THE IMPACT OF SAFETY TRAINING FREQUENCY
ON THE LEVEL OF SAFETY

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Purpose: The aim of this article is to investigate the impact of the frequency of safety training on the formation of a safety culture in a Polish company.

Design/methodology/approach: The study was conducted in the first half of 2024 in a Polish company. Data were collected on the organisation of health and safety training courses and the reporting of near misses. Statistical and qualitative methods were used in the analysis to establish a correlation between the frequency of training and the number and type of reported incidents.

Findings: Studies have shown that frequent and well-structured safety training significantly reduces the number of potential accident incidents. However, this effect diminishes over time, suggesting the need for regular reminders.

Research limitations/implications: The study was limited to one company, which may affect the limited generalisability of the results. Future studies could cover different industries and organisations to verify the results in a broader context.

Practical implications: The results suggest that companies should increase the frequency and variety of training to maintain a high level of employee safety awareness. It is also crucial to foster a positive culture of hazard reporting, which enables problems to be identified at an early stage.

Originality/value: The article provides new insights into the long-term effectiveness of safety training and highlights the importance of the frequency and variety of such training in developing an effective safety culture. It is a valuable analysis for safety managers, HR professionals and organisational leaders who want to raise health and safety standards in their companies.

Keywords: safety culture, safety training, near misses, awareness.

Category of the paper: Research paper.

1. Introduction

Modern organizations are increasingly recognizing that a safety culture is not merely a formal requirement but a key element influencing employee efficiency, morale, and overall

productivity. A high level of safety culture translates into fewer accidents, reduced downtime costs, and improved work quality. One of the most important tools supporting the development of this culture is regular safety training, whose effectiveness depends on its frequency, quality, and adaptation to the specific characteristics of the organization (Liu et al., 2023; Lafuente et al., 2018).

The frequency of safety training plays a key role in reinforcing good habits (Mahan et al., 2014) and responding quickly to new risks emerging in the workplace. Regular training allows employees to stay up to date and raises awareness of potential hazards (Taylor et al., 2015). On the other hand, training that is too infrequent can lead to reduced vigilance and the unconscious disregard of existing procedures, which increases the risk of accidents.

Interest in safety culture worldwide has significantly increased due to the growing humanization of work, particularly evident after World War II. This is directly linked to the rising awareness among company management of the importance of employee safety and maintaining their health (Cooper, 2000; Cox, Cheyne, 2000), as well as risk management and safety issues (Ramos et al., 2020; Dahler-Larsena et al., 2020; Swustea et al., 2020). As this topic gains prominence, safety culture has become a subject of study for researchers around the world. Based on a literature review from the Elsevier - Science Direct database, I have made a statistical summary that reflects the growing interest in this subject within academia. An analysis of articles containing the term "safety culture" identified 377,848 papers published between 2021 and 2024. These results (Figure 1) clearly show that interest in safety culture is growing year by year. The trend line in the graph takes on an exponential function and explains as much as 98% of the data ($R2 = 0.9863$), indicating an excellent fit and that companies will increasingly develop effective occupational health and safety management systems to better protect their employees (Reason, 2016; Li, Guldenmund, 2018).
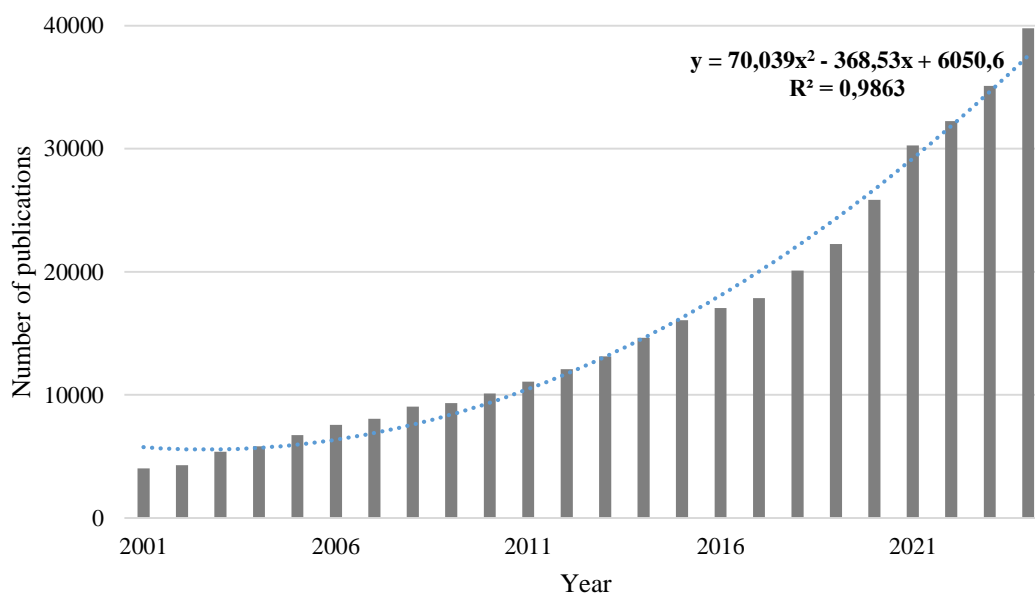

