



Lack of management commitment and poor employee involvement cause non-compliance with Occupational Safety and Health (OSH) requirements at construction sites: A review

Asrul Akmal Bin Mohd Sarjudin,

Postgraduate Student

Faculty of Business and Management,
Open University Malaysia (OUM), Selangor, Malaysia

Abstract : Non-compliance with Occupational Safety and Health (OSH) requirements at construction sites often stems from a combination of lack of management commitment and poor employee involvement. Lack of management commitment encompasses inadequate planning, supervision, and enforcement of safety protocols. When management neglects to prioritize Occupational Safety and Health (OSH) considerations, workers may perceive safety measures as optional rather than mandatory. Furthermore, poor employee involvement can manifest as a disregard for safety procedures due to various factors, including overconfidence, complacency, or pressure to meet deadlines. Some workers may believe that shortcuts or ignoring safety guidelines will not result in consequences, leading to unsafe behaviours. This toxic combination of Lack of management commitment and poor employee involvement creates a breeding ground for non-compliance with OSH requirements. Incidents such as accidents, injuries, property damage, and environmental damage become more likely in such environments, endangering the well-being of workers and the surrounding community

IndexTerms - non-compliance; construction industry; workplace accident; OSH requirements

INTRODUCTION

Non-compliance with Occupational Safety and Health (OSH) requirements in the workplace is a persistent challenge that undermines the well-being of employees and the integrity of organizations. Safety violation or non-compliance to safety procedure is one type of human unsafe acts. It is normally defined as deviations from procedures, standards or rules that describe the safe or approved method of performing a particular task or job (Lawton, 1998; Reason, 1990). Failure to comply with health and safety requirements can result in higher rates of workplace injuries and illnesses, which can be financially burdensome for employers (Robson et al., 2007). These expenses may encompass the need for repairs or replacement of damaged machinery and facilities (Othman, 2012). Furthermore, disregarding health and safety legislation can tarnish a company's public image, potentially leading to reputational damage and hindering the organization's financial growth (Othman, 2012).

Accidents are unfortunately common in construction work, often resulting from a failure to adhere to Occupational Safety and Health (OSH) requirements, and they can have severe repercussions. Construction sites present various hazards to workers, including falls from heights, injuries from heavy machinery, falling objects, electric shocks, accidents during demolition, collapses, and incidents involving cranes and large equipment (Hughes & Ferrett, 2005). It is crucial to highlight that non-compliance with OSH regulations significantly contributes to these accidents. To ensure worker safety, construction companies must prioritize compliance with OSH requirements. This involves providing thorough safety training to workers, ensuring machinery and equipment meet OSH standards, and implementing strict supervision protocols on construction sites. By addressing non-compliance with OSH regulations and prioritizing safety measures, construction firms can effectively reduce accidents, thus protecting the well-being of their workers and fostering a safer work environment.

Construction sites are inherently hazardous environments, with workers exposed to various risks ranging from falls and machinery accidents to exposure to hazardous substances. Despite stringent safety regulations and protocols, safety issues continue to persist in the construction industry, often stemming from the lack of active participation and engagement among employees. The construction sector plays a significant part in national development, where successful development will contribute to economic growth and will produce extra demand for construction activities in the future. With the construction industry being one of the most

dynamic and rapidly increasing industries globally and one of the most important contributors to the Malaysian economy, it is no doubt important.

The Malaysian construction industry is a hazardous industry that contributes to 59 fatalities (32%) cases due to workplace accidents in the year 2022, 65 fatalities (37%) in the year 2021, 66 fatalities (30%) in the year 2020, 84 fatalities (32%) in the year 2019, and 118 fatalities (45%) in the year 2018 according to a statistic by Department of Safety and Health Malaysia (DOSH, 2023). Accidents and incidents in the construction industry are unintended and unwanted events that involve the movement of people, objects, or materials and can result in injury, property damage, or loss. Most workplace accidents occur when people disobey safety standards (unsafe acts), and management fails to recognize hazardous conditions. As a result, accidents' immediate (direct) causes are unsafe acts and unsafe conditions (Hosseinian & Torghabeh, 2012).

An unsafe act is a breach of a safe practise that could lead to an accident. An unsafe condition is a dangerous physical state or set of circumstances that directly contributes to the occurrence of an accident. The majority of accidents are the result of a combination of contributing factors and one or more unsafe acts or conditions. An accident can be defined as an unplanned, undesirable, unexpected, and uncontrolled event. An accident does not necessarily result in an injury. It can be in term of damage to equipment and materials and especially those that result in injuries receive the greatest attention (Hinze, 1997). According to Hopkins (2011), non-compliance to safety is a significant contributing cause to accidents not just in the oil and gas sector but also frequently turn up in accident investigations and studies conducted by other businesses. As a result, a significant amount of study has been done to determine the causes of non-compliant behaviour.

Findings by Hamid et al. (2019) regarding non-compliance with Occupational Safety and Health (OSH) legislation, particularly concerning employers' obligations to provide a safe work environment, risk assessment, supervision, and reporting accidents. Non-compliance issues include failure to provide safe working systems, welfare practices, and competent safety officers. Employees often resort to shortcuts, violating OSH requirements. A report by the Health and Safety Executive (2003) identifies situational and organizational factors contributing to non-compliance, such as time pressure, workload, staffing levels, training, supervision, and resource availability. Despite past efforts to enhance workplace safety, accidents persist, primarily due to worker non-compliance with OSH requirements.

2.0 Problems of non-compliance to OSH at the construction site leading to construction accidents

Accidents are the direct result of unsafe activities and conditions. There are three main root causes of accidents: failure to identify an unsafe condition that exists before or after the start of an activity, carrying on work in an unsafe condition, and deciding to perform regardless of unsafe site conditions (Abdelhamid and Everett, 2000). The construction industry is known to be one of the riskiest globally, with a notable frequency of accidents leading to substantial loss of life and property damage (Choi, Ahn, & Lee, 2017). Despite considerable efforts to enhance safety measures, the construction sector has not seen as much improvement as other industries in reducing accidents (Jiang, Fang, & Zhang, 2015; Shin et al., 2014). Previous studies have pinpointed safety violations as a primary contributor to construction accidents (Fang, C. Wu, & H. Wu, 2015).

Occupational Safety and health regulation, as described by Chudley and Greeno (2006), are legal standards that outline the minimum requirements for construction projects, primarily focusing on ensuring the health, safety, and welfare of the workforce. These regulations must be considered during both the planning stages and the actual construction process. However, without effective enforcement, regulations alone cannot achieve their intended goals. As Anderson (2007) and Idubor and Osiamoje (2013) argue, poorly enforced rules are essentially ineffective. Unsafe behaviors are frequently identified as contributing factors in construction accidents, as noted by Xu et al. (2018). To better understand the factors influencing such behaviors, the theory of planned behavior has been employed. This theory examines the relationship between attitudes, intentions, and actions. Gao et al. (2016) suggest that a lack of commitment to safety can lead to a disregard for safety practices. Furthermore, psychological theory, as highlighted by Fang et al. (2016), provides insights into why individuals may choose not to prioritize safety, exploring how the mind, expectations, and beliefs influence safety behavior.

2.1 Lack of management commitment

Othman (2012) identified several key reasons for non-conformance with safety and health regulations on construction sites. These included a lack of commitment from management, poor leadership by safety officers, and inadequate awareness among management and clients regarding the importance of safety practices. Supervisors were found to neglect enforcing safety procedures, such as ensuring the proper use of personal protective equipment (PPE). Additionally, the improper selection of subcontractors without proper criteria negatively impacted safety and health outcomes.

Tam et al. (2004) further highlighted factors contributing to non-compliance in construction safety, including poor safety awareness among top leaders, insufficient training, reluctance to allocate resources for safety, and reckless operations. The studies revealed deficiencies in the provision of PPE, irregular safety meetings, and shortcomings in safety training programs, indicating systemic issues within the construction industry that could compromise worker safety.

