

Review

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Review

How Can Safety Contribute to Working Conditions in the Construction Industry? A Conceptual Framework

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Abstract: Studies have demonstrated the critical role that safety plays in preserving favourable working conditions in the construction industry, which is necessary to accomplish goals. The aim of this research was to inform stakeholders in the construction industry in developing nations about the value of safety and possible strategies for influencing their opinions regarding safety protocols. The importance of safety to the construction sector, which is crucial to the advancement of the country, has also been emphasized. However, due to a lack of adequate safety understanding among stakeholders in the construction sector, the construction industry is characterized by a great deal of instability and hazard. To determine what factors affect productive working conditions in the construction production, this study examined safety. A conceptual framework for safe working conditions in the construction sector was developed by considering several aspects, including the person dimension, environment factor, safety behaviour, organization features, technology, and incentives. It is now imperative to bring in these dimensions to improve the safe working conditions in the construction industry, particularly in the developing countries. By putting these safety factors into practice, the construction industry can reduce safety risks, lower the number of accidents and fatalities, cut expenses related to subpar safety performance, safeguard the reputation of construction companies, boost employee morale and satisfaction with their work, enhanced employee retention, reduced absenteeism, and enhanced sustainability goals. Additionally, the proposed conceptual framework is assured to be new and to be widely accepted in the developing nations. Based on this assumption the conceptual framework is designed.

Keywords: Safety; Safety program; unsafe environment; working conditions; construction industry; Conceptual framework

1. Introduction

Due to its unique nature, construction operation is one of the most hazardous sectors in the world. Many hazards, uncertainties, and complexities are causing problems for construction projects because accidents regularly occur in these settings (Sousa et al., 2014). Developing countries are particularly susceptible to construction accidents due to their lack of strict legislation or practices governing construction safety and the lack of awareness of the problem among stakeholders and employees (Biswas et al., 2017).

As stated by Sousa et al. (2014), accidents in the construction sector can have detrimental effects on employees as well as the broader public. Pinto et al. (2011) and Sousa et al. (2014) point to several industry-specific factors that may be responsible for the high proportion, including the dynamic and constantly changing character of construction sites. According to Sousa et al. (2014), as a result, it is common to have multiple work teams completing different tasks in the same location on the site, with the teams changing as the project moves along. There could be several risks because the employees are not from the same background and are working in different places. To lower the risk of accidents, a construction site with several contractors and subcontractors needs to be well-organized (Pinto et

al., 2011). One major contributing factor can potentially be the limited implementation of safety programs on construction sites. According to Yakubu and Bakri (2013), improper implementation of safety measures raises the probability of workplace accidents or fatalities. Because there are so many risks at work, some employees, for example, disagree with safety standards because they believe they complicate their life (Wadick, 2010). The number of workplace accidents increases as a result. Workers' health and safety are at risk while doing many of the duties involved in finishing construction projects (Sousa et al., 2014). According to Torghabeh et al. (2013), they could cause fatalities, chronic disorders, or bodily traumas (Gürcanlı et al., 2015).

A safety program is an integrated collection of rules and actions designed to increase safety (ICAO, 2013). According to the Industrial Accident Prevention Association, a safety program is a methodical set of tasks, practices, and resources intended to guarantee and preserve a safe and healthy workplace (Buniya et al., 2021). The client, the architect/engineer, the contractor, the construction manager, the subcontractor, and the suppliers make up the construction team, and it is their duty to ensure that each project is completed without any recorded mishaps or casualties (Hinze and Wiegand, 1992; Buniya et al., 2021). As a result, the construction team has responsibility for implementing safety programs.

The construction industry still uses relatively few safety systems, even with their established advantages. Safety programs are either non-existent or loosely implemented as a result of poor management and a disdain for safety. Outdated safety rules and regulations that are not followed lead to poor performance (Buniya et al., 2021). But after an incident or near-miss, everyone's attention usually turns to the site's state because tangible proof of the incident can be easily obtained, and past modifications can be used to stop similar incidents from happening in the future. (Gould and Joyce, 2013; Choudhry, 2014; Shin et al., 2014). According to (Blackmon and Gramopadhye, 1995; Zid et al., 2018), 98% of accidents are the result of dangerous behaviour. These discoveries have led many researchers and experts to focus their attention on how to handle safety issues at the construction workplace effectively (Zid et al., 2018).

