

Occupational Health and Safety in Urban and Peri-Urban Bangladesh: An Important Cause and Consequence of Extreme Poverty

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Abstract:

Poor occupational health and safety damages many lives and livelihoods which impedes economic growth. Poor and unsafe work conditions are both a cause and consequence of extreme poverty. They reinforce each other negatively. The significance of occupational health and safety is particularly strong in countries like Bangladesh where it is not adequately addressed or explored. This study focuses on urban and peri-urban Bangladesh drawing from: 15 Life History (LH) interviews with people who became disabled during work, 10 in-depth interviews with vulnerable workers in high risk environments; and key informant interviews (KII) with five senior management officials in high risk workplaces. Other studies have also been consulted on occupation safety in rural and urban Bangladesh. Findings confirm that extreme poor people are not only disproportionately drawn into high risk and unhealthy jobs but also the accidents and health problems that arise from these jobs exacerbate poverty. Employers were found to be reluctant to take responsibility for workers and any support offered to injured workers was mainly done out of charity. Sub-contracting was found to be a potentially harmful practice of the business/industry owners which makes workers more vulnerable. The paper concludes that occupational health and safety in Bangladesh should be a higher priority in discussions of extreme poverty, its consequences and its solutions.

KEY WORDS;

Urban/Peri-Urban; Occupational Health and Safety; Extreme Poverty; Bangladesh

TABLE OF CONTENTS

Key Words;	2
Introduction	4
Occupational Health and Safety	4
Global Context.....	5
Bangladesh Context of Occupational Health and Safety	6
Poverty and Disability due to Occupational Hazard	8
Rationale and objectives of the Study	9
Methodology	9
Ethical Issues	11
Findings and discussion.....	11
What makes people choose high risk occupations	11
Nature, Environment and Practice at Workplace	13
Sub-contracting: A potential threat.....	17
Occupation and relation with Health.....	18
Employers Perspective about Workers Safety and Risks	19
Frustration of Claiming Rights	20
Gendered Perspective of Occupational Health and Safety and Poverty	22
Extreme Poverty and Occupational Health	23
Conclusion.....	25
References	27

INTRODUCTION

Health and safety at work are considered to be very important issues as they are intrinsically linked with the overall well-being of working people. Occupational Safety and Health have been repeatedly mentioned as a fundamental right of every worker, and are referenced in the Alma Ata Declaration on Primary Health Care (1978), the WHO constitution, the UN's Global Strategy on Health for All (2000), the ILO Convention (1919) and in many other multilateral conventions and documents along with the National Labor Law of Bangladesh. However, status of occupational health and safety in developing countries like Bangladesh is especially problematic, with workers bound to work in an unsafe working environment where there is little regard for safety issues and inadequate monitoring from any public or civil society agency. Poor safety and health record of locations where poor people are 'employed' also contributes to worsening the situation. Hence, occupational health and safety is very important irrespective of the type of employment, or size or sector or location of the workplace because of its strong connection with extreme poverty and wellbeing.

OCCUPATIONAL HEALTH AND SAFETY

As mentioned earlier, a safe and healthy workplace is considered to be a right for any worker/employee. Since people spend significant portions of their days in workplaces, the nature and scope of safety and security remain a major issue for discussion and debate. The question of a worker's safety is not only based on considerations of productivity but also on to the ability of employees to sustain themselves and earn for his/her family. Whereas, employment and income help us survive, unemployment on the other hand brings significant negative consequences for the family. Often cited as characteristics of the many "sweatshops" which operate in developing countries (Robertson et al 2011) are: poor wages; long working hours; risky working environments with few safeguard mechanisms; unhygienic working environments with no or little air flow, no daylight, high temperatures, excessive noise, and poor indoor air quality; and both verbal and physical abuse. These sweatshop characteristics can result in death or mild, moderate and severe injuries, long or short term work related

sickness/diseases of workers which can have significant economic consequences for the family and society.

Expecting employees to work excessive overtime is common practice in developing countries, particularly in the manufacturing industry (Dawson et al 2004). There is evidence that workers who work long hours show poorer performance and suffer an increased rate of accidents, due to the strong connection between working time and fatigue (Harrington, 2001). Health and safety at work is strongly affected by overtime, and several studies have found a high correlation between excessive overtime and higher incidences of cardiovascular disease, high blood pressure, on-the-job injuries and repetitive strain injuries due to poor occupational health and safety conditions (Spurgeon, 2003).

GLOBAL CONTEXT

Workplace/occupational injuries are increasingly becoming a public health concern in all developing countries as they cause insecurity, poverty, and sickness. Occupational injuries alone account for more than 10 million disability-adjusted life years (DALYs) lost each year globally (DCP, 2007). On the other hand, quantifying the global burden of disability due to occupational injury and illness is difficult because of the fragmented and often anecdotal nature of the data from developing countries (Emmett & Alant, 2006).

ILO estimates death of 2.3 million workers as a result of occupational accidents and work-related diseases. 337 million occupational accidents and 160 million occupational diseases occur each year globally. Financial losses of occupational health related death, injuries and diseases could rise even up to 10-15% of the country's national product if all the factors are taken into account (Niu 2010). Conservative estimates show that occupational risk factors are responsible for 312,000 fatal unintentional occupational injuries globally and 8.8% of the global burden of mortality. Fatal and non-fatal occupational injuries resulted in about 10.5 million DALYs; which means that about 3.5 years of healthy life are lost per 1,000 workers every year globally (Concha-Barrientos et al, 2005).

