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Literature Review: The benefits of occupational health and safety management systems implementation for the safety of workers

Literature Review: Manfaat penerapan sistem manajemen keselamatan dan kesehatan kerja bagi keselamatan pekerja

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Abstract

Background: The construction sector is of particular concern with regard to occupational safety and health, given the persistently high incidence of accidents and safety risks. In 2021, there were 234270 cases of work-related accidents, underscoring the urgent need for the implementation of an effective occupational health and safety management system (OHMS) to protect workers and mitigate the risks associated with injuries and accidents.
Objectives: This study aims to investigation is to ascertain the advantages of implementing an OHSMS in the construction sector, with a particular emphasis on worker safety.
Methods: A literature review in this study employed online databases, including SINTA, Google Scholar, and Garuda. The keywords utilized were "safety culture," "OHS," and "safety management system" in the construction industry. The inclusion criteria were articles published within the last five years (2020-2024), research conducted in Indonesia, and the research population comprising construction sector workers.
Results: The implementation of OHSMS in the construction sector has been demonstrated to significantly reduce the incidence of work-related accidents and injuries, while simultaneously enhancing the efficiency of construction projects. The effectiveness of the construction sector work system is contingent upon a number of factors, including the level of awareness among workers regarding safety protocols, their mindset, and the budgetary allocation towards ensuring the safety and health of workers in the construction sector.
Conclusion: The findings of this study also revealed that the implementation of an OHSMS in the construction sector can effectively reduce accidents and enhance project efficiency. However, the field-level adoption of such systems is still constrained by various factors, including worker awareness and capital expenditure.

Keywords :
Construction industry, occupational health and safety, management system, OHMS

Abstrak

Latar Belakang: Keselamatan dan kesehatan kerja di sektor konstruksi sangat penting dikarenakan tingginya angka kecelakaan dan risiko keselamatan maupun kesehatan yang masih tinggi pada sektor industri konstruksi sebesar 234,270 kasus kecelakaan kerja tahun 2021, maka diperlukan penerapan SMK3 yang efektif untuk melindungi pekerja dan meminimalkan risiko akibat cedera dan kecelakaan.
Tujuan: Menyelidiki manfaat penerapan SMK3 di sektor konstruksi yang berfokus pada keselamatan para pekerja.
Metode: Tinjauan literatur pada penelitian ini menggunakan database online seperti SINTA, Google Scholar, dan Garuda. Kata kunci yang digunakan adalah budaya keselamatan, K3, dan sistem manajemen keselamatan di industri konstruksi. Kriteria inklusi adalah artikel yang diterbitkan lima tahun terakhir (2020-2024), penelitian dilakukan di Indonesia, dan populasi penelitian pekerja sektor konstruksi.
Hasil: Penerapan SMK3 penerapan sistem manajemen keselamatan dan kesehatan kerja di sektor konstruksi secara signifikan dapat mengurangi kecelakaan kerja dan risiko cedera, serta meningkatkan efisiensi proyek pekerjaan di sektor konstruksi. Beberapa faktor yang mempengaruhi efektifitas pada sistem kerja di sektor konstruksi yaitu kesadaran

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pekerja terhadap keselamatan, pola pikir, dan alokasi anggaran pada sektor konstruksi terhadap keselamatan dan kesehatan para pekerja.
Kesimpulan: Pada penelitian ini memiliki temuan bahwa SMK3 di sektor konstruksi dapat mengurangi kecelakaan dan meningkatkan efisiensi proyek, akan tetapi pada implementasinya dilapangan masih terhambat oleh beberapa faktor seperti kesadaran pekerja dan pengeluaran modal.

Kata Kunci :
K3, Sektor Konstruksi, SMK3

Introduction

Constructions has a building or project construction does have a unique characteristic including the workplace in an open space that's influenced by weather, limited work period, using worker who haven't been trained, using appropriate work equipment that endangers occupational health and safety (OHS), and requiring a lot of work power. Based on these unique characteristics, construction sector has a risk of fatality accidents (Sihombing et al., 2014). Construction industry is known for causing injuries to workers and these injuries have been many and serious (Phinias, 2023). The construction industry is reported to have the highest accident rate of all industry and the most serious accidents in terms of the severity of injuries (Ghuzdewan & Damanik, 2019; Rajaprasad & Chalapathi, 2016; Soltanzadeh et al., 2016).

