



Child labour in Nepal and associated hazards: a descriptive study

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Introduction

In 2004, the International Labour Organisation reported that there were 218 million child labourers between 5 and 17 years of age worldwide. (1) According to the national report on child labour in Nepal, dating from 1996, a total of 2.6 million (42%) of the 6.2 million children aged 5–14 years worked regularly and 1.7 million (26.7%) were economically active. (2) The Nepal labour force survey of 2008 reported that 33.9% of children aged 5–14 were engaged as child labourers. (3) According to the 1995/96 survey, 1.5 million (94.7%) of economically active children did agricultural and household work. (2)

Child labour is undoubtedly a big problem with many ugly facets showing clear violation

of human rights. Everyone is concerned about the large number of child labourers. As long as we cannot eliminate child labour, there is another aspect which is important – the working conditions of the existing child labourers. Often, this aspect is ignored because it is hard to get a proper and clear picture of the situation. Because child labour is against the law, most child labour takes place undercover. The situation of child labour does not come under the watchful eyes of the labour and human rights monitoring authorities. Thus, the situation and conditions of child labour are poor and difficult to correct.

Whatever information we have on child labour should be seen with great caution because it is just the tip of the iceberg. We conducted this study in order to get a bet-

ter picture of child labour and its situation in Nepal.

Our approach

We designed a qualitative observational study to assess the work settings of child labourers. Through a detailed literature review of all previously published reports on child labour in Nepal, we selected 25 study centres involving child labour so that they were evenly distributed in all regions of the country, including cities – Kathmandu, Biratnagar, Butwal, Nepalgunj and Mahendranagar.

We approached these centres for their approval, promising total confidentiality. Nineteen of them agreed. In these centres, we made a detailed inspection focusing on the work-

ing conditions, workplace, nature of work, working hours, safety measures at work, and work equipment. Our inspection team included a specialist in occupational safety and health, a child rights expert, a physician, a psychologist and a sociologist. To avoid any kind of bias, each one made his individual report based on his inspection. After this, all the reports were analysed together to get a final consensus report. This study was carried out during May and June 2007.

Most of the data obtained through the inspection were abstract and qualitative, with only very little quantitative data. We mostly used description to portray the images of the workplaces and the prevalent hazards.

Results

For each of the 19 centres, we determined what sort of work the children were required to do and what potential risks this work caused to the children.

After the inspections of the workplaces, we listed the following hazards which could be very damaging to the children:

- Lack of hygiene in the workplace
- Airborne contaminants
- Chemicals at the workplace
- Noise and illumination of the workplace
- Work load (long work hours, heavy load or both)
- Work posture (sitting, standing, crowded work/machinery, etc.)
- Tools and equipment (sharp, hammering, power-driven).

Lack of hygiene in the workplace

We observed some extremely unhealthy practices in the workplaces. Personal hygiene and health care were the most neglected. Children were seen wearing very dirty clothes, and they had not had a bath for a long time. They did not have proper dietary habits, they were used to eating stale and contaminated foodstuffs, often with dirty hands. They never used any protective gear, such as helmets, gloves, boots, ear plugs, goggles and face masks during work.

Some tasks, especially rag picking and scavenging, required them to work in extremely filthy environments, such as dumps and roadsides with huge piles of garbage. In addition, some other tasks involved dangerous acts, such