To overcome this gap, this study analyses six constructs based on how applicable they are to safety programs.

2. Sustainable Safety Constructs, Strategies and Methods for the Framework

Sustainable safety construct can be differentiated according to six dimensions which are person dimensions, safety behaviour, Environment factors, Organisation features, Technology, and Incentives (figure 1). The six dimensions that are proposed for the safety working conditions in the construction industry were developed with secondary data. A literature search was conducted on the ISI Web of Science and SCOPUS repositories using the terms "construction industry," "working condition," "unsafe environment," and "safety." Guz and Rushchitsky (2009) submitted that the ISI Web of Science and SCOPUS databases constitute the most widely used sources of research publications pertaining to scientific disciplines, which is why these databases were selected. Over three hundred papers were found through the search, and they were carefully reviewed to see if they had anything to do with the main topic of the study. The search was restricted to publications and further narrowed by include conference publications, journal articles, a small number of reports, and textbooks. 123 articles fulfilled the requirements to be taken into consideration for this study. Since they discuss working conditions in the developed as well as developing construction industries worldwide, an aggregate of 87 published documents were ultimately determined to be pertinent. For the purposes of this study, "working condition" means all the metrics that are used to assess safety programs on building projects in the construction industries that have been analysed.

Creating safe working conditions in the construction industry is the goal of this framework. This is done to delineate the fundamental idea needed to create safe working conditions in the construction sector. Through this framework the industry should be able to deliver safer projects in compliance with sustainable development goals 3 and 9 (SDGs), which translate to viable solution to the construction industry's unsafe nature. To guarantee productivity, enhance health and safety, and benefit society, the framework will be beneficial to the construction industry in developing nations.