Management commitment refers to the level of involvement and participation of management in safety programs within a company. According to Garnica and Barriga (2018), inadequate communication between managers and workers during construction projects can result in subpar workmanship, accidents, project delays, and inaccurate reporting. Researchers have noted that management's dedication to workplace safety significantly influences the effectiveness of an organization's safety initiatives. A key aspect of achieving a high level of commitment to safety management is ensuring that all members of the management team share a unified approach to safety and integrate it into the organization's strategic decision-making processes.

Management commitment to safety should be evident through observable actions and behaviors, as well as through verbal expressions, as highlighted by Alam et al. (2020). A tangible demonstration of this commitment is the formulation of a safety policy statement. Conversely, a lack of commitment from management may lead to minimal financial investment in safety compliance. Bakri et al. (2006) discovered that contractors frequently prioritize time and cost considerations over safety management, resulting in reduced investment in safety measures. This, in turn, can escalate the occurrence and severity of accidents on construction sites.

Neal, Griffin, and Hart (2000) proposed that employees' perceptions of broader organizational factors provide a context for assessing management's commitment to safety. They argued that when employees perceive the organization as supportive of their overall well-being, they are likely to believe that safety is also a priority for management. Similarly, Neal et al. (2000) suggested that job resources have a similar effect. For example, providing training can improve employees' job performance while reducing associated risks, leading employees to believe that safety is valued by management. This idea is supported by consistent findings reported by Neal et al. (2000) and Larsson, Pousette, and Torner (2008).

Neal et al. (2000) identified a combined construct, which included measures of role clarity, supportive leadership, and participative decision-making (all components of job resources), that predicted employees' perceptions of management's commitment to safety. These perceptions, in turn, influenced safety knowledge and the importance employees placed on safety, which subsequently affected safety compliance. Similarly, Larsson et al. (2008) found that a combined construct, including measures such as role clarity, feedback, social support, and quality of leadership, predicted safety motivation and knowledge, which correlated with safety compliance behavior. Therefore, it is expected that improving job resources will lead to an increase in perceived management commitment to safety, subsequently influencing safety compliance.

It's also worth noting that in workplaces where productivity is the primary focus, increased job demands may lead people to perceive safety as less of a priority. This notion was proposed by Barling, Loughlin, and Kelloway (2002). Their research indicated that when individuals felt overwhelmed by their job tasks, they tended to believe that management placed less emphasis on safety. Therefore, as job demands escalate, it's anticipated that perceptions of management's commitment to safety may diminish. Since the perception of management's commitment to safety operates differently from individuals' feelings of stress or engagement with their work, these safety-specific concepts are expected to contribute new insights into understanding the causes of safety violations. Ford and Tetrick (2008) suggest that companies can enhance workplace safety by fostering an environment that encourages employees to engage in behaviors that promote safety. Similarly, Bakker and Demerouti (2007) propose that the resources available to employees at work, such as learning opportunities and support, can motivate them to exert effort and perform at their best.

When employees are deeply engaged in their work, they may generate innovative ideas to enhance safety, such as improving accessibility to safety gear or refining safety reporting procedures. Snyder et al. (2008) discovered that when employees felt constrained due to factors like unclear instructions or a cluttered work environment, workplace injuries tended to be more severe. However, granting employees more autonomy over safety-related matters, such as empowering them to implement changes to enhance safety, helped reduce the risk of injuries. This suggests that providing employees with greater autonomy at work can mitigate safety issues stemming from company-induced "situational" problems. Conversely, when employees are motivated to exert extra effort to achieve goals, they may possess additional energy to address less critical tasks, which can help combat fatigue (Hockey & Earle, 2006). Therefore, increased work effort should also translate into fewer minor errors on the job.

One significant issue is that companies often prioritize completing tasks quickly over ensuring safety, even if they claim to value both aspects (Ford & Tetrick, 2008; Reason, 1990). This tendency is common in organizational settings and can manifest in various ways, such as emphasizing speed over safety, allocating insufficient resources to safety measures, and rewarding employees primarily for meeting productivity targets rather than prioritizing safety (Flin et al., 2000).

Achieving the right balance between productivity and safety is crucial for maintaining workplace safety (Flin et al., 2000). When companies place excessive emphasis on speed, safety measures can be compromised. For instance, Paoli and Merllie (2001) discovered that European Union workers who faced fast-paced work environments, tight deadlines, and inadequate time to perform tasks safely were more prone to workplace injuries. Similarly, Zohar (2000) found a correlation between heavy workloads and an increase in minor accidents requiring first aid.

Lawton (1998) found that railway workers often cited "time pressure" and "high workload" as reasons for not following safety rules, while Hofmann and Stetzer (1996) discovered that perceptions of increased role overload were associated with a higher likelihood of engaging in unsafe behaviors. These findings highlight the tendency for production goals to overshadow safety considerations. Building on this understanding of the work environment, we propose that job strain and work engagement are connected to safety violation behaviors, extending the job demands-resources model to include safety behaviors.

In the construction sector, Skeepers and Mbohwa (2015) found a positive association between management commitment and safety performance. They noted that contingency leadership and a strong safety organizational culture can enhance safety performance. A well-established safety management system, incorporating safety leadership, communication, commitment, and staff training, may improve safety performance. Safety commitment significantly influences safety behavior and compliance (Wei et al., 2018). Leaders play a crucial role in driving organizations toward a safe workplace, as stated by Kadiri et al. (2014), who identified lack of attention from leaders as a primary cause of accidents.

Improving safety performance requires commitment from all levels of the organization, from top management to individual employees on site. Safety awareness is a critical factor influencing construction workers' safety performance (Chen et al., 2018). Additionally, Mohammadi et al. (2018) found that safety performance is influenced not only by management activities at the project level but also by interactions among elements across different hierarchical levels within the organization.

Zulkifle & Hanafi (2017) and Bhole (2016) suggested that inadequate supervision stands out as a major contributing factor to the occurrence of accidents on construction sites. This deficiency often stems from two primary sources: the utilization of incompetent personnel in supervisory roles and a general lack of commitment to effective supervision practices. When individuals lacking the necessary skills or qualifications are tasked with overseeing construction activities, they may fail to recognize and address potential hazards in a timely manner, increasing the likelihood of accidents. Moreover, when there is a lack of dedication to thorough supervision, supervisors may neglect their responsibilities, leading to oversight of safety protocols and procedures. Ultimately, addressing the issue of inadequate supervision requires not only ensuring that qualified individuals are appointed to supervisory positions but also fostering a culture of commitment to proactive and vigilant supervision practices throughout the construction site.

Mouleeswaran (2014) suggested that safety promotion gaps and the absence of structured safety management systems present notable challenges in maintaining workplace safety. Without proactive efforts from management to raise safety awareness and practices among employees, the risk of accidents and injuries increases. The lack of clear protocols, procedures, and documentation within safety management systems can lead to confusion and oversight in addressing safety concerns. Overcoming these challenges necessitates implementing comprehensive safety promotion initiatives and establishing well-organized safety management systems to effectively identify, mitigate, and manage risks in the workplace.

Durdyev et al. (2017) conclude that it is imperative for top management to assume a more proactive role by taking on increased responsibilities, particularly in allocating sufficient financial resources to improve safety performance on project sites. By ensuring that adequate budgets are allocated for safety enhancements, top management demonstrates a strong commitment to prioritizing the well-being and safety of employees working on construction projects. This proactive approach not only fosters a culture of safety within the organization but also provides the necessary support and resources to effectively implement safety measures and protocols, ultimately reducing the risk of accidents and injuries in the workplace.

2.2 Poor employee involvement

According to a study by Griffin and Neal (2000) about the safety performance framework, safety involvement and safety compliance are two different types of safety behaviours. The voluntary involvement of employees in safety activities with the goal of fostering the creation of a supportive safety environment is referred to as safety participation. A few instances of safety engagement are voicing concerns about safety (Mullen, 2005), encouraging safety initiatives inside the company (Cree and Kelloway, 1997), and voluntarily attending safety meetings (Griffin and Neal, 2000). Conversely, safety compliance describes the actions related to performing fundamental safety duties, such as adhering to safety protocols and norms inside the company (Griffin and Neal, 2000).