Developing countries' population bear more than 80 percent of the global burden of occupational disease and injury (DCP 2007) and less than 10 percent of the working populations in these countries are covered by occupational safety and health standards at workplace (La dou 2003).

BANGLADESH CONTEXT OF OCCUPATIONAL HEALTH AND SAFETY

According to the latest labor force survey of Bangladesh published in 2009, 51 million people are employed in Bangladesh (see table 1), of whom 22.2 million are involved in agriculture, forestry and fisheries sector, 7.8 million in trade, hotel and restaurant service occupations, about 7 million in manufacturing, 2 million in construction sector, and 4.2 million in transport, storage and communication sector. Most of these employees operate under poor working conditions, where occupational health and safety standards are missing. A study conducted in

Bangladesh revealed that 79.52% of the injured (occupational injuries) workers were in the 40–59 age group; and 73.26% of accidents caused injury to hands, feet, torso, arms and eyes resulting in different forms of disability (Khan et al 2006), This study covers a small sample size which might not be representative of the global data but still gives us an impression of the vulnerability of the workers.

Table 1: Bangladesh Labor Force Characteristics, 2009

Labor Force Characteristics (In Million)	MES (2009)
Employed Population (Million)	
Total	51.0
Male	38.5
Female	12.5
Urban	12.2
Male	9.3
Female	2.9
Rural	38.8
Male	29.2
Female	9.6
Employment by Major Industry	
Agriculture, Forestry and Fisheries	22.2
Mining and Quarrying	0.1
Manufacturing	6.9
Electricity , Gas and Water	0.1
Construction	2.0
Trade, Hotel and Restaurant	7.8
Transport, Storage and Communication	4.2
Finance and Business Services and Real Estate	1.2
Health, Education, Public administration and Defense	3.6
Community and Personal Services	2.9
Status in Employment	
Total	51.0
Self Employed/Own Account Workers	20.0
Employer	0.2
Employee	8.7
Unpaid Family Helper	10.8
Day Laborers	10.3
Others	0.3

The real picture of occupational health in Bangladesh can be inferred if we take into account the regular media reports concerning workplace accidents. A media scan report of 2007 showed that almost half of all worker deaths took place in the construction sector, with 164 separate incidents resulting in a combined total of 222 deaths (Safety and Rights, 2007). Another report revealed that at least 388 workers were killed in workplace accidents across the country in 2011. The reports excluded deaths of workers outside the workplace or deaths of workers as a result of road traffic incidents. Electrocution at workplace was the cause of the highest number of deaths followed by falling from heights (e.g. scaffolds) (Safety and Rights, 2011).

Statistics from the Bangladesh Occupational Safety, Health and Environment Foundation (OSHE) revealed that some 1,310 workers were killed and 899 others injured during the first six months of 2010 (OSHEBD 2010) and some 622 workers were killed and 395 others injured in various work related incidents across the country in the first six months of 2011 (OSHEBD 2011). The statistics appear to show that, as Bangladesh industrializes, work related injuries are increasing, implying that occupational safety has not risen in line with industrial expansion.

The booming readymade garments industry, which employs about 3.6 million factory workers (McKinsey & Company 2011), is increasingly becoming an unsafe working environment. With an absence of minimum safety standards, the factories are often housed in buildings that are poorly maintained and inadequately ventilated, cooled, heated or lit. Unsuitable domestic premises, overcrowding and improper storage of flammable materials, frequently creates serious fire hazards (ILO 2011). Inadequate exit points, inadequate fire extinguishers and no proper training make the workplace more dangerous. The recent incidents in factories in Savar (nearest sub-district of Dhaka) highlight the extreme danger and immeasurable costs of a lack of workplace safety. In November 2012 a fire caused the death of 111 workers (AMRC 2013), and just five months later, in April 2013, a building collapse killed a further 1143 workers (WHO 2013) while leaving thousands injured.

All this evidence portrays the overall situation of the occupation health and safety issue, yet it is strongly suspected that the numbers of work related injuries or illness in Bangladesh are higher than those reported or published. Employers in Bangladesh show little or no responsibility to protect workers. As long as a worker gives their consent to work it is assumed that they are willing to risk their lives without any compensation, an assertion supported by our research findings.

POVERTY AND DISABILITY DUE TO OCCUPATIONAL HAZARD

Poverty may increase the risk of disability through several pathways; one of the important pathways is unsafe work environments and injuries (Mitra et al. 2013). On the other hand, workplace injuries not only incur ill-health, disability and death, but also have several negative economic consequences (Hadley 2007). One study showed that irrespective of the severity of injuries, victims in rural Bangladesh spent an average of US \$4 on each injury. This is in a country where 17.6% of the population lives below the lower poverty line (HIES 2010). Thus out-of-pocket expenses for treatment in developing countries often generate cataclysmic household expenditure, acute debt and a higher level of poverty among poorer people (Devadasan and Von Damme, 2009). With a poor public health care system, insufficient health insurance and social safety nets, injured victims and their families are forced to cover the cost of treatment through their own means (Roy and Howard 2007).

