

*Original Research Article*

**EMPLOYEES' COMPLYING WITH OCCUPATIONAL HEALTH AND SAFETY RULES: A CASE STUDY IN TIRE MANUFACTURING FIRM IN SRI LANKA**

**Abstract**

**Purpose:** Employee disengagement and a lack of participation in establishing a safe and healthy workplace are bitter realities of the modern workplace. In this context, this study aims to explore how employees' complying with the health and safety rules and regulations established by the selected tire manufacturing firm of Sri Lanka.

**Method:** A qualitative research approach was applied. A well-known Sri Lankan organization in tire manufacturing industry was used as the research setting for the purpose of data generation. Data generated by using semi-structured interview technique and analyzed based on thematic analysis. Data have collected from the sample of one managerial employee and five factory workers.

**Findings:** It is identified that the main reason for recurrent workplace accidents in this company is none other than the non-adherence to the health and safety rules and regulations by the employees. From the exploratory findings made through the three main factors of work environment, employee attitudes and management of the organization. As the main reasons for non-compliance of employees to the rules and regulations related to occupational health and safety identified as; employee carelessness, using quick methods deviating from standard procedure and discomfort in using personal protective equipment.

**Research Implications:** The outcomes of this study will be more useful for the selected company to reduce industrial accidents and to create a safe working environment by eliminating the reasons for non-adherence. It will boost the employee satisfaction and through that, the company can increase the productivity and performance. The findings of this study can also be used as a starting point by other businesses in the same sector for their inquiries regarding this topic.

**Future research Suggestions:** Identified factors could be developed as a framework when applying quantitative approach in future research.

**Keywords:** *Occupational health and safety, Workplace hazards, Tire manufacturing, Employee non-adherence, Personnel protective equipment*

**Introduction**

In postindustrial societies, employees are considered as the important resource in the workplace since they make other resources working (George and George, 2020). With the emerge of labour forces demand and labour unions' requirements, occupational health and safety of workers has been confronted for numerous changes and improvements for decades (Pandeya et al, 2021). Employee health, or complete health of all work, is defined by the international labor union as the promotion and maintenance of the highest level of physical, mental, and social well-being of workers in all occupations (Jilcha and Kitaw, 2017). Moreover, occupational health goes beyond

prevention of illness and injuries and move into the area of promotion of health (Yanar et al., 2019).

Considering the transformation that has taken place in the industry field so far with the industrial revolution, it is apparent that the manufacturing industry is the priority industry, which is exposed to immeasurable risky situations. It appears that the manufacturing industry is the priority industry that is exposed to immeasurable risks related to occupational health and safety (Ghobakhloo, 2014). To prevent workplace hazard, the manufacturing plant should be a safe and cautious place for employees (Khandelwal et al., 2020). It is the responsibility of management and factory workers to take necessary steps in the process of creating a safe workplace (Heikkinen et al., 2006).

Most recent incidents, which happened in Sri Lanka that drew public attention towards occupational health and safety, are unfortunate deaths of five Horana factory workers and dozens of workers being hospitalized due to a gas leak at a garment factory at Ja-Ela (Samath, 2018). In Sri Lanka more than four thousands of workplace accidents reported every year and accidents of a minor nature leave unreported by workplaces to stay away from legal actions or public attention (Chathurangani&Dharmawansa, 2020). Unfortunately, this is just the tip of the iceberg and does not reflect the actual figures of industrial accidents. Many regulations currently in force in Sri Lanka such as Workmen's Compensation Ordinance, No. 19 of 1934, Factories Ordinance, No. 45 of 1942, Employment of Women and Young Children Act, No. 47 of 1956 always regulate the employer's contribution in building a safe and healthy work environment. The harsh reality in today's workplace is that employees are disengaged in creating a healthy and safe workplace (Rae & Provan, 2019), leading accidents, omissions and risks in the workplace. As such, employee participation in creating a great workplace found to be very useful, but the main problem in today's world is that employees are abandoning their responsibility in complying with the guidance and procedures on safety and health at the workplace (Senavirathne&Kularathne, 2020). All these are leading to the continuous growth of work place accidents (Arachchige et al., 2019). Thus, there is a vital requirement to investigate why employees are risking their lives while not adhering to health and safety rules and regulations established by the organization.