Table 1. Work sectors, work process and observed potential risks

	Sector	Work or Work Process	Potential Risks
1.	Agriculture	<ul style="list-style-type: none"> • Animal transport • Waste handling and disposal • Pesticide handling and spraying • Harvesting and collection 	<ul style="list-style-type: none"> • Physical injuries • Thermal (heat/cold) injuries • Stress and fatigue due to long work hours and physically demanding tasks • Biological infections • Pesticide poisoning
2.	Service sector	<ul style="list-style-type: none"> • Cleaning • Laundry • Dancing and recreation • Kitchen work 	<ul style="list-style-type: none"> • Fire and physical injuries • Musculoskeletal disorders • Biological infections • Passive smoking
3.	Carpet factories	<ul style="list-style-type: none"> • Weaving • Chemical handling 	<ul style="list-style-type: none"> • Respiratory problems • Physical injuries • Psychological stress • Chemical burn
4.	Brick kilns	<ul style="list-style-type: none"> • Clay transport • Moulding bricks • Brick piling and transport • Coal crushing and transport 	<ul style="list-style-type: none"> • Biological infections • Physical injuries • Musculoskeletal disorders • Respiratory problems
5.	Overland transport	<ul style="list-style-type: none"> • Calling passengers • Fare collection 	<ul style="list-style-type: none"> • Respiratory problems • Physical injuries • Musculoskeletal disorders • Noise-induced hearing loss
6.	Vehicle repair and servicing	<ul style="list-style-type: none"> • Tyre disassemble/assemble • Cleaning and washing • Heavy lifting • Waste handling 	<ul style="list-style-type: none"> • Chemical burns • Chemical poisoning • Skin infection and allergies • Noise-induced hearing loss • Physical injuries and disorders
7.	Construction work	<ul style="list-style-type: none"> • Masonry • Scaffolding • Form work • Transport of materials • Excavation 	<ul style="list-style-type: none"> • Physical injuries • Dust allergy • Skin infection and allergies • Musculoskeletal disorders • Falling from heights • Solar radiation
8.	Stone crushing	<ul style="list-style-type: none"> • Collection • Sledge hammering • Hammering 	<ul style="list-style-type: none"> • Eye and other physical injuries • Musculoskeletal disorders • Solar radiation
9.	Scavenging	<ul style="list-style-type: none"> • Sorting recyclable materials • Household waste handling • Handling sharpened materials 	<ul style="list-style-type: none"> • Biological infections and allergies • Physical injuries • Animal bites • Psychosocial stress
10.	Porter	<ul style="list-style-type: none"> • Handling and transport of construction materials • Handling and transport of food materials • Loading and unloading of materials 	<ul style="list-style-type: none"> • Musculoskeletal disorders • Physical injuries and dislocations • Dust allergy
11.	Domestic work	<ul style="list-style-type: none"> • Kitchen work • Dish washing • House cleaning • Laundry 	<ul style="list-style-type: none"> • Physical injuries • Skin allergies and infections • Psychosocial stress
12.	Drug peddling	<ul style="list-style-type: none"> • Collection of drugs • Handling and transport of drugs 	<ul style="list-style-type: none"> • Psychological disorders
13.	Entertainment	<ul style="list-style-type: none"> • Dance • Massage • Prostitution 	<ul style="list-style-type: none"> • Physical injuries • Psychosocial stress • Musculoskeletal disorders • Biological Infections • Sexually transmitted diseases & HIV/AIDS • Passive smoking
14.	Metal casting	<ul style="list-style-type: none"> • Molten metal handling • Grinding • Polishing • Chemical treatment 	<ul style="list-style-type: none"> • Physical injuries • Metal burns • Respiratory problems
15.	Metal works	<ul style="list-style-type: none"> • Metal handling • Metal strip cutting • Welding • Lathe operating and grinding 	<ul style="list-style-type: none"> • Physical injuries • Respiratory problems
16.	Embroidery	<ul style="list-style-type: none"> • Preparatory work • Pattern work • Embroidering 	<ul style="list-style-type: none"> • Musculoskeletal disorders
17.	Woodworking	<ul style="list-style-type: none"> • Log handling • Sawing • Assembly work • Colouring and polishing 	<ul style="list-style-type: none"> • Physical injuries • Noise-induced hearing loss
18.	Printing	<ul style="list-style-type: none"> • Chemical handling & spraying 	<ul style="list-style-type: none"> • Respiratory problems
19.	Hair cutting	<ul style="list-style-type: none"> • Hair cutting • Massage 	<ul style="list-style-type: none"> • Skin allergies

as blowing into an air valve with the mouth, holding tools (needles, pins, nails, screws, etc.) with the lips, and using saliva to moisten the wax mould in metal casting.

Furthermore, the floor of many workplaces was wet and slippery. Especially in vehicle repair and metal works, there were oil spills which were not attended to. Similarly, in woodworking, painting, carpet factories and embroidery, wastes and by-products were not cleared away; they were left in the workplace to pile up haphazardly. There were no proper storage racks for equipment, machinery or raw materials in any of the workplaces.

Emergencies had not been taken into account in workplace design. There was not a single place with provision for emergency exits, e.g. in the case of fire or some other accident.