$$y = 70{,}039x^2 - 368{,}53x + 6050{,}6$$
$$R^2 = 0{,}9863$$

Figure 1. Number of publications on "safety culture" in particular years.

This article will analyze various time intervals between training sessions and their impact on employees' perception of safety, as well as on shaping the overall safety culture within the organization. I will also present conclusions from research on training effectiveness and provide practical recommendations for managers and occupational health and safety specialists who wish to implement effective training strategies in their companies.

2. The role of training in developing a safety culture

Workplace safety training is one of the most important elements in building and maintaining a safety culture in organisations. Through them, employees acquire not only theoretical knowledge, but also practical skills that allow them to better recognise hazards and respond appropriately in emergency situations. Effective training contributes to increasing employees' awareness of the applicable health and safety rules, which in the long term leads to an improvement in the overall level of safety in the workplace (Brinia et al., 2012; Nkomo et al., 2018).

A key aspect that determines the effectiveness of training is its regularity. Frequent training allows for continuous updating of knowledge and the consolidation of good habits. On the other hand, training carried out too infrequently can lead to a weakening of the educational effect, with a consequent decrease in vigilance and safety. Workers who regularly participate in training are more likely to consciously observe safety rules and are aware of the potential consequences of disregarding them.

An important element of training is also that it is tailored to the specific industry and working conditions of the company. For example, in high-risk industries such as construction, chemicals or transport, training should be more intensive and include detailed procedures for dealing with emergency situations. By contrast, in lower-risk sectors such as administration, training can focus on basic ergonomics, stress or first aid.

Moreover, the effectiveness of training also depends on its form and methodology. Traditional theoretical training is increasingly being complemented by modern tools such as simulations, virtual reality (VR) or interactive e-learning courses (Stefan et al., 2023; Rokooei et al., 2023). Such innovative approaches allow for more engaging and hands-on experiences that can prepare employees much better for real-world risks.

Based on the literature review and empirical studies, regular and appropriately tailored training not only improves employees' individual safety awareness, but also supports the formation of an organisational culture based on responsibility and mutual trust (Tong et al., 2023; Varchenko-Trotsenko et al., 2019; Wang et al., 2021). Organisations that invest in the development of their employees through comprehensive training enjoy higher levels of safety, resulting in fewer accidents, better productivity and higher team satisfaction.

3. Training frequency versus effectiveness

The frequency of safety training is crucial to its effectiveness. Regular, systematic training is essential so that workers can keep their knowledge up to date and improve their skills in complying with health and safety rules.

One of the main objectives of safety training is to prevent accidents by building awareness of hazards and forming appropriate habits (Eiris et al., 2020). The more often employees have the opportunity to participate in training, the better prepared they are to recognise potential hazards and respond appropriately in hazardous situations. Research shows that organisations that provide regular training have fewer workplace accidents, which in turn translates into reduced costs related to downtime, compensation and treatment of employees (Kabiesz, Bartnicka, 2019).

For example, in companies operating in high-risk sectors such as heavy industry, construction or energy, health and safety training should take place even every few months. With this frequency, employees have the opportunity to constantly remind themselves of the most important rules and procedures, as well as to improve their practical skills in handling protective equipment or dealing with emergency situations. This regularity of training creates a natural cycle to remind them of safety priorities.

On the other hand, training that is too infrequent can lead to what is known as procedural drift, a situation where employees gradually drift away from accepted safety standards as a result of forgetting or ignoring them. When training is infrequent, workers' awareness of hazards decreases and their reactions in emergency situations become less adequate. This can lead to an increase in accidents and safety incidents.

Training that is too infrequent can also give the impression that safety issues are not a priority for the organisation. Failure to do so on a regular basis can undermine employee confidence in safety management systems, which can have a negative impact on the company's safety culture. As a result, employees may perceive training as a one-off formality rather than a real support in their daily work.

While regularity of training is key, too much training can lead to information overload and so-called 'material fatigue'. Employees may feel fatigue if training is too intensive or repeated too often without introducing new content. This situation can lead to a reduction in commitment to training and treating it as a formal obligation rather than a valuable source of knowledge.

