

Challenges to control work place risk in Construction Industries

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ABSTRACT

Construction industries is Hazardous prone industries. To control workplace risk in construction industries is challenging job for any organisation. Each and every year several people killed, several injured, huge losses of property and harm of environment, create obstruction in social as well as country development. In past few decades, Construction industries have created huge employment opportunities & playing vital role in social development as well as development of country. The main objective of the paper is to analyse the challenges (Negative impacts) that arises at construction site during controlling workplace risk. The study also indicated the challenges arises during construction activity during Selection of resources like manpower, contractor, Tools, Tackles and impacts of Accidents to organisation.

Keywords:

Challenges to control workplace risk in construction industries, Safety Management system (SMS) in construction industries, Risk control at construction site, Loss Control

1. Introduction:

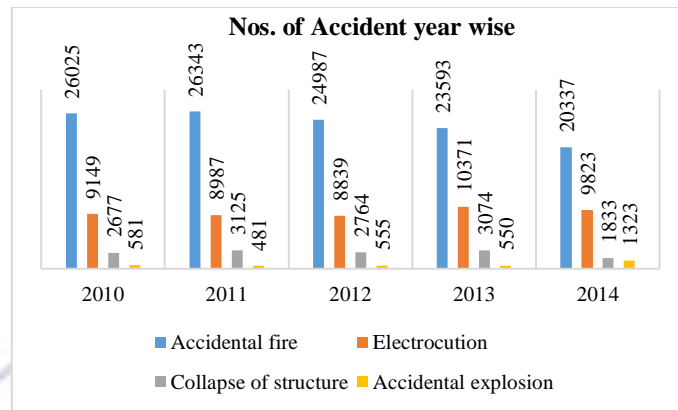
India is Developing country and here construction industries playing vital role in country development. Construction industries has positive and Negative impacts. Positive impacts always shown good result for organisation as well as country and negative impacts shown bad result for organisation as well as country. To create employment opportunities, economic development of country are results of positive impacts. Negative impacts is injury, death of person, damage of property, harm to environment is bad for organisation as well as country and it may cause of project delay, Poor organisation reputation, prosecution by respective legal or govt. authority, Employee morale decreases etc. Costs of accident are direct & indirect cost and indirect cost of accident is several times more that direct cost. Accident rate in construction industry in India are several times more than manufacturing or other sector industries.

2. Literature Review & Risk in construction Industries

2.1 Literature Review

Dr. Sindhu J. Nair and Shahnawaz R (2017) carried out a study on occupational Health Safety Management system in an organisation with objective to improve safety culture and reduce accident. Study done to collect data of Accident from NCRB India and other different sources and found that due to poor safety awareness, numbers of People Killed, Several injured and huge organisational losses and maximum injury or Fatal occurred in industries are due to fall.

As Per NCRB India in year 2010-14, numbers of accident occurred in different sector in which more accident occurred in construction industries.



Number of accident cases in year 2010, 2011, 2012, 2013 and 2014 (India) as per National crime record bureau

2.2 Risk in construction Industries

Risk in a construction industries are Person falling, Material falling, failure of lifting equipments, collapsed of structure, vehicle collision, Vehicle Toppling, Electrocutation, Fire, Explosion, Toxic gas release, Snake bite, diseases that create due to occupation of construction activity etc. Risk depend on Probability of hazardous event and its consequence. Major Numbers Injury or Fatal occurred at construction site are due to fall hazard. Poor management commitment or no interest of employer in field of safety, Inadequate resources, ineffective enforcement of Safety norms, rules and regulation like factor increases threat of risk at construction workplace and it may cause of harm.

The National Crime Records Bureau, Government of India published data on the accidents reported in India in construction industry in year 2012-2013 are:

Sr. No.	Causes of Deaths	Total Number of Deaths	
		2012	2013
1	Electrocutation	8750	10218
2	Falls (Fall from Height Fall into Pit/Manhole, etc.)	12319	12803
3	Fire (Short Circuit)	1439	1690

The Table show highest death at construction site is due to fall.

3. Objective

- Analyse challenges in construction industries.
- Problem identification.
- Control work place risk at construction site.
- Reduce work injury & cost arises due to Accident.
- Increase productivity.
- To increase economy of country.
- Fulfilling statutory requirements.

4. Challenges to Control workplace risk in Construction industries

Controlling Risk on workplace in construction industries is challenging Job due to following reason

- Dynamic Nature of work
- Less organized sector
- Poor Safety Culture & behavioural Issue
- Inadequate of resources
- Unskilled Manpower's
- Frequent rotation of Manpower
- Language barrier due to migrated Manpower
- Poor method or no any criteria of Contractor selection.
- No provision of welfare facility or Inadequate welfare facility
- Poor method of work place Risk evaluation or Risk evaluation by less competence & less experienced personnel etc.
- Poor interest of senior organisational personnel in safety etc.

Dynamic Nature of work: Continuous changes in construction activity are cause of threat to construction workers. It creates obstacle to identify hazard and minimise risk As low as reasonable practicable (ALARP). Potential sources of harm in construction industries vary activity to activity and location to location.