Occupational health and safety program is important to implement in the workplace because every worker is constantly faced with potential hazards that originate from work and/or the work environment, that are at risk of causing occupational diseases and injuries, on average of one-third of the time workers are spent time at work and they are facing a double burden because in addition to having a risk of generalized disease and they also have a specific risk of disease that's occupational diseases or illness both physically and mentally, and occupational accidents or injuries (The Ministry Manpower Indonesia, 2022). Safety at work is closely related to increased production and productivity, that's combination of the output and the effort that will be used or input.

Based on data from the International Labour Organization (ILO) in 2018, approximately 380000 workers, or 13.7% of 2.78 million workers, die each year as a result of workplace accidents or occupational diseases, and more than 374 million people suffer injuries, injuries, or illnesses each year due to minor employee injuries. Based on data International Labour Organization (ILO), about 4% of the world's total domestic product is lost every year as a result of accidents and illnesses resulting from work, health expenditure, retirement, absence, and rehabilitation (Ilo & Crozet, 2019). Based on data of Social Security Administrator for Employment (BPJS Ketenagakerjaan) there are cases of occupational accidents that occurred in Indonesia that is as many as 110285 in 2015, 101367 in 2016, 123041 in 2017, 173105 in 2018, and 77295 in 2019. Furthermore data from The Ministry of Public Work and People's Housing in 2017 suggested that the biggest contributor to occupational accidents in Indonesia is construction sector, with an average contribution around 32% (Ghuzdewan & Damanik, 2019).

In the construction industry, the highest number of accidents in Indonesia is reported in building projects (47%), followed by housing projects (42%), and other projects (11%). The most common types of accidents in Indonesian construction projects are electrical shocks (115 cases), falls from height (91 cases), and being struck by objects (83 cases). Globally, about 60000 fatal accidents occur on construction sites each year, with the construction industry accounting for 21% of all work-related deaths in the United States. These statistics underscore the significant impact of accidents in the construction industry, both in Indonesia and worldwide. Construction companies are obligated to uphold workers right through occupational safety and health measures, as per the Law of the Republic Indonesia, Number 1 of 1970 on Work Safety (Bria et al., 2024; Kadir et al., 2022; Lestari et al., 2020).

Organizations often adopt a safety management system or behavior based on system approaches to managing their safety function in an attempt to achieve performance excellenge and organization is an typically prefer to adopting one system and the other probably due to both pragmatic likely resource and implementation constraints and philosophical reasons. Implementing occupational health and safety management system (OHSMS) in construction has

several benefits. The benefit of implementing OHSMS in the construction industry industry include a safer operational environment, decreased risk for workers, improved safety performance, increased productivity, lower insurance costs, and prevention and reduction of accidents. Additionally, OHSMS can help organizations comply with regulatory requirements, locate hazards and risks related to the organization's operations, and put in place systematic procedures that consider the company's environment, possible risks, and possibilities. OHSMS can also reduce employee absenteeism and turnover rates. Overall, implementing OHSMS can help minimize hazardous accidents and risks, improve safety performance, and promote a safer working environment in the construction sector (Wachter & Yorio, 2014).

Based on the research above, the author prepares the literature review aims to explore the benefits of implementing OHSMS in the construction sector, focusing on the safety of workers. The search results provide insights into various interventions, such as the introduction of new regulations, safety campaigns, training, inspections, and the use of technology-enabled safety mitigation research and this review also highlights the importance of communication determinants on safety commitment in a high-risk workplace.

Method

This research study used the Literature Review method by accessing database namely Journals SINTA (Science and Technology Index), Google Scholar, and Garuda. The keyword used in the search are safety culture, occupational health and safety, and safety management system in construction industry. These three databases were chosen because they provide articles from national journals with appropriate research scope. Then screening was carried out according to the inclusion criteria with research sites in the construction sector in various places in Indonesia and journals that had been published in the last 5 years, 2020–2024. The journal articles used are full text, open access, and original articles. The selection of articles is based on a literature study, which involves a survey and analysis of literature relevant to the research topic with the aim of exploring, comparing, summarizing, and collecting existing literature so that research conclusions can be formulated.