To avoid this effect, organisations should tailor the frequency of training to the needs and specifics of the job, and the training itself should be varied in content and form. For example, practical training, such as emergency simulations or workshops on the use of safety equipment, can be interspersed with theoretical courses or e-learning training. Introducing interactive elements, such as simulation games or case studies, can increase employee engagement and ensure that even frequent training is perceived as valuable (Gleason et al., 2022).

The optimal frequency of training depends on a number of factors, including the specific industry, the level of job risk, and the level of knowledge and experience of employees (Jamil et al., 2024). In high-risk organisations, frequent training - e.g. quarterly - is warranted, while in lower-risk sectors, annual or semi-annual training may be sufficient.

An example would be an IT company, where cyber security training may be held every six months to consolidate employees' knowledge of current threats and safeguards. In the construction sector, on the other hand, health and safety training may take place much more frequently, due to the rapidly changing working conditions on construction sites and the need for constant reminders of safe practices.

In summary, the frequency of safety training should be tailored to the specific nature of the organisation and the risks involved in the work. Regular and thoughtful training programmes are one of the most effective tools for building a sustainable safety culture that not only protects workers, but also contributes to the organisation's performance (Peng, Chan, 2019). In the next chapter, we will look at methods to evaluate the effectiveness of training and how to monitor its impact on safety culture in companies.

4. Evaluating the effectiveness of safety training

For safety training to be truly effective, it is necessary not only to conduct it regularly, but also to systematically evaluate its effectiveness. Without the right measurement and analysis tools, organisations may not be able to determine whether training is actually improving safety culture and reducing accidents at work. In this chapter, we look at methods for evaluating the effectiveness of training, key performance indicators and how to monitor its long-term impact on the organisation.

One of the most commonly used training evaluation models is the Kirkpatrick Model, which involves a four-level assessment of training effectiveness (Hutchinson et al., 2022):

- Reaction - the first step is to assess the reaction of the trainees. How employees perceive the training is an important indicator, as their engagement and positive attitude can influence the future application of the acquired knowledge in practice. Evaluation of reactions can be done by means of surveys or questionnaires completed by participants after the training.

- Learning - this level measures how much knowledge and skills participants have acquired during the training. This can be assessed through knowledge tests, practical exercises, as well as an analysis of how employees deal with simulated hazardous situations or tasks requiring the application of new skills.

- Behaviour - the next step is to assess whether employees put the knowledge they have acquired into practice. Has the training influenced their daily working behaviour? This assessment can be made by observing employees, talking to supervisors and evaluating safety indicators such as the number of accidents or reported incidents.

- Results - the most important level that assesses the long-term effects of the training on the organisation. These results may include a reduction in the number of accidents, a reduction in absenteeism due to occupational accidents, a reduction in compensation costs and an improvement in the company's overall safety culture.

To measure the effectiveness of training, organisations often use a set of key performance indicators (KPIs). Key indicators include (Moore et al., 2019):

- Number of accidents at work - one of the most obvious indicators to directly assess whether training has improved safety in an organisation. A decrease in the number of accidents following the introduction of systematic training demonstrates its effectiveness.

- Number of incidents reported - this indicator reflects both the level of employee awareness and the effectiveness of training. An increase in the number of reported incidents does not necessarily indicate a deterioration in safety, but rather an increased awareness of risks and a better response to potentially dangerous situations.

- Accident-related costs - an analysis of the financial impact of accidents at work makes it possible to assess whether investment in training translates into real savings. The reduction of costs related to compensation, downtime or treatment of employees is one of the most important measures of training success.

- Training attendance - regular employee participation in training is a signal that the organisation is effectively motivating safety. Low attendance may indicate problems with employee engagement or a need to change the way training is delivered.

- Level of engagement - this can be measured through surveys, evaluation interviews and analyses of employee behaviour after training. Higher levels of involvement in safety processes (e.g. hazard reporting, adherence to procedures) indicate a positive impact of training on organisational culture.

To fully understand the impact of training on a company's safety culture, it is essential to monitor its long-term effects (Rey-Becerra et al., 2019). In addition to the ongoing assessment of effectiveness, organisations should track changes in employee behaviour and the evolution of safety indicators over months or even years. This makes it possible to identify trends and correlations between the regularity of training and the company's safety performance.

It is also important for organisations to openly communicate the results of training effectiveness assessments among employees. Transparency in this regard can motivate employees to become more involved in safety processes and build confidence in the company's risk management (Kabiesz, Tutak, 2024).

