A review on the occupational health and social security of unorganized workers in the construction industry

Abstract

Construction is one of the important industries employing a large number of people on its workforce. A wide range of activities are involved in it. Due to the advent of industrialization and recent developments, this industry is taking a pivotal role for construction of buildings, roads, bridges, and so forth. The workers engaged in this industry are victims of different occupational disorders and psychosocial stresses. In India, they belong to the organized and unorganized sectors. However, data in respect to occupational health and psychosocial stress are scanty in our country. It is true that a sizable number of the workforce is from the unorganized sectors — the working hours are more than the stipulated hours of work — the work place is not proper — the working conditions are non-congenial in most of the cases and involve risk factors. Their wages are also not adequate, making it difficult for them to run their families. The hazards include handling of different materials required for construction, and exposure to harsh environmental conditions like sun, rain, and so on. On account of this, in adverse conditions, it results in accidents and adverse health conditions cause psychosocial strain and the like. They are victims of headache, backache, joint pains, skin diseases, lung disorders like silicosis, other muscular skeletal disorders, and so on. The repetitive nature of the work causes boredom and the disproportionate earning compared to the requirements puts them under psychological stress and strain and other abnormal behavioral disorders. The Government of India has realized the importance of this industry and has promulgated an Act in 1996. The state government are being asked to adhere to this, although only a few states have partially enforced it. In this article, attempts have been made to review some of the important available articles for giving a broad idea of the problem and for furtherance of research in this field.

Key words: Construction industry, occupational hazards, occupational health, social security

INTRODUCTION

Any industry plays an important role in building up of a nation. India’s economy is based on Agriculture, Industry, and Services. The industry is a major source of income to our economy. According to the National Classification of Industry, the construction industry is under code 5. The workers of the building construction industry are placed in code 7 and 9 of the National Classification of Occupation. About 340 million (roughly 92%) of the workforce is engaged in the unorganized sector, of which, around half of them are from the construction industry. The performance of a worker is usually accounted by the output. It is true that sound health is essential for proper functioning. To safeguard the benefits of the workers and their health, the Central and State Governments in India have enacted various Acts for building and other construction workers, the Regulation of Employment and Conditions of Service Act, 1996, has been promulgated, for their health and welfare. The maximum stipulated hours of work by Factories Act 1948 is eight hours per day, but the workers are working 10 – 12 hours. This affects their health and they are prone to accidents. The rate of incidence of accidents is higher in the construction industry than the manufacturing industry. Various health hazards are associated with the construction industry. Social security for unorganized sector workers is very meagre.

OBJECTIVES

1. To bring to light the different health problems among workers working in the building construction industry
2. To know the various acts and rules available in the country

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3. To find out the magnitude of the problems, as evidenced in research articles

**LITERATURE REVIEW**

The review of literature is pertaining to some of the important articles cited or reported in some valuable documents for the last 30 years. Here the emphasis is on the aspects of health hazards, diseases, social security, and psychosocial stress.

Social reforms have been taken into considerations by several authors. One of the important aspects is human behavior in the social system. Sociologists would agree that human behavior is shaped by social groups. Emile Durkheim states that Occupation is an example of a social fact. It influences the way we behave and the way others behave toward us.

Karl Marx argued that everything that happens in society is caused by economic relationship. "...from the point of view of functioning of the social system, too low a general level of health, too high an incidence of illness, is dysfunctional. This is in the first instance because illness incapacitates the effective performance of social roles..." Talcot Parson. Laborers are classified as per the division of labor into three sections: Primary, Secondary, and Tertiary. The primary section comprises of laborers who cultivate, the secondary section mining and quarrying, and the manufacturing and service industry laborers are from the tertiary section. Construction laborers belong to the service sector, representing the tertiary section.

Considering the working area, the company laborers are divided into two group the large group and the small group. The large group workers work in big companies or MNC companies. They make multi-storied buildings, shopping malls, and so on. They are from the organized sector. The small group workers work in small sites of buildings like house or flats. They are the unorganized workers. For the benefit of the workers large companies follow Acts and rules. However, this is not found in the small group owned by contractors of small laborers.