To address that research problem, the study used case study approach and specifically selected a leading tire manufacturing company in Sri Lanka. The selected tire manufacturing company is the industry leader in Sri Lanka when it comes to retreading tires, offering services for everything from big industrial tires to three-wheeler tires. At present, the company occupies a total workforce of five hundred employees who work six days per week divided into two shifts. In tire manufacturing sector, nearly 300,000 employees are directly and indirectly employed and it is ranked in the top ten of industries with the highest general accidents incidence rate and highest permanent incapacity accidents incidence recorded per year (Ceylan et al., 2022). Moreover, there is a very high risk in the rubber related manufacturing industry [such as tire manufacturing] and the negligence of the employees towards the health regulations of the rubber

industry has contributed to the continuous growth of accidents (Arachchige et al., 2019). By being inspired with all the above particulars, the phenomena the study attempt to explore how employees' complying with the health and safety rules and regulations established by the company. Align with the research question; the study intends to examine the attitudes of factory workers towards the occupational health and safety practices in the selected tire manufacturing company and to investigate the reasons for adherence or non-adherence of the occupational health and safety rules and regulations in the company by factory workers.

## **Literature Review**

### ***Occupational Health and Safety***

One of a person's life's most crucial parts is their health. Abraham Maslow introduced the Maslow's hierarchy of needs theory in which he represented the human needs as a pyramid structure (Jerome, 2013). The second layer of the pyramid is safety needs that means once a person's physiological needs like food, water, clothes, etc. are relatively satisfied, their safety needs take precedence and dominate behavior. These include shelter, job security, Safety against accidents and injury (Cherry, 2018). Health is not just the absence of disease; it also refers to a condition of whole physical, mental, and social well-being and the capacity to lead a fulfilling life on both a social and economic level (Armstrong, 2009). According to Aswathappa (2005), safety is the absence of any possibility of harm or loss.

Work and health are fundamental human rights, and several countries emphasize the significance of both. For example, health and work are highlighted in the 'Universal Declaration of Human Right' (General Assembly of the United Nations, 1948 as cited in George & George, 2020). Everyone has the right to work, to a free choice of job, to fair and favorable working conditions, and to protection from unemployment, according to Article 23 (1) of the Universal Declaration of Human Rights. Additionally, according to Article 25 (1), everyone has the right to a level of living that is sufficient for their own health and the welfare of their families. In order to survive in such background, almost all the work organizations practice occupational health and safety as their first and foremost concern.

Protecting the welfare, health, and safety of those who are employed, or working is the focus of the field of occupational health and safety. This multidisciplinary subject involves physiology, ergonomics, physics, chemistry, technology, economics, etc. Farrokhi et al., (2019) identified the health and safety as the everyday concern of everyone at work. The goals of occupational safety and health programs include maintaining a safe and healthy work environment. Coworkers, family members, employers, clients, and a host of other people who can be impacted by the employment environment may also be protected under occupational safety and health programs (Armstrong, 2009).

Manufacturing industry faces several regulations due to the high exposure of workers to the workplace hazards. These legislations related to health and safety will provide guideline to

protect of people at workplace. The 1942 Factories Ordinance, No. 45, contains measures for the welfare, health, and safety of those who work in factories and other establishments. Workers who sustain injuries while performing their jobs are entitled to compensation under the Workmen's Compensation Ordinance, No. 19 of 1934. Additionally, the Employment of Women and Young Children Act, No. 47 of 1956 and the Shop and Office Employee Act, No. 19 of 1954 both apply to occupational health and safety (Jonathan, 2016).

