



Occupational Health Hazards among Child Labourers of Patna

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Abstract : *To study the possible effects of occupational hazards and health in child labourers working in different sectors such as agriculture , construction , ragpickers , dhabas and household , a survey was conducted in different areas of Patna. Agriculture was the most hazardous sector of the five sectors considered. Health problems included headache, musculoskeletal problems, nausea, loss of appetite, hearing problem, fatigue and skin ailments. 35% of child labourers working at construction sites and 30% of child labourers working at agricultural sites had musculoskeletal problems.*

Key Words : *Agriculture, hazardous, health problems.*

Introduction :

Work can have positive effects on children such as development of discipline, responsibility, self confidence and independence, teaching children how to manage money , and providing valuable models to teach them work-skills. On the other hand, work environment and occupational conditions also have negative impact on health and development of children (Committee on the Health and Safety Implementation on child labour, 1998). Exposure to hazards affects children much more strongly than to adults (Bequele and Myers, 1995; Forastieri, 1997; International Labour Organization, 1998).

The main objectives of our research were to collect data from child labourers of different sectors regarding nature of occupation and its ill effects on their health and also to compare health problems in different sectors based upon age, sex, working hours etc.

Materials and Methods :

The survey was conducted in different areas of Patna like Patna Junction and residential areas, Ashiana Nagar, Boring Road, Patliputra, Gandhi Maidan and Utpurna Kendra. In the present study a total 250 children were interviewed, out of which 200 were child labourers and 50 belonged to the control group i.e. the normal school going children of low income group. 40 child labourers were

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randomly selected from each of the 5 different sectors in Patna as in agricultural, construction, Dhabas, household and rag pickers. These child labourers were interviewed according to a predesigned questionnaire including data on their age, sex, nature of work, working hours, number of family members, health problems and educational qualification. The weight of children was also noted.

Results and Discussion :

On the basis of several parameters following results are obtained.

There were 70% of boy child labourers and 30% of girl child labourers in all. Out of which 26% belonged to age group of 5 – 10 and 74% belonged to age group of 11 – 14 years. 59.5% of child labourers were illiterate, 35.5% had primary education and only 5% of child labourers had secondary education. (Table-1)

Table 1. Sex, age, no. of family members, working hours, sleeping hours, educational qualifications and weight.

VARIABLES	NUMBER (n=200)	PERCENTAGE (%)
SEX		
Boy	140	70
Girl	60	30
AGE (IN YEARS)		
5 – 10	52	26
11 – 14	148	74
No. of Family Members		
0 – 5	19	9.5
5 – 10	21	10.5
10 – 15	107	53.5
15 – 20	53	26.5
WORKING HOURS		
0 – 5	37	18.5
5 – 10	163	81.5
SLEEPING HOURS		
0 – 5	79	39.5
5 – 10	121	60.5
EDUCATIONAL QUALIFICATION		
Illiterate	119	59.5
0 – 5 (Primary)	71	35.5
5 – 10 (Secondary)	10	5
WEIGHT (KG)	Child	Controlled
Controlled	labourers (n = 200)	group (n = 50)
		labourers
		group
		(%)
		(%)
Underweight	48	5
Normal	137	35
		68.5
		70

Table 2. Different hazards in child labourers

Hazards	Number (n = 200)	Percentage (%)
Environmental Hazards	110	55
Chemical Hazards	52	26
Biological Hazards	38	19

19% of health problems (Table-2) were due to biological hazards, 26% were due to chemical hazards and 55% were due to environmental hazards (Table-2).

Table-3: Percentage of different types of child labourers on the basis of skills

Different Skills	Number (n = 200)	Percentage (%)
Unskilled labourers	160	80
Labourers under supervision	30	15
Trained labourers	10	5

80% of child labourers were unskilled labourers, 15% were labourers under supervision and 5% were trained labourers (Table-3).