The construction sector is characterised by a number of factors that contribute to an elevated risk of accidents. Such factors as the prevalence of outdoor workplaces, which can be affected by weather conditions; limited working hours; the presence of untrained workers; and the use of dangerous equipment contribute to the elevated risk of accidents in this sector. It is therefore imperative that an effective safety management system be implemented in the construction sector in order to protect workers and minimize the risk of injuries and accidents. In order to achieve this, it is imperative to gain an understanding of the specific characteristics inherent to the construction sector. A research study was conducted, in which 5,835 article titles were collected from online databases, including SINTA, Google Scholar, and Garuda. After applying the inclusion criteria, 282 articles were selected for further review. Ultimately, only five articles met the inclusion criteria. This study employed the literature review method, screening articles based on relevant keywords and strict inclusion criteria to ensure the quality of the data used. The study spanned five years, from 2020 to 2024.

The following is an explication of the following Inclusion and Exclusion Criteria. The following inclusion criteria were considered: studies based on the online database from 2020 to 2024 that focus on the implementation of Occupational Health and Safety Management Systems (OHSMS) in the construction sector; research that examines the benefits of OHSMS for the safety of workers in the construction industry; and case studies that demonstrate the effectiveness of OHSMS in the construction sector. In addition, the following exclusion criteria were applied: studies that do not focus on the construction sector, research that does not discuss the benefits of OHSMS for worker safety, case studies that do not demonstrate the effectiveness of OHSMS in the construction sector, and studies that do not compare the effectiveness of different OHSMS standards in the construction industry.

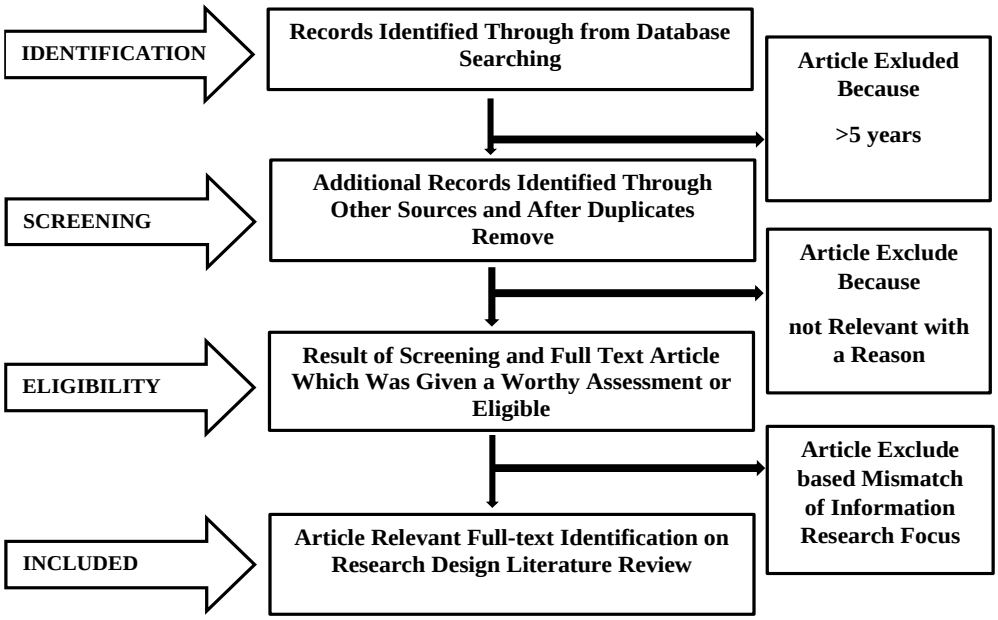

Figure 1. PRISMA flow diagram on literature review strategy

The PICOC (Population, Intervention, Comparison, Outcome, and Context) resume, which appears in the title "Literature Review : The Benefits of Occupational Health and Safety Management Systems Implementation for the Safety of Workers". The population under investigation comprises individuals employed in the construction industry. The scope of intervention research encompasses the implementation of occupational health and safety management systems (OHSMS) in the construction sector. In the course of the intervention process, the research team identified five articles that met the inclusion criteria and were published between 2020 and 2024.