A safe working environment reduces indirect costs such as lost wages, insurance premiums, and legal fees. Employers should anticipate a decrease in fatalities, injuries, and diseases by making investments in workplace safety and health. Additionally, companies frequently discover that adjustments made to enhance workplace safety and health can significantly enhance the productivity and financial success of their organization (Yee & AL-Rejal, 2016).

#### ***Adhering to occupational health and safety practices***

Employee disengagement and a lack of participation in establishing a safe and healthy workplace are bitter realities of the modern workplace. Henrich's Domino Theory (Dejoy, 1996) claimed that 88% accident and injuries in work places are occurred as result of unsafe action. The theory further demonstrated that improving working condition of the production premises can overcome accident and injuries by 90% and human resource management practices of rules and regulation, training, reward, awareness, safety inspection, employees' participation and other safety program play key role in adhering to the health and safety practices. The theory further emphasized that employee belief, attitude, and expectation impact on 20% of various reactions of health and safety threats or issues of employees. As Weinstein mentioned, employees are estimating dangerousness of the risk, accident, and hazard in the workplace and compare cost and benefit of actions with seriousness of workplace. After that they take various actions to minimize expected negative outcome and maximize expected outcome.

Acknowledging the Henrich's Domino theory and Ferrell's human factor model, Garcia et al. (2007) highlighted that the work environment, employee attitudes and management of the organization are key factors to compliance to the safety and health practices in an organization. The office environment in the post-industrial age is viewed as a combination of organizational and physical variables, and both should be the focus of attention and actions. Accordingly, organizational hazards are becoming more significant in many organizations while physical surroundings are less demanding and dangerous than they once were. Organizational considerations primarily affect how work is designed, managed, and organized. Employees feel their job demands are reasonable and have a good attitude toward organizations if they are provided with a healthy work environment. They are then modified to comply with occupational health and safety laws (Yusuf et al., 2012). Hajmohammad & Vachon (2014) claimed that companies with a strong safety culture where management cares about the health and safety of workers and where staff members are empowered to take part in safety-related activities are more likely to achieve favorable financial, environmental, and safety outcomes.

The importance of employees and their attitudes has recently come to light, which has prompted several studies to examine how people behave at work. Employee attitudes and belief are impact on employee self-personal protective behavior and compliance or non-compliance health and safety rules which established by the organization. Employees who are being working for a long period are overconfident about themselves as experts. Employees that are overconfident tend to underestimate the hazards they confront (Carabelli, 2017). When it comes to safety and health, management commitment is described as consistently demonstrating a favorable and supportive attitude toward their employees' perceptions of workplace safety (Taufek et al., 2016). The managers' lack of support has had a significant impact on employees' failure to follow health and safety regulations (Sugiono et al., 2020). The supervisory responsibility is to instruct and train workers in safe work procedures according to health and safety rules, and then they can identify the workers with the problems, which could affect safety at workplace (Chen et al., 2021). Additionally, supervisors must enforce organizational health and safety policies when addressing harmful behaviors and situations at work. It is the job of supervisors to make sure that tools and materials are handled, stored, and maintained correctly. They should always create health and safety policies and look for potential hazards at work. Negligent employee is a liability to a company since their negligent behaviors ultimately create losses to the company. Additionally, it is the duty of the employer to stop any improper behavior that could endanger the wellbeing, health, or safety of their employees (Sorrels & Ostrom, 2016).

It would appear that the employers and employees share responsibility for disengagement in occupational health and safety procedures. However, there is no enough located in Sri Lankan context with regard to the compliance of occupational health and safety practices by manufacturing workers though it reported more than four thousands of workplace accidents every year (Chathurangani&Dharmawansa, 2020). Therefore, even though occupational health and safety is seen as a key subject in Sri Lankan manufacturing organizations, there is an empirical silence that needs to be broken in the Sri Lankan context.