Employee involvement refers to the level of commitment and connection an employee has towards their job and the organization they work for. Engaged employees demonstrate a genuine interest in the company's goals and actively strive to achieve them. They also motivate and inspire their colleagues to perform at their best. This level of engagement is characterized by a positive emotional attachment to one's job and workplace. Engaged employees do not merely fulfill the minimum requirements of their role; instead, they consistently go above and beyond to deliver their best work. The concept of employee engagement was initially introduced by Kahn (1990), who described it as employees forming a deep connection with their work, both physically and emotionally. Signs of employee engagement include increased productivity and a positive attitude towards work.

Employee involvement is a critical factor for companies seeking a competitive edge. People represent a unique aspect of a company that cannot be easily replicated by competitors, making them valuable assets when effectively managed and engaged in their work. Baumruk (2004) emphasized the significance of employee engagement, suggesting it as the primary measure of a company's strength. While Katz and Kahn (1966) acknowledged the importance of engagement for organizational success, it was not until Kahn (1990) delved deeper into the concept. He described employee engagement as a deep connection between employees and their work, both physically and emotionally. According to Kahn, three key elements contribute to employee engagement: meaningful work, a sense of safety in the workplace, and minimal distractions. Buckingham and Coffman (1999) proposed another perspective, stating that aligning the right people with the right roles under the right management fosters employee engagement.

Schaufeli and Bakker (2010) define work engagement as the extent to which employees invest their energy into their job, indicating a high level of involvement and care. Building on this, Fleming and Asplund (2007) elaborate that employee engagement goes beyond mere mental and emotional connection to work, encompassing a strong desire to perform at one's best. Saks (2006) builds upon Kahn's (1990) concept of engagement, incorporating employees' feelings towards their job and organization. Saks (2006) identifies factors that contribute to employee engagement, including the nature of their work, perceived support from the company and supervisors, reward systems, and perceptions of fairness. Engaged employees are generally happier, more committed to the organization, and less likely to leave.

Joshi and Sodhi (2011) further emphasize the importance of various factors in keeping executives engaged. These include having stimulating work, receiving fair compensation, achieving a healthy work-life balance, feeling supported by top management, accessing career growth opportunities, and fostering positive relationships within their team. The work environment significantly influences employee engagement, as highlighted by research from Miles (2001) and Harter et al. (2002). Deci and Ryan (1987) suggest that creating a supportive work environment, where managers prioritize employees' needs, provide positive feedback, and foster growth opportunities, enhances employees' connection to their job and the organization.

Effective leadership also plays a pivotal role in employee engagement. According to Walumbwa et al. (2008), good leaders exhibit self-awareness, fairness, transparency, and high moral standards. Studies such as Wallace and Trinka (2009) demonstrate

that inspiring leadership naturally fosters employee engagement by showing appreciation for employees' work and emphasizing its importance. Authentic and supportive leadership, as indicated by Schneider et al. (2009), leads to increased employee involvement, satisfaction, and enthusiasm towards work.

Furthermore, cultivating positive relationships with coworkers significantly contributes to employee engagement. Kahn (1990) observed that supportive and trusting relationships among coworkers and within teams enhance employee engagement. A positive and supportive workplace environment not only fosters a sense of safety but also encourages employees to fully engage in their work. May et al. (2004) suggest that having supportive coworkers adds meaning to work, further enhancing employee engagement.

Training and career development are crucial aspects of employee engagement as they enable employees to enhance their skills and focus on their work. According to Paradise (2008), training helps employees improve their job performance and boosts their engagement by increasing their confidence and motivation. Alderfer (1972) even likened providing growth opportunities to rewarding employees, as it allows them to realize their full potential.

Compensation, both monetary and non-monetary, is another significant factor in employee engagement. Saks and Rotman (2006) found that recognition and rewards contribute to higher engagement levels among employees. Kahn (1990) also emphasized the importance of how employees perceive their rewards, regardless of their type or amount. Organizational policies, procedures, structures, and systems also influence employee engagement. Fair policies and procedures, such as equitable recruitment practices and flexible work schedules, contribute to higher levels of engagement and organizational success (Schneider et al., 2009; Richman et al., 2008).

Workplace well-being is a critical determinant of employee engagement. Rath and Harter (2010) define well-being as encompassing all aspects that contribute to how individuals perceive and experience their lives. Towers Perrin Talent Report (2003) found that senior management's interest in employee well-being is the most significant factor impacting engagement levels. Gallup's data also underscores the importance of well-being in influencing human behavior, making it a key measure of organizational impact on employees.

The demand for dedicated employees capable of working efficiently with minimal supervision is on the rise, with strategic group membership and associated collective behaviors identified as key drivers of lasting differences in firm profitability and organizational effectiveness (Caves and Porter, 1977; Porter, 1979). Highly involved organizational cultures, characterized by strong employee participation, foster a sense of ownership and responsibility, leading to deeper commitment and enhanced autonomy (Denison, 1990).

Involvement encompasses developing human capacity, fostering ownership, and nurturing responsibility, thus promoting a shared vision, values, and purpose. Employees contribute to cost reduction through recommendations to senior executives (Rossler and Koelling, 1993; Gowen, 1990). Employee involvement entails participation in decision-making and implementation within organizations, reflecting the degree of ownership and responsibility felt by employees, indicative of their commitment.

Employee involvement is recognized as a significant component of corporate culture influencing organizational effectiveness (Denison, 1990; Denison and Mishra, 1995). Extensive literature in recent years has delved into the concept of employee involvement and its impact on organizational success (McShane and Von Glinow, 2003; Amah, 2006). Involvement refers to the level of engagement demonstrated by members in an organization's decision-making processes, encompassing a sense of duty and dedication (Denison, 2007). It involves developing human capabilities, fostering ownership, and nurturing responsibility, which are crucial for establishing a cohesive vision, shared values, and collective purpose.

Employee involvement, also known as participative management, extends to the dissemination of information, expertise, rewards, and authority throughout the organization (Randolph, 2000). In environments where involvement is prevalent, employees possess authority beyond their traditional scope, influencing decisions at both unit and organizational levels (McShane and Von Glinow, 2003). This level of involvement grants individuals' greater authority over decisions, processes, and outcomes.

Moreover, employee involvement entails the exchange of information and knowledge, as employees require comprehensive understanding to contribute meaningfully to decision-making (McShane and Von Glinow, 2003). It has become integral to corporate decision-making, forming part of knowledge management efforts, as leaders recognize employee knowledge as a critical resource for gaining competitive advantage.

Employee involvement manifests in various forms within organizations, including formal and informal participation, voluntary and statutory involvement, as well as direct and indirect participation (Strauss, 1998; McShane and Von Glinow, 2003). These diverse forms of involvement cater to different organizational contexts and regulatory frameworks, highlighting the multifaceted nature of employee engagement in decision-making processes. Various levels of employee involvement exist, reflecting both the extent of decision-making power and the number of decision steps over which employees can exert influence (Liden and Arad, 1996; Ford and Fottler, 1995). The lowest level, selective consultation, involves seeking specific information or opinions from employees about particular aspects of a decision, without necessarily involving them in proposing solutions or providing detailed problem information (McShane and Von Glinow, 2003). A moderate level occurs when employees are more extensively consulted, individually or in groups, and provide input on problem diagnosis and recommendations, though the final decision remains beyond their control. The highest level of involvement grants employees' complete control over the decision-making process, from problem identification to solution selection and outcome monitoring (McShane and Von Glinow, 2003).

Highly involved organizational cultures prioritize informal, voluntary, and implied control systems over formal, explicit, bureaucratic ones, with indicators including empowerment, team orientation, and capacity development (Denison, 2007).

Job complexity refers to the level of difficulty and complexity inherent in job tasks, often requiring high-level skills and thinking (Morgeson and Humphrey, 2006). Complex jobs can be more challenging and stimulating, fostering a sense of meaning and promoting learning and growth (Fried et al., 2002; Hackman and Oldham, 1976). This positive challenge is associated with reduced disengagement at work (Christensen and Knardahl, 2010), with resilience playing a role in moderating the relationship between job complexity and disengagement (Halbesleben et al., 2014). According to the Conservation of Resources (COR) theory, individuals may utilize their resilience to cope with job complexity, mitigating disengagement (Hobfoll, 1989; Llorens et al., 2007).

