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A Literature Review on Living & Working Condition for Construction Workers

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Abstract: Construction Workers are an important part of Construction Industry. But their contribution in Construction Industry is neither recognized nor appreciated. Construction Worker does not even get basic facilities which should be provided to them as per BOCW. Also, the onsite working conditions for Construction Worker is not appropriate. This paper includes a review on various literature papers related to construction workers facilities and working conditions.

Keywords: Working Condition, Living Condition, Construction Worker

Abbreviation: GDP – Gross Domestic Product, BOCW- Building and Other Construction Worker, CPF- Contributory Provident Fund

I. INTRODUCTION

In India, Construction Industry is the Largest Industry after Agriculture Industry. Its Contribution in India's GDP is about 9%. Also, it is the second largest employment provider in the country for educated people as well as uneducated people such as workers, masons, etc. Construction Workers play a major role in Construction Industry, but they don't even get the basic facility of good and healthy environment for Living. Improvement in production efficiency is one of the biggest challenges faced in the Construction Industry. To improve product efficiency, it is important to improve worker productivity. The productivity of any project relies mainly on worker force as worker play an integral part in the success of the project. The Productivity of a Worker depends on the numbers of working hours of workers, workers physical health, surrounding working environment and many more other factors. If such factors are overcome than worker productivity can be increase which will directly reflect on the project schedule, its cost and quality of the project.

A. Facilities for Construction Worker as per BOCW

To provide basic facilities to Construction Workers, BOCW – Building and Other Construction Workers Act has been created. As per this act, the first step is that employers are required to register their establishments and construction sites with the registering officer. After that provisions to regulate workers with regard to the minimum conditions of work as well as the facilities such as housing, basic services and social infrastructure to be provided to workers.

The BOCW Act provides following facilities to the workers at construction sites [1]:

- 1) Drinking Water.
- 2) Sanitation Facilities
- 3) Free accommodation.
- 4) Crèches
- 5) First-aid facilities.
- 6) Canteen

B. Aim

Aim of the study is to review critical condition for construction workers at construction site.

C. Objective

- 1) Identify basic facilities to be provided to Construction Workers as per BOCW.
- 2) To identify the working & living conditions of Construction Worker.

D. Need for Study

- 1) Due to improper Working condition and improper Living condition the performance of Construction Worker is affected.
- 2) These affects the productivity of Construction project.
- 3) Productivity affects the Cost and Duration of Construction Project.

II. LITERATURE REVIEW

A. Occupational health status of construction workers: A review

1) *Study:* In these paper author focuses on the health status of Construction Worker which is affected due to improper Working condition. Construction Workers have to work for 10-12 hours every day to fulfill their daily requirements. They are exposed to different physical, chemical, biological, mechanical, and psychosocial hazards during their daily working scheduled. Due to prolonged maintain of poor working postures, bent position, manual handling of heavy weights with repetitive work and lack of rest, and musculoskeletal disorders are common among them.

B. Occupational Accidents in Construction Works - Causes and Suggestions for Prevention

1) *Study:* In these Research five different occupational groups working in construction area such as Labour-skilled workers, Technical staff, Safety staff, Inspection staff and Senior executives were surveyed. In the survey study, the causes of occupational accidents and the suggestions for prevention were evaluated using a questionnaire. The most common type of the occupational accident encountered is falling from height. About half of the employees have encountered at least one occupational accident. Literature findings showed that lack of safety training, safe working conditions and inspection is the most important reason for occupational accidents in construction industry.

The most effective implementation to ensure occupational safety is occupational safety training, establishment and implementation of an occupational safety system and occupational safety inspection.

C. Experience Wise Satisfaction Level of Workers to Labour Laws

1) *Study:* This paper focuses on examining the satisfaction level of workers on the basis of experience regarding Factories Act, Industrial Disputes Act, Minimum Wages Act and Payment of Wages Act. Satisfaction level of workers decreases with the experience increases. Highly experienced workers are expecting more from the organization as compared to new and less experienced workers. They are expecting proper and effective implementation of statutory welfare laws in the organization. New workers don't have as much responsibilities as senior workers in the organization. To fulfil the responsibilities of family, they want more satisfaction and expecting more from the organization as compared to new workers.