### **Methodology**

As per the research questions established, the study used phenomenological qualitative research approach, followed with inductive research approach (Saunders *et al.*, 2009). The qualitative approach was suitable since it allows describing experiences of the participants through formal or informal interviews (Creswell, 2013) and it facilitates the researchers to link to the phenomena under investigation. A purposive sample under non-probability sampling technique was employed to select desired sample of the study. The study was carried out with both management and non-managerial level employees in the selected tire manufacturing company. After getting approval from the top-management of the company under aerated conditions, authors were allowed to interview one managerial employee and five non-managerial employees (factory workers) representing various working sections who have the ability and willingness to endow with information in terms of knowledge or experience. Participation in this study was voluntary.

One of the most delicate subjects is occupational health and safety, which is best handled by asking definite and direct questions. It's critical to be on the lookout for indicators of discomfort and, if they are displayed, to ask the participant if they would want to continue the interview or offer to end it. As a result, participants were given the opportunity to ask questions about their doubts whenever they wished, and it was made clear that they were allowed to leave the interview at any time if they felt uncomfortable. Before conducting the interviews, the authors had an opportunity to observe the production process in order to get the idea about health and safety practices implement in the company.

The process of data collection was performed through open-ended semi-structured interviews. All interview conversations were digitally recorded with the consent of the participants. All the interviews were carried out in Sinhala language by considering the convenience of research participants to express their ideas, experiences, and inner feelings. The first few questions were asked to develop a sound relationship with the research participants and to get an idea about their job role. Then asked questions, framing to the interview guide by allowing research participants to talk freely about their own experiences relating to the occupational health and safety. While they expressed their views, few questions were raised to get a clear understanding and more background details.

Content analysis was used as the data analysis method. Content analysis is a systematic coding and categorizing approach used for exploring large amounts of textual information unobtrusively to determine trends and patterns of words used, their frequency, their relationships, and the structures and discourses of communication (Gbrich, 2007). In the preparation state, the authors transcribed the interview and obtain the sense of the whole through reading the transcripts several times. In organizing phase in content analysis, two authors independently coded the interview data, and afterwards shared and agreed the coding which further improved the inter-reader agreement and reliability (LeVasseur, 2003). Next, the codes were collected under potential subcategories, comparing the emerged codes and clustered together (Clarke & Braun, 2017). The final stage of data analysis is related to reporting the result of the previous stages. In reporting, content analysis uses a descriptive approach in both coding of the data and its interpretation of quantitative counts of the codes. Thus, it is possible to analyse data qualitatively and at the same time quantify the data. In summary, we examined narrative materials from interviews by breaking the text into relatively small units of content and submitting them to descriptive treatment.

## Findings and Discussions

The interviewees' profile details are shown in Table 1.

**Table 1: Interviewees' profile**

Code	Age	Section and Designation	Work	Marital	Experience
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			experience in Designation	Status	in work place accidents
M1	33	Human Resource Department – Manager in occupational health and safety	5 years	Married	5 incidents inquired
E1	36	Mixing Section – Factory Worker	14 years	Married	10 incidents faced
E2	32	Quality Section - Factory Worker	15 years	Married	8 incidents faced
E3	34	Mill Section – Factory Worker	10 years	Married	4 incidents faced
E4	36	Transportation Section–Forklift Driver	14 years	Married	3 incidents faced
E5	35	Press Section - Factory Worker	10 years	Married	8 incidents faced

#### **Available healthy and safe working practices**

The study first examined the available healthy and safe working practices in the firm. The selected company gives their precedence on this subject hence it is a manufacturing plant where occupational health and safety should be the alarming area. As the employees of a tire manufacturing company, the employees certainly expose to workplace risks and hazards in their daily operations. The manager (M1) further explained about on the possibility of hazards.