Individuals with work related long-term injuries and their families are often overburdened by additional costs resulting from the accident. Such costs include special medical care, rehabilitative and restorative equipment and services, and provision of special needs, as well as costs incurred for or by care providers, including opportunity costs related to foregone income. Medical costs for disabled people can be up to four times greater than those incurred by people without disabilities (Emmett and Alant, 2006).

Occupational hazards thus increase the risk of extreme poverty, by severely impacting the income capacity of the family, as a result of debilitating injury or even death of key earning members. A multiplier effect can easily have long term consequences, for example when children are taken out of school to provide care. In this way a vicious circle starts marked by poverty and disability (Emmett 2005), which can be reproduced from one generation to another. Hence, the complex relationships between occupational hazards and its consequences need to be seen within the context of the dynamics of extreme poverty and disability.

RATIONALE AND OBJECTIVES OF THE STUDY

It is hoped that this research can contribute to a scientific basis for policy-making, priority-setting, problem-solving, professional training, and evaluation for the development of occupational health in developing countries.

With no safety mechanisms in place, as Bangladesh industrializes, people are left to take jobs that are dangerous. Although in the wake of the Savar building collapse protests about workers safety rights have been increasing, in many cases those protests are weakened by the power of the businessmen in Bangladesh. In addition, since occupational injuries are scattered and most of the cases are underreported, research on this issue is still in its infancy. The current study aims to contribute to this vacuum by exploring how occupational health issues can take families to the level of extreme poverty.

The broad objective of this study is to explore how occupational hazards in general and disability in particular impact extreme poor families in Bangladesh.

The specific objectives are as follows:

1. To identify the status of occupational health in some vulnerable workplaces in Bangladesh
2. To understand the causes and effects of occupational hazards
3. To explore the impact of disability or death caused by occupational hazards on poverty status
4. To explore policy options and recommendations that can promote greater occupational safety in Bangladesh

METHODOLOGY

The choice between quantitative and qualitative research methods should be determined by the research question, not by the preference of the researcher (Marshall 1996). For this study, we have adopted a qualitative approach because of the highly exploratory nature of the research. In the last few years we have seen an increase in the use of qualitative research methods to answer public policy questions about poverty. Through the use of a wide range of techniques, qualitative researchers have generated an understanding of poverty as it is experienced and of the complex web of ideas and practices that

surround policies designed to eradicate it (IRP 2007). We want to achieve the same in relation to our understanding of the dynamics of occupational health. Thus, we want to generate rich insights based on people's experiences, perceptions, interpretations and understandings. A qualitative approach best helps us to do this.

The study presents findings from data gathered from Life Histories, In-depth Interviews, Key Informant Interviews (KII) and Documentary Reviews.

Life history interviews were conducted with 10 disabled beneficiaries from Shiree innovation fund projects (Handicap International and ADD International) whose disabilities were caused by workplace hazards. Five life history interviews were also conducted with disabled non-beneficiaries who had also suffered workplace accidents. The life histories generated information relating to their past lives, detailed history of the injury they experienced, post-injury livelihood experiences and so forth. A snowballing technique was adopted to find the 15 respondents.

In depth interviews were conducted with 10 able bodied workers from different workplaces (e.g. ship breaking yard, chemical industry, iron & steel industry, glass industry, construction site, garments factory etc.) which are considered to be potentially hazardous as cases of long-term injuries from those workplaces are often reported in newspapers. The interviews focused on the respondents' daily experiences of trying to ensure occupational safety. However, the risky workplaces have been identified based on the frequency of reporting of occupational injuries in the newspapers and through different researches.

Key informant interviews were also conducted with 5 factory/business/industry owners. The aim of these interviews was to explore occupational safety issues from a manager or owner's perspective. We had intended to carry out 12 interviews but despite repeated contacts, only 5 agreed in the end to have an interview. Even then there was a lot of resistance to discuss safety and compliance issues.

For our **documentary review** we looked at relevant literatures and reports, and tried to assess occupational hazard and safety issues both in theoretical and practical terms. Our review was not restricted to Bangladesh only. We also reviewed local and national newspapers to identify news coverage on workplace casualties.

ETHICAL ISSUES

The study was conducted in the Shiree* supported NGO project areas, and so existing rapport provided access to the respondents. Interviews were conducted in a place convenient for the interview. No financial or material incentive was provided to the respondents to discourage any bias in participation and to avoid possible misconception. Informed consent was obtained from all the selected respondents before they participated in the interviews.

Respondents were informed beforehand that participation in the interview was absolutely voluntary and that they were free to withdraw themselves at any time. They were also free to abstain from answering any particular question they felt uncomfortable with. Four non-disabled respondents, who were currently working in factories, quit in the middle of the interview because they were not comfortable with the topic that was being discussed. Although they had agreed at the very beginning to be interviewed, the nature of the study made it especially important to stress to the participants that they could opt out.

Access to the factory owners and managers was obtained through personal requests. Six of those we contacted declined to take part in the interview when they were informed about the topic of discussion.