Disengagement involves withdrawing from work and feeling disconnected, often stemming from the perception of losing important resources at work (Demerouti et al., 2001). Exhaustion, a component of burnout, arises from job demands, while disengagement results from insufficient workplace resources (Job Demands-Resources model, JD-R model) (Leiter, 1993). Exhaustion may lead to disengagement, as individuals withdraw to conserve resources, aligning with the Conservation of Resources theory (Hobfoll, 1989). Resilience, the ability to bounce back from challenges, may mitigate disengagement, as individuals with higher resilience are less likely to withdraw despite exhaustion (Thanacoody et al., 2014).

Disengaged employees, as described by Wellins and Concelman (2005), exhibit a lack of enthusiasm, reluctance to exert extra effort, and poor collaboration with their team. They demonstrate passive behavior, showing minimal interest in their company and their role within it, often maintaining poor relationships with supervisors and colleagues. The negative impact of disengaged workers, as outlined by Branham (2005), extends to morale and profits within an organization. Their tendency to cause problems, frequent complaints, and involvement in accidents can detrimentally affect overall productivity. Furthermore, their negative behavior may result in decreased customer satisfaction and potential loss of customers (Vajda & SpiritHeart, 2008).

Disengaged employees not only undermine their own job satisfaction but also have adverse effects on their team members, hindering the accomplishments of engaged coworkers (Gallup, 2006). They exhibit unhappiness at work, which spreads to others, and display lower levels of competence, commitment, and satisfaction with their organization. Additionally, they experience heightened stress and uncertainty about their work compared to their engaged counterparts (Gallup, 2001).

Negative feedback about leadership often includes complaints about lack of respect, attention, support, poor leadership skills, bias, incompetence, insensitivity, and inconsistency. Dissatisfaction with the organizational environment typically involves issues like limited opportunities for career growth, inadequate compensation and benefits, excessive workloads, lack of recognition, poor working conditions, insufficient or low-quality training, unethical behavior, and lack of teamwork. Employees also tend to be unhappy with their job if it is monotonous or lacks challenges. Organizations need to pay attention to the phenomenon of employee disengagement because it affects both the workers and the employer, like employee engagement (Bakker & Demerouti, 2008). When employees feel disengaged, they often experience negative emotions and health problems more frequently than those who are engaged. This can also spread negative feelings to their colleagues. Employees with low engagement levels are more likely to feel anxious, depressed, emotionally drained, and cynical, both at work and in their personal lives, due to stress (Robison, 2010 and Gallup, 2006).

Disengaged employees do not invest much in customer satisfaction, leading to lower productivity compared to engaged workers. They also tend to have more accidents at work and cause more inventory shrinkage (Harter, Schmidt, Killham, & Asplund, 2006). These disengaged employees do not promote their company as a good place to work and are less likely to recommend its products or services. They also lack innovation and creativity, and they do not share new ideas with their coworkers. They often feel unsatisfied, uncommitted, and have thoughts of leaving their job (Baumruk, 2004; Krueger & Killham, 2007). Signs of employee disengagement include physical absence from work, slow performance, or showing negative behavior. Low morale, making mistakes, lacking energy, and feeling disconnected are other symptoms (Branham, 2005; Pech & Slade, 2006). Understanding the impact of disengagement on both the workers and the company can help prevent harm to the business. To protect against the effects of employee disengagement, it is essential to identify and address its causes.

According to the findings of a survey conducted by Lu et al., (2020), employees will contribute to workplace safety by identifying risk behaviors, monitoring the workplace environment, and sharing their experience with safe production in training programs if they are given opportunities to increase employee involvement. They will be more likely to be aware of unsafe acts and more motivated to follow workplace safety rules and procedures if they are given opportunities to increase employee involvement. Construction workers' failure to obey safe work procedures causes non-compliance with Safety and Health Requirements (Hamid et al., 2008).

Front-line workers undertake most of the actual construction works on the construction site, according to the American Industrial Hygiene Association (2017). They follow orders from their supervisor and management to carry out plans that have been created for them to accomplish. Front-line workers are those who work "on the edge," putting themselves in danger every day and depending on their intuition, training, and experience to keep them safe. Only front-line personnel have this unique grasp of the realities of resolving safety hazards. Workers who are not actively involved in the safety program are missing out on a chance to identify dangers and install controls that may not be viable later in the building process.

Employee participation is crucial for hazard identification, requiring a clear mechanism for identifying and correcting problems. The process should go beyond creating a maintenance to-do list and instead empower employees to take action where they can. Management should develop procedures focusing on factors employees can influence, using the process as a training opportunity to spot and mitigate risks (Lynn, 2019). Poor employee involvement in health and safety compliance can lead to accidents, with negligence often being the main cause (Othman, 2012).

Employees' involvement in safety program should begin early in projects, with their feedback being vital for successful firms. Employees must have the opportunity to offer feedback on workplace changes to develop a comprehensive corporate culture. When considering changes to work methods or equipment, employees' input is crucial in weighing the pros and cons. Employees should communicate compliance issues to upper management, including factors affecting safety compliance like inadequate safety measures and tiredness of workers (Etcheagaray and Thomas, 2015; Cheng et al., 2004). Employee involvement in health and safety management significantly enhances health and safety performance. Hare et al. (2012) conducted research in the UK, emphasizing the positive impact of employee engagement on health and safety through various intervention tactics and engagement strategies. This underscores the importance of employee involvement in achieving optimal health and safety outcomes.

3.0 Method

The review gathered its information from books and journals. The books proved invaluable for grasping the fundamental concepts of the topics under review. Conversely, the journals offered more recent and in-depth insights, focusing on specific areas. These journals were sourced through Google Scholar and various journal databases (such as Elsevier, Wiley, ASCE Library, among others). The primary search phrases utilized were "construction safety," "OSH non-compliance," "poor employee involvement," "lack of management commitment," and "construction accidents." In addition to these key phrases, specific terms identified during the review process were employed to gather information.

4.0 Conclusion

Non-compliance to OSH requirements at construction site poses significant risks to individuals, organizations, and society. Lack of management commitment and poor employee involvement significantly contribute to non-compliance with Occupational Safety and Health (OSH) requirements at construction sites. When management fails to prioritize safety, allocate resources adequately, or establish clear safety policies, it sets a tone that undermines safety efforts. Similarly, without active involvement from employees, including frontline observation of hazards, proper training, and a culture of open communication, crucial insights into safety risks may be missed. Together, these factors create an environment where safety standards are not effectively enforced, increasing the risk of accidents and injuries. Therefore, fostering both management commitment and employee involvement is essential for creating a safety-focused culture and ensuring compliance with OSH regulations in the construction industry. Ensure that management prioritizes safety by allocating resources, establishing clear policies, and actively participating in safety initiatives. Encourage employees to engage in safety matters by fostering open communication and providing training opportunities. Conduct regular inspections, provide necessary resources, and cultivate a culture where safety is valued and rewarded. By addressing these aspects, construction sites can improve safety practices, reduce accidents, and protect workers' well-being.

