

# An Empirical Study on Safety Awareness of Road Construction Workers with Special Reference to the Bhopal Region

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## Abstract:

One of India's largest and most significant industries is the construction sector. The accident rate on construction projects is extremely high, and ignorance and a lack of supervision continue to plague construction safety. The objective of this study is to recognize the wellbeing mindfulness crusades sent off in the development enterprises, issues relating to ergonomic wellbeing and security, and the situation with security designing administration as seen by development and consultancies to support mishap decrease. A number of questionnaires were given to 100 people who participated in the survey. As per the examination of the reactions, the main elements included: " Mindfulness programs about wellbeing, security, and the climate are being sent off in the development business." " How are climate development firms managing ergonomic well-being and security issues on building locales?" How well does each Bhopal-based organization oversee development security design?

**Keywords:** Construction, Safety Measures, Labour Safety, Awareness, Ergonomic, Site Safety, etc.

## 1. INTRODUCTION

Construction Sites are working spots for labourers. Labourers are given by the act of acquiring the labour and products legitimately consented to given by project workers. From the days of yore to the advanced period, a similar standard is applied yet turns out to be more complicated concerning time, and cost imperatives. After a few explorations and creation performed, it is as yet being more dangerous regarding time cash, and a few gamble factors. According to a security perspective, it is more unsafe. Development work is hazardous work. Some building site occupations are: building houses, streets, and work environments, and fixing and support of designs. A few works, for example, working with level, exhuming, commotion, dust, power devices, and hardware. The most well-known wounds and passing are brought about by the lethal four which are shocks, falls, being trapped in the machine, and breakdown. Development work has been expanding in creating and lacking nations throughout the course of recent years. With an expansion in this sort of work word related fatalities have expanded. A few people die at work or perform business-related mishaps. In Bhopal, Construction site support is extremely poor in a large portion of the ventures which makes mishaps happen and turns into the primary driver for influencing the arrangement and timetable of the works. There is no new substantial demonstration that has not yet been figured out for impacted individuals at working environment wellbeing, security, and climate (HSE).

## 2. REVIEW OF LITERATURE

**According to Cheah's** study from 2007, the challenge of making construction sites safe should not be solely the responsibility of contractors; rather, it should be shared by developers, consultants, and the government.

**Ismail et.al., 2011** found from the study it was found that the most powerful security factor was private mindfulness followed intently by correspondence. In order to increase construction workers' productivity and efficiency, suggestions and recommendations were made regarding the design of equipment and improved work practices and procedures. It was suggested to management to better inform their employees about safety issues.

**Zhang et al., 2015** researched the Development of wellbeing-related information and undertaking proposed to formalize the security of the executives' information. It comprises of three principal space cosmology models, including Development Item Model, Development Interaction Model, and Development Wellbeing Model.

**According to Adhikary et al. (2017)**, workers who complain about their working and living conditions are more likely to report accidents and injuries. The event of work environment mishaps is thusly unequivocally connected with the impression of their convenience and the workplace. Transients who work in Qatar and Saudi Arabia in the development business are multiple times bound to encounter working environment mishaps than those functioning in a Malaysian manufacturing plant. Therefore, it is argued that, particularly in Middle Eastern destinations, the Government of Nepal should ensure that migrants are offered compulsory health insurance by the companies for which they work in order to reduce health risks for workers in host countries. Compulsory pre-flight well-being and security preparation with boost meetings on appearance are likewise emphatically suggested.

**According to Kawakami et al. (2004)**, practical training tools like action checklists, group discussions, and local good example photos were especially helpful in supporting these workers' initiatives in a way that was tailored to the local environment. The productive relationships between employees and their employers have frequently been strengthened by workers' practical action proposals that take into account low-cost ideas. The workers' initiative to improve health and safety has been strengthened by the trade union networks, and the POSITIVE program has expanded to include numerous informal workplaces. It was demonstrated that workers' own experiences and initiative can be used to build action-oriented safety and health programs. For the purpose of involving the human resources and experiences of the local community, we must further encourage the use of practical training tools.

**According to Joshi et al. (2015)**, there have only been a few scientific studies on occupational safety and health in Nepal. Summarizing the restricted writing accessible, it is observed that the general status of word-related well-being and wellbeing in Nepal isn't agreeable. The majority of workplaces, particularly those requiring more physical labor, lack proper safety and preventive measures, and workers lack knowledge of their exposure to hazards and ways to reduce them. In this way, in such

circumstances, there ought to be quick areas of strength for and at all levels including the public authority, businesses, and workers.

**Kamal et al., 2013** examined that the writing had reported that natural variables were liable for the vast majority of the cases. This paper means to feature the causation variables of mishaps and wounds at building locales in light of the human element. Chosen diaries and exploration papers connected with mishaps at building destinations were investigated and human blunder was viewed as the primary causation component of mishaps at building locales. This study desires for a more top-to-bottom concentration on the moves or mediations that could be made to limit the event of human blunder in the building site, hence, limiting the event of mishaps, wounds, and even mortality.

