazards faced by the child labourers in their working environment, and to establish the nature of occupational injuries and illness encountered by them during their work.

Subjects and Methods

The cross-sectional study was conducted in a squatter settlement in Karachi's Sultanabad area from January to February, 2011. A convenient sampling method was applied and the sample size was calculated by using Open-epi

[1,2]Final Year Medical Students, Dow Medical College, Karachi.
[3]Senior Instructor, Department of Community Health Sciences, Aga Khan University, Karachi, Pakistan.
Correspondence: Salman Javed. Email: salman_jr4u@hotmail.com.

software. Using an anticipated population proportion of 10%[7] for child labour, the minimum number of participants required for the study was 182, at a confidence level of 95% with a 5% chance of error. The study comprised 190 children. A structured pre-tested questionnaire containing both open-ended and close-ended questions was used to interview the child labourers, aged 9-14 years, at their work-places. Before taking the interview, the objectives of the study were explained and consent was taken from them and the parents of the children if they were available at the site, or their employers. During the interview, the participants were questioned regarding their health, illness, frequency of occupational related illness, frequency and severity of injuries they received during work, their working hours and various other aspects. Severity of injuries was classified as 'mild' (not affecting their routine activities), 'moderate' (affecting their routine activity) and 'severe' (those requiring immediate medical attention). After the interview, personal observations regarding the participants, including their body structure, clothing, wearing of slippers or shoes, personal and environmental hygiene, were also recorded. For evaluating body structure, body mass index (BMI) was used. BMI <20 was classified as 'underweight,' 20-25 'healthy' and >25 'overweight.' The personal hygiene was evaluated by observing the level of grooming of those interviewed, while environmental hygiene was assessed by the presence of pollutants, mismanaged waste and cleanliness of the surroundings. The participants were then given a brief session regarding the various occupational and health hazards to which they were exposed and measures which should be taken to ensure their safety.

The data was entered in SPSS 17.0 for statistical analysis. Continuous variables were expressed as mean ± standard deviation (SD), while categorical variables were presented as frequencies and percentages. Chi-square test was used to evaluate the relation between categorical variables. The results were considered statistically significant at $p \leq 0.05$.

Results

The ages of the child labourers in the study ranged from 9 to 14 years with a mean age of 12.60±1.47 years. Children were employed in different occupations, which included 37 (19.5%) mechanics; 40 (21.1%) street sellers; 14 (7.4%) garbage collectors; domestic servants 2 (1.1%); in shops 17 (8.9%); in small cafeterias 23 (12.1%); carpenters 21 (11.1%); car cleaners 16 (8.3%); welders 3 (1.6%); electricians 6 (3.2%); cobblers 9 (4.7%); peons 1 (0.5%) and compounders 1 (0.5%). Of the total, 105 (55.3%) had never gone to school; 74 (38.9%) were employed; 88 (46.4%) were self-employed; and 28 (14.7%) were unpaid workers. The daily working hours of 146 (76.8%) of those interviewed were over 10 hours. Only 9 (4.7%) child labourers said their working environment was always clean and hygienic (Table-1).

When questioned about occurrence of any injury or injuries during the preceding 3 months, 149 (78.4%) remarked that they did get injured; 64 (33.7%) 'often' suffered injuries at work; while 93 (48.9%) said they 'sometimes' experienced injury (Table-2). When asked about the severity of their injuries, 13 (6.8%) reported to have had severe injuries; 58 (30.6%) had moderate injuries; and 119 (62.6%) had mild injuries. Besides, 114 (60.0%) commented that their illness was sometimes work-related or due to the working environment. The injuries were of various types, including minor skin cuts and burns, which were the most common ones. Skin diseases and respiratory problems were the commonly reported illnesses among the participants. However, most participants did not give the details of the type of the injuries and illnesses. It was striking that 158 (83.2%) child workers were unaware of the occupational hazards they were facing, while only 17(8.9%) children were ever informed about the hazards by the employer or the parents. Only 27 (32.5%) out of the 83

Table-1: Demographic and employment data.

	Mean ± SD	
Age	12.60 ± 1.47	
	No. of participants (n)	**Percentage (%)**
Education		
No schooling	105	55.3
Class 1	1	0.5
Class 2	32	16.8
Class3	19	10.0
Class 4	4	2.1
Class 5	3	1.6
Class 6	17	8.9
Class 7	6	3.2
Class 8	3	1.6
Employment		
Employed	74	38.9
Self-employed	88	46.4
Unpaid family worker	28	14.7
Years Of working		
<1year	85	44.7
1-4 years	82	43.2
4-8 years	20	10.5
>8 years	3	1.6
Daily working hours		
<6 hours	0	0.0
6-8 hours	10	5.3
8-10 hours	34	17.9
>10 hours	146	76.8
Working environment		
Always clean and hygienic	9	4.7
Often clean and hygienic	25	13.2
Often unclean and unhygienic	68	35.8

employed participants received some sort of payment from their employers for medical services in case of illness or injury.