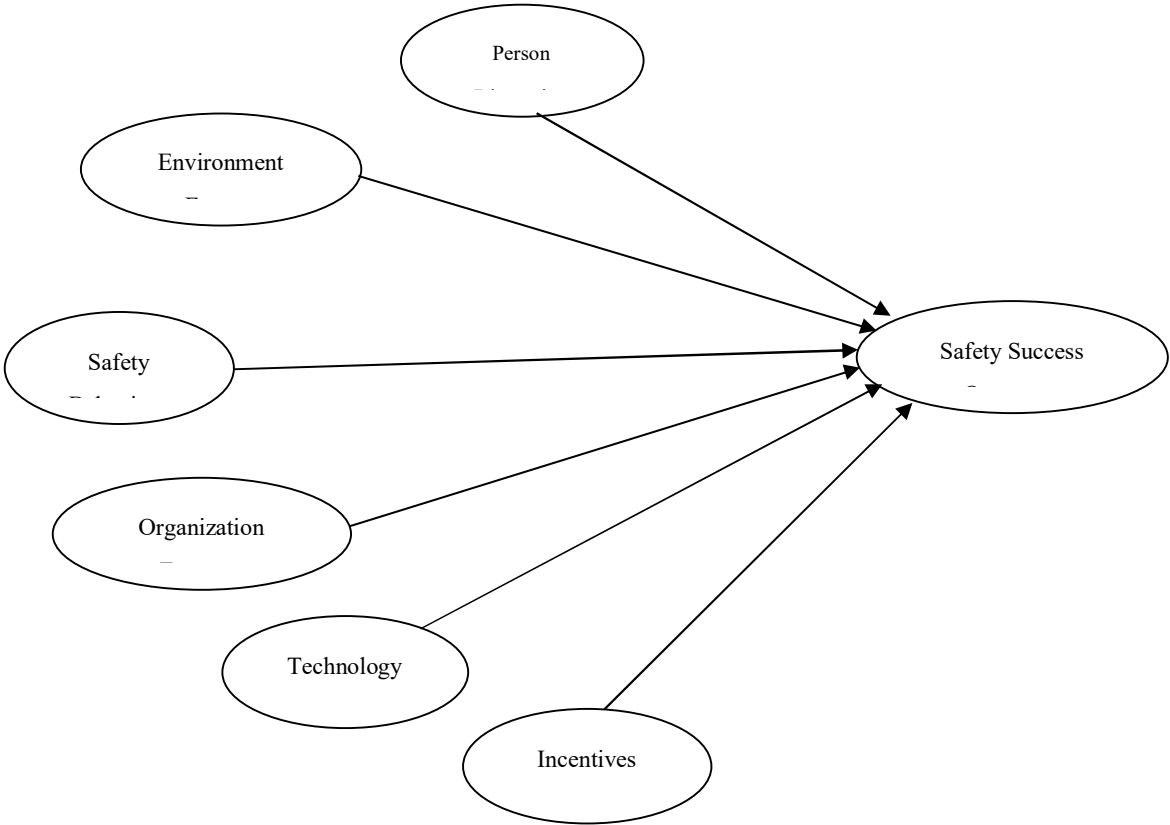


Figure 1. Safety Conceptual Framework.

3. Discussion

3.1 Person Dimension

Both Lingard and Rowlinson (2005) and Langford, Rowlinson, and Sawacha (2000) assert that an employee's attitude toward safety affects not only whether they will follow formal workplace guidelines and accept and follow instructions, but also whether they will take initiative to establish informal procedures that accomplish the same objectives when needed. Attitudes are a major factor in determining behaviour, as Biggs, Sheahan, and Dinsdag(2007) note. Safety-related incidents are not significantly correlated with formal safety procedures, such as creating Safe Working Method Statements, according to data from Safe Work Australia (2015). This finding lends credence to Dekker's (2014) analysis, which concluded that the desire to move away from formal administrative systems-based approaches to safety is crucial and depends on attitude.

Traditionally, the method of determining occupational health and safety (OHS) susceptibility has involved identifying sociodemographic characteristics or groups specific to a sector or occupation where work-related injuries are more common (Breslin and Smith, 2005; Dembe, Erickson and Delbos, 2004; Oh, and Shin, 2003; Premji and Smith, 2013). However, it's becoming more frequently accepted that this approach fails to consider how susceptibility changes over time or how variable circumstances can either increase or decrease the likelihood of a work accident (Smith, Saunder, Lifshen, Black, 2015 and Lay, Saunder, Lifshen, Bresli, 2017). According to the Expert Advisory Panel (2010), a more current definition of vulnerable workers in the context of OHS are those who are more exposed than most workers to situations that could be harmful to their health or safety but do not have the authority to change such circumstances. To provide more clarification, recent efforts have defined OHS susceptibility as situations in which employees face risks but have insufficient protection against those risks. These protections could be OHS regulations and procedures, awareness of OHS rights and responsibilities, or a work environment that encourages employee participation in safety (Smith et. al., 2015). In addition to the previously listed dangers and safeguards, a worker's risk of injury may also be influenced by the direct supervisor's safety procedures. Supervisors have a big impact on how employees behave in respect to safety because of

their constant presence and close contact with them (Huang, Lee, McFadden, Rineer, Robertson, 2017; Lingard, Cooke, Blismas, 2012; Zohar, 2002; Hofmann, Burke, Zohar, 2017).

According to Griffin & Neal (2000, p. 349), safety compliance refers to "the core procedures that individuals need to carry through to maintain workplace safety" and is correlated with task performance. These actions include things like wearing personal protection equipment and abiding with safety regulations. "Behaviours that do not directly contribute to an individual's personal safety but that do help to develop an environment that supports safety" (Griffin & Neal, 2000, p. 349) are referred to as safety participation, which is contextual performance. These behaviors include things like taking the initiative, helping colleagues who are having safety-related issues, and participating in voluntary programs to improve workplace safety. When it comes to safety management in high-risk enterprises, which are characterized by highly unpredictable unfavorable occurrences, both employee compliance and involvement behavior are critical (Didla, Mearns, & Flin, 2009).

