
SOCIOLOGY OF SAFETY: PREVENTIVE MEASURES IN INSURANCE AS AN OBJECT OF ANALYSIS

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Abstract

Modern sociology actively examines issues related to occupational safety and preventive measures in the field of insurance, with a specific focus on safeguarding the well-being and health of workers. This article presents a sociological analysis of preventive programs in insurance, paying close attention to their sociological dimensions. The study investigates the experiences and future prospects of countries belonging to both the Organization for Economic Co-operation and Development and the Eurasian Economic Union that have implemented preventive measures within their social insurance systems. The article discusses the key components of preventive programs, their role in guaranteeing worker safety and health, and the effectiveness of investments made in preventive measures. Furthermore, it presents data regarding the allocation of resources for preventive measures in different countries and evaluates the return on investment in preventive programs. In conclusion, the article highlights the significance of further developing and enhancing preventive programs in insurance to ensure the safety and well-being of workers in their respective work environments.

Keywords: safety, preventive measures, insurance, health

Introduction

In the field of sociology, the study of safety has gained importance as a critical area of analysis, particularly regarding preventive measures within insurance frameworks. The intersection of sociology and safety explores the intricate dynamics of risk management, workplace safety, and the societal consequences of accidents and occupational hazards. Scholars aim to unravel the multifaceted social, economic, and institutional factors that influence safety practices and outcomes by examining the proactive strategies embedded within insurance systems.

This article delves into the nuanced field of the sociology of safety, specifically focusing on the role of preventive measures within insurance mechanisms. By scrutinizing this aspect, the aim is to shed light on the broader sociological implications of safety initiatives, exploring their effectiveness, challenges, and socio-economic ramifications. Through a comprehensive

analysis, the goal is to deepen our understanding of how insurance-based preventive programs shape societal perceptions, behaviors, and responses toward safety and risk mitigation.

By exploring the intricate interplay between sociology and safety within the insurance realm, this study seeks to offer valuable insights into the broader socio-cultural landscape surrounding safety practices. Through empirical evidence, theoretical frameworks, and comparative analyses, the aim is to elucidate the complexities inherent in preventive measures within insurance systems, thereby providing implications for policy, practice, and future research in the sociology of safety.

Retrospective and contemporary materials

The sociology of safety, particularly within insurance frameworks, is a complex and multifaceted field that requires a critical and constructivist approach [(1), (2)]. This approach should emphasize the role of organizations and the state in hazard production, as well as the social construction of risk and risk objects [(3)]. The concept of «risk work» is also crucial, as it involves translating risk into different contexts, minimizing risks in practice, and caring in the context of risk [(4)]. These components of risk work highlight the need for further exploration of the tensions and challenges faced by workers in this field.

The analysis of preventive programs in the Eurasian Economic Union (EAEU) and in the Organization for Economic Co-operation and Development (OECD), as outlined by [(5)], (6), (7), and (8), focuses on reducing workplace accidents and occupational diseases, promoting a culture of safety, increasing awareness and compliance with safety standards, and facilitating early intervention and rehabilitation for affected workers. These programs are influenced by the German accident insurance system, which has been successful in reducing accident frequency and costs (6). They also consider the impact of moral hazard and adverse selection on insurance markets (7), and the role of innovative models in pension insurance (7). Employee Assistance Programs are highlighted as a cost-effective preventive benefit (8).

A range of studies have explored comprehensive risk assessment procedures in various workplace settings. (9) emphasizes the need for systematic approaches in complex socio-technical systems, while (10) proposes an integrated approach for identifying hazardous substances and assessing preventive measures. (11) focuses on small and medium-sized enterprises, highlighting the importance of positive attitudes towards safety and the use of a flexible risk assessment tool. (12) provides a specific example in academic laboratories, suggesting the use of a combination of qualitative and quantitative risk assessment methods and the application of engineering, administrative, and personal protective equipment control

measures. These studies collectively underscore the importance of a systematic, integrated, and flexible approach to risk assessment, with a focus on positive safety attitudes and the use of a combination of control measures.