Out of the 190 participants, 142 (74.7%) were not under adult supervision at work while the employers and parents of 138 (72.6 %) participants were aware of the hazards these children faced. When evaluating the frequency of illness and occupation-related illness, a statistical association was noted (p= 0.01). A significant association was also seen between the occupation-related illness and the working environment (p= 0.01).

Table-2: Injury and illness profile.

	No. of participants (n)	Percentage (%)
Injuries acquired in last 3 months		
Yes	149	78.4
No	41	21.6
Frequency of injuries		
Often	64	33.7
Sometime	93	48.9
Rarely	33	17.4
Nature of injuries		
Severe	13	6.8
Moderate	58	30.6
Mild	119	62.6
Frequency of illness		
Often	72	37.9
Sometime	99	52.1
Rarely	19	10.0
Frequency of occupation related illness		
Often	7	3.7
Sometime	114	60.0

After the interview was completed, five aspects regarding the participants and the working environment were observed and noted (Table-3). The association between environmental hygiene observed and the frequency of work-related illness was statistically significant (p= 0.001).

Discussion

Child labour can have both positive and negative effects, but its negative impact on the health and development of the children outweigh its positive effects.[15] Child labourers are more prone to injuries and illness at work than the adults, as they are unskilled, have inadequate training and supervision and often the working equipments are not adequately adapted for them.[16] Children have also been found to be more sensitive to noise, heat, chemical and radiations present at workplaces.[17,18] ILO estimates that about 22000 child labourers lose their lives due to occupational hazards every year.[3] This is an alarming indicator of the gravity of this problem. The mean age of the child labourers in our study (12.60±1.47 years) was well below that recommended by ILO.[6] Children were involved in various occupation, out of

Table-3: Frequency of illness in association with work-related illness and personal observations.

	Frequency of illness				
	Often (n)	Sometimes (n)	Rarely (n)	Total no. of participants (n)	P Value
Frequency of work related illness					
Often	7	0	0	7	0.000
Sometimes	46	62	6	114	
Rarely	19	37	13	69	
Body structure					
Overweight	2	2	0	4	0.478
Healthy	29	33	4	66	
Underweight	41	64	15	120	
Dressing					
Good	3	4	0	7	0.665
Average	26	28	5	59	
Poor	43	67	14	124	
Wearing shoes/slippers					
Yes	62	88	13	163	0.064
No	10	11	6	27	
Personal hygiene					
Good	0	2	0	2	0.761
Average	19	26	5	50	
Poor	53	71	14	138	
Environmental hygiene					
Good	0	3	0	3	0.103
Average	7	20	5	32	
Poor	65	76	14	155	

which the most common were street selling, mechanic, working in hotels, and carpentry. The working environment in majority of the cases was not suitable for them and the unclean and unhygienic conditions prevalent had severe negative effect on the children.[8] Similarly, the working hours of over three-fourth of the participants was over 10 hours. Long working hours create severe biological pressures on the health of the children.[8]

Child labour also has a negative impact on education. In the current study, 55.3% of the children had never been to school. Children consume greater energy compared to the adults. An increased energy requirement for performance of high-grade physical work at their jobs increases susceptibility to toxic effect and apart from this the exhaustion induced by such physical work can place serious stress on their body and result in illness.[18,19] Surveys conducted by ILO in 26 countries show that one in every four working children suffered injuries while at work.[16] Our results show similar high figures of injuries, where 78.4% had suffered an injury during preceding last three months. Besides, 33.7% and 37.9% of those interviewed had often had injuries and illness respectively. Similar results were noted in Philippines where 24% of the child workers were found to suffer work-related illness or injury.[20] These injuries and illnesses are often not given much importance to, but many studies show that these could lead to physical disabilities and even death.[21]

The personal observations noted clearly show the state in which the child labourers are forced to live. Being underweight, poorly dressed, and with poor personal and environmental hygiene, they are exposed to health problems. Poverty, combined with occupational hazards, can lead to permanent disabilities and premature death.[16]

Due to resource limitations a complete medical examination of the children could not be done, which is a limitation of the study as it could not assess the actual health status of the children. Due to the sensitivities of the area, various questions regarding different issues, such as child abuse, sexually-transmitted diseases (STDs) and psychological problems could not be asked.

Conclusion

The child labourers in the study faced unsafe working conditions. They were under significant physical stress due to their jobs, and often encountered injuries and illnesses. This situation could have a severe impact on the health of these children. There is a strong need to look after these children and impart significant knowledge to them regarding the potential hazards at their work-place. Besides, the role of parents and employers is also crucial in order to protect these children from these hazards.

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