It is challenging to strike an appropriate balance between productivity and safety; thus, management usually pushes construction workers to complete their work within an aggressive time in most projects when the actual progress deviates from the baseline schedule. Then, to increase productivity and maintain the planned timetable, production pressures are established (Han, Saba, Lee, Mohamed, and Peña-Mora, 2014). Additionally, the pressures cause workers in the construction industry to focus more on productivity than other project goals, which negatively affects construction performance, especially safety and quality performance on job sites (Nepal, Park, and Son, 2006; Oswald, Sherratt, and Smith, 2019). Because accidents are more frequent when productivity and safety are out of balance, it undermines worker safety. Accidents can reduce worker motivation and slow down productivity, which can affect the success of a project (Oswald et al., 2019).

According to Buchanan, Raffaele, Glozier, and Kanagaratnam, (2016), apprentices participate in both classroom and "on-the-job" learning. This includes receiving instruction in the classroom on technical safety elements. When classroom safety teaching does not necessarily translate into workplace application of what has been learned, a gap between idealized safety and workplace practice may occur (Grytnes, Grill, Pousette, Törner, and Nielsen, 2018). The gap between work as intended and work as done is a well-known issue in numerous organizations. On the other hand, apprentices who are still learning about standard operating procedures are likely to find the contrast between idealized and real safety behaviour especially noticeable.

In conclusion, the person dimension construct provides a thorough understanding of how individual traits and experiences affect safe working conditions in the construction industry. This is because it considers factors like age, marital status, educational attainment, working experience, work-related pressure, workmate safety behaviour, prior exposure to occupational safety health accidents, awareness of safety, and safety attitude.

3.2 Environment Factor

Construction workers' risk can be reduced, and their safety-related behaviours may be influenced by the planned and organized site layout (Choudhry and Fang, 2008). The experts agreed that well-designed spaces are more likely to improve safety practices by reducing the causes of on-site accidents. For example, locking equipment or limiting access to specific locations can help prevent accidents on the job site. Additionally, labour camps can be thoughtfully planned and erected to lower the risk to workers on site (Manjula and De Silva, 2014).

To provide an atmosphere free from accidents, the construction site must be clean and orderly (Choudhry and Fang, 2008). Even in quality standards, the importance of a clean site is emphasized. For instance, according to the Architectural Services Department of Hong Kong's 2012 specification for buildings, cleanliness on site is considered essential in the British Standards' General specification for buildings. It states that the area needs to be kept tidy and clean, that plants and materials need to be stored correctly, and that dirt and garbage need to be removed as they accumulate. Experts stressed the importance of neat and clean settings for improving safety behaviours. Improving working conditions is essential to lowering the risk of deaths in the physical environment (Manjula and De Silva, 2014).

To monitor employee behaviour regarding safety, OSH monitoring systems and feedback mechanisms are required in place. Employees naturally follow these systems if they are well-designed to catch every error and correct it (Pidgeon and O'Leary, 2000; Mohamed, 2003). Although

organizations now have this technology, experts stressed that the problem lies in the continuous monitoring. They felt that any good system may eventually fail without continuous monitoring. Additionally, the monitoring procedure will make the workers feel watched over, and it will undoubtedly affect their safety behaviours. Experts also noted that without adequate system monitoring, the workers could fail to take the system seriously. (Manjula and De silva, 2014).

Senior managers from the owner regularly gather on-site to discuss managerial innovations and safety issues. The onsite meetings are attended by personnel from all safety management positions. When a typical safety event occurs, the owner's senior management immediately gather the main project managers on the site and set up seminars to discuss the incident's causes and its deeper organizational roots. Each participant is expected to explain the lessons they learned during the meeting. Senior leaders frequently assert that accidents of this nature "could also occur on your site someday at this time." (Wu, Fang, and Li, 2015. Pg.1670)

Pre-accident safety supervision data, generated by project management teams or government agencies, can serve as a substitute for ex-post-accident reports in the context of construction sites. These real-world safety monitoring statistics provide a comprehensive picture of the circumstances at the construction site within the relevant time frame. (Sun, Lei, Cao, Zhong, Wei, Li, and Yang, 2020), which is helpful for decision-making in risk management. As the third accident-causing element in Heinrich's (1936; wang, Liu, and Dan Tan, 2022) domino model, pre accident safety supervision data concentrate on capturing those low-severity yet high-frequency signals unsafe acts and conditions in detail, in contrast to ex-post-accident or injury reports.