*Employees who are working with the machines are highly exposed to the accidents. Employees, who are working with chemicals, could suffer from chronic diseases. Most of the accidents occur while working with the massive machines in the plant.*

There are six main work premises in this tire manufacturing plant where factory workers are providing hard labor. They are mixing section, quality section, mill, press, transportation section and boiler. It was observed that the management exercises various health and safety measures in order to uphold the workplace as an inimitable place to work. In the firm, hard labor is extremely using for vigorous or high intensity activities such as tire handling, chemical mixing, transporting, handling mill machines and press machines, etc. As such, the firm follows a special training procedure for employees before placing them on the job. In accordance with Section 26 of the Factories Ordinance, No. 45 of 1942, a factory worker is not permitted to operate a machine unless he has received complete training regarding the risks associated with the machine and the safety measures that must be taken. As M1 mentioned, trainee should also receive adequate instruction in operating the machine while being supervised by someone with in-depth understanding and experience of it. Other than the basic trainings, company provides different types of trainings like first aid training, fire escape training, chemical handling trainings and trainings on machines handling in order to equip employees with the adequate knowledge on workplace health and safety. The implementation of workers' safety training has been found to be impacted by organizational aspects linked to safety and health at work, including policies and

practices regarding occupational risk prevention (Sugiono et al., 2020). However, when we discussed with factory workers, they commented on their training program in a completely different way.

*After hiring, the management described us only about the job (smiling) and extra knowledge was gathered through the experienced employees.(E1)*

Maintaining suitable safety signs at the relevant times is a fantastic method for a business to ensure that their workplace is safe for employees. Safety signs can be highly beneficial in preventing diseases or accidents, and they may even provide some kind of legal defense. Section 58B (2) of Factories Ordinance, No. 45 of 1942 further explains the requirement of exhibition of notices, warning against danger in the factory premises. When we observed the factory premises, many colorful and attractive notices were seen with symbols on safety maintenance placed there. M1 commented on the use of symbols as:

*When we conduct trainings, we mostly use pictures and videos to give them a good understanding. We have to scare and force employees unless it is difficult to get their adherence (angry tone). Mmm... It is useless displaying notices, which says what to do or wear. We should use symbols to give those instructions.*

It is apparent that the management does their best to give a clear understanding about health and safety instructions, by using visual method. Even though the management of this company uses symbol-based safety warnings with an intention of providing a clear understanding on safety rules to the employees and reducing workplace accidents, effectiveness of the same is doubtful as per the comment of E2;

*There are notices displayed in the places where we should wear goggles, helmets, etc. In addition, there are warnings near the machines. We have seen these things so many times. At the beginning, we looked at them and followed them but now we even not look at them hence we already know what is in there, they are not new things to us (sarcastic tone).*

It is evident that the company displayed so many safety warnings and notices, it would be effective only for the first few days of its appearance. First, people become surprised by the novelty of its form (Garcia et al., 1999) and when it seen everyday people become insensitive about its appearance. Employees eventually become insensitive to those symbols due to the familiarity with them. So, the expected outcome of those safety warnings is diminished with the time.

Moreover, the actions have been taken to eliminate any poisonous materials or dangerous liquids that may be present in the workplace are outlined in section 32 of the Factories Ordinance, No. 45 of 1942. When mixing, toxic chemicals like silica and carbon are using which are producing high amount of carbon dioxide that pollutes the air in the factory surrounding. Therefore, employees who are exposed to such chemicals must wear a suitable breathing apparatus like masks. E3 who is an employee of mixing section commented that;

*We put many toxic chemicals, carbon and rubber sheets to the machine and mix them in order to take out a compound. Chemicals that we use are very toxic and there is a large amount of dust in the plant, which makes inconvenience when breathing (convulsive tone). Now we got used to it.*

In addition, E5 commented on the accidents and near misses when working in the press;

*The machines we use in the press got heat easily and most of the times our hands were burned due to the darkness in the press (dissatisfied voice). We carry tires manually and put them in the press machine. At one time, a tire which is weighted more than three hundred kilograms fallen onto an employee's leg and his leg was injured severely (piteous feeling).*

Finally, the company provides all suitable personnel protective equipment including respirators, safety goggles, earmuffs, safety shoes, safety helmets, shields, and overalls by measuring the risks related to each job. Company conducts monthly medical checkups for employees to confirm that they are healthy and fit. Other than that, the selected manufacturing company maintains an insurance policy, which covers all the employees without any discrimination.