Airborne contaminants

Airborne contaminants observed in the study centres included particulate matter (dust, smoke, fumes, and mist), gases, bad smell and vapours. These were produced predominantly through vehicular emission, grinding, cutting, crushing, mixing, drilling, threshing of grains and polishing.

The workplaces had very poor ventilation systems. There were very few exhaust fans and – to make things worse – most of the workplaces had very small rooms with few windows; sometimes the working rooms were underground. These all led to the accumulation of air contaminants, which increased the danger they posed.

Stone crushing, woodworking and furniture, metal works, vehicle repair, transport, carpet factories, hair cutting and printing were major sectors where air contaminants were highly prevalent.

Chemicals at the workplace

We observed the use of different types of chemicals in workplaces. They included pesticides, mineral oils (grease, degreaser, cutting oil, kerosene), organic solvents, acids, alkalis, dyes, cement products and heavy metals (mercury coating in metal idols). But we did not observe any care towards the proper and safe use of these chemicals. None of the containers or bottles were labelled. Agriculture, vehicle repair, woodworking and metal

Table 2. Work sectors and the prevalent hazards

	Work sector	Work process	Work hazards
1.	Stone crushing	Making aggregate	Dust, noise, long work hours, multiple workload, frequent moving around
2.	Vehicle repair and servicing	Repair work Servicing	Dust, smoke, fumes, noise, chemicals, long work hours, multiple work processes
3.	Overland transport	Helper - repair work	Dust, smoke, fumes, noise, chemicals, long work hours
4.	Scavenging and rag picking	Waste collection Waste sorting	Dust, noise, chemicals, multiple workload
5.	Service (hotels and restaurants)	Kitchen work Cleaning, washing	Smoke, fumes, noise, long work hours, multiple workloads
6.	Domestic work	Kitchen work Cleaning, washing	Smoke, fumes, long work hours, multiple workload, frequent moving around
7.	Agriculture	Animal tending Harvesting	Dust, noise, chemicals, frequent moving around
8.	Construction	Helper	Multiple work load, dust
9.	Carpet	Weaving	Noise, prolonged sitting on the floor
10.	Metal casting	Mould, polishing	Smoke, chemicals, sitting on the floor
11.	Portering	Loading/unloading Materials transport	Dust, frequent moving around, hit and collapse
12.	Embroidering	Embroidering	Sitting on the floor
13.	Brick kilns	Moving bricks	Dust, work load (long work hours)
14.	Metal works	Moving things, hammering	Chemicals, noise, workload (long work hours)
15.	Woodworking	Sawing, moving things	Noise, dust, work load (long work hours)
16.	Painting	Painting walls	Chemicals, strong smells
17.	Hair cutting	Hair cutting	Prolonged standing
18.	Tyre treading and resoling	Work with tyres	Work load, unhygienic working condition
19.	Beverage manufacturing	Brew beverages	Work load (long work hours)

works involved the use of chemicals most often.

Noise and illumination at the workplace

Stone crushing, woodworking, metal works, carpet factories, and transport services were the main sectors which produced a high level of noise.

In most of the industrial sectors studied, daylight was the main and sometimes the only source of working light. In some sectors, there were no problems involving poor illumination, e.g. in agriculture and vehicle repair, because they had open workplaces. Many other workplaces, however, were closed rooms, some of them underground – as in carpet factories and embroidery works. In such places, natural light was totally inadequate. Ceiling bulbs and florescent lamps were used, but although they did not seem sufficient to us, none of the workers complained about bad light.

Work load

We assessed the work load in terms of working hours and also the physical effort and strain it required.

In most of the industrial sectors studied, daylight was the main and sometimes the only source of working light.

Agriculture, hotel and restaurant work, carpet factories, transport services, vehicle repair, domestic work, construction work, printing and metal works were the main sectors where children needed to work long hours, some even up to sixteen hours a day. Portering required them to lift and move loads almost double their own weight. This work was extremely demanding because the children had no aids, such as carts, trolleys, or pulleys, and no mechanical aids such as cranes or conveyors.

Some work also required the children to perform many different types of tasks at the same workplace. Carpet factories, hotel and restaurant work, stone crushing, vehicle repair, agriculture, tyre retreading and metal works were such sectors. In these workplaces, children had to move things around, sit on the floor for a long time, do hammering, load goods and do whatever their superiors ordered.