These articles were subjected to a rigorous literature review process, which involved filtering them based on relevant keywords and strict inclusion criteria. The resulting literature reviews were then synthesized into a comprehensive data set. The research was conducted with the objective of identifying the advantages of implementing Occupational Health and Safety Management Systems (OHSMS) within the construction industry. Although no direct comparisons were made between different safety management systems, the study found that the implementation of an OHSMS can significantly reduce the incidence of workplace accidents and injury risks while simultaneously improving project efficiency. The effectiveness of a safety management system is contingent upon a number of factors, including the level of worker awareness regarding safety, the prevailing mindset, and the extent to which resources are allocated towards ensuring the safety and health of workers in the construction sector.

The research was conducted in the context of the construction sector, which is characterised by a number of factors that contribute to a high risk of accidents. These include outdoor workplaces affected by weather conditions, limited work periods, the presence of untrained workers, and the use of dangerous equipment. It is therefore essential to implement an effective safety management system in this sector in order to protect workers and minimise injury and accident risks. An understanding of the unique characteristics of the construction sector is essential in order to implement an appropriate safety management system that will ensure the safety and well-being of workers.

Result

This research study used the Literature Review method and the journals used were obtained accessing from a online databases, namely SINTA (Science and Technology Index), Google Scholar, and Garuda. The keyword used in the search are safety culture, occupational health and safety, and safety management system in construction industry. Sorting was done by screening based on the journals that had been issued with a

period of five years (2020-2024) and the results were 5.835 titles, 3.645 journals were issued and not used due to the publication of the journal over the last 5 years, and the results were 2.190 journals. Then the relevant journal discussion was filtered, and 282 articles were selected. Then a re-selection was made until there were 5 titles of articles that matched the criteria for inclusion in the research. Here is a graph of the extraction and identification of the article, as follows:

The articles discussed meet the research inclusion criteria. The keywords used in searching for research articles are safety culture, occupational health and safety, and safety management systems in the construction industry. The following is a matrix of articles from journals that have the same objectives and will be researched, which can be seen in Table 1.

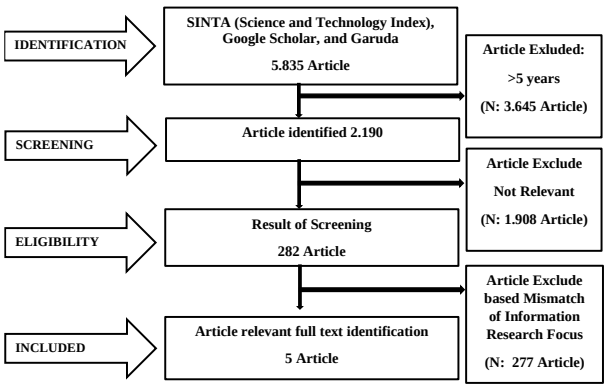

Figure 2. Research step of the articles

Table 1. Results of literature review

Researcher	Title	Research Methods			Result
Rochmatul Anisa, Suhariyanto, and Suselo Utoyo (2022)	Implementation of an Environmental Safety and Health Management System an Airport Project in Kediri District *Location: Kediri*	The type of research used in this study is a quantitative descriptive type of research	The population of the study consisted of 100 workers from the contractor and 5 workers from the supervisory consultant, with a sample size of 55 respondents	The study collected primary data by distributing and administering the questionnaire to the workforce of the Kediri airport project, including contractors and supervisory consultants. The questionnaire was designed based on the Government Regulation No. 50 of 2012	The Kediri airport project's health and safety management system (SMK3L) is deemed very good by contractor and supervisory consultant respondents, but issues such as worker awareness, low mindset, and minimal capital have been identified and addressed to improve the system's effectiveness.
Nasir Bumulo, Sartan Nento, Cindra Demanto, and Rahman A. Djau (2022)	Analysis of the Effect of Occupational Safety and Healthon the Performance of Construction Workers *Location: Gorontalo*	The type of research used in this study is a quantitative descriptive type of research	The respondents in this study were as many as 30 people	Data was collected using a questionnaire with 30 respondents.	The study found seven accepted factors in the nine factors correlated with the regression test: fear of safety regulations sanctions, company work accident insurance, adhering to quality standards, feeling safe and comfortable with PPE, signs for dangerous equipment, adequate rest hours,