FINDINGS AND DISCUSSION

WHAT MAKES PEOPLE CHOOSE HIGH RISK OCCUPATIONS

One of the key discussion points focused on reasons for taking on high risk employment. Not surprisingly, respondents almost universally identified poverty as the main reason. Although people are aware of the dangers, high risk jobs are

* **SHIREE** – the Bangla word for steps and an acronym for “**S**timulating **H**ousehold **I**mprovements **R**esulting in **E**conomic **E**mpowerment” – reflects the core approach of the programme which is to provide households with the support needed to start and to continue climbing out of extreme poverty. The Economic Empowerment of the Poorest (EEP)/shiree programme is a partnership between the UK Department for International Development (DFID), the Swiss Development Cooperation (SDC) and the Government of Bangladesh (GoB) to lift 1 million people out of extreme poverty by 2015. See www.shiree.org

actually valued because there is usually constant demand for work and employers pay a bit higher than other kinds of regular employment– even if payments are not always regular. Many respondents confirmed that in general higher risk jobs tend to pay relatively more wage than less risky jobs, though regular cash payments is seen as important security in conditions of extreme poverty. According to respondents, people who take on risky jobs are not only poor but also *oshikhitto* (illiterate). A lack of education is seen as an important barrier to a range of more secure opportunities in life, including employment. Household demographics seem to play an important role in decisions about risky employment. Respondents compared the cases of large and small poor families, stating that the latter requires less income and therefore, the need to take on risky jobs is less compelling. For larger poor families, often younger members are forced to take on risky jobs in order to help the family.

Household demographics influence occupational decisions in other ways. Respondents for example referred often to cases where husbands abandon wives and children. In such cases, the women are left with no option but to take on work at any cost to feed the children. There is an ethical dimension captured in the following statement which highlights the sense of having no choice but to take on risky work:

"I've seen many accidents and sometimes I have even decided to quit the job and thought about begging. But when I see eight hungry faces in front of me, I keep working, mortgaging my life on the mercy of the Almighty."

- Faruk, 36, Semi-Urban

"Anyone who works in a shipyard does so because of the extreme poverty they are stricken with. Anyone who is in a comparatively better situation would never have to work as a labourer in a shipyard."

- Bashir, 40

It is evident that the employers often take advantage of the poor economic conditions of workers by offering them advance payment for labor which attracts the poor but allows the employer to set less favourable terms for the employee. This refers to the reality of *Faustian Bargain* (Wood G 2003) by which

the poor are forced to make degraded choices which further reinforces their poverty.

The power of poverty and need is so strong that even the death of a family member because of hazardous working conditions does not deter other family members from continuing or taking up the same job. Jahirul (30) works in a ship breaking yard where his father also used to work. His father recently died in a severe accident while working in the yard and although his father's death shocked Jahirul, he continued with his work because he needed to. In his own words: *"I am panicked by my father's death, but what can I do? My family will starve to death if I don't work. Every morning feels like the last day of my life. I keep praying all the time."*

Extreme poverty with limited earning options often leaves them to choose between two worse options. Thus, working in a hazardous environment remains as the chosen option rather than starving. Those who are unlucky become the ultimate victim of it all and the less unlucky ones keep experiencing the odds day after day.

NATURE, ENVIRONMENT AND PRACTICE AT WORKPLACE

When we asked respondents to discuss the characteristics of their work environments, responses were remarkably consistent. All respondents stated that they had never signed a formal written contract with their employers. However, although respondents were aware that a contract constituted a legal document and was therefore valuable, they argued that it actually made little difference because they would not be able to understand the gaps and loopholes in the contract which favour the employer over the worker. A lack of basic literacy skills combined with a lack of knowledge about their basic employment rights makes respondents wary and distrustful of legal contracts.

Ship breaking, iron and steel, glass factories, construction and chemical factories were found to be the most hazardous sectors of employment followed by jute mills, spinning mills and garments factories, based on the incidents of casualties and illness reported by the respondents.

Respondents also highlighted the fact that there is no formal or informal training for workers on safety mechanisms. Many of them reported that there are no alarm systems in the factories to warn the workers in case of emergencies. Some

reported that when the big bosses or important visitors come to the workplace, then the workers are temporarily provided with helmets and other safety equipment.

A difference was found in terms of bargaining capacity and entitlements of the local compared to internally migrant workers. Most of the workers of Dhaka or Chittagong urban areas are migrant workers who often come from different parts of Bangladesh in search of a decent livelihood. In terms of getting compensation for a casualty that leads to disability or death, local workers who have strong social linkages in the community are more likely to receive compensation than those who have migrated to the area. Those who have no connections in the locality are less likely to be compensated. This finding suggests that the migrant workers are more vulnerable and are mistreated by employers.

“When I fractured my leg (due to a fall) and became disabled, my factory refused to pay any compensation since I came from another area and do not have anyone to speak in favour of me.”

- Rifat, 37 Years

Though paid leave time should be an earned right of a worker, very few respondents mentioned that they are allowed paid leave. All of the respondents mentioned that they work on daily wage basis and are entitled to be paid only for the total time/days they work in a month or week. If they do not work they do not get paid. With no paid holiday option, workers are encouraged to work without thinking about leisure time.

Expecting employees to work excessive overtime is a common practice in developing countries (Dowson et al 2004). Excessive working hours were found to be common across all the respondents in this study. According to International Labour Organization (ILO) convention-1919, the total time spent working is very important no matter what type of worker they are; the convention defined 48 hours as acceptable working hours per week for all. Since the first ILO convention defined working hours, there has been an increasing recognition of the importance of occupational health and safety (Spurgeon 2003). The main aim of establishing laws concerning working time was to combat the negative effects of long hours on workers' mental and physical health, and thus, to reduce the high number of industrial accidents. It is worth noting that except three, all the injuries suffered by the disabled respondents occurred when they were working

overtime. Though this finding cannot be generalized, it can be inferred that excessive working hours influence the chances of a potentially dangerous incident occurring.