D. Problems of Construction Workers in Navi Mumbai City

1) *Study:* In these Paper Author discusses about the problems faced by Construction Workers in Kamothe, Navi Mumbai, Maharashtra, in their day to day life.

Major Findings of the Study:

- a) Age Group: 48.00% are 20-40 age, while 28.00% are of 40-60 age groups.
- b) Gender: 74.00% of workers are male and 26.00% are female.
- c) Educational Status: 66.00% school level, 32.00% illiterate and 2.00% are graduate.
- d) 76.00% of construction workers children are illiterate.
- e) Geographical Location: 78.00% from North, 18.00% from south, 1.00% is east and 2.00% is from west region.
- f) The sanitation and hygiene of the construction site and the temporary shed are very poor.
- g) 79.00 % of construction companies are not making provision of crèches to the workers' children.
- h) 81.00% workers work for 8-10 hours, while 13.00% work for 10-12 hours and 5.00% works for 12-13 hours.

E. Housing Conditions of Construction Workers in Ahmedabad

1) *Study:* This study was undertaken to understand the current housing conditions of construction workers in Ahmedabad. According to a study there are five types of settlements in which construction workers find shelter.

- a) Shelters on pavements and street edges, under flyovers and bridges.
- b) Shelters on government or private lands, which are not recognized slums.
- c) Rental housing in slums on government of private lands, which are generally recognized slums.
- d) Shelters on private-sector construction sites.
- e) Shelters on public-sector construction sites.

The research findings discussed in this paper with regard to the housing conditions and choices of construction workers are:

- i) Tenure Security
- ii) Housing Quality



- iii) Access to basic services and amenities
- iv) Documents for entitlement in the city
- v) Construction work, Migration and Housing
- vi) Household Income and Housing Expenditures

F. Working Conditions of Male Construction Worker and its Impact on Their Life: A Cross Sectional Study in Surat City

1) *Study:* These papers discuss about the working conditions and the facilities provided at the sites in Surat city.

Major Findings of the Research:

- a) Out of 93 workers, 3.25% were children and 9.67% were adolescents.
- b) Illiteracy was 45.20%.
- c) All the workers were migrants.
- d) Average hours of working were 8.5 per day.
- e) Body-ache was the most common complaint among worker.
- f) Most common habit among them was tobacco chewing (48.38%).

From this study it was seen that migration compounded by illiteracy, poor working conditions, lack of infrastructures and security, inadequate health service utilization made these workers a vulnerable population. The working conditions along with their health have lots of scope for improvement.

G. Problems of Labours on Construction: A Qualitative Research

1) *Study:* In these Research Paper author carried out survey at 5 big construction sites in Indore and from these sites nearly about 200 workers were questioned.

Major Findings of the Research:

- a) 61% of construction companies consist of 100-150 workers.
- b) 66.00% of workers live in self-constructed temporary sheds.
- c) 71.00% of temporary sheds doesn't have any electricity provision.
- d) 67.00% of sites do not have any toilets or toilets having substandard quality.
- e) 63.30% of sites do not have adequate provision for bathrooms.
- f) 55.00% of companies do not make provision of helmets to their workers.
- g) 42.00% of companies make provision of Hand Gloves and Shoes to their workers.
- h) 79.70% of companies don't make provision of 'Crèches' for labors children.

H. A Study on Perception of Construction Labor with Reference to Social Security Schemes

1) *Study:* In these literature author discusses about construction workers welfare schemes and their implementation on construction sites. This study was performed in Andhra Pradesh and is restricted to 90 Construction workers.