Evaluating the effectiveness of training does not end with measurement alone. An important part of this process is to adjust training programmes based on the results obtained. If the analysis indicates that current training is not delivering the expected results, the organisation should consider changing the approach - for example, introducing more interactive methods, reducing or increasing the frequency of training, or adapting the content to the specific needs of employees.

Findings from training effectiveness monitoring can also help identify areas that require additional support, such as specialised training for selected groups of employees or the introduction of new technologies such as VR (virtual reality) training.

5. Research methodology

The research took place between January and June 2024 at a Polish company with more than 500 employees. This company manufactures disposable packaging that comes into direct contact with food. During this time, data was collected regarding all safety-related training that was carried out in the company. The information collected related to:

- Training dates - each training session was recorded with the exact date it was held.
- Target group - the groups of employees who attended training sessions were identified, taking into account their positions and the department in which they work.
- Type of training - training topics were analysed, including initial training, periodic training, specialised training (e.g. related to machine operation, health and safety, evacuation, etc.).

The second key element of the research was the collection and analysis of near miss reports. Employees of the company were given the opportunity to report such incidents through an internal incident reporting system. The following information was collected from these reports:

- Date of the incident - each reported situation was recorded with the exact date, which made it possible to analyse the frequency of incidents in the context of the dates of the training provided.
- Location of the incident - the reports identified the exact location where the incident occurred, allowing the identification of areas in the workplace where the risk of accidents is highest.

- Description of the incident - each report provided a detailed description of the situation that could have led to the accident. The description included what happened, what hazard occurred and what factors may have contributed to the incident.
- Actions taken - reports also included information about immediate actions taken by staff or management to minimise the hazard. These included immediate preventive measures and further remedial actions taken by the company.

The data collected was analysed qualitatively and quantitatively. The analysis included:

- Relationship between training dates and incident reports - it was examined whether there was a correlation between the training provided and the incidence and reporting of near misses.
- Type of training versus type of incidents - it examined whether specific types of training (e.g. specialised training) had an impact on reducing the number of reported incidents in a particular area of the company.
- Location of incidents - analysis of the locations of incidents made it possible to identify areas in the company that require special attention and possible modification of safety procedures.

The following research tools were used to analyse the data:

- Questionnaires and report forms - standard forms available in the company were used to collect data on training and incidents. Employees completed incident reports using a dedicated computer system.
- Databases - all information was archived in company databases, allowing easy aggregation and analysis against specific dates and areas of the company.
- Data analysis software - the statistical analysis used analytical tools to identify trends and correlations between training dates, the type of groups trained and the number of near-misses reported.

The study provided valuable information on the effectiveness of the training provided and its impact on safety in the organisation. The conclusions of the study will allow further improvement of training programmes and the safety culture within the company. In the next chapter, we will discuss the results of the analysis and present the conclusions of the study.

6. Results

Based on the collected data, the impact of training on safety in the company and the frequency of reported near misses were analyzed. The research results provide important information on the effectiveness of training and identify areas requiring improvement.

Figure 2 presents the number of reported incidents and information on the months in which OHS training was conducted for all employees of the plant. In the first half of 2024, employees reported a total of 116 near misses. General OHS training in the company for all employees took place in January and June. Analysis of the collected data showed a clear relationship between the time of training and the number of near misses reported. In the periods immediately after training, the number of incidents dropped significantly, which indicates a short-term increase in employee safety awareness. The largest decrease in the number of incidents was observed in the first two months after the training, when employees showed greater vigilance and knowledge of safety procedures. During this period, the number of reported threats was significantly lower compared to the months preceding the training, which suggests that OHS education has a direct impact on improving behavior and increasing caution in the workplace.
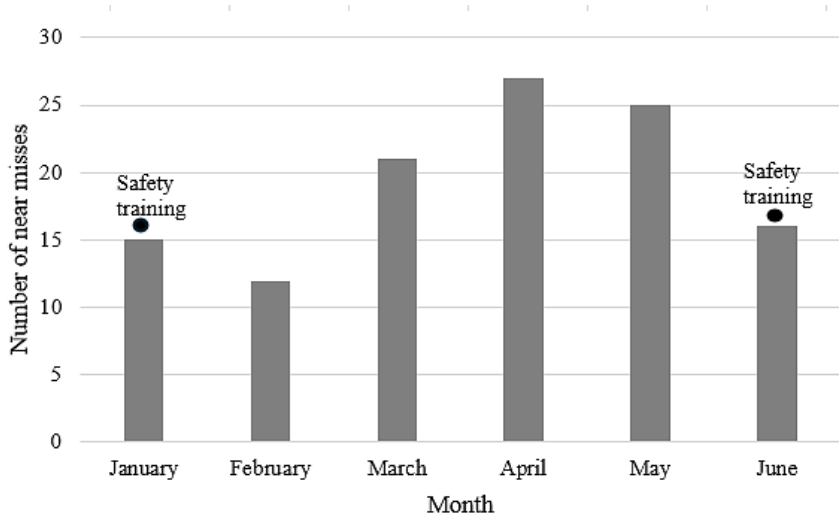
Figure 2. Number of near misses.