In most cases, the disabled respondents mentioned they were not compensated. Some of them said that they received meager amounts of money as compensation, though those cases were mostly out of charity rather than because of a legal obligation. In some cases, when the respondents were injured, the employers sent them to a hospital but did nothing afterwards, and would not take care of treatment costs. They reported the same happening to other workers who were injured or had died. Some respondents mentioned that the employer bore the treatment costs but offered nothing more. In some cases the employer refused to treat the injured party, threatened them against pursuing claims for compensation and advised them to be satisfied with whatever they were offered. However, it was not clear why some of them received treatment and some of them did not.

Respondents mentioned that there was lack of daylight and sufficient air flow all day long and therefore, they have to work in an unhealthy and uncomfortable environment. Most of the respondents mentioned that small scale fires, falls and cut injuries are common but avoidable. Their main concern is that such incidents might occur on a larger scale and could result in severe casualties. Many of them shared that there is only one exit and entry point for them in their workplaces, and recent incidences in Savar have highlighted the devastating consequences this can have.

Respondents reported that old machinery has a higher risk, but many added that owners do not want to replace their old machines and keep them running while mending them. These machines frequently cause mild injuries which sometimes lead to serious ones. Cylinder explosions, fire breakouts, fall and cut injuries are frequently cited as incidents in the most risky work places – and these often occur where there is automated machine based labour and the machinery is old. However, technical innovation and automated machine based labour has replaced some of the demand for manual labor, and thus, reduced some risk. But they have also brought in their 'new' set of risks. It is often the case that workers using these new machines do not have adequate training to use them safely.

Many of the respondents reported that when there were scheduled or official visits, the company instructed them not to say anything negative about the company or their work. Negative comments could result, according to company officials, in workplaces being closed down and the loss of jobs.

“When there are any scheduled visits from the labor office, journalists, foreigners or from any government office they become so alert. They provide us with safety masks, hand gloves, helmets etc. and give strict instruction not to take them off for the whole day.”

~Jashim (22)

“Whenever any visitors come, everything is arranged beforehand to present a good but artificial working environment.”

~Kamal (25), Working in Steel Re-Rolling Mills

Box: Case Study of Tamal Debnath (36)

Tamal was the third of six children. His father was working in a jute mill and earned too little to manage the family of eight. When he was a child their house was burnt down in an accident. The same year, his father had to pay an expensive dowry to marry off the eldest daughter and the family was struggling. Tamal dropped out from school when he was a primary student and started working in a furniture shop as a trainee carpenter. At the age of 15 he started work in a textile mill as a cleaner and then as a machine operator for two years. During his tenure, Tamal has seen many accidents. Some of the accidents even made him think of quitting his job. One day one of his colleagues sank in a large dyeing tank in the factory, and when the other workers went to rescue the body all they found was his skeleton. Tamal got so scared that he did not go to work for the next few days, but lack of alternative work opportunities forced him to return. One day in 1998, Tamal's supervisor asked him to work overtime to help meet a tight deadline from the buyer. If Tamal and a few other workers did not do the overtime, the owner would have lost thousands of dollars. While working, his right hand suddenly got stuck in a machine, severing it from his arm, and Tamal was hospitalized for 6 months. This accident also weakened his right leg. The factory only gave him 15,000 taka which was not enough to cover basic treatment and recuperation costs. Tamal's family went bankrupt in an effort to support his health needs, as they had to take a loan of 40,000 taka with high interest from a moneylender. When Tamal was released from the hospital he found himself in the midst of hopelessness, unemployed and living on the assistance of other family members. To get rid of the loan, Tamal's family arranged his marriage and accepted a 50,000tk dowry. Tamal repaid the loan with that money but now finds himself burdened with the responsibility of his wife whilst being reliant on his other family members. Tamal is now worried because his family will not be able to bear that cost for a long time and predicts that compassion fatigue will develop over time.

The nationality of the factory owner was found to be a determinant for safety standards in a factory, with mixed reactions found in working for a foreign (i.e. a

factory owned by non-Bangladeshi businessmen/corporations) or local (i.e. a factory owned by a Bangladeshi owner). Most of the respondents said working conditions and workplace compliance are better in factories/industries owned by foreign owners (specially multinational corporations) compared to local/national owners. Respondents also mentioned that foreign owners tend to take responsibility for risk and liabilities for any kind of workplace injury. However, some said the opposite about foreign owners (individual owners), who are able to flee in cases of emergencies/casualties and not get caught by law enforcing agencies. Respondents also mentioned that police stations and other legal bodies do not take any action against them as they are bribed.

SUB-CONTRACTING: A POTENTIAL THREAT

Subcontracting may be defined as a practice of assigning part or full of an assignment, obligations or responsibilities or tasks by a general contractee to another individual or firm. Sub-contracting is preferred when there is a win-win situation that mutually benefits the general contractee and the sub-contractee.

Discussion with the respondents revealed the tendency of apparel producers to subcontract work to manufacturers who subsequently contract it out to other individual or factories to ensure faster and cheaper production. Industrial mishaps are becoming common in Bangladesh and subcontracting is one of the reasons. While the data brought out the significant consequences of subcontracting, the frequent industrial hazards also place the spotlight on the problem of unauthorised and unmonitored subcontracting in the factories and industries which has been termed as “unauthorized production.”