					and providing work instructions and safety equipment usage methods to make the job easier.
Yunus Alfiansah, Bina Kurniawan, and Ekawati (2020)	Analysis of Management Occupational Health and Safety in Prevention and Control of Work Difference in PT X Semarang Construction Projects *Location: Semarang*	The type of research used in this study is a qualitative descriptive	The respondents in this study were as many as 4 main informant and 3 triangulation informants	Data was collected using indepth interview with google form, whatsapp, and observation	The company has committed to OSH but is not yet operating optimally. The HSE organizational structure is not in accordance with existing regulations, reward, and punishment system has been implemented, although it has less firmness for violations. OSH communication has been following regulations and positively influencing workers.
Kaamilah Bilqis, Muhammad Sultan, and Iwan M Ramdan (2021)	The Correlation between Occupational Health and Safety (OHS) Culture with the Unsafe Behavior of Construction Workers at Pt. X Kutai Kartanegara Regency *Location: Kutai, Kartanegara*	This research is a quantitative study with a cross-sectional	The respondents in this study were as many as 75 people (purposive sampling)	The measuring instrument uses a questionnaire. Data analysis used Spearman rank correlation test with 95% confidence level (α = 0.05)	The study found a negative correlation between management commitment, safety rules, worker communication, competence, and involvement on unsafe behavior among workers. A good safety culture leads to a decrease in unsafe behavior
Triana Srisantyorini and Rika Safitriana (2020)	Implementation of the Occupational Safety and Health Management System on Jakarta-Cikampek 2 Elevated Road Construction *Location:Jakarta*	Type of research was mix method (quantitative research that strengthens qualitative research)	The respondents in this study were as many as 4 people	The measuring instrument uses a indepth interview and questionnaire	The application of SMK3 in the Jakarta Cikampek 2 Elevated TollRoad construction project met regulation standards, with a 98.04% achievement in self-assessment criteria. The project included 163 out of 166 advanced application criteria,

		indicating a satisfactory application evaluation level

The research conducted by (Anisa & Utoyo, 2022) "Implementation of an Environmental Safety and Health Management System an Airport Project in Kediri District", (Bumulo et al., 2022) "Analysis of the Effect of Occupational Safety and Healthon the Performance of Construction Workers", (Alfiansah Yunus, Kurniawan Bina, 2020) "Analysis of Management Occupational Health and Safety in Prevention and Control of Work Difference in PT X Semarang Construction Projects", (Bilqis et al., 2021) "The Correlation between Occupational Health and Safety (OHS) Culture with the Unsafe Behavior of Construction Workers at Pt. X Kutai Kartanegara Regency", and (Srisantyorini & Safitriana, 2020) "Implementation of the Occupational Safety and Health Management System on Jakarta-Cikampek 2 Elevated Road Construction". As the literature review above implementation of the safety and health management system of the working environment at workers.

Discussion

Implementation of the Safety and Health Management System of the Working Environment at Workers

Based on article 1 written by (Anisa & Utoyo, 2022) discusses the implementation of the Environmental Safety and Health Management System on the Kediri airport project in Kediri district. The results of the research show that the application in Kediri airport project is very good based on the mean values obtained. Obstacles to the implementation of environmental safety and health management system include employees who are unaware of the Health, Safety, Security and Environment (K3L) guarantees provided by the company, low workforce mentality, capital expenditure for implementation, and employees who feel uncomfortable using Personel Protective Equipment (PPE) at work. The solutions provided in this study include socializing the workers on matters related to K3L, providing occupational health and safety training to the entire workforce, and not doing capital clearance of the K3L application.