3.3 Safety Behaviour

The crucial function of procedures is demonstrated by the fact that noncompliance with procedures is regularly identified as one of the primary causes of accidents. Scholars and practitioners alike have a particular interest in understanding employees' compliance behaviour (Clarke, 2006). Compliance with procedures was conceptualized by Griffin and Neal (2000) as a fundamental safety behaviour. Based on this conception of safety compliance, several follow-up research have been carried out to comprehend the organizational and human elements that enable this behaviour (Bronkhorst, 2015; Cui, Fan, Fu, and Zhu, 2013; Dahl and Olsen, 2013; Hu, Griffin, and Bertuleit, 2016; Li, Jiang, Yao, and Li, 2013). Researchers are aware that processes have limitations on their own, even though the significance of procedural compliance is well recognized. Praino and Sharit (2016) summed up procedures as being difficult to understand and follow, taking a long time to finish, and possibly inappropriate to utilize when conditions at work are different from what was expected. Process management, according to Hale and Borys (2013), ought to be a continuous and developing process that involves the adoption, monitoring, evaluation, and modification of procedures. This action was taken with awareness of the limits inherent in the processes. Their process management approach states that worker efforts to apply procedures in the task environment are essential for safe operations. Employees can help to track and enhance the performance of procedures by talking up about their experiences utilizing them. Employees are also thought to possess significant expertise and information.

It is possible to create behavioural observation checklists for safe and risky behaviours using the incident reports, risk assessment documentation, standard operating procedures, and group discussions that are readily available. Then, to get the base-period safety scores, trained observers would periodically measure the safe and dangerous actions. Construction machinery and systems should be adjusted as needed based on these ratings, the site environment, or other conditions. The workforce must be made aware of the metrics being used, and goal-setting meetings must be scheduled so that they may help create attainable safety performance goals. For a predetermined length of time, behavioural safety performance is measured, and behavioural safety checklists are routinely reviewed and revised (Choudhry, Fang, and Mohamed, 2007).

A lackluster safety culture has been found to be one of the major causes of many accidents and fatalities in the international construction industry, according to Choudhry et al. (2007). The bulk of these accidents are the result of employee safety culture, as migrant workers comprise 95% of the workforce in the construction industry. Therefore, until safety culture is taken into consideration as a primary topic, making any measures to decrease or eliminate the accident history will not be beneficial (Blockley, 1995). As a result, a great deal of study has produced models for this goal, and a

great place to start is with the safety culture evaluation. The "reciprocal safety culture model" (Choudry et al., 2007; Ismail, Hashim, Ismail, and Majid, 2009) is one of these methods that focuses mostly on behaviour (safety behaviour), the environment or circumstance (safety management system), and the individual (safety climate).

Safe behaviours can be enhanced by the implementation of initiatives such as warning indicators, training, and spoken instructions. However, employees will surely take short cuts, maybe violate safety rules, forget to wear personal protective equipment, and operate in a dangerous manner if they are convinced that the work is easier and can be finished quickly in exchange for a financial incentive. Maintaining employees' health at work is one of the long-term goals, as it allows them to continue making money for their families and the company. Management involvement: Developing a strong safety culture is a major responsibility of management. The best ways to demonstrate this are to allot funds, schedule time, led by example, carry out the duties at hand, do inspections, participate in risk assessments and committee consultative sessions. participation of employees A strong safety culture requires the active participation, ownership, and commitment of employees; employee empowerment promotes feelings of value, self-worth, and belonging. Workers should take part in noise-related training, consultations about sound barriers, job rotation, PPE, and donning different earmuffs. (Choudhry, Mohamed, Fang, 2007). Although Arboleda and Abraham (2004) distinguish between worker behaviors and management attitudes, they contend that to be useful in assessing and classifying safety culture, worker activities and management activities should be seen as separate but related phenomena.