Sub-contracting or outsourcing work is a common feature in ship breaking, readymade garments, iron and steel factories, and this allows owners to remain strategically in risk free positions. Workers cannot claim compensation for casualties from the owner as they are not employed by him but by a sub-contractor. In the event of a casualty, sub-contractors often flee to avoid any legal or compensation claims and demands. In such incidents, respondents were also quick to point out that police officials, media and other influential people fail to take decisive action. In some cases, silence can be bought with bribes; in other cases, it might be even easier. The powerful support each other and workers have little chance of getting their claims.

“A few days back one person died when he fell into the chemical chamber of the factory. Police came, saw everything, asked us about it and then they left. We have seen no action afterwards. We have no doubt that they have received bribes.” – Sirajul, 35 years, Works in a dyeing factory

Although there is a lack of proper understanding of the forces that create unauthorised subcontracting and pose challenges to their effective monitoring, it was not found whether there is an approval process (by government) before sub-contracting except in readymade garments. In RMG sector, there is a provision that factories need to get the BGMEA approval before delegating orders on subcontract without which a factory cannot take up subcontracting work. All the factory owners interviewed denied their factory's practice of sub-contracting. However, sub contracting is common among garments factories where the factories tend to contract out their workload to meet their targeted shipment deadline. Even this kind of sub-contracting results in low labour compliance as the sub-contractor made the workers work in a poor environment to bring out more profit. In fact, the environment in sub-contracted factories is worse than in those factories that make clothes through direct order from buyers.

OCCUPATION AND RELATION WITH HEALTH

Exposure to risk does not only result in injury or death but also results in different forms of illness or health concerns. Interviews both with disabled and non-disabled workers revealed that they have experienced different types of health concerns throughout their working period.

Some of the major aspects of the work environment that negatively affect respondents' health include: a no-leave policy, having to stand the whole day, limited leisure period, dusty or smoky air, no air flow or daylight, prolonged exposure to chemical odors, unsafe electric machines and excessive heat. Sabera (42) who works in a spinning mill said, *“I have to work standing all the time, I have back pains which were mild before but now have become regular. Sometimes I can't bear it. I can't even leave my job because otherwise my children will go hungry.”* Such poor working conditions leads to workers suffering from fever, cough, back aches, lung problems, asthma, fatigue and depression.

EMPLOYERS' PERSPECTIVE ABOUT WORKERS SAFETY AND RISKS

It is important to listen to the employers views about safety in the workplace and the effect this has on the health of their employees. Although six employers/owners of factories and mills were unwilling to talk, we can infer a few things on the issues of occupational safety and hazards. Regarding work contracts, most of the employers we interviewed said that the nature, scope and type of employment for which workers are hired and the characteristics of workers (e.g. poor, uneducated/less educated, unskilled) made the question of formal contracts between employers and workers less important. A formal contract does not only contain the rights and benefits a worker is entitled to, but also a brief outline of the scope of the job and responsibilities. It was also mentioned that running a factory, company, mill or a business venture based on national/international standards is a costly exercise with lower profit margins. This means the employers tend to circumvent or ignore them. Industries like ship breaking, iron and steel are taking on the policy of sub-contracting because of the low risk associated with it since all the risk and liabilities go to the sub-contractor. This kind arrangement allows the main contractors to escape from the responsibility of ensuring safety for workers in their sector as the sub-contractors act as 'non-compliant' middle men, intent on making as much immediate profit as possible at the expense of their workers' rights and entitlements.

Focal persons (mostly owners or higher management staff) who were interviewed said that when they employed anyone new, the employee was told about the possible risks and hazards associated with the work. They felt that by giving them all this information, they lost liability for any accident and did not therefore, have to pay compensation in the event of an accident. However, they all insisted that they tried to do as much as possible for any injured worker.

"When any of our workers get injured, we arrange medical support for them. We also try to support them if they become unable to work further."

- Iron Factory Owner, 48 Years

Although sustained injuries can be directly linked with the work a person carried out, it is much more difficult to prove a link to working conditions for diseases such as musculoskeletal problems, heart disease, allergies, reproductive problems, stress and fatigue, even if it was the likely cause. During interviews, employers were less understanding about relations between occupations and

possible diseases or health concerns, claiming that the ailments are the result of other aspects of an individual's life and not their work. However, the respondents reported that they lost workdays due to those problems which also impact on their earning.

Only one of the focal persons of a garments factory, which happens to be a registered compliance factory[†], reported that they have publically displayed safety guidelines for workers. The other employers we interviewed said that they did not have such guidelines. So when any kind of emergency occurs or a worker is injured the decisions and compensations offered are done on an ad hoc basis. However, respondents (owners) did not refuse that there is a practice of compliant garments contractors sometimes outsourcing to non-compliant factories, especially when under pressure to meet orders.

FRUSTRATION OF CLAIMING RIGHTS

Most of the respondents (workers) do not know about labour laws and what they or their family are entitled to receive from the employer if they are victims of injury or death. Many of them received suggestions from people (e.g. neighbors/colleagues) to file cases under the labour laws but they did not do so as they feared they would not win against businessmen who could always create problems for their families.