To safeguard the benefits and health of the laborers, various Acts are promulgated by the Government of India and rules are framed by the State Government.

The Factories Act, 1948, states that no adult worker shall be required or allowed to work in a factory for more than eight hours per day or forty hours a week.

The Buildings and Other Construction Workers (regulation of employment and conditions of service) Act, 1996, Act no. 27 of 1996 [19 August, 1996] was enacted by the Parliament in 1994: the Act regulated the employment and condition of the service of buildings and other construction workers, to provide for their safety, health, and welfare measures and for other matters connected therewith or incidental thereto.

In India 22.68 million of the workforce is engaged in the construction industry, out of this 18.25 million are casual workers. As per 2001 census, West Bengal alone covers 864,180 construction workers, of whom 827,910 are males and 36,270 females.

The wages of the workers of the organized sector are more compared to the wages of the unorganized small group. The female workers get a lesser amount of wage as compared to the male workers. It is important to note that the maximum wages have also been increased from time to time. The National minimum wages have been increased thus: 1991 — ₹ 35, 1999 — ₹ 45, 2004 — ₹ 45, and 2007 — ₹ 80, respectively. It is interesting to note that in 2004, the construction industry workers were paid ₹ 76.40, which is more compared to the national minimum floor wage rate of ₹ 66.00. The revised minimal wage of a construction industry unskilled worker in 2009, was ₹ 179.00 in Kerala, followed by Andaman and Nicobar (₹ 167.00), Delhi (₹ 152.00), Haryana (₹ 151.00), and Chandigarh (₹ 148.50). West Bengal has ₹ 114.00 for unskilled workers. Average women workers at a certain points in time are jobless, getting lesser wage than males. The unorganized workers get lesser wage as they are under contractors. At times they work in big companies, when the work is outsourced to small contractors. Low wages leads to stress and strain, due to which they cannot fulfill their daily needs. They cannot educate their children and give them proper food. They go through stress and anxiety leading to alcohol intake.

About 19% of the construction workers in the urban area and 38% in the rural area were not eligible for paid leave. It was found that the workers had to work 10-12 hours daily. Very often it happened that they worked day and night to finish a particular construction due to the time constraint. The rigorous work led to many diseases and hazards. They fell sick and were not paid for sick leave.

There are various steps for constructing a building. They involve different types of laborers like mason, santrash mistry, raj mistry, marble mistry, electrician, plumber, and so on. These workers are skilled, semiskilled, and unskilled. The big companies give safety facilities like helmets, gloves, and boots to their workers. The small group workers work without any safety measures. The work involves risk factors, whether working at heights or working at ground level. Due to a communication gap they cannot understand properly and come through accidents. The workers are interstate and intra-state migratory workers. During cultivation season they go back to their village for cultivation.
The process of constructing buildings and other structures involves a very wide range of tasks; some of them have a certain amount of risk also.[24] This covers various types of occupational diseases, ill health, and accidents.[25,26] Very little amount of research has been done on the occupational health, hazards, and psychosocial problems of the workers of the construction industry. Dong et al.[27] observed that working in the construction industry is associated with a high risk of accidents and might result in death. Malignant diseases like cancer of the lung and stomach might be present.

The workers might go through different occupational diseases due to exposure to work. They are less educated and not cautious about different preventive measures. The major occupational diseases in construction industrial workers requiring attention are, silicosis, lead poisoning, diseases of joints and bones, carbon monoxide, and benzene poisoning, skin diseases, and so on.[28-32] The workers are exposed to lead, while buildings are painted.[33] Difficulty in breathing most probably due to the presence of dust and problem associated with high noise and vibration mostly causes hearing loss and Raynaud’s syndrome, respectively.[28,37] Due to hearing loss the workers speak louder to their colleagues and family members with a concept that others are unable to hear him, as he himself cannot hear. At the working site they do not clean their hands properly. This causes different types of skin diseases that affect their hands and fingers.