Analysis of reported near misses revealed that the highest risk of incidents was concentrated in specific areas (Fig. 3). Identified risk zones are an important element in the risk assessment process and planning of preventive actions.
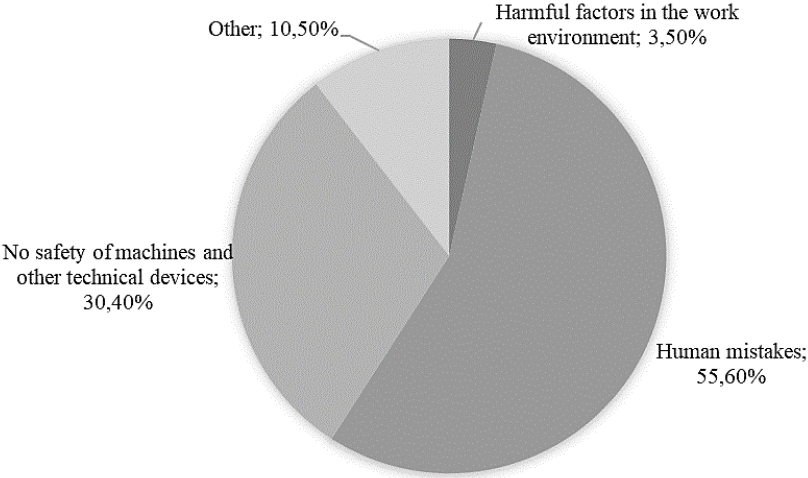
Figure 3. Type of near misses.

Detailed analysis showed that the causes of potential accidents can be divided into several key categories:

- Human mistakes (55.60%). This is the most important risk factor, which indicates a high number of incidents caused by inappropriate decisions and actions of employees. Human errors can result from many reasons, such as lack of knowledge, improper training, stress or fatigue. In order to reduce this percentage, it is necessary to introduce systematic training and programs for improving qualifications, which will emphasize the importance of safe work practices. It is also crucial to create an atmosphere in which employees feel responsible for their own safety and the safety of their colleagues.

- No safety of machines and other technical devices (30.40%). Incidents related to machines and technical devices indicate the need to introduce regular inspections and maintenance of equipment. Many accidents are the result of improper technical condition of machines, which can lead to failures or damage. Therefore, managers should invest in modern technologies and implement safety procedures related to the operation and use of machines, which will minimize the risk.

- Harmful factors in the work environment (3.50%). Although this percentage seems relatively low, these factors can significantly affect the health and safety of employees. This category includes, among others, inadequate lighting conditions, noise and chemicals. Employers should take action to eliminate or reduce exposure to these factors, which includes regular audits of the work environment and the use of appropriate personal protective equipment.

- Other (10.50%). This category includes a variety of factors that are not directly related to the areas mentioned above. These may be unpredictable situations or one-off incidents that require analysis and understanding to prevent their recurrence in the future. It is important to collect data on these incidents and analyze them thoroughly to better understand the sources of risk in the future.

Based on the descriptions of incidents, several categories of reported hazards can be distinguished, which occurred most frequently. These were:

- Falls and slips: They constituted the largest percentage of reports, especially in storage and production areas. Many reports concerned improper maintenance of order in workplaces, which contributed to the occurrence of such incidents.

- Equipment failure: Incidents related to machine and equipment failures were most often reported in technical departments. They were the result of both improper handling and faulty equipment.

- Chemical hazards: Reports regarding chemical leaks and problems with their storage appeared sporadically, but were of great importance due to the potentially serious consequences of such incidents.

Each report included actions taken by employees to minimize the risk. Most remedial actions consisted of:

- Immediate removal of the risk (e.g. tidying up the workplace, marking dangerous zones).
- Reporting the problem to the appropriate supervisor or technical department to repair the faulty equipment.
- Introducing ad hoc protective measures, e.g. additional personal protective equipment.