“When I got injured and broke my leg, I went to claim my compensation. When I approached them, they acted as if they were surprised and made some rude remarks. One of my colleagues suggested to file a case. But how can I do that! Everything is a game of money. Neither do I have money to run the case nor would I get a fair verdict in favor of my claim. I gave up and I am living a miserable life now.” Saikat, 37 Years

Both employers and employees reported that, on occasion, companies will provide jobs to other members of the family of the injured worker. However,

[†] A compliance factory is one which mandatorily conforms to the national and international rules, regulations and standards from production to export. In RMG sector currently, many international buyers demand compliance with their “code of conduct” before placing any garment import order which promotes the right to safe working environment.

when a family member dies, only a few family members dare take on the same risky job again.

Labour unions are discouraged by the employers, even though freedom of association is a right of the workers under the ILO convention as well as national labor law. Sometimes when there are labour unions, the leaders are often bribed by the owners to say what they want them to. Respondents mentioned the need of labour unions to protect and preserve their rights as workers and to raise their voices when needed. Anwar (35) who is from Nilphamary, working as a helper in a chemical factory in Chittagong said, *"If something happened to me, who will say anything in my favour? I am from a different part of the country; I have no voice like the local workers. If something happened to them they will fight collectively for their rights but I have no one to support me here."*

Compensation after a casualty or death is a legal right of a worker but often the employer wants to get rid of this liability by offering a meager amount of money. However, any amount paid is given more as charity than an entitlement. It is also found that the employers sometimes threaten the disabled workers or their family members if they attempt to ask for any compensation.

"I went to the office for help but they always gave me different excuses and never welcomed me. One day they gave me 2,000tk and warned me never to go back otherwise I would be in trouble."

~Alim, 35

"I know about the labour law, but it is worth nothing if I can't go to the court and fight for my rights."

~Anis, 36

Respondents reported that in cases of death caused by poor working environments, authorities often announce the closure of the factory in order to prevent public protests on behalf of the victim.

"One of our colleagues died in an accident in our factory, as soon as we heard the announcement, the factory was closed for the day."

~Khalid (32), Iron Factory

GENDERED PERSPECTIVE OF OCCUPATIONAL HEALTH AND SAFETY AND POVERTY

Occupational health and safety has a clear gendered dimension which has to be kept in mind. Female respondents reported that they face different types of mild, moderate and severe injuries or accidents and casualties which are gender specific. Women in factories are more vulnerable than men because of their long hair, and loose clothing (*udna, kameez*) which get stuck in machines easily. Sabera has seen such accidents several times. What worries Sabera the most is that when women are involved in accidents, their honour is at stake. Quite often when women have accidents, men watch them in their torn clothes with their body exposed.

Every morning I start for the office reciting verses from the Quran so that the Almighty protects me from any kind of shameful incidents. I would rather die at home than facing such an accident in a factory."

~Sabera (45), Spinning Mill

However, excessive work hours have another dimension for the female workers. Women who work outside have to manage their family as well. Women reported that because of their work they cannot take proper care of their children and other family members which is an essential duty for them. Often long working hours led to conflict between the female workers and their spouses and other family members, especially in-laws.

"When coming back home after work, I often get late. Though my husband and in-laws know about this, they act as if I am doing something indecent. Sometimes it turns into a verbal quarrel as well."

- Taniya, 28, Garments Worker

Female respondents who became disabled while working reported that the post-disability period brought on a lot of family conflicts. Disabled women who used to work suddenly find themselves with no income and being an extra burden to other income earners of the family. Women who are family managers, experience difficulties in managing and doing their regular household chores since their performance slows down. Conflicts with their husbands becomes a

regular issue. Households with meager resources are less likely to spend on ill or disabled female members and this has a strong gendered dimension.

Box: Case of Rabeya (36)

Rabeya was married with her husband, Araz Ali, at the age of 21. Her husband was not well-off but did not want her to work outside and managed their family by pulling a rickshaw. When Rabeya gave birth to two children it became very difficult for Araz Ali to provide for the family with a single income source. Araz Ali then expected Rabeya to contribute to the family income and she went to work in a spinning mill. She worked there for six years and the extra income of around 3000 taka per month enabled the family to easily afford their basic needs. However, one day Rabeya's right hand suddenly got stuck in the machine she was working with and she lost her hand. She received no compensation from the spinning mill, although they arranged for her medical treatment. Rabeya was unable to work and needed the help of someone else (often her daughter) to do regular household chores. Her husband started beating her, and several times he said he wanted to throw her out of the house. Rabeya said, "People used to mock him about me, and ask who feels good about having a disabled wife?" Rabeya says that every day she experiences some rough behaviour from her husband and fears he might leave her at anytime. She is especially worried that if they get divorced, it will be harder for her, as a single mother, to arrange a marriage for her daughter.

EXTREME POVERTY AND OCCUPATIONAL HEALTH

Occupational injuries can lead to active and productive people suddenly becoming disabled, inactive and less productive. Discussion with the disabled respondents revealed that the severe injuries or casualties make the family bankrupt as they have to meet treatment costs with their own money. Often they have to use their savings, sell their assets, sell their labour in advance or take loans. All of these enforced options lead to a further deterioration of their economic situation. When the person becomes disabled they become dependent on family members or relatives. In most cases, respondents with severe disabilities have to have a full time caretaker, who is often another productive member of the family or the youngest member. This means reduced working hours for the caretaker, or less time to spend on studying.