A study by (Chan et al., 2023; Guntur Suryaning Hadi et al., 2023; Upadhyaya & Malek, 2024) analysed the application of environmental safety and health management system to construction projects and found that the implementation of this system was crucial to reducing work accidents and improving the efficiency of the project. The study by (Saraswati, 2020) also investigated the use of environmental safety and health management system in building projects and discovered that implementing this system could increase the rate of implementation and reduce work-related accidents. Furthermore, a study by (Khoirunnisa et al., 2023) found that applying environmental safety and health management system to a construction project could improve project efficiency and decrease work accidents. Studies by (Hong & Cho, 2024) showed that the application to a building project can increase the awareness of the workforce about the work environment and value risk management. From these three studies, it can be concluded that the implementation of environmental safety and health management system is crucial for improving the efficiency of construction projects and reducing work accidents. Therefore, Rochmatul Anisa., et al. research aims to offer solutions to overcome challenges in the implementation of environmental safety and health management system in Kediri airport projects. Furthermore, research by (Saraswati, 2020) suggests that the application of environmental safety and health management system to construction projects can improve project performance and reduce project costs.

The implementation of environmental safety and health management system is crucial in construction projects to improve project efficiency and reduce work accidents. The obstacles that occur in the implementation of environmental safety and health management system can be overcome by conducting socialisation and training for the workers, as well as by not carrying out capital elimination for the application of K3L (Anisa & Utoyo, 2022). Therefore, the company should pay attention to the implementation of environmental safety and health management system in the construction project to achieve the desired

objectives and provide significant benefits to the company and the workforce (Kineber et al., 2023; Lestari et al., 2020).

Implementation Occupational Health and Safety Management Systems at Workers

The effect of occupational health and safety is an effort to create a safe, comfortable working atmosphere and achieve the goal of high productivity. Occupational Health and Safety is very important to be implemented in all fields of work without exception. Based on article 2 written by (Bumulo et al., 2022) highlight about the importance of occupational safety and health in creating a safe and comfortable working environment to achieve high productivity. The article underscores the significance of occupational safety and health in the construction industry, emphasizing the correlation between worker productivity and health. Poor health can result in elevated absenteeism and diminished production. An efficacious health program can enhance productivity by curbing missed work and fostering a favorable work environment. The article cites previous studies by (Bumulo et al., 2022) which suggested the need for further research to identify other factors that can influence worker performance related to occupational safety and health. It also refers to a study by (Dwi et al., 2018) which concluded that there were still some inadequacies in the implementation of occupational safety and health and recommended that contractors should further socialize the occupational safety and health program to increase worker support and commitment to the company.

Based on article 3 written by (Alfiansah Yunus, Kurniawan Bina, 2020) discusses the efforts PT.X a construction company to prevent and control work accidents in their apartment construction project in Semarang. The article examines the company's commitment to occupational safety and health (OHS), the structure of the Occupational Safety and Health Advisory Committee, OHS regulations and procedures, communication and training, and supervision. The company has established regulations and procedures pertaining to occupational health and safety (OHS), although these have yet to be fully optimized. A reward and punishment system is in place, albeit with a degree of leniency towards violations, which serves to enhance workers' motivation to comply with OHS regulations. OHS communication and training are conducted in accordance with regulations and schedules. The study proposes several improvements, including involving workers and OHS committee members in policy-making, enhancing supervision, and evaluating existing programs. These findings provide valuable insights into the current state of OHS management in the company and offer clear recommendations for improvement. The study contributes to the knowledge on occupational safety and health in the construction industry through its comprehensive analysis of various aspects of OHS management in construction projects. (Alfiansah Yunus, Kurniawan Bina, 2020).

The article, focusing on a construction project and examining OSH management practices, is a valuable resource for understanding and improving safety and health outcomes in the construction industry. It offers practical recommendations to enhance OSH management approaches. A study by (Levitt et al., 2018; Suárez Sánchez et al., 2017) previous studies have shown that the implementation of Occupational Health and Safety Management System (OHSMS) can significantly reduce work-related accident rates in the construction industry. A South Korean study revealed that certified companies experienced a 67% reduction in accident rates compared to non-certified construction companies due to the implementation of OHSMS. (Kineber et al., 2023) explained similarly, emphasizing its positive influence on organizational performance and accident reduction. Furthermore, research about has shown that OHSMS certification leads to a substantial reduction in site accidents, underlining the vital role of OHSMS in improving health and safety in the construction industry.