In addition, an analysis was conducted to determine which department of employees most often reports near-miss incidents. This analysis aimed to identify areas where the risk of such incidents is the highest, which may indicate a greater risk in these workplaces or better employee awareness of reporting incidents. The results were presented in relation to the number of employees employed in individual work areas, which allows for comparison between departments regardless of their size (Fig. 4).
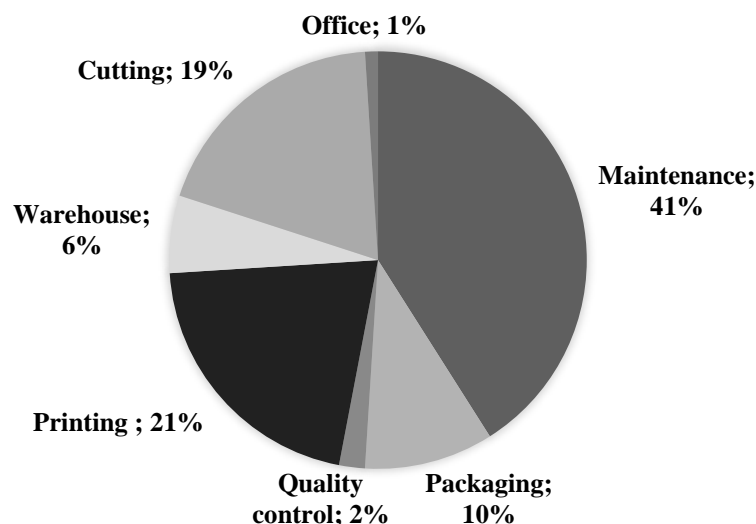

Figure 4. Percentage of reported near misses in each department in relation to the number of employees in those departments.

The highest percentage of reports came from the Maintenance department, which accounts for 41% of all reported incidents. This may indicate specific working conditions that are associated with greater risk or a particularly good safety culture in this department, where employees are more aware of reporting potential hazards. The next most reported department is Printing, with 21%. This department is characterised by specific risks related to the operation of printing machines and chemical materials, which may explain the high number of reports. The Cutting department accounts for 19% of reported incidents, which may be related to the use of sharp tools and machinery that pose a potential risk to employees. The remaining departments report incidents less frequently: Packaging – 10%, Warehouse – 6%, Quality Control – 2%, and Office – just 1%. The low percentage of reports from the office may be explained by the fact that office work is associated with a lower level of accident risk compared to production departments.

The Maintenance department, which reports the most near misses in the company, was subjected to a detailed analysis. The nature of the work performed by this department involves various hazards, which requires special attention to compliance with safety rules and regular training. In the analyzed company, employees of the Maintenance department participate in specialist training once a month, which is tailored to the specific hazards they may encounter in their daily work.

The training schedule is as follows:

- January – First aid training. Employees learn basic life-saving skills to be able to respond effectively in the event of accidents at work.
- February – Training in working at heights. It focuses on the correct use of equipment and techniques for minimizing the risk of falls, which are one of the most common hazards in industrial environments.
- March – Training in the safe handling of chemicals and hazardous substances. Employees are educated on the proper handling of hazardous substances to prevent leaks, spills and exposure to harmful effects.
- April – Training on the safety of operating selected machines and technical devices. Its aim is to ensure that employees operate complex machines efficiently and safely, which reduces the risk of mechanical accidents.
- May – Training entitled "Harmful factors in the work environment". It covers the identification, mitigation and protection against environmental hazards such as noise, dust or contact with toxic materials.
- June – Fire protection training. Prepares employees for a quick and effective response in the event of a fire, including evacuation procedures and the use of fire extinguishers.

Figure 5 shows a detailed analysis of near-miss incidents reported by the Maintenance Department over the six-month period.