It also suggested that stress due to work burden, repetitive work, and job uncertainty was present.[38,39] Use of asbestos in this industry, with 20-40 years direct exposure, might lead to different diseases like lung cancer, malignant mesothelioma or gastrointestinal cancer.[32,40-42] Other health effects include pleural effusion, pleural scarring, pulmonary fibrosis, and rounded atelectasis. The workers who are exposed to crystalline silica can get Silicosis a type of Pneumoconiosis and or cancer.[43-47] Rappaport et al.,[48] have suggested that silica and dust could be suppressed by using water at the construction sites.[48]

The nature of work leads to fatigue. Monotonous work, work intensity, and duration of mental work, are some factors that require special attention. The workers even face anxiety when there is no work. The exposure to different environmental conditions like noise, light, and heat may be responsible for health impairment.[48-50] Postural changes like bending forward or standing may cause backache, low back pain, neck pain and so on. It is also associated with weight bearing.

According to the International Labor Organization (ILO), Maximum Weight Recommendation, 1967, (No. 128), stated that an adult man can carry up to 55 kg weight, but a female or weak person should carry less compared to a healthy adult man.[53,54]

The workers have to work in winter, summer, autumn or rainy season. They are exposed to all types of weather conditions. This causes health disorders and they may fall sick. Respiratory, eye and skin disorders, noise-induced hearing loss (NIHL), cancer, and so on are found to be prevalent among workers exposed to hazards like dust, noise, heat and cold, non-ionizing radiation, cement, glass, adhesives, tar, and paint.[9,55] Psychological ill health is also common with high rates of alcohol and drug abuse.[24,37] The workers misuse their money on alcohol as they do not have any other recreation. Too much intake of alcohol affects their mental state. This results in them beating their wives and children and scolding them for not being able to fulfill their basic needs (food, clothes, education, etc.).

A construction project involves a number of small contractors who may be lacking in terms of technical supervisors and trained workers. In this case the workers go through traumas like unsafe working conditions, falling from heights, falling while carrying loads, and so on.

They may resort to unsafe work practices such as improper building design, lack of guardrails, and problems with exits.[38,58-60] Occupational safety hazards in construction might occur due to improper illumination, improper material handling and storage, improper walking and working surfaces, raw concrete surfaces, high platforms, obstructive and unclean floors and aisles, improperly shored trenches and excavations, badly maintained tools, improper scaffolding, wrongly designed ladders and stairs, unsuitable and badly maintained lifting appliances, unsafe demolition methods, and insufficient protection against fire and electric hazards.[29,61,62]

It is found that in big companies or MNC companies safety guidelines are maintained for the benefit of the workers. No such guidelines are followed or safety measures taken while working at heights for unorganized workers. These are causes for fatal accidents.

As stated by Decklin, working at heights has remained the biggest single cause of serious and fatal injuries.[63] Accidental deaths in construction industries is rising at an alarming rate and is considered as the second most hazardous in the world (17%).[64] It is found that in the Indian construction industry the average Fatal Accident Frequency Rate (FAFR) was 15.8 incidents / 1000 employees / year and construction hazards are rated as eight times more risky than those from the manufacturing sector.[65] About 44% of all unorganized urban workers work for India’s booming construction industry. They are mostly migrants from remote villages where agriculture can no longer support their growing needs and problems arise due to less earning.[37,66-68] The local workers are now unemployed due to migrant workers. These workers are likely to be victims of fatal accidents due mainly to non-adherence...
to adequate safety measures.\textsuperscript{53,69,20} One of the main reasons for the high rate of injuries and large number of occupational diseases is the low level of occupational health services for the workers.\textsuperscript{74}

The women workers at certain points were going through a number of job stresses like sexual harassment, being jobless, gender-based discrimination, proneness to different health hazards, physical problems, insomnia, nausea, headache, and other adverse outcomes.\textsuperscript{51,19,52,72-74} It is seen that at the work place they do not have any privacy for sanitation. They even bring small children along with them as there is no one back at home to look after them. Both male and female workers work together. Due to free mixing with the male co-workers they might get Sexually Transmitted Diseases (STD).

The female construction workers, as Baruah identified were getting opportunities, and suggested training and certification for providing skilled women with quality employment opportunities.\textsuperscript{95} If required, policy intervention might be required at the State and National levels to ensure that such programs have replicable, sustainable, and gender-equitable results.

It was found that the workers were highly affected by bullying, mobbing, verbal abuse, and violence by their seniors or co-workers, leading to moral suppression, frustration, anxiety, followed by absenteeism.