**Choudhry et al, 2008** found that Well-being issues have acquired imperative significance throughout the development business. Numerous development organizations all over the planet are carrying out security, well-being, and natural administration frameworks to decrease wounds, dispose of disease, and give a protected workplace in their building locales.

**Zahoora et al, 2015** investigated that the development business is contributing 2.39% to the Gross domestic product of Pakistan and is utilizing north of 4,000,000 individuals; Nevertheless, it is the second most injury-prone industry, and employees frequently have to work in extreme weather without taking precautions. Major cities are seeing an increase in the construction of multi-story buildings, with large and medium-sized businesses serving as main subcontractors; However, because safety measures are not strictly enforced, these projects are experiencing fatal accidents.

**Chiocha et al. (2011)** discovered that Construction Health and Safety (H&S) is crucial to the process's improvement and sustainability. Clients, project managers, architects, engineers, contractors, subcontractors, suppliers, and manufacturers have all attempted to improve construction H&S management practices at various stages of the process. However, the construction industry has not seen a commensurate improvement as a result of H&S implementation.

### 3. RESEARCH METHODOLOGY

#### RESEARCH DESIGN

**(a) Objective-** The following is the objective for conducting the study;

- i. To explore the problems related ergonomic health and safety in construction sites
- ii. To assess the safety management status at the selected construction site

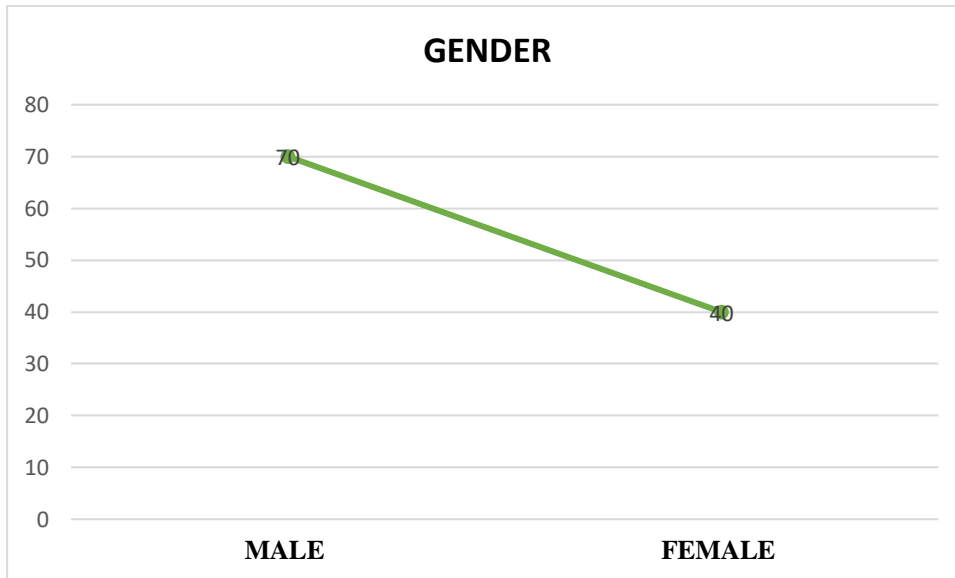
#### **b) Research Approach and method-**

The present research is based on Abductive Approach. The type of research is empirical and the research design is descriptive in which cross-sectional has been taken from Bhopal Region. For the purpose of collecting primary data.

The snowball sampling technique was used to collect the data. The sample size was of 150 participants while data were collected from 110 respondents.

#### 4. DATA ANALYSIS

PARTICULARS	NO. OF RESPONDENTS
<b>MALE</b>	8
<b>FEMALE</b>	9
<b>TOTAL</b>	19



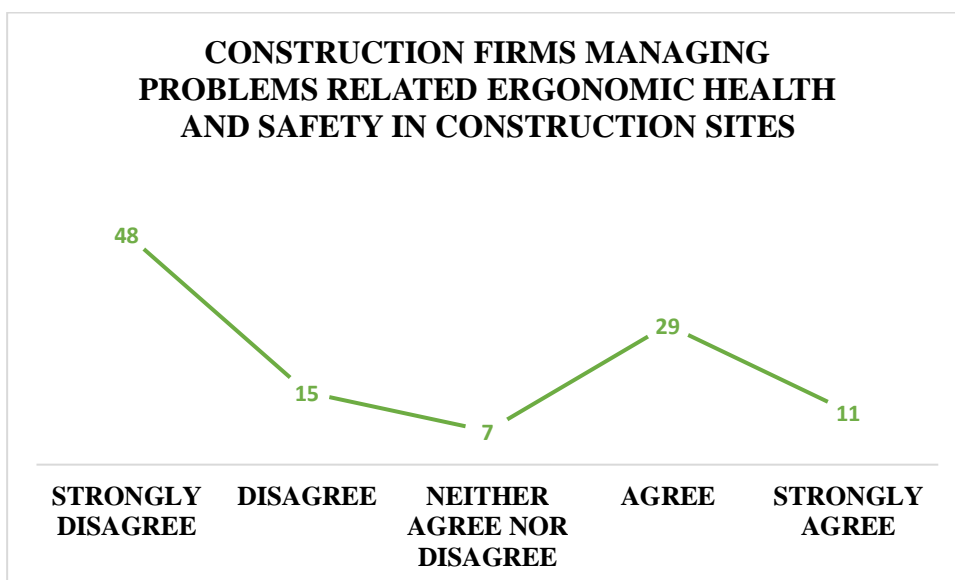
The aforementioned table and graph shows that out of 110 construction workers participated in the study, majority of the workers were male i.e., 70 and rest 40 were females.