Based on article 4 written by (Bilqis et al., 2021)explained explained unsafe behavior is behavior that can allow an accident or incident to occur. The primary causes of occupational accidents are unsafe behavior and unsafe conditions, particularly in the construction industry, which is characterized by a high incidence of work-related injuries and fatalities. In Indonesia, the construction sector is responsible for 63.6% of all work-related accidents. PT X is a construction services company that specializes in the provision of construction services, particularly within the oil and gas sector. A number of factors have been identified as influencing the safety culture in the construction industry, including top management commitment,

occupational health and safety regulations, communication, worker competence, and worker engagement. The degree of commitment demonstrated by top management is of paramount importance in influencing the development and implementation of a robust safety culture. The implementation of occupational health and safety regulations, as exemplified by the standards set forth by OSHA, is of paramount importance in establishing safety standards and fostering a secure work environment. Effective communication among workers facilitates the dissemination of information pertaining to potential hazards, risks, and safety procedures. Worker competence, encompassing knowledge, skills, and experience, is instrumental in identifying and mitigating hazards. Worker involvement in safety-related activities is indispensable in cultivating a positive safety culture. The construction industry's approach to worker safety is shaped by a number of factors, including the commitment of top management, compliance with regulatory standards, effective communication, the competence of workers, and their involvement. These factors can be strengthened through the prioritization of specific measures.

Based on article 5 written by (Srisantyorini & Safitriana, 2020) explained Construction work at height is work that has a high level of potential danger. Based on Government Regulation No. 50 of 2012 concerning the high level of potential hazards, companies that have potential hazards that can result in accidents that harm human lives, disrupt the production process and work environment pollution. The safety of construction workers is influenced by a number of factors, including the level of commitment demonstrated by management, the clarity of company policies, the implementation of effective safety management planning, the monitoring and evaluation of safety procedures, and the establishment of robust safety management systems. Management commitment plays a pivotal role in fostering a communication environment that enhances safety performance.

Several studies have been conducted to examine how commitment can improve safety performance in the construction industry globally. According to (Abukhashabah et al., 2020), commitment should be established as part of management interest, morale, and values, and not as a policy or regulation, to promote a safe and healthy work environment. The safety performance evaluation process can identify positive points and gaps during the assessment and help contractors improve safety. The assessment of safety performance is based on the analysis of quantifiable data, including the incidence of injuries, incidents, and lost-time frequency rates, as well as the reporting of near-miss occurrences, the implementation of safety training, and the compliance with standard operating procedures. The commitment of management to safety is of paramount importance. A safety management system comprises four key elements: policy, planning, implementation, and evaluation. Planning entails the identification and assessment of potential hazards and risks, while implementation necessitates the provision of adequate resources and training. Evaluation encompasses the monitoring and measurement of outcomes, the review of feedback, and the implementation of corrective and preventive actions. By integrating commitments and policies with safety management planning, implementation, monitoring, and review, construction companies can foster a safe and productive work environment while minimizing the costs and impacts of accidents and injuries.

From the results of the review of several journals that have been described previously, several factors that influence worker safety in the world of construction are influenced by several things, such as supervisory consultants, commitment and policies, planning, planning implementation, performance measurement and evaluation, management review of improvements to the management system, top management commitment, regulations and procedures, and communication. workers, worker competence, social environment, organizational implementation, and safety training.

Conclusion

An Occupational Safety and Health Management System (OHSMS) is a crucial element in the management of hazard risks and the enhancement of safety culture. The implementation of this system has been shown to yield beneficial outcomes in a range of sectors, including construction. Further research is recommended on the role of top management commitment, safety training programs, the social environment, and organizational policies.

Conflict of Interest Declaration

The authors of this research article declare that there are no potential conflicts of interest on the part of the author or the institution related to the research, authorship, and/or publication of this article.

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