Participants narrated various stories about the workplace accidents happen to their colleagues. Those experiences help employees to understand the root causes for workplace accidents. During the discussions, participants came up with the different reasons for workplace accidents. Through that, main reasons for workplace accidents that occur in this tire manufacturing firm are explained in next section.

#### ***Adhering to occupation health and safety practices***

Even though the company allocates considerable portion of the budget on creating a healthy and safe working environment, the number of workplace accidents and near misses being recorded could not be prevented. From the participants' stories, it is evident that neglecting the safety rules is the main source behind the unavoidable occupational health and safety issues occurred. The best example we have been revealed that there were number of accidents in transportation section due to overruling the existing speed limit and specified weight limit. Most of the accidents were happened when driving in an uncontrollable speed, overloading the forklift, and unloading the tires. There is a specified speed limit when driving forklifts in the premise and a specified weight limit, which can be loaded to a forklift as well as to trucks. Unfortunately, the forklift drivers are misusing the specified limits and they mean to complete their tasks as soon as quick and save time to take nap or play card games.

Eventhough, the safe working load and the speed restriction are clearly displayed on every lifting equipment; as stated in section 28 of the Factories Ordinance, forklifts accidents were regularly occurred due to heavy, unstable loads and speed driving. This example proved that the management and the factory workers have an adequate knowledge on the health and safety practices applied as well as accidents and near misses that can be occurred at their workplace.

It is reasonable to argue that all employees have obligations with regard to safety (Tidwell, 2000). However, the participants have highlighted that the overconfidence of the employees regarding their physical fitness, ability and skill results in neglecting their obligation towards healthy and safe practices. Overconfidence is the phenomena where people have more faith in

their knowledge and judgments than they do in the truth of those judgments (Hoffrage, 2004). As M1 opined, factory workers who have been working for a long period in the company think themselves as the experts.

*Newly recruited employees hesitate not to follow the health and safety rules. Nevertheless, well-experienced employees, who are being working for five to six years are overconfident. They think they are experts (smiling). (M1)*

Overconfidence in turn, makes employees underestimate the risks they face (Carabelli, 2017). This is all about the attitudes of the employees. When they feel like they are experienced and familiar with the situations, they think they are expertise in their job. When our brain got exact algorithm over a period of time people become confident about their decisions. When they do not experience bad outcome from those risky decisions, they become overconfident (Carabelli, 2017). When the things will turn out fine over period without adhering to safety rules, the next time also employees make their choice to violate the safety rules by underestimating the risks they face in the workplace.

It is further revealed that experienced employees believe that they are specialized in their assigned job role, leading to find the easiest way (short-cuts) of completing the assigned task. A shortcut is a technique or way of doing anything that is more direct, rapid, and frequently less thoroughly than by following standard process (Cormier, 2017). M1 specified that;

*Most of the accidents are occurred at the night shift during 3.00 a.m. to 5.30 a.m... there is less supervision during that time slot and employees have chances to use shortcuts to complete the task quickly.*

E4 further explained about their working experiences in transportation section;

*We must use forklifts to lift the tires and put them in the press machines. However, it is a long process. We have to wait until the forklift arrives and it wastes the time. Therefore, we always lift the tires by our hands. It is easy.*

The above comment clearly signposts that how employees are negligent with their working standards. Here, employees are attracted to finding easier ways of completing assigned jobs. They found the shortcut of lifting tires by themselves is easier and time saving than waiting for a forklift. Cormier (2017) argued that ease is not synonymous with laziness or worthlessness, this reckless behavior makes employees expose to a risk. Ignoring safety rules could result in serious consequences that would negatively affect their coworkers, their families, and themselves. Additionally, it is the duty of the employer to stop any improper behavior that could endanger the wellbeing, health, or safety of their employees (Sorrels & Ostrom, 2016).