PARTICULARS	NO. OF RESPONDENTS
<b>VERY MUCH</b>	8
<b>SOMEWHAT</b>	9
<b>UNDECIDED</b>	19
<b>NOT REALLY</b>	58
<b>NOT AT ALL</b>	16
<b>TOTAL</b>	110



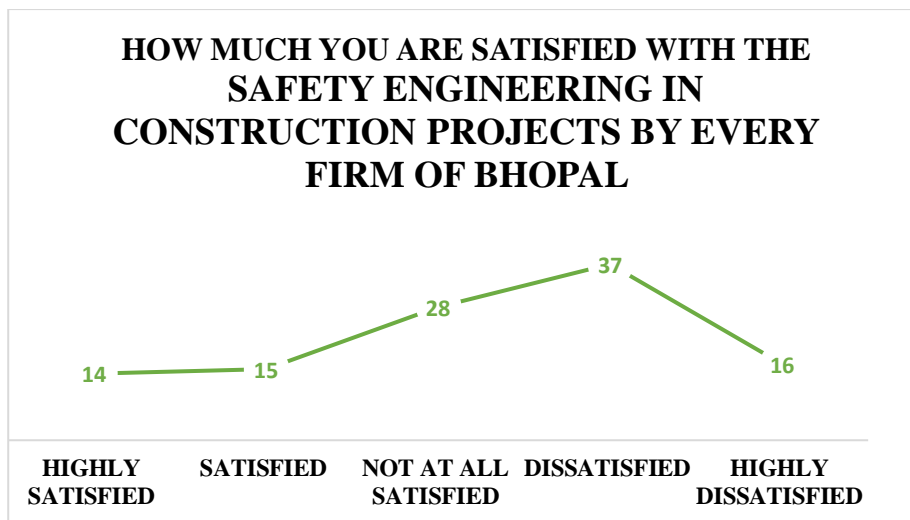
The aforementioned table and graph shows that out of 110 construction workers participated in the study, majority of the workers i.e., 58 revealed that the awareness programs were not really launched in construction industries about health, safety and environment shows that the need for sending off such projects thinking about wellbeing and security of the specialists.

PARTICULARS	NO. OF RESPONDENTS
<b>STRONGLY DISAGREE</b>	48
<b>DISAGREE</b>	15
<b>NEITHER AGREE NOR DISAGREE</b>	7
<b>AGREE</b>	29
<b>STRONGLY AGREE</b>	11
<b>TOTAL</b>	110



The previously mentioned table and chart show that out of 110 development labourers who partook in the review, most of the specialists i.e., 48 were found to unequivocally contradict the way that Development firms overseeing issues connected with ergonomic wellbeing and security in building locales and 15 differ while 29 concurred with a similar reality shows that the building destinations couldn't oversee issues connected with ergonomic wellbeing and security of labourers at the building site.

PARTICULARS	NO. OF RESPONDENTS
<b>HIGHLY SATISFIED</b>	14
<b>SATISFIED</b>	15
<b>NOT AT ALL SATISFIED</b>	28
<b>DISSATISFIED</b>	37
<b>HIGHLY DISSATISFIED</b>	16
<b>TOTAL</b>	110



The recently referenced table and chart show that out of 110 construction workers who participated in the survey, a larger piece of the experts i.e., 37 were seen as disheartened with the security planning being developed ventures by each firm of Bhopal region to take extraordinary thought of their site workers.

### 5. CONCLUSION

In the show part men, machines, materials, and cash are assets and are remembered for each preview of a protected climate. This evaluation has made sense of the security, success, and climate of laborers who recall an improvement project and gave a decided structure thinking about a serious survey of the continuous organization. Everybody ought to be safeguarded first, next, be careful to all gifted and incompetent specialists, and sometime later need to execute the undertakings. In the philosophy portion, two or three works have been thought of and the expansion was seen to satisfy the drawn-out

frame research has been facilitated. Taking into account the datum, the evaluation has been done at last, and the terminations have been drawn. Taking into account bound making study seems to have been facilitated to examine security care expected at regions until to progress stage. The issues related to ergonomic security and thriving and the situation with success arranging association taken on by the undertaking boss. Then, at that point, the success, flourishing, and climate should be normal for the whole headway stage will endorse accessories according to the improvement of existing blueprints and rules.

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