The nature of the Construction industry in the study area is unorganized and the literacy rate was also very low. The women workers engaged in construction activity is considerable and they were unaware about welfare facilities available to women workers such as maternity benefits, child care benefits and health care benefits. The coverage of general health insurance to Construction workers is not given. No social security schemes were implemented by the owners or contractors.

Social security schemes should be provided by the Government. Government should make it compulsory to all the construction sector industry to follow all the Government rules and regulations regarding protection and conservation of environment. The Contributory Provident Fund (C.P.F.) scheme, and pension schemes should implement effectively for construction workers.

I. Identifying Determinants of Construction Worker Performance on Construction Sites: A Literature Review

1) *Study:* The study has been performed to identify factors which influences construction workers performance on construction site. This aim of the literature is to identify determinants of construction workers' performance on construction sites in terms of ratio of output to input. Author identified that salary/wages, working time, financial incentives, communication, health, adequacy of plans and specifications, availability of consumables, education and training on the job, management dynamics, safety measures and proper work planning determine construction workers' performance on construction sites.



Good management and high incentives improve productivity. On the other hand, poor management, poor working conditions, and lack of financial incentives reduce the motivation of construction workers, which in turn results in lower productivity of construction workers.

Frequent maintenance and repair of tools and equipment as well as utilization of competent and qualified managers and supervisors would improve performance of construction workers. Workers can be encouraged by giving financial rewards. With healthy food alternatives on construction sites by contractor or developer, workers could also perform with optimal concentration levels. Continuous training of construction workers for learning of new building techniques can be proved vital in improving productivity.

J. Study of Injuries among Construction Workers in Ahmedabad City, Gujarat

1) *Study:* This study was carried out to study the magnitude and nature of injuries among construction workers and also to study the factors which contributing to such occupational injuries.

For this study 16 random construction sites were selected from four zones of Ahmedabad city and 240 construction workers were interviewed to collect information related to injuries suffered during the last one year.

At the end of the research it was found that eye injury was the most common injury among the construction workers. The percentage of injury among illiterate workers was as high as 60.42%. Another major factor for injury was falling from height. The percentage of injury by falling from height in male workers was significantly higher (6.13%) than the female workers (2.60%). Majority of male workers were involved in skilled occupations and as they worked at height, chances of fall were significantly higher among them. The female workers were mostly involved in unskilled occupations like loading and unloading, and as they worked on the ground chances of injury by some falling object were significantly higher among them (5.19%) than the male workers (1.84%). Provision of training to workers and motivating the workers to use the safety equipment's would reduce the injuries to a great extent.

K. Psychosocial stress of the building construction workers

1) *Study:* The author performed the research on construction workers stress and the factors causing the stress.

Usually the construction workers are very poor and daily wage earner. They are victims of different health hazards, diseases, psychosocial / occupational stress and strain. Work stress is generally known for negative impact on productivity and job satisfaction among construction workers. Job stress & strain was believed to be one of the causes of low workers morale, high rate of accident and poor turnover rates.

The stress & strain among construction workers were due to

- a) Work Load
- b) Long Working Hours
- c) Lower Wages
- d) Lack of Training
- e) Poor Communication among Workers as well as with supervisors
- f) Unfavorable Working Conditions
- g) Exploitation by Labour Contractors
- h) Conflicting Demands
- i) Job Uncertainty
- j) Sexual Harassment to Women Construction Workers
- k) Gender Discrimination in Women Construction Workers

Government of India and State Governments enacted Acts and framed Rules for governing the work condition for construction workers for their safety and welfare. Research studies on occupational health especially psychosocial stresses in construction industries in India are lacking.

III.CONCLUSIONS

After these researches, we are able to find that majority of Construction Workers are migrating workers. These migrating construction workers are not applicable to use benefits of Labour Laws. These workers are not provided proper working conditions and therefore are having many health problems. Living Conditions of these workers is not adequate and as per the Labour laws. It is necessary to create awareness among construction worker about their rights for Working and living condition on construction sites.



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