Operating safety committees are more likely to attempt to improve safety outcomes than non-operational safety committee organizations, according to the hypothesis put forth by Choudhry et al. (2007) given the important role that safety committees play in safety performance. As a result, the construction company should set up a safety production committee before PBBS intervention in order to develop policies for sustaining the organization's overall safety. Subcontractors, safety managers, and foremen should be on the safety production committee. The authority to act as safety officers should extend to representative subcontractors and safety managers. Foremen ought to have the same authority to act as safety supervisors. All committee members must first undergo rigorous safety trainings before being accepted as well-versed safety representatives (Li, Lu, Hsu, Gray and Huang, 2015).

3.4 Organisation Features

OHSAS 18001:2007 - Occupational Health and Safety Management Systems states that an organization must have both an effective training program and an introduction to safety policy. Programs for worker training and awareness were identified by experts as being crucial. They will make clear the importance of workplace safety and serve as a guide for appropriate and safe behaviour. All three companies said they have safety briefings twice a week and that all new hires must receive safety training. A successful safety program can be achieved if every worker has regular access to opportunities for education and training to increase their knowledge and proficiency on workplace safety. Cooper and Cotton (2000); Toole (2002); Tam, Zeng, Deng, 2004; Fang, Xie, Huang, and L I, 2004; Fang, Chen, Wong, 2006).

A key element of measurement and evaluation that demonstrates the efficacy of current systems or initiatives is site safety inspection, as described by Hinze and Godfrey (2003) and Feng (2013). Despite the significance of site safety inspection systems, very few studies have looked at them in depth. As per Lee, Tsai, Lin, and Kang (2012), inspectors in numerous site safety inspections use paper and a pen to record the inspections. The traditional paper-based inspection method makes it difficult to maintain and evaluate inspection results. It also requires extra work to input the handwritten observations through a computer system, which is error-prone and time-consuming. A good safety policy requires employers to provide employees with adequate supervision to shield them from hazards at work. In order for supervision to be successful, qualified individuals must assign tasks based on employees' abilities, assess employees when they carry out their jobs safely, communicate with one another by engaging in conversation and listening, set a good example by following the same safety regulations, and take care of any new safety concerns. Fang, Xie, Huang, and L I (2004); Stranks (2000)

Workers are known to cooperate with OSH frameworks within an organizational setting when given tangible rewards for following OSH norms and procedures. In 2008, Choudhry and Fang position that notwithstanding OSH, all experts agreed that rewards have always been a potent worker motivator. An employer encourages a worker to perform safely at work by providing an OSH incentive. Experts claim that it is a real reward for the employee. As a result, OSH incentives have a significant impact on site safety behaviours (Manjula and De Silva, 2014).

If a company wants to encourage safe work practices among its employees, management commitment to safety is essential (Choudhry, Fang, and Mohamed, 2007). According to De Silva and Wimalaratne (2012), current OSH management techniques include overseeing employees' safe and healthy behaviour as well as a centralized OSH management unit, resources, insurance policies, OSH paperwork, and an OSH committee. Experts assert that if senior management has a blasé attitude toward safety, there is less that can be anticipated of employees in terms of safety.

To improve safety behaviour, it is necessary to provide and employ the appropriate tools for the work, as well as protective clothes and gear (Choudhry and Fang, 2008). According to experts, it is the responsibility of the employers to give employees those items because they help them execute their jobs securely. Experts, however, stated that even though they give their employees the required PPEs, they don't use them except they are being constantly watched. Organizations frequently have to compel employees to put on PPE while they are at work (Manjula and De Silva, 2014).