The data from the six-month analysis indicates that the lack of safety in machinery and technical equipment remains a persistent issue, especially in the early months of the year, with the highest recorded number of 5 incidents in January. The situation improves in the following months, which may suggest the effectiveness of the machinery operation training conducted in April. Hazards related to working at heights are a regular but less frequent issue, with several incidents reported in the first quarter of the year. Chemical spills were most frequent in February, followed by a significant decrease after the chemical safety training in March, which suggests a positive impact of the training on reducing this hazard. Fire incidents are rare, with one reported case in May, coinciding with the planned fire safety training in June. Harmful factors in the work environment were reported sporadically, with the highest number of incidents in February and April, which may be related to the topic of the May training. The analysis of trends in incident reports shows a direct relationship between the types of accidents and the timing of specialized training. This highlights the importance of ongoing safety education and the need for further improvement of safety procedures within the company.
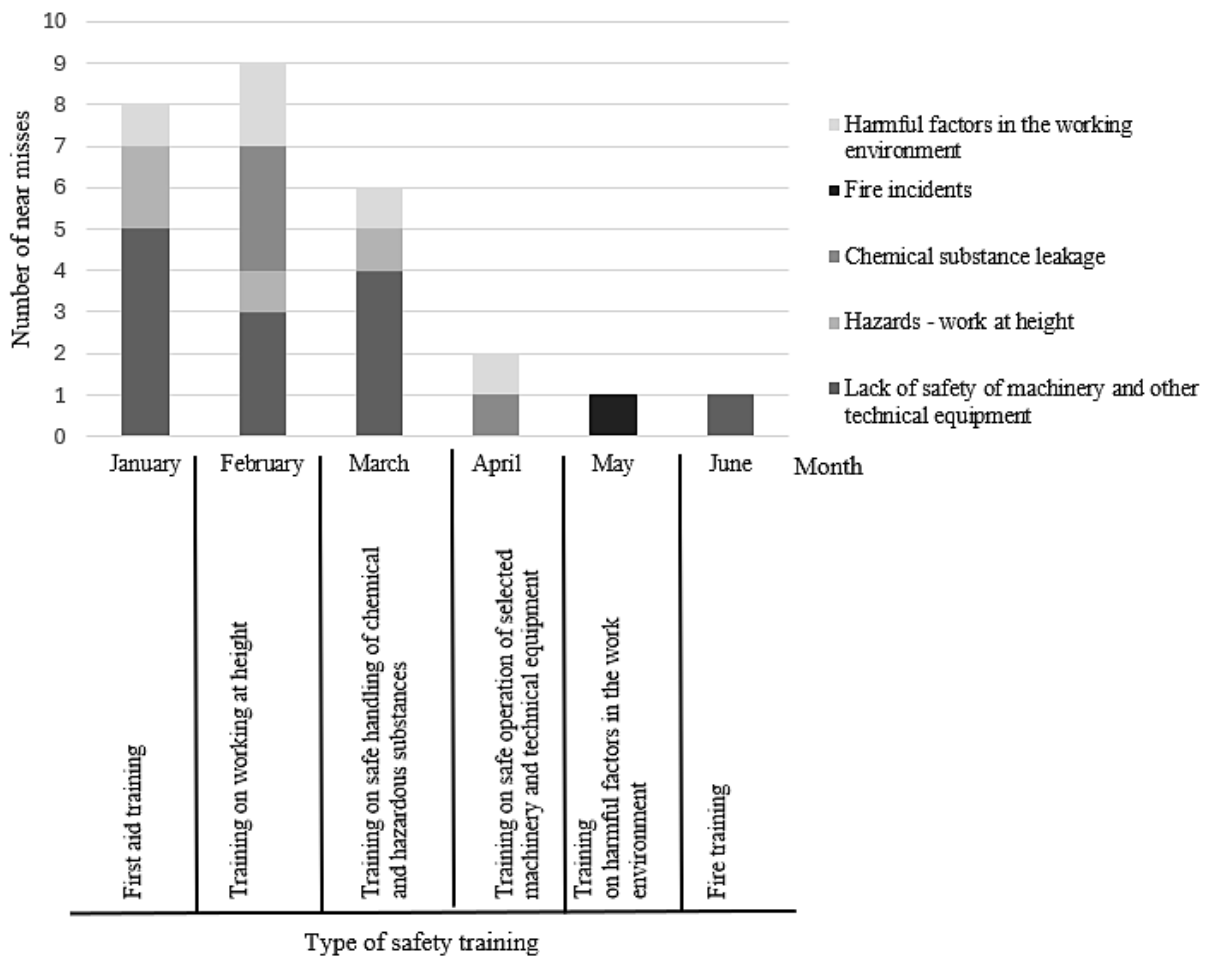
Figure 5. Detailed analysis of near misses reported by the Maintenance department over the six months.

7. Discussion

The conducted analysis of the impact of occupational health and safety (OHS) training on workplace safety and the frequency of reported near-miss incidents provided key insights into the effectiveness of such preventive measures. The research results indicate that safety training has a significant effect on reducing the number of incidents, which is corroborated by the literature on the subject.

In our studies, a clear decrease in the number of reported incidents was observed in the months immediately following the training sessions. This effect, as indicated, may stem from increased employee vigilance shortly after acquiring new knowledge and their greater willingness to adhere to safety procedures. These findings align with those of Bęś and Strzałkowski (2024), who also noted that the effectiveness of OHS training is highest in the first two months after completion, suggesting that the effectiveness of such programs may gradually diminish over time unless reminders or additional periodic training are implemented.

One of the key findings in this analysis is that as many as 55.60% of incidents were attributed to human errors. These results emphasize the importance of not only safety training but also stress and fatigue management to improve employee performance and alertness. Research by Liu et al. (2023) demonstrated similar relationships, indicating that stress and fatigue are among the primary factors affecting workplace safety, particularly in high-risk environments. This author also highlighted the need for implementing psychological support programs in companies, which is reflected in our recommendations.