Work postures (sitting, standing, crowded work and machinery)

During their work, children were required to maintain certain postures for

quite long periods of time. These postures included sitting, standing, bending and stretching. At many places, the height of the working surface was not suited to the children because it was meant for adult workers. This was encountered mainly in construction work, woodworking and metal works, and painting. Likewise, children had to be seated the whole day in, e.g. carpet factories and embroidery work. They had to be standing and walking all the time for work done at restaurants and in vehicle repair.

Tools and equipments

We observed that the tools and equipment the children used were too uncomfortable and large for them. They were appropriate only for the adults. The tools and equipment also seemed dangerous for the children. We noticed these issues especially in stone crushing, vehicle repair, furniture works, metal works and woodworking.

According to the nature of work, the workplaces varied somewhat in the types of hazards they had. This made it hard to compare which work is the most hazardous; instead we listed the hazards we found in each of the work sectors. (Table 2)

Discussion

Child labour is not only prevalent in high magnitude, but children also work among hazards. Lack of hygiene at workplaces, air contaminants, chemicals, noise, poor illumination, work load, difficult work postures and inappropriate tools and equipment are the prevalent hazards.

Of course, the hazards take their toll. Not using protective gear at work – such as face masks at stone crushing sites or brick kilns, or gloves in woodworking and metal works – definitely make the children more prone to accidents. In addition, inappropriately sized tools and equipment increase the risk of accidents.

Contamination is the other potential threat we noticed, causing all sorts of infections. Although only a little effort is required to maintain hygiene, worker illness causes a great deal of economic loss. The economic loss of being unable to come to work is an additional loss on top of the high costs of treatment.

We found a lot of chemicals being used without proper precaution. The chemicals mostly involved pesticides, mineral oils, organic solvents, acids, alkalis, dyes, etc. These chemicals are of different nature – toxic, corrosive, flammable and explosive. No one seemed in the least concerned either about the safety measures or about the possible life-threatening

effects, such as acute poisoning by organophosphorous. (4) Even though not life-threatening, other conditions – such as dermatitis, allergies and chemical burns – are important health impairments caused by chemical exposure.

Noise also has serious effects on health, e.g. hearing loss and mental stress. Besides, it also makes it difficult for workers to concentrate, which may lead to loss of production quality and even accidents. Long working hours, heavy loads and inappropriate body postures are great hazards as well. KC et al. also reported long working hours and unpredictable work schedules among child porters in Nepal. (5) Back pain, musculoskeletal disorders, exhaustion and fatigue are some of the important health impacts of excessive work load.

Some previous surveys on rag pickers (6), domestic child labourers (7) and the carpet sector (8) have reported working conditions similar to our study findings.

Though we found a number of hazards, they were not prevalent in all work sectors. The nature of the work definitely determined the types of hazards. Thus we could not make a comparison as to which work is the most hazardous. However, some hazards were common to all work types; these included unhygienic conditions, improper storage of materials and tools, inappropriate tools and equipment, and long working hours. Moreover, the working conditions were not designed for children, all of them were designed for adult workers. Thus, children had a tough time adjusting to the working conditions and equipment.

This study had five investigators and thus five individual observations, which were analysed to produce a consensus report. This was expected to improve the validity and reliability of the findings and to reduce the chances of any observation bias.

One major setback of this study is the fact that we could include only those workplaces that agreed to the inspection. The probability therefore remains that we missed workplaces with worse working conditions and where child labour have been exploited. However, we tried to reduce this probability by explaining to the employers that we did not come through any government authorities and we would maintain strict confidentiality. That might be the reason why we obtained permission to inspect 19 centres out of the 25 that we approached, which is a very good participation.

We believe that what we have observed is just the tip of the iceberg. The magnitude of child labour is much higher than what we observed. Strict policies have to be made setting the minimum quality of workplaces, and the maximum number of working hours allowed should be fixed. Proper and regular inspection should be carried out to make it sure that the policies are implemented in practice.

Conclusion

We found that the condition of child labour is not satisfactory. The primary prevention is to eliminate the worst forms of child labour immediately, and to contribute to improving the working conditions through legislation and strict enforcement.

There are many health hazards at the workplaces. Whatever we report in this study is just the tip of the iceberg. All the responsible authorities and the government should be aware of this fact, and should develop and implement some immediate control measures. To begin with, they could conduct regular and strict inspection of all workplaces.

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