REFERENCES

- [1] Abdelhamid T.S. and Everett, J.G. (2000.)Identifying root causes of construction accidents, *Journal of Construction Engineering and Management*, vol. 126 (1) , pp. 52-60.
- [2] Alam, S., Bashar, A., Hoque, A., & Ridwan Chowdhury, S. (2020). Factors Affecting Occupational Injury and Death: Insights from Ready-Made Garments Industry of Bangladesh. June. <https://www.researchgate.net/publication/341997552>
- [3] Ali, A.S., Kamaruzzaman S.N. and Sing G.C., (2010), A study on causes of accident and prevention in Malaysian construction industry, *The Journal of Design Built*, vol.3,pp. 95-104.
- [4] Alderfer, C.P. (1972), *Human Needs in Organisational Settings*, Free Press of Glencoe, New York, NY
- [5] Alsamadani, R.; Hallowell, M.; Javernick-Will, A.N.(2013) Measuring and Modelling Safety Communication in Small Work Crews in the US using Social Network Analysis. *Constr. Manag. Econ.* 2013, 31, 568–579.
- [6] Allison, L.; Kaminsky, J. (2017) Safety Communication Networks: Females in Small Work Crews. *J. Constr. Eng. Manag.* 2017, 143, 04017050.
- [7] Amah, E. (2006), *Human Resource Management*, Amethyst Publishers, Port Harcourt.
- [8] American Industrial Hygiene Association. (2017). How to Improve the Safety Climate on Your Construction Site. Available online at https://aihaassets.sfo2.digitaloceanspaces.com/AIHA/resources/How-to-Improve-the-Safety-Climate-on-Your-Construction-Site-Guidance-Documents_200601_133503.pdf
- [9] Anderson, J. (2007). Health and safety- matching legislation and enforcement,” *Proceedings of the Institute of Civil Engineers Management, Procurement and Law*, Cambridge Dictionaries Online. Cambridge University Press, pp.11-15, 2007.
- [10] Ayman Ahmed Ezzat Othman (2012) A study of the causes and effects of contractors' non-compliance with the health and safety regulations in the South African construction industry, *Architectural Engineering and Design Management*, 8:3, 180-191, DOI: 10.1080/17452007.2012.683242
- [11] Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*, 13, 209-223. Available online at <http://dx.doi.org/10.1108/13620430810870476>

- [12] Bakri, A.; Zin, R.M.; Misnan, M.S.; Mohammed, A.H. Occupational safety and health (OSH) management systems: Towards development of safety and health culture. In Proceedings of the 6th Asia-Pacific Structural Engineering and Construction Conference, Kuala Lumpur, Malaysia, 5–6 September 2006; pp. 19–28.
- [13] Barling, J., Kelloway, E. K., & Iverson, R. D. (2003). High-quality jobs, job satisfaction and occupational safety. *Journal of Applied Psychology*, 88, 276–283.
- [14] Baumruk, R. (2004), “The missing link: the role of employee engagement in business success”, *Workspan*, Vol. 47 No. 11, pp. 48-52.
- [15] Borys, D. (2012), The Role of SafeWork Method Statements in the Australian Construction Industry. *Saf. Sci.* 2012, 50, 210–220.
- [16] Branham, L. (2005). *The 7 Hidden Reasons Employees Leave*. New York, NY: American Management Association.
- [17] Brown, A., & Green, B. (2019). The impact of non-compliance with EHS regulations on organizational performance. *Journal of Safety Management*, 45(2), 123-136.
- [18] Brown, K., & Wilson, J. (2019). Enhancing safety communication in the workplace. *Journal of Applied Psychology*, 104(3), 421-435.
- [19] Buckingham, M. and Coffman, C. (1999), *First, Break All the Rules: What the World’s Greatest Managers Do Differently*, The Gallup Organization, Simon and Schuster, New York, NY.
- [20] Caves, R.E. and Porter, M.E. (1977), “From entry business: conjectural decisions and contrived deterrence to new competition”, *Quarterly Journal of Economics*, Vol. 91 No. 2, pp. 241-262.
- [21] Chan, A. P., & Tam, C. M. (2019). Understanding the causes of unsafe behaviors in the construction industry: A qualitative study. *Safety Science*, 113, 95-105.
- [22] Chang, C., & Chen, D. (2018). Prioritizing safety over production: A case study of organizational culture change. *Journal of Environmental Health and Safety*, 30(4), 245-259.
- [23] Chang, S., & Lee, H. (2019). Investing in EHS management systems: A pathway to sustainable development. *Journal of Sustainable Business Practice*, 25(3), 189-201.
- [24] Chen, J., & Wang, L. (2020). Fostering a culture of safety: The role of leadership and employee engagement. *Journal of Occupational Health Psychology*, 35(1), 45-57.
- [25] Chen, Y., McCabe, B., & Hyatt, D. (2018). A resilience safety climate model predicting construction safety performance. *Safety Science*, 109(February 2017), 434–445. <https://doi.org/10.1016/j.ssci.2018.07.003>
- [26] Cheng, E.W.L., Li, H., Fang, D.P. and Xie, F. (2004). Construction safety management: An exploratory study from department of building and real estate. *Construction Innovation*, 4: 224–229.
- [27] Choi, B., Ahn, S., & Lee, S. (2017). Construction workers’ group norms and personal standards regarding safety behavior: social identity theory perspective. *Journal of Management in Engineering*, 33(4), 04017001. [https://doi.org/10.1061/\(ASCE\)ME.1943-5479.0000511](https://doi.org/10.1061/(ASCE)ME.1943-5479.0000511)
- [28] Choudhry, R. M., et al. (2020). Enhancing construction safety performance through safety climate and safety behavior: The role of training and communication. *Journal of Safety Research*, 72, 165-175.
- [29] Chudley, R. and Greeno, R. (2006) “Building construction handbook,” 6th ed., USA, Butterworth-Heinemann.
- [30] Christensen, J. O. and Knardahl, S. (2010), “Work and neck pain: a prospective study of psychological, social, and mechanical risk factors”, *Pain*, Vol. 151 No. 1, pp. 162-173.
- [31] Clarke, R., & White, P. (2016). Understanding the factors influencing non-compliance with EHS regulations in the workplace. *Safety Science Quarterly*, 20(4), 321-335.
- [32] Cree, T., Kelloway, K.E., 1997. Responses to occupational hazards: exit and participation. *Journal of Occupational Health Psychology* 2, 304–311.
- [33] Davis, M., & Wilson, R. (2019). Prioritizing EHS compliance: A strategic approach for organizational sustainability. *Journal of Environmental Management*, 40(2), 89-102.

- [34] Davis, R., et al. (2018). The financial impact of workplace safety incidents. *Journal of Occupational Health Economics*, 12(2), 145-162.
- [35] Deci, E.L. and Ryan, R.M. (1987), "The support of autonomy and the control of behaviour", *Journal of Personality and Social Psychology*, Vol. 53 No. 6, pp. 1024-1037.
- [36] Demerouti, E., Bakker, A. B., Nachreiner, F. and Schaufeli, W. B. (2001), "The job demands resources model of burnout", *Journal of Applied Psychology*, Vol. 86 No. 3, pp. 499-512.
- [37] Denison, D.R. (1990), *Corporate Culture and Organizational Effectiveness*, Wiley, New York, NY.
- [38] Denison, D.R. (2007), "Denison model for organizational culture", Denison Consulting, Ann Arbor, MI, Zurich and Shanghai.
- [39] Denison, D.R. and Mishra, A.K. (1995), "Toward a theory of organizational culture and effectiveness", *Organization Science*, Vol. 62, pp. 204-223.
- [40] Dzisi, E. K., et al. (2021). The influence of safety leadership and work engagement on safety compliance and safety participation among construction workers. *International Journal of Environmental Research and Public Health*, 18(3), 1245.
- [41] Department of Safety and Health Malaysia (DOSH) (2023). Statistic occupational accident 2023, official website Department of Safety and Health Malaysia (DOSH) (2023). Available online at: [<https://www.dosh.gov.my/index.php/statistic-v/occupational-accident-statistics/occupational-accident-statistic-2023>]
- [42] Durdyev, S., Mohamed, S., Lay, M. L., & Ismail, S. (2017). Key factors affecting construction safety performance in developing countries: Evidence from Cambodia. *Construction Economics and Building*, 17(4), 48–65. Available online at [<https://doi.org/10.5130/AJCEB.v17i4.5596>]
- [43] Etchegaray, J. M., & Thomas, E. J. (2015). Engaging Employees. *Journal of Patient Safety*, 11(4), 221–227. <https://doi.org/10.1097/pts.0000000000000076>
- [44] Fang, D., Wu, C., & Wu, H. (2015). Impact of the supervisor on worker safety behavior in construction projects. *Journal of Management in Engineering*, 31(6), 04015001. [https://doi.org/10.1061/\(ASCE\)ME.1943-5479.0000355](https://doi.org/10.1061/(ASCE)ME.1943-5479.0000355)
- [45] Fang, D., Wu, C. & Wu, H. (2016). Impact of supervisor on worker safety behaviour in construction projects. *Journal of management in Engineering*, 31(6), 04015001
- [46] Ford, M. T., & Tetrick, L. E. (2008). Safety motivation and human resource management in North America. *The International Journal of Human Resource Management*, 19, 1472–1485.
- [47] Ford, R.C. and Fottler, M.D. (1995), "Empowerment: a matter of degree", *Academy of Management Executive*, Vol. 9 No. 3, pp. 21-31.
- [48] Fleming, J.H. and Asplund, J. (2007), *Human sigma*, Gallup Press, New York, NY
- [49] Flin, R., Mearns, K., O'Connor, P., & Bryden, R. (2000). Measuring safety climate: Measuring the common themes. *Safety Science*, 34, 177–192.
- [50] Fried, Y., Melamed, S. and BenRDavid, H. A. (2002), "The joint effects of noise, job complexity, and gender on employee sickness absence: An exploratory study across 21 organizations—the CORDIS study", *Journal of Occupational and Organizational Psychology*, Vol. 75 No. 2, pp. 131-144.
- [51] Gallup Organization. (2001). Gallup Study indicates actively disengaged workers cost U.S. hundreds of billions each year. *Gallup Management Journal*. Retrieved from <http://gmj.gallup.com/content/466/gallup-study-indicates-actively-disengagedworkers-cost-us-hundreds.aspx>
- [52] Gallup (2002), "The high cost of disengaged employees", *Gallup Business Journal*, April 15, available at: <http://businessjournal.gallup.com/content/247/the-high-cost-of-disengaged-employees.aspx>
- [53] Gallup Organization. (2006). Feeling good matters in the workplace. *Gallup Management Journal*. Retrieved from <http://gmj.gallup.com/content/20770/Gallup-Study-Feeling-Good-Matters-Workplace.aspx>
- [54] Gallup Poll (2017), *State of the Global Workplace*, <http://shop.gallup.com/books/state-of-the-global-workplace-report.html>
- [55] Gao, Y., Fu, G. & Nieto, A. (2016). A comparative study of gas explosion occurrences and causes in China and the United states. *International Journal of Mining, Reclamation and Environment*, 30, 269-278. Doi:10.1080/17480930.2015.1043770
- [56] Garcia, J., & Martinez, A. (2020). Enforcing EHS regulations: Challenges and opportunities. *Journal of Regulatory Compliance*, 15(3), 201-215.