Our study results indicated that 30.40% of incidents were related to safety issues with machines and technical equipment, underscoring the need for regular maintenance of equipment and modernization of technology. Similar conclusions were drawn by Colim et al. (2022), who pointed out that improper maintenance of machinery increases the risk of accidents, and regular technical inspections can significantly improve workplace safety. Their research showed that companies investing in modern technologies and systematic equipment audits report a significant decrease in incidents related to machine failures.

Another important aspect that emerged both in our research and in the literature is the high frequency of falls and slips. They constitute the largest percentage of reported incidents, suggesting the need for additional preventive measures in high-risk areas such as warehouses and production halls. Research by Reinhold et al. (2014) also emphasizes that slips and falls are among the most common hazards in workplaces, especially where appropriate preventive measures, such as modifying floor surfaces or using protective footwear, have not been implemented.

The results of this analysis also suggest that OHS training should be conducted periodically to maintain a high level of safety awareness among employees. Such a recommendation also appears in the work of Laberge et al. (2014), who indicate that regular training and reminders are essential for sustaining the long-term effectiveness of preventive actions. Their studies showed that companies conducting training every six months experience fewer incidents compared to those that organize such training less frequently.

In summary, our research results align with the literature and confirm the importance of regular OHS training, psychological support for employees, and investments in modern technologies and equipment maintenance. Implementing periodic preventive measures, as well as fostering a culture of reporting hazards, can contribute to further reductions in the number of incidents in the workplace. However, further research is necessary to assess the long-term impact of these actions on improving safety culture in enterprises.

8. Recommendations

Based on the analysis conducted, several key actions are recommended that can significantly improve safety within the organization. First and foremost, regular occupational health and safety (OHS) training should be organized at least every six months to maintain a high level of employee awareness regarding safety principles. Additionally, research suggests that the effectiveness of training diminishes after two months, so it is advisable to implement systematic reminders or shorter refresher courses to reinforce the skills acquired.

Another recommendation is to implement psychological support programs, particularly focusing on stress and fatigue management, which can affect employee performance and alertness. Psychological support can help reduce the number of incidents caused by human errors, which account for a significant percentage of workplace accidents.

Regular technical inspections of machines and equipment are also advised, as a considerable portion of incidents has been associated with technical problems. Routine maintenance, technical condition audits, and investments in modern technology can significantly reduce the risk of equipment failures and associated accidents.

Moreover, in response to the most frequently reported hazards, such as falls and slips, it is recommended to implement preventive programs aimed at improving safety in high-risk areas like warehouses and production halls. These could include infrastructure modifications, such as non-slip flooring, better lighting, and the provision of appropriate protective footwear.

An essential element of improving safety is also promoting a culture of hazard reporting. It is important to create a work environment where employees feel comfortable reporting potential issues. Motivational systems that encourage active hazard reporting can significantly enhance the effectiveness of preventive measures.

Finally, monitoring and analyzing reported incidents is recommended, as this allows for the identification of patterns and areas requiring special attention. Regular reviews of data can assist in making ongoing adjustments and optimizing safety procedures. Considering the integration of modern technologies, such as monitoring systems for working conditions, can also improve employee safety.

Implementing these recommendations can contribute to a significant improvement in workplace safety and a reduction in the number of incidents. Regular monitoring of their effectiveness and further research will be crucial for maintaining long-term results.

9. Summary

The article presents the results of the analysis of the impact of occupational health and safety training on safety at work and the frequency of reported near-miss incidents in the company. The research results clearly indicate a significant relationship between employee education and a reduction in the number of incidents. It was noted that in the months immediately following the OHS training, there is a significant decrease in reports, which suggests an increase in safety awareness among employees.

The analysis of reported incidents reveals that the highest risk of incidents is concentrated in areas related to human errors, which constitute as much as 55.60% of all reports. This indicates the need to introduce systematic training and programs for improving qualifications, which will emphasize the importance of compliance with OHS rules. Additionally, a significant percentage of incidents (30.40%) is related to the lack of safety of machinery and technical devices, which emphasizes the need for regular inspections and maintenance of equipment.

To sum up, the research results confirm that effective safety management at work requires not only systematic employee training, but also continuous analysis and adjustment of procedures in response to identified threats. The implementation of recommended actions, such as periodic OHS training, psychological support programs and regular equipment audits, can contribute to creating a safer work environment and reducing the number of accidents. Further research in this area will be crucial to better understand the long-term effects of the implemented actions and to develop a safety culture in companies.

Acknowledgements

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