3.5 Technology

In the construction industry, the location of resources that are vital to the project—such as labour, machinery, and supplies—is crucial. Understanding and evaluating the precise positions of construction resources as well as identifying and monitoring the status of work tasks improve the project's performance (safety). To capture 3D/4D (spatio-temporal) data, many real-time sensing technologies, including GPS (Global positioning system), UWB (Ultra-wideband), and vision tracking, can be used. However, data is dispersed over numerous systems, several of which are disconnected from one another, in most construction-related jobs. Data fusion and consolidation are difficult because of the high degree of variation in sensor technology options. Using a protocol which can be implemented to any sort of data stream is one way. Forcing data that arrives at a uniform data pattern, even when it comes from multiple sources, such as databases, is an additional choice (Cheng and Teizer, 2012). For data collection, a single instantaneous data source from a single tracking technology was employed. The movement of the building process resources could have been tracked using any of the tracking technologies, which may have also been more affordable for an outside construction site implementation. However, the preferred technology was Ultra-wideband that could track people, tools, and materials at the same time and provide frequent updates (Cheng, Venugopal, and Teizer, 2012).

Producing safety reports from photos automatically: In most modern on-site safety inspections, engineers take handwritten notes on the hazards they observe, which are subsequently input into a computer system to generate a safety report. Nevertheless, this method of manual data transmission is error-prone and time-consuming. Advances in image caption algorithms enable us to provide semantic image captions that enable autonomous hazard description (Hossain, Sohel, Shiratuddin, and Laga, 2019; Nadeem, Shah, Sohel, Togneri, and Bennamoun, 2019). Instead of having to walk the site to look for potential risks, this strategy can let site managers automatically prepare risk reports.

Design-phase digital methods to construction safety are less developed than construction-phase ones. The range of digital tools utilized for safety during construction is much greater than the number of technologies available to designers to help them achieve construction safety during the design process. Significant advancements have been made in the design for safety process (DFSP) tool, which addresses technical problems throughout the building phase, and in the knowledge-based design decision toolkit. Additionally, rule-checking methodologies using BIM have been used to enhance construction safety by layout (Zhou, Whyte, and Sacks, 2012). Building maintenance personnel can evaluate the danger of falling from a roof while carrying out preventive maintenance by using the web-based ToolSHeD (Cooke, Lingard, Blismas, and Stranieri, 2008) decision support tool. The core aim of ToolSHeD was to use knowledge-based techniques to examine the maintenance dangers of complex building settings.

Unmanned aerial vehicles (UAVs), sensors, virtual reality, building information modeling (BIM), and other technologies have all been proposed as emerging technologies for safe construction. Their advantages have been investigated for applications such as real-time monitoring, early warning, and quick rescue of hazards (Nnaji and Karakhan, 2020; Okpala, Nnaji, and Karakhan, 2020). Although multiple new technologies are being used for construction safety management to reduce accident rates, it is difficult to achieve the high safety requirements required using only one technology. One creative new approach for those trying to solve these unsolvable problems is the application of Internet-of-Things (IoT) technology into the construction management process (Yeo, Yu, and Kang, 2020). As safety event warnings are supported by BIM technology (Kong and Ma 2020), IoT also makes it possible to deploy a variety of sensors to monitor dangerous conditions at building sites (Jia, Komeily, Wang, and Srinivasan, 2019). IoT may therefore connect many technological functions to satisfy the demands of the construction procedure for safety core technologies.

Context information can help a system for responding to emergencies determine what action to take based on its ability to assess the current state of the environment (Mayer et al., 2012). This definition of "context" includes any data that can be used to characterize an individual's circumstances, the state of a spot in an enclosed space (e.g., fire extinguishers, stairs, etc.), or the state of a physical or computational item. According to Mayer et al., (2012), an emergency response plan must have the capacity to monitor and compile user-provided information properly. Rapid identification and prompt notification are essential components of an emergency; hence, MCC networking concerns are significant and must be met to guarantee uninterrupted connectivity (Khan, Othman, Xia, Khan, 2015). When responding to an emergency, active user participation—such as pushing switches on wearable alarm devices or smartphone apps or sharing emergency information with other users—is crucial to spotting perilous circumstances and facilitating rescue efforts. Furthermore, there may be scalability issues because of the increasing number of connected devices, such as providing services to a sizable number of dynamically added and registered devices and facilitating communication.