Table 4. Work related hazards in different sectors of child labourers (in percent)

Work related hazards	Agri-culture	Cons-truction	House-hold	Rag-pickers	Dhabas
Cut	30	20	5	5	10
Sunburn	35	25	0	30	5
Animal bite	10	0	0	15	5
Noise	35	45	5	5	0
Exposure to dust	35	40	30	30	0
Exposure to chemicals	55	0	0	5	5

Out of 40 child labourers in agriculture sector, 30% had cut, 35% had sunburn, 10% animal bite, 35% suffered due to noise, 35% were exposed to dust, 55% were exposed to chemicals and 45% used heavy equipments (Table-4)

Table 5. Health problems in different sectors of child labourers

Health problems	Agri-culture	Cons-truction	House-hold	Rag-pickers	Dhabas
Headache	20	10	5	5	10
Musculoskeletal problems	30	35	20	15	15
Nausea	10	5	10	5	5
Loss of appetite	15	10	15	10	5
Hearing problems	5	5	0	0	0
Fatigue	10	10	5	10	15
Skin ailments	10	15	0	15	0

Agriculture was the most hazardous sector of the five sectors considered. Health problems included headache, musculoskeletal problems, nausea, loss of appetite, hearing problem, fatigue and skin ailments. 35% of the child labourers working at construction sites and 30% of child labourers working at agricultural sites had musculoskeletal problems (Table-5).

The present study found that 59.5% child labourers were illiterate. This is mainly due to the reason that their parents do not allow them to attend school so that they can earn money for their family. According to Wilk (1993), the seasonal characteristics of the work, the long hours required, the distance from the school and lack of schools with higher grades in the rural areas are some of the reasons that reduce school attendance. Work for family can demand long hours, preventing the children from going to school or doing well in school, perpetuating the poverty cycle. It also includes some heavy chores as taking care of siblings and carrying heavy loads of firewood and buckets of water (UNICEF, 1997). But long hours of work and inappropriate work environment adversely affect their health. The result of the current study revealed that 24% child labourers were underweight where as only 10% of controlled group children of the same age group were underweight. This might be because of lack of proper nutrition, work load, tension, strenuous labour etc. Children respond differently than adults to physical and chemical hazards (Fassa et al. 1999; Eijkemans and Hiba, 2002), the permissible exposure limits (PEL) established for adult might not be sufficiently protective for children. The present study also revealed that agriculture is the most hazardous sector of all the 5 sectors of work that we considered. This activity is consistently ranked among the most hazardous industry for mortality and morbidity (Wilk, 1993; Cooper and Rothstein, 1995; Landrigan, 1995).

The workers of these sectors show highest number of injuries like cut, sunburn and exposure to chemicals like DDT, Endosulphan, Urea etc. used as insecticides and pesticides leading to skin ailments. The most prominent work related hazards in child labourers working at construction sites include noise, exposure to dust, use of heavy equipments and sun burn. Use of heavy equipments lead to several musculoskeletal problems like back pain, leg pain, neck pain, shoulder pain etc. According to Yadav and Sengupta (2009), children are also exposed to strenuous labour, like carrying heavy loads and working in uncomfortable postures such as stooping in the same position or bending very frequently which can affect the musculoskeletal development of the children. Child labourers working in homes were ill treated due to which they had to face severe problems like tension, less sleep, insufficient food etc. In some cases, they lack an appropriate place to sleep and do not receive sufficient food. They usually receive low or no wages; bonded labour is common in some places. (UNICEF, 1997; Bureau of International Labour Affairs, 1998). Work related hazards like cut, sunburn, animal bites, noise and exposure to dust were main problems in child labourers working as rag pickers. Sun burn was due to spending maximum time in sun while picking the rags like plastics, electronic wastes (like batteries), bottles etc. Our study also revealed that musculoskeletal problems were more prominent in child labourers working at agricultural and construction sites. Musculoskeletal problems are mainly due to bending or working in a particular posture for long hours of time. This can also be due to the use of heavy equipments or by lifting heavy loads. Skin ailments due to use of chemicals present in pesticides and insecticides, are more prominent in child labourers working at agricultural sites.

Hearing problems were prominent in child labourers at agricultural sites and at construction sites. This is because of the use of tractors and mixers.

Conclusion :

The main causes of child labour include poverty, unemployment, lack of knowledge in parents and excess population. Child labour causes damage to a child's physical and mental health. They are deprived of their basic rights such as proper schooling, freedom and also their all round development. They are more prone to hazards. According to our conclusion, agriculture is the most hazardous sector of all the five sectors that we considered in our study.

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