Less organized sector: Construction industries is less organised sector where the employment terms are not fixed and not regular in numbers of construction industries. In numbers of states and country, government have made Health Safety related rules and regulations but not followed by employer due to ineffective enforcement from government ends. Less man-power and investment, Agricultural laborers, Unskilled manpower and changing their job as per construction activity etc. constitute unorganized sector.

Poor Safety Culture: Poor Safety culture is main parameter that create obstacle to control workplace risk. Cause of poor safety culture may be poor management commitment, Behaviour issue of employees, Unawareness & ineffective implementation of Safety norms, Rules & regulation, No provision of safety awareness program and poor health of workmen are factor of poor safety culture.

Inadequate resources & Unskilled Manpower's: Inadequate resources like manpower, Personnel Protective Equipment (PPE's), tools tackle and Unskilled manpower increased threat of risk. Unskilled manpower unable to identify threat of harm and safe method to perform their task.

Frequent rotation of Manpower: Frequent rotation of manpower create stress among construction workmen and they loose their confidence and unable access risk in their work.

Language barrier: Language barrier create threat. Such manpower not aware about risk due to language barrier. Proper communication in local language and other language that could understand by workmen help to easily understanding and controlling workplace risk.

Poor method or no any criteria of Contractor selection.

Poor method or no any criteria of Contractor selection always increase threat among workmen at construction site. Organisation or client not identify certain guide line to evaluate and select best **contractor during tendering phase**. Best contractor means they have adequate resources like manpower, Personnel Protective equipment, Tools & Tackles,

Strong financial condition, ensured compliance related to safety, Health & welfare at previous construction worksite and have relevant experience. Best contractor selection is major challenge that help to control risk at construction workplace.

Inadequate welfare facility: No provision of welfare facility or inadequate welfare facility always increase risk of harm at construction workplace. Canteen, Drinking water, toilet & urinals, Changing room, rest room, hygienic environment like facility reduce work place risk and help to control accident and diseases that create due to inadequate welfare facility. So contractor should ensure welfare facilities and clients must ensure its compliance.

Apart from this, Poor method of work place Risk evaluation or Risk evaluation by less competence & less experienced personnel can cause of threat because potential sources that can cause harm not identify due to such factor and it may lead to cause of accident. Poor management commitment or no interest of senior personnel of organisation in field of safety are also major cause of threat of risk. No provision of Safety induction and safety related awareness program always hamper to construction site safety culture. So, To control workplace risk in construction industries is challenging job.

5. Controlling work place Risk in construction Industries:

To control Risk at construction site, need to identify and accept to challenges and Proactive approach to be adopted. Potential source of harm of construction site can be controlled to Eliminate Hazard or Isolate Hazard or Substitute materials/ process or Engineering control or Administrative control or use of Personnel protective equipment (PPE's) or To adopt two or more method together. PPE's is last consideration that used to control risk because it not prevent likelihood of hazardous event, it only minimise the severity of Hazardous event. Safety culture is important parameter that help to prevent accident or harm. Regular Supervision required of site by competent supervisor and safety Awareness Program including Training must be conducted regularly. Assigning duty to worker as per their previous experience and such job should be carried out under close supervision under experienced personnel. Effective enforcement of safety norms, work permit system and effective method to select contractor with certain guideline and criteria help to make Accident free to construction site.

Experience & competent safety personnel play vital role in hazard identification and risk assessment. Health Surveillance must be carry out at regular interval. Communication among manpower to be maintained in local languages. Ensure standard parameter to select suitable resources like skill manpower. Ensure welfare amenities. Equipment, Tools and Tackles must be good working system. Ensure Safe Site operation by suitable planning.

Ensure site related compliance as per the Building and Other Construction Workers (Regulation of Employment and Conditions of Services) Act 1996, Building and Other Construction Workers (Regulation of Employment and Conditions of Services) Central Rules 1998, Building and Other Construction Workers Welfare Cess Act 1996, The National Building Code of India 2005 and respective applicable state or government rules, regulation and codes. To Prepare Safety Management plan and effective implementation is best way to control workplace risk.

6. Conclusion

Risk control is challenging Job in construction industries due to Less organized sector, Dynamic nature of work, Behaviour issue, Inadequate of resources, Unskilled Manpower's, Language barrier with migrated manpower, Poor method or no any criteria of Contractor selection, Inadequate welfare facility, Risk evaluation by less competence & less experienced personnel, Poor interest of senior organisational personnel in field of Health safety and ineffective enforcement of Safety norms and procedure.

Management commitment, Effective planning, reporting, Training, suitable resources selection, effective enforcement of safe law like parameter help to control construction workplace risk. All factor that create challenges to control workplace risk during construction activity should be identify and adequate control measure must be taken to avoid any future harm. Compliance should be identify with the help of respective state or country laws, rules, regulation, codes, non-conformance observation and through proactive approach. Effective risk control method help to control organisational harm, increasing business opportunities and maintain better relation with stakeholders.

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