"I was better off before. I had land and other assets. For more than two years, I needed to see a doctor each month to treat my injury and I had to sell everything I had. I have borrowed taka 20000 from the moneylenders at a high interest rate of 2000 taka per month. To repay the money, I have even sold the gold jewelry my wife had. People like me should not live."

Jafar, 38 years, Worked for a glass factory

"I cannot do without my wife now. Even to go to the toilet I need her help. Because of me, she cannot go to work frequently and when she does go out to work, my son (13 years) has to accompany me."

– Tobarak, 41 years

Some married male disabled workers reported that after their injury they had to send their wives out to work. For some this was a significant change because they had been used to keeping their wives at home. Others took a different decision worried that outside work might ruin the reputation of the wife, husband or family. In these cases, begging was seen as a better option than sending female members outside for work.

Bablu's (38) situation after the accident in the iron factory became so bad that he has to live on the charity of others. He is now considering sending his wife to work, but he does not want to do this. He said, *"I should rather die than send my wife outside for work."*

From the cases of many of the respondents, prolonged treatment periods caused them to sell assets and spend savings which bankrupted many of them. A few of them took credit on a 100% interest rate or borrowed money from neighbours and relatives as a coping strategy.

Respondents who become disabled due to exposure to risk in their workplaces are caught in a vicious cycle of low or no income, making other productive household members inactive, and generating low-aspirations, and low self-confidence. As soon as the injured worker recovers from their disability, some attempt to find suitable work. The 'social model of disability'[‡] comes into effect in this case. They often aim at, or are channeled into, work and occupations below their potential, because of limited expectations of what they can do.

It was a common feeling among all the disabled respondents that their disability was due to the will of 'Allah'. They have made sense of their injury as part of their destiny. Bashir (40) who became disabled while working in a ship breaking field

[‡] In this model it is assumed that disability is caused by the way society makes a disabled people to live a normal life like all others do. This model believes that by removing barriers that restrict life choices disabled people can be independent and equal in society, with choice and control over their own lives. It looks more at what is 'wrong' with the person and not what the person needs.

strongly believes this. He said, *"I faced this because this was the will of the Almighty Allah. If He wants it this way you can't escape it."*

Almost all the beneficiaries mentioned that they do have the courage and capacity to run their family themselves given that they have enough facilities and support from the society. But this is merely a dream for them as neither does the employer pay attention about the post disabled life of the worker nor does the society offer them such opportunities. The traditional micro finance model does not allow disabled people to receive loans while the development programmes and initiatives in Bangladesh are not disability inclusive. Although all the respondents reported that a small amount of capital could allow them to set up a small business according to their ability and change their lives, none of them attempted to attain such credit or micro-credit because they were sure they would not be allowed micro-credit or SME loans.

CONCLUSION

The research found that poor people tend to take risky work. However, the availability of cheap unskilled and semi skilled labor also contributes to encourage employers to employ without complying with safety and health standards. On the other hand, as the South Asian economies are moving from agriculture to industry based economy, workers face increased environmental, safety, and health risks (Carter 2010). In accepting risky employment, workers are exposed to gradual or sudden impairment of functions (Strand & Jhonson1980) which in many cases limit their future opportunities. This burden is left altogether on the victim and his or her family to carry, thereby, increasing the poverty already caused by the loss of income (Niu 2010). For those who become disabled as adults, disability may prevent work, or constrain the kind and amount of work a person can do, lowering income for the individual and the household and potentially resulting in poverty (Mitra et al. 2013). This further led to more exclusion, loss of income, dragged further into poverty and eventually to extreme poverty which can also transmit intergenerationally. This is because the cost of dealing with the illness in the absence of insurance, forces a household to spend so much of its resources on medical care that it depletes its assets and debts are incurred. This may throw a household into poverty from which it cannot escape, and has ramifications for the welfare of all its members and often

relatives as well. This depletion of productive assets can lead to a poverty trap (i.e. persisting poverty) at the household level even after the acute illness is overcome, since impoverished households will have a hard time re-capitalizing their productive activities (Tanh 2006).

The economic costs of occupational injuries and illnesses rival those of even cancer and heart disease (Leigh et al 1997), however, the individual picture and history of extreme poverty of each of the vulnerable workers and victim workers is wretched and needs immediate attention to minimize possible adverse consequences. The costs of occupational injuries have a high (social and economic) impact on the injured workers, their families, society and the country.

A better work environment can enhance productivity and profitability (Robertson et al. 2011). Although most South Asian countries already have some occupational health and safety laws and regulations but the cultures lack motivation to comply with laws and strict compliance. (Carter 2010) On the other hand, the lack of willingness of the employers to provide an environment in compliance with fair occupational health and safety standards also lacks comprehensive understanding about the benefit of having such an environment. In a society which is not disability sensitive it is even more difficult to rehabilitate people who are victims of unsafe work environments. It is essential to invest on institutionalising occupational safety and health issues. However, despite having an obvious link with poor working conditions, impairment/disability and poverty; minimal research has explored these interlinked issues. This dearth of knowledge is also an important indication of less attention paid to this most important agenda that results in frequent reported and non-reported hazards in the workplaces in countries like Bangladesh.

However, relations between occupational injury and impairment and how this leads the households into poverty and extreme poverty are both interesting and understudied issues in Bangladesh. Further research studies and strong reporting mechanisms are also instrumental to cover the paucity in data/knowledge/evidence required for policy and practice level sensitization and to prevent such incidents.

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