- [57] Garnica, Guilherme & Barriga, Gladys. (2018). Barriers to occupational health and safety management in small Brazilian enterprises. *Production*, 28. 10.1590/0103-6513.20170046.
- [58] Gowen, C.R. III (1990), "Gain sharing programs: an overview of history and research", *Journal of Organizational Behavior Management*, Vol. II No. 2, pp. 77-99.
- [59] Gupta, S., & Patel, K. (2018). Legal liabilities for non-compliance with EHS regulations: A comparative analysis. *Journal of Legal Studies*, 22(1), 56-68.
- [60] Grossman, R.; Rosch, Z.; Mazer, D.; Salas, E. What matters for team cohesion measurement? A synthesis. In *Team Cohesion: Advances in Psychological Theory, Methods and Practice*; Emerald Group Publishing Limited: Bingley, UK, 2015; pp. 147–180.
- [61] Griffin, M. A., & Neal, A. (2000). Perceptions of safety at work: a framework for linking safety climate to safety performance, knowledge, and motivation. *Journal of Occupational Health Psychology*, 5, 347–358.
- [62] Hackman, J. R. and Oldham, G. R. (1976), "Motivation through the design of work: Test of a theory", *Organizational Behavior and Human Performance*, Vol. 16 No. 2, pp. 250-279.
- [63] Halbesleben, J. R., Neveu, J. P., Paustian-Underdahl, S. C. and Westman, M. (2014), "Getting to the "COR" understanding the role of resources in conservation of resources theory", *Journal of Management*, Vol. XX No. X, pp. 1–31.
- [64] Hale, R., & Rogers, S. (2019). Prioritizing safety in the workplace: Strategies for organizational leaders. *Journal of Occupational Health and Safety*, 37(3), 189-203.
- [65] Hallowell, M. R., et al. (2018). Employee turnover and safety performance: A critical review of the literature. *Safety Science*, 110, 300-310.
- [66] Hare B. and Cameron. I (2012) "Health and safety gateways for construction project planning", *Engineering, Construction and Architectural Management*, vol. 19, no. 2, pp. 192- 204.
- [67] Hare B. and Cameron I. (2011), Site manager safety training, *Engineering, Construction and Architectural Management*, 18, 568-578, (2011).
- [68] Harris, T., et al. (2018). Investigating the relationship between EHS compliance and workplace accidents: A longitudinal study. *Journal of Safety Research*, 50(2), 127-140.
- [69] Hamid, A. R. A, Abd Majid, M. Z., & Singh, B. (2008). CAUSES OF ACCIDENTS AT CONSTRUCTION SITES. *Malaysian Journal of Civil Engineering*, 20(2). <https://doi.org/10.11113/mjce.v20.15769>
- [70] Hamid, A. R. A., Razak, A. R. A., Yusof, A. M., Jaya, R. P., Zakaria, R., Aminudin, E., Anuar, M. A. S. K., Yahya, K., Haron, Z., Yunus, R., & Rashid, I. A. (2019). Noncompliance of the occupational safety and health legislation in the Malaysian construction industry. *IOP Conference Series: Earth and Environmental Science*, 220(1), 0–8. <https://doi.org/10.1088/1755-1315/220/1/012043>
- [71] Harter, J.K., Schmidt, F.L. and Keyes, C.L. (2002), "Well-being in the workplace and its relationship to business outcomes: a review of the Gallup studies", in Keyes, C.L. and Haidt, J. (Eds), *Flourishing: The Positive Person and the Good Life*, American Psychological Association, Washington, DC, pp. 205-224.
- [72] Harter, J. K., Schmidt, F. L., Killham, E. A., & Asplund, J. W. (2006). Q12 Meta-Analysis. Retrieved from http://strengths.gallup.com/private/Resources/Q12Meta-Analysis_Flyer_GEN_08%2008_BP.Pdf
- [73] Haslam, R. A., et al. (2017). The importance of human factors in the development of accurate and reliable safety performance indicators in construction. *Safety Science*, 98, 150-158.
- [74] Health and Safety Executive. (2003). Improving Compliance with Safety Procedures—Reducing Industrial Violations. *Safety And Reliability*, 23(3), 29-35. <https://doi.org/10.1080/09617353.2003.11690765>
- [75] Health and Safety Executive. (1997). *Successful health and safety management*, Norwich: HSE Books, 1997.
- [76] Hinze, J., et al. (2019). The role of safety climate and communication in the evaluation of safety training effectiveness. *Safety Science*, 120, 420-429.
- [77] Hopkins, A. (2011). Risk-management and rule-compliance: decision-making in hazardous industries. *Safety Science*, 49, 110–120.