Psychological violence was widespread everywhere, with verbal abuse right at the top followed by bullying and mobbing.\textsuperscript{76,77} Brundtland reported that health was seriously compromised, causing the death of 1.6 million people due to violence and countless more were damaged, exposing the many faces of interpersonal, collective, and self-directed violence, as well as the settings in which the violence occurred.\textsuperscript{76} Low support in the workplace increased the rate of absence.\textsuperscript{79-82} Abusive supervision was associated with an increase in absenteeism.\textsuperscript{83}

Absenteism can be influenced by factors directly or indirectly — Geographical (like climate, ethnic, health services, epidemics, etc.), Organizational (nature, industrial relations, Sick pay, working conditions, environmental hazards, occupational health services, labor turnover, etc.), and Personal (like age, sex, occupation, medical condition, alcohol, family responsibilities, etc.). The different factors that influence absence due to sickness could be controlled by adequate information, a reliable and sufficiently comprehensive system of individual absence records, and the ability to measure both frequency and severity rates in the groups of employees. Furthermore, a right attitude is to be established in the organization. There must also be appropriate policies and procedures designed to meet the local needs for covering all aspects of absenteeism.\textsuperscript{84-90} The large gaps between the rich and poor and the organized and unorganized sector workers has led many countries to provide social and economic security to the workers who are poor and underprivileged.\textsuperscript{91}

Workmen’s Compensation act 1923 provides, “The persons who are subject to section 2(1)(n) and subject to the provision of that section, that is to say, any person who is employed in the construction, maintenance, repair or demolition of, (a) any building that is designed to be, or is, or has been more than one story in height above the ground or twelve feet or more from the ground level to the apex of the roof, and also those who are employed in the maintenance, repair or renewal of electric fittings in any such building” are eligible for compensation.\textsuperscript{92}

Subrahmanya defined the concept of social security in its broadest sense, as a support provided by the society to the individual, to enable him / her to attain a reasonable standard of living and to protect the standard from falling due to any contingency.\textsuperscript{93} Johri and Pandey stated that, the extension of social security to the unorganized sector was not merely a matter of extension of the existing organized sector schemes to new groups, but it involved the development of a different and more diversified set of schemes.\textsuperscript{94} Based on their study of the building industry in Pune, Rao and Ded\textsuperscript{95} observed that self-help organizations might guarantee the minimum standards of social and economic security to workers in non-traditional and informal sectors of the society.

Mr. M. Mallikarjun Kharge, prioritized the implementation of a social security scheme for the benefit of construction workers as most of the laborers were in the unorganized sector. He further added that authorities would ensure bringing all the below poverty line (BPL) families under the Rashtriya Swasthya Bima Yojana within the next three years, as also its coverage to the above poverty line (APL) unorganized workers.\textsuperscript{96} A survey showed that the effectiveness of counseling and educational programs on the work ability and work disability pension for employees in the construction industry was slightly effective in improving the work ability, but not in reducing the work disability pensions.\textsuperscript{97,98} As stated by Damodaran, safety in construction was frequently pushed to the bottom rung of priorities.\textsuperscript{99} He further stated that it was high time a Construction Safety Manual was evolved and made a part of the decision-making criteria submitted along with the standard tender document by every bidder and strictly enforced by the supervising agency. He also stated that before passing the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 (BOCW Act), the construction safety fell within the mandate of the Industrial Disputes Act, the Central Labor Act, and other related legislations. The Central Rules and State Rules need to be made and the enforcing agencies need to
be notified. However, to date apart from the Center only two states, namely Delhi and Kerala, have set up the necessary State Rules. Effective tailgate training (brief job site safety meetings) can be a powerful tool to promote hazard awareness and safe work practices for the workers of the construction industry [100]. In Australia, the Victorian building industry extended the range of portable benefits to include sick leave in the year 1997, for the building construction industry workers, to bring them under employment security [101].

CONCLUSION

In India, as the workers are mostly illiterate, it is desirable to impart health education to them, to apprise them of the ill effects of work and the remedial measures. Awareness programs and local group discussions are essential for improving the health status of these working communities.

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