3.6 Incentives

Nowadays, many companies globally use monetary incentives in the form of bonus systems to motivate workers to improve their performance (Patton, 1972; Mattson, Torbiorn, and Hellgren, 2014). With the rise in workplace accidents, one of the biggest concerns among companies these days is employee safety. Safety-promoting organizational practices are critical for all organizations, but they are especially important for those that face higher risks. As a result, many high-risk firms implement bonus programs that are largely focused on enhancing employee performance in safety-related areas to achieve safety. Nearly all firms compensate their employees for the work they produce, but there are significant variations in how closely the pay structure is tied to productivity. The premise that employees should be encouraged to work better because they understand the link between job performance and compensation is the foundation for many firms' usage of various sorts of performance-related pay schemes. However, the design of such structures can vary depending on who is involved (and at what levels), how success is assessed, and which incentives are utilized (cash, shares, etc.). The sort of performance-related compensation system is denoted by a variety of names, although the differences are not always obvious. Bonus systems are sometimes described as having an agreed-upon weekly or monthly salary for employees as well as performance-based bonuses. Productivity measures may be based on an individual's performance, the performance of a group (such as a team or department), or the performance of the entire organization (Furnham, 2008).

Goals are the intended outcome of an action, such as achieving a particular competence level within a specific time frame (Locke & Latham, 2002). High objectives encourage people to perform better through four factors, based on goal-setting theory (Locke & Latham, 2002). First, setting high goals helps one focus on tasks that are relevant to the goal and directs attention there. Second, people are motivated by high goals to exert more effort, which results in increases in output, pace of performance, and direct physical effort. Third, setting high goals fosters perseverance. Fourth, setting high goals encourages the acquisition of task-relevant information and the application of task-relevant techniques to improve performance. According to goal-setting research, there is a positive linear link between the complexity of the objective and task performance if a person has the necessary levels of drive, commitment, and aptitude (Locke & Latham, 2006). This association between objective

difficulty and performance doesn't begin to wane until a person reaches the boundaries of their capacity or their commitment to the goal is lessened (Locke & Latham, 2002).

Rewards for meeting deadlines, bonus plans for all work groups, performance-based incentives, recognition for excellent work and goal achievement, health and safety awards and incentives for no delays or incidents, and health and safety competitions to promote safe and healthy competition among trades are just a few incentive programs that can boost output and morale (Jergeas, 2009). According to Abrey and Smallwood (2014), enhanced labour relations are positively correlated with improved job performance, and optimal labour management can further increase job satisfaction and productivity.

4. Conclusion and Recommendations

When it comes to other industries, the construction industry is still the most dangerous. It is obvious that safety policies in the construction industry will need to be improved, and researchers will need to look at the underlying reasons why accidents happen. This study presents a comprehensive overview of a safe working conditions in the construction industry. The factors: person dimension, environment factor, safety behaviour, organisation factors, technology and incentives were incorporated. The research identified these six main variables that need to be tackled to strengthen the implementation of safety programs in the construction industry. First, the person dimension provides a thorough understanding of how individual traits and experiences affect safe working conditions in the construction industry. Second, environment factor construct includes several significant variables that work together to provide secure working conditions in the construction sector. Third, safety behaviour in these fields involves both individual accountability and a team effort to uphold a secure working environment for everyone. Fourth, organisation features include several important variables that work together to support safe working conditions in the construction sector. Fifth, technology variables emphasize the value of designing technology and safety solutions to specifically address the demands and penchants of construction workers, as perceptions of utility are a key factor in both the adoption of technology and its success in enhancing safety conditions. Sixth, Incentive is to make sure that risks and benefits are appropriately distributed among contracting parties and that they are geared toward attaining project goals. By putting these safety variables into practice, the construction industry can reduce risks to worker safety, cut down on accidents and fatalities, cut costs related to subpar safety performance, safeguard the reputation of its members, increase worker morale and job satisfaction, improve employee retention, lower absenteeism, and advance sustainability goals.

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