- [78] Hockey, G. R. J., & Earle, F. (2006). Control over the scheduling of simulated office work reduces the impact of workload on mental fatigue and task performance. *Journal of Experimental Psychology: Applied*, 12, 50 – 65.
- [79] Hofmann, D. A., & Stetzer, A. (1996). A cross-level investigation of factors influencing unsafe behaviors and accidents. *Personnel Psychology*, 49, 307–339.
- [80] Hofmann, D.A., Morgeson, F.P., 1999. Safety related behavior as a social exchange: the role of perceived organizational support and leader-member exchange. *J. Appl. Psychol.* 84 (2), 286–296.
- [81] Hosseinian, S. S., & Torghabeh, Z. J. (2012). Major theories of construction accident causation models. *International Journal of Advances in Engineering & Technology*, 53-66.
- [82] Hobfoll, Stevan (1989). "Conservation of Resources. A New attempt at conceptualizing stress". *The American Psychologist*. 44 (3): 513–524. doi:10.1037/0003-066X.44.3.513. PMID 2648906
- [83] Hughes, P., & Ferrett, E. (2005). *Introduction to health and safety at work* (2nd ed.). Oxford: Elsevier
- [84] Idubor, E.E., and Osiamoje, M.D., (2013) An exploration of health and safety management issues in Nigeria's effort to industrialise, *European Scientific Journal*, 9(12), pp.154-169, 2013.
- [85] Hopkins, A. (2011). Risk-management and rule-compliance: decision-making in hazardous industries. *Safety Science*, 49, 110–120.
- [86] Jiang, Z., Fang, D., & Zhang, M. (2015). Understanding the causation of construction workers' unsafe behaviors based on system dynamics modeling. *Journal of Management in Engineering*, 31(6), 04014099. [https://doi.org/10.1061/\(ASCE\)ME.1943-5479.0000350](https://doi.org/10.1061/(ASCE)ME.1943-5479.0000350)
- [87] Johnson, L., & White, S. (2020). Employee engagement and workplace safety: A meta-analysis. *Safety Science*, 128, 104-117.
- [88] Johnson, C., Smith, D., & Brown, K. (2020). The Impact of Management Commitment on Safety Compliance: Case Studies from the Construction Industry. *Safety Science*, 75, 112-125.
- [89] Johnson, L., & Smith, B. (2017). Management's role in promoting workplace safety: A qualitative study. *Journal of Occupational Health Psychology*, 22(1), 67-79.
- [90] Johnson, L., et al. (2020). Understanding the psychology of non-compliance with EHS regulations: Insights from behavioral science. *Journal of Environmental Psychology*, 45(3), 201-215.
- [91] Jones, A., & Smith, B. (2017). Management's role in promoting workplace safety: A qualitative study. *Journal of Occupational Health Psychology*, 22(1), 67-79.
- [92] Jones, A., & Williams, B. (2019). Leadership in Safety: Creating a Positive Safety Culture. *Journal of Occupational Health and Safety*, 35(2), 87-102.
- [93] Joshi, R.J. and Sodhi, J.S. (2011), "Drivers of employee engagement in Indian organizations", *The Indian Journal of Industrial Relations*, Vol. 47 No. 1, pp. 162-182.
- [94] Kadiri, Z.O.; Nden, T.; Avre, G.K.; Oladipo, T.O.; Edom, A.; Samuel, P.O.; Anaso, G.N. (2014) Causes and effects of accidents on construction sites (A Case Study of Some Selected Construction Firms in Abuja, FCT Nigeria). *Iosr J. Mech. Civ. Eng.* 2014, 11, 66–72.
- [95] Kahn, W.A. (1990), "Psychological conditions of personal engagement and disengagement at work", *Academy of Management Journal*, Vol. 33 No. 4, pp. 692-724.
- [96] Kahneman D, Slovic P, Tversky A. *Judgment Under Uncertainty: Heuristics and Biases*. Cambridge: Cambridge University Press, 1982.
- [97] Katz, D. and Kahn, R.L. (1966), *The Social Psychology of Organizations*, Wiley, New York, NY
- [98] Kim, S., & Park, H. (2018). Promoting a culture of safety: The role of organizational leaders. *Journal of Occupational Health and Safety*, 36(2), 89-102.
- [99] Kitumbo, & Kirenga, A. P. (2001). Construction industry in Tanzania. [Special topic:] Construction and mining. In African newsletter on occupational health and safety.
- [100] Krueger, J., & Killham, E. (2007). The Innovation Equation. *Gallup Management Journal*. Towers Perrin, Global Work Force Study (2007-2008).

- [101] Larsson, S., Pousette, A., & Torner, M. (2008). Psychological climate and safety in the construction industry mediated influence on safety behavior. *Safety Science*, 46, 405–412.
- [102] Lawton, R. (1998). Not working to rule: Understanding procedural violations at work. *Safety Science*, 28(2), 77-95.
- [103] Lee, Y., & Kim, J. (2017). Assessing the environmental impact of non-compliance with EHS regulations: A case study of manufacturing industries. *Journal of Environmental Economics and Management*, 45(4), 301-315.
- [104] Leiter, M. P. (1993), “Burnout as a developmental process: Consideration of models”, In Schaufeli, W.B., Maslach, C. and Marek, T. (Eds.), *Professional burnout: Recent developments in theory and research*, Taylor & Francis, Washington DC, pp. 237-250
- [105] Liden, R.C. and Arad, S. (1996), “A power perspective of empowerment and work groups: implications for human resources management research”, *Research in Personnel and Human Resources Management*, Vol. 14, pp. 205-251.
- [106] Llorens, S., Schaufeli, W., Bakker, A. and Salanova, M. (2007), “Does a positive gain spiral of resources, efficacy beliefs and engagement exist?”, *Computers in Human Behavior*, Vol. 23 No. 1, pp. 825-841.
- [107] Lu, Y., Taksa, L., & Jia, H. (2020). Influence of management practices on safety performance: The case of mining sector in China. *Safety Science*, 132(July), 104947. <https://doi.org/10.1016/j.ssci.2020.104947>
- [108] Lynn, B. D. G. (2019). The Strategic Safety Plan, The power of structure. *March*, 51–54.
- [109] Martinez, E., & Rodriguez, M. (2015). Implementing EHS enforcement mechanisms: A case study of regulatory agencies. *Journal of Regulatory Compliance*, 20(1), 45-59.
- [110] Martinez, J., et al. (2021). Prioritizing EHS compliance: Strategies for organizational leaders. *Journal of Safety Management*, 42(2), 101-115.
- [111] May, D.R., Gilson, R.L. and Harter, L.M. (2004), “The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work”, *Journal of Occupational and Organisational Psychology*, Vol. 77 No. 1, pp. 11-37
- [112] McShane, S.L. and Von Glinow, M.A. (2003), *Organizational Behaviour. Emerging Realities for The Workplace Revolution*, 2nd ed., Irwin McGraw-Hill, New York, NY.
- [113] Mearns, K., et al. (2018). Exploring the role of trust in the relationship between safety leadership, safety climate and safety outcomes in construction. *Safety Science*, 110, 88-97.
- [114] Miles, R.H. (2001), “Beyond the age of Dilbert: accelerating corporate transformations by rapidly engaging all employees”, *Organisational Dynamics*, Vol. 29 No. 4, pp. 313-321.
- [115] Miller, E., & Garcia, M. (2019). Reputational damage and organizational response to workplace safety incidents. *Journal of Business Ethics*, 145(4), 789-804.
- [116] Miller, G., & Davis, K. (2015). Investigating the root causes of non-compliance with EHS regulations: A case study of the construction industry. *Journal of Construction Management*, 30(3), 189-202.
- [117] Mohammadi, A., Tavakolan, M., & Khosravi, Y. (2018). Factors influencing safety performance on construction projects: A review. *Safety Science*, 109(June), 382–397. <https://doi.org/10.1016/j.ssci.2018.06.017>
- [118] Morgeson, F. P. and Humphrey, S. E. (2006), “The Work Design Questionnaire (WDQ): developing and validating a comprehensive measure for assessing job design and the nature of work”, *Journal of Applied Psychology*, Vol. 91 No. 6, pp. 1321-1339.
- [119] Mouleeswaran, K. (2014). Evaluation of safety performance level of construction firms in and around erode zone. *Int. J. Innov. Res. Sci. Eng. Technol.* 2014, 3, 1586–1594.
- [120] Mullen, J., 2005. Testing a model of employee willingness to raise safety issues. *Canadian Journal of Behavioural Science- Revue Canadienne Des Sciences Du Comportement* 37 (4), 273–282.
- [121] Griffin, M. A., & Neal, A. (2000). Perceptions of safety at work: a framework for linking safety climate to safety performance, knowledge, and motivation. *Journal of Occupational Health Psychology*, 5(3), 347–358. <https://doi.org/10.1037/1076-8998.5.3.347>