Personal protective equipment (PPE) is gear that shields users from workplace health and safety risks (Armstrong, 2009). Safety helmets and hard hats, gloves, eye protection, bright clothes, safety shoes, and safety harnesses are a few examples of PPE. As M1 commented;

*We supplied earmuffs, safety goggles according to the job role. Employees engaging in welding should wear a shield. (Short pause) Employees are instructed to wear helmets during the*

activities like loading and unloading. Employees who are using chemicals should wear respirators. Employees who are working in painting booth should wear full-face respirators overalls. Safety shoes must be worn when entering to the plant (emphasizing).

Unfortunately, as M1 opined, workers wear the PPE only when the supervisors are nearby. When we discussed with the factory workers, it is revealed that uneasiness and discomforting of wearing PPE becomes the main reason to evading the PPEs.

*At first, company provided overalls in order to protect us from burning by rubbing against press machines. However, they were uncomfortable to us. Heat inside the press is high. Therefore, it was difficult to wear an overall due to the sweating and itching. Then we requested to change it (smiling). Now we are wearing t-shirts provided by the company. (E5)*

*Mill machines generate high level of noise and dust. So, we are provided with the earplugs, safety goggles and masks. We wear earplugs and goggles but not the mask. (Short pause) it is difficult to wear all of them, it is suffocating. We cannot even speak a word with the mask (grunting). (E2)*

Effective utilization of PPE crucially depends on correctly chosen, provided, and used (Elghmry et al., 2019). PPE must be chosen depending on the materials expected to be contacted and the actions that need to be carried out. As the participants claimed, effectiveness of the company's PPE selection process is questionable. As Hoffrage (2004) discussed, overconfidence can yield reckless behavior such as rejecting PPE and thus lead to poor performance and severe mistakes.

Supervisors frequently play a key role in influencing workplace safety by exchanging information with subordinates and by expressing their attitudes and opinions in this regard (Chen et al., 2021). It is the job of supervisors to make sure that tools and materials are handled, stored, and maintained correctly. They should always create health and safety policies and look for potential hazards at work. While analyzing the narratives of participants, especially factory workers, it is evident that the low degree of supervisory responsibility significantly contributes to employees' noncompliance with occupational health and safety regulations.

In sum, the company takes essential actions to create, improve and maintain the occupational health and safety of the employees whenever and wherever necessary. The main threat to maintain the occupational health and safety is non-adherence of employees towards the implemented health and safety rules and regulations. As we analysed, experienced workers who have been employed by the company for a long time have a tendency to disregard health and safety laws and regulations. Favoring shortcuts and unstructured methods to perform operations is also a major reason for neglecting the health and safety rules and regulations in work environment. Due to the discomfort of PPEs, workers are reluctant to wear PPEs even they know the risk of evading the PPEs. Greater levels of injury risk, higher injury occurrences, and poorer levels of employee satisfaction with the organization are all correlated with lower levels of supervisor safety support.

### **Implications and conclusion**

Considering the workplace, workplace is defined as the setting in which workers carry out their duties on a daily basis (Sugiono et al., 2020). Each employee has three expectations for the workplace environment. The first necessity is to establish a secure workplace free from any threats. The second is to provide a positive work environment that promotes employees' physical, social, and emotional wellness. Finally, workers anticipate that their firm will offer wellness options so they can live a healthy life (Armstrong, 2009). Therefore, occupational health and safety has come into surface as a major concern of the working environment. Employees are more preferring to work in comfort physical environment which are absence of dangerous or troublesome (Yusuf et al., 2012). As literature and the findings of the study emphasized, a lack of information, training, supervision, and commitment to the application of occupational health and safety norms and regulations all have an impact on workplace accidents (Sugiono et al., 2020). Both management and employees are responsible for a healthy workplace. The supervisory responsibility is to instruct and train workers in safe work procedures according to health and safety rules, and then they can identify the workers with the problems, which could affect safety at workplace (Chen et al., 2021; Shier et al., 2021). The supervisors must enforce organizational health and safety policies when addressing harmful behaviors and situations at work. It is the job of supervisors to make sure that tools and materials are handled, stored, and maintained correctly. They should always create health and safety policies and look for potential hazards at work.

Experienced industrial workers who have been employed by the company for a long time have a tendency to disregard health and safety laws and regulations. Familiarity with the work and work environment encourages them to circumvent safety standards. Overconfidence in their experience and knowledge of the work makes employees think like they are experts, and nothing will happen to them if they do not follow safety rules. Unfounded self-confidence can result in careless behavior, which can therefore have a negative impact on performance and cause serious errors (Hoffrage, 2004). This is further in line with the favoring shortcuts and unstructured methods to perform operations; leading to neglecting the health and safety rules and regulations in work environment.

Management must participate in a team effort to manage the identified hazard effectively and efficiently to prevent harm to the people in order to meet the criteria of safety and health. According to Heikkinen et al (2006), this concept is called as tripartite co-operation. All the parties should understand their responsibilities and accountabilities in their individual roles and make them alive to achieve a zero-harm environment. The managers/supervisors should convey to workers the importance of safety policies and the serious consequences of ignoring safety policies, which could have a significant impact on their colleagues, their families, and themselves (Yueng et al., 2004).

On the other hand, workers and representatives are able to collaborate with employers and their managers to identify and prioritize occupational health problems as well as to develop and implement preventive measures, which is another justification for their involvement in the management of occupational health. In order to foster a culture of safety, staff members must be

constantly alert to potential risks at work, including those they themselves may introduce. It becomes automatic to take action to increase safety.

Rejecting PPE will ultimately create an unsafe working environment for employees as well as it will increase the cost on occupational health and safety. To ensure that the appropriate PPE is chosen, management should take into account the various workplace dangers and determine whether PPE will offer sufficient protection against them (Niciejewska&Kiriliuk, 2020). As such, PPE must be selected based on the materials anticipated to be contacted and the tasks required to be conducted (Garcia et al., 2007). In line with that, the management may provide incumbents a variety of safety equipment options (e.g., different safety goggles or different lever bars to open manhole lids) from which employees can choose.

The study concludes with some limitations that may be worth exploring in future research. The study mainly focused on the narrations of six main participants employed in the selected tire manufacturing firm. Despite planning to select research participants representing each functional area, including mixing, quality, press, mill, transport, and boiler, it was not possible to interview an employee working with the boiler. A wider and more diverse group of participants would have made the study more representative. Moreover, this study was carried out using semi-structured interviews technique under the case study approach. Future researchers could generate data effectively and with interest by employing the observation approach. It would be interesting to explore the diminishing effectiveness of the safety warnings in manufacturing plants due to the anaesthetization of employees to those warnings with the time. The study preliminarily explored the reasons for non-adherence of workers to the health and safety rules and regulations, management's non-compliance with the safety standards and its impacts were not being explored. These aspects could be explored in further research, and it is likely that these unobservable factors would reinforce the implementation and maintaining of occupational health and safety practices in manufacturing firms.

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**Comment [U1]:** 1. Is it necessary to add educational data and recent training history for each informant?  
2. It has not been clearly described about the punishment that management will apply to workers if they do not comply with occupational health and safety rules in that place.  
3. Attached is the research ethics from the local research ethics committee for using humans as research subjects  
4. Libraries used for at least the last 5 years for research results.