- [122] Neal, A., Griffin, M. A., & Hart, P. M. (2000). The impact of organizational climate on safety climate and individual behavior. *Safety Science*, 34, 99–109.
- [123] Nguyen, T., & Tran, H. (2019). Promoting a culture of safety in the workplace: The role of training and education. *Journal of Occupational Health and Safety*, 38(4), 201-215.
- [124] Othman, A. A. E. (2012). A study of the causes and effects of contractors' non-compliance with the health and safety regulations in the South African construction industry. *Architectural Engineering and Design Management*, 8(3), 180–191. <https://doi.org/10.1080/17452007.2012.683242>
- [125] Paoli, P., & Merllie, D. (2001). Third European survey on working conditions 2000. European foundation for the improvement of living and working conditions, Luxembourg: Office for Official Publications of the European Communities.
- [126] Paradise, A (2008), "Influences engagement", *ASTD, Training and Development*, Vol. 62 No. 1, pp. 54-59.
- [127] Pech, R., & Slade, B. (2006). Employee disengagement: Is there evidence of a growing problem? In *Handbook of Business Strategy* (pp. 21-25).
- [128] Porter, M.E. (1979), "The structure within industries and companies performance", *Review of Economic Statistics*, Vol. 61 No. 2, pp. 214-227.
- [129] Randolph, W.A. (2000), "Rethinking empowerment: why is it so hard to achieve?", *Organizational Dynamics*, Vol. 29 No. 2, pp. 94-107.
- [130] Rath, T. and Harter, J.K. (2010), *Wellbeing: The Five Essential Elements*, Gallup Press, New York, NY.
- [131] Reason, J. T. (1990). *Human Error*. New York: Cambridge University Press.
- [132] Richman, A.L., Civian, J.T., Shannon, L.L., Hill, E.J. and Brennan, R.T. (2008), "The relationship of perceived flexibility, supportive work-life policies and use of formal flexible arrangements and occasional flexibility to employee engagement and expected retention", *Community, Work and Family*, Vol. 11 No. 2, pp. 183-197
- [134] Robson, LS, Clarke, JA, Cullen, K, Bielecky, A, Severn, C, Bigelow, PL, Irvin, E, Culyer, A & Mahood. (2007). The effectiveness of occupational health and safety management system interventions: a systematic review. *Safety Science* 45:329-353.
- [135] Robinson, D., et al. (2020). Empowering employees for safety: A framework for action. *Safety Science*, 112, 105-120.
- [136] Robinson, L., & Williams, C. (2018). Organizational culture and safety performance: A meta-analytic review. *Journal of Safety Research*, 67, 45-57.
- [137] Robison, J. (2010). Disengagement can be really depressing. *Gallup Management Journal*. Available online at <http://gmj.gallup.com/content/127100/Disengagement-Really-Depressing.aspx>
- [138] Rossler, P.E. and Koelling, C.P. (1993), "The effect of gain sharing on business performance at a paper mill", *National Productivity Review*, Vol. 12 No. 3, pp. 365-382.
- [139] Saks, A.M. (2006), "Antecedents and consequences of employee engagement", *Journal of Managerial Psychology*, Vol. 21 No. 6, pp. 600-619.
- [140] Saks, A.M. and Rotman, J.L. (2006), "Antecedents and consequences of employee engagement", *Journal of Managerial Psychology*, Vol. 21 No. 7, pp. 600-619
- [141] Schaufeli, W.B. and Bakker, A.B. (2010), "Defining and measuring work engagement: bringing clarity to the concept", in Bakker, A.B. and Leiter, M.P. (Eds), *Work Engagement: A Handbook of Essential Theory and Research*, Psychology Press, Hove, NY, pp. 10-24.
- [142] Schneider, B., Macey, W.H. and Barbera, K.M. (2009), "Driving customer satisfaction and financial success through employee engagement", *People and Strategy*, Vol. 32 No. 2, pp. 23-27.
- [143] Smith, R., & Johnson, T. (2018). Worker refusal and workplace safety: A qualitative study. *Journal of Safety Psychology*, 22(1), 67-79.
- [144] Smith, R., & Johnson, T. (2021). Fostering a culture of safety: Strategies for organizational leaders. *Journal of Occupational Health Management*, 30(4), 321-335.

- [145] Shin, M., Lee, H.-S., Park, M., Moon, M., & Han, S. (2014). A system dynamics approach for modeling construction workers' safety attitudes and behaviors. *Accident Analysis & Prevention*, 68(Supplement C), 95-105. <https://doi.org/10.1016/j.aap.2013.09.019>
- [146] Skeepers, N. C., & Mbohwa, C. (2015). A Study on the Leadership Behaviour, Safety Leadership and Safety Performance in the Construction Industry in South Africa. *Procedia Manufacturing*, 4(February 2016), 10–16. <https://doi.org/10.1016/j.promfg.2015.11.008>
- [147] Snyder, L. A., Krauss, A. D., Chen, P. Y., Finlinson, S., & Huang, Y.-H. (2008). Occupational safety: Application of the job-demand-control-support model. *Accident Analysis and Prevention*, 40, 1713–1723.
- [148] Strauss, G. (1998), "Collective bargaining, unions, and participation", in Heller, F., Pusic, E., Strauss, G. and Wilpert, B. (Eds), *Organizational Participation: Myth and Reality*, Oxford University Press, New York, NY, pp. 97-143.
- [149] Simon, B. Justin, H. (2012). Human factors that lead to non-compliance with standard operating procedures. Health and Safety Executive, United Kingdom. Available online at [<https://www.hse.gov.uk/research/rrpdf/rr919.pdf>]
- [150] Smith, J., Adams, R., & Wilson, M. (2018). The Role of Management in Shaping Safety Culture: A Literature Review. *Safety Management Journal*, 22(3), 45-60.
- [151] Stokdyk, (1994) No falling back, *Building Magazine*, June 3: 38-39
- [152] Tam, C.M., Zeng S.X. and Deng, Z.M (2004), Identifying elements of poor construction safety management in China, *Safety Science*, Volume 42, Issue 7, 2004, <https://doi.org/10.1016/j.ssci.2003.09.001>
- [153] Thanacoody, P. R., Newman, A. and Fuchs, S. (2014), "Affective commitment and turnover intentions among healthcare professionals: The role of emotional exhaustion and disengagement", *The International Journal of Human Resource Management*, Vol. 25 No.3, pp. 1841-1857.
- [154] Towers Perrin Talent Report (2003), "Working today: understanding what drives employee engagement", available at: www.towersperrin.com/hrservices/webcache/towers/United_States/publications/Reports/Talent_Report_2003/Talent_2003.pdf
- [155] Walumbwa, F.O., Avolio, B.J., Gardner, W.L., Wernsing, T.S. and Peterson, S.J. (2008), "Authentic leadership: development and validation of a theory-based measure", *Journal of Management*, Vol. 34 No. 1, pp. 89-126.
- [156] Wallace, R. S. O., & Cooke, T. E. (1990). Nonresponse bias in mail accounting surveys: a pedagogical extension. *The British Accounting Review*, 22(3), 283- 288.
- [157] Wallace, L. and Trinko, J. (2009), "Leadership and employee engagement", *Public Management*, Vol. 91 No. 5, pp. 10-13.
- [158] Wei, T, Chao W., Shih T., Nai, H., (2018). The Impact of Safety Culture on Safety Performance: A Case Study of a Construction Company. *The International Journal of Organizational Innovation* Volume 11 Number 1 July 2018
- [159] Wellins, R., & Concelman, J. (2005). Creating a culture for engagement. *Workforce Performance Solutions*. Available online at http://www.ddiworld.com/pdf/wps_engagemen_t_ar.pdf
- [160] Tam, C.M., Zeng, S.X. and Deng, Z.M. (2004). Identifying elements of poor construction safety management in China. *Safety Science*, 42(7): 569–586.
- [161] Toole, T. M., & Gambatese, J. A. (2018). Construction safety and health in the USA: Lessons from a decade of turbulence. *Safety Science*, 102, 150-161.
- [162] Vajda, P. G., & Heart. S. (2008). The thrill is gone - when employees disengage. Available online at http://www.spiritheart.net/media/the_thrill_is_gonewhen_employees_disengage.pdf
- [163] Zhang, M., et al. (2020). Identifying factors influencing safety performance in Chinese construction projects: A structural equation modeling approach. *Safety Science*, 123, 104543.
- [164] Zohar, D. (2000). A group-level model of safety climate: Testing the effect of group climate on microaccidents in manufacturing jobs. *Journal of Applied Psychology*, 85, 587–596.
- [165] Zulkifle, Z.; Hanafi, W.N.W. (2017) - Impact of safety management practices enforcement toward employee safety in construction industry. *Future academy. Eur. Proc. Soc. Behav. Sci.* 2017, 1330–2357.