Methodology

The ILO report highlights (13) that several OECD countries have already implemented preventive measures in their occupational injury programs. These measures aim to reduce accidents and occupational diseases among workers. Dr. Sven Timm's survey on occupational injuries and programs in OECD countries aligns with the findings of Rantanen (14), (15), which highlight the gaps in the implementation, coverage, and content of occupational health services. These gaps are particularly evident in the lack of infrastructure and human resources. (16) further emphasizes the importance of preventive measures, such as job analyses and workplace assessments, in addressing work-related injuries. However, (17) points out the challenges in comparing occupational accident statistics due to different reporting methods across European countries. This underscores the need for standardized reporting systems to effectively track and address occupational injuries. A survey conducted by Dr. Sven Timm included OECD countries such as Australia, Japan, the Republic of Korea, Canada (Ontario province), Mexico, and Switzerland, among others. These countries provided information on the types of programs for occupational injuries, legal frameworks, membership conditions, coverage, supervision, and services/benefits, including preventive measures (13).

The document notes (13) that only nine out of 24 surveyed countries were able to provide data on the proportion of the budget for occupational injury programs spent on preventive measures. The data showed that allocated resources for prevention in these programs were generally small. Examples (Table 1.) of the proportion of expenditure on preventive work in some countries were provided, such as Austria (5%), Germany (6.9%), and Switzerland (6.5%). The report emphasizes the importance of strengthening occupational injury programs by incorporating principles and measures of prevention to improve the lives of workers affected by occupational injuries and diseases. It suggests that enhancing preventive programs within these programs can have a positive impact on the safety and health of workers.

The aim of the report (13) is to provide recommendations for the development of preventive measures within occupational injury programs, highlighting the advantages of such initiatives and promoting cooperation between stakeholders involved in occupational safety and health. The concept of «return from prevention» is discussed in the (18), particularly in the

context of Germany. Return on prevention is defined as the ratio between the monetary value of benefits and the costs of preventive work in occupational safety and health. According to German research, for every euro invested in prevention, €1.60 was returned (19). Furthermore, the cost-effectiveness of sports injury prevention strategies has been demonstrated, particularly in the context of specific injury types such as ankle, hamstring, and anterior cruciate ligament injuries (20). These findings underscore the advantages of preventive measures in occupational safety and health, and the need for cooperation between stakeholders to ensure their successful implementation.

Expenses for maintaining insurance programs for occupational accidents and diseases are directly proportional to their number. Therefore, it can be assumed that measures and initiatives for occupational safety are closely linked to the functioning of these programs. However, this is not always the case in reality. This can be partly attributed to traditions, as different ministries and departments are responsible for occupational safety and insurance against occupational accidents and diseases. Insurance programs, especially in the form of social insurance, are closely associated with other social security benefits, including support for the unemployed, individuals with health issues and financial difficulties, as well as retired workers. On the other hand, occupational safety falls more within the jurisdiction of labor ministries that deal with working conditions and employment issues, although ministries of health often oversee occupational hygiene.

Results

It is noteworthy that certain countries have already integrated preventive measures into their insurance programs. Among the 24 countries surveyed by the International Labour Organization (ILO), only nine were unable to provide specific data on the proportion of expenditures allocated to preventive measures for occupational accidents and diseases within their insurance programs. The following data, which should be interpreted cautiously due to methodological limitations and challenges in cross-country comparisons, illustrates the situation. The general conclusion is apparent: the funds allocated from insurance program budgets for prevention purposes are nearly negligible in most countries. Table 1 presents the proportion of expenditures on preventive measures in the budgets of insurance systems for occupational accidents and diseases in various countries.

The value of preventive work was demonstrated by the implementation of the «Return from prevention» program in Germany from 2006 to 2008. This program aimed to establish a

reporting mechanism similar to that used for calculating return on investment. It evaluated funds invested by individual companies at the micro level for preventive measures in occupational safety and health. Essentially, the «return on prevention» is the ratio of compensation paid to the costs of preventive work in occupational safety and health. The German initiative continued through an international project in 2010-2011, involving representatives from 300 companies in 16 countries, including Azerbaijan, Australia, Austria, Canada, the Czech Republic, Germany, Hong Kong, the Republic of Korea, Romania, Russia, Singapore, Sweden, Switzerland, Turkey, the USA, and Vietnam. Overall, the return on prevention ranged from 1.6 to 5.5, with an average of 2.2, varying across countries and enterprises. Notably, significant benefits of prevention were identified, including improvements in company image, corporate culture, reduced downtime and production failures, increased worker motivation, and job satisfaction. Larger enterprises rated the impact and benefits of preventive work in occupational safety and health higher than smaller enterprises.

Tabel 1. Share of employment insurance (EI) scheme expenditure spent on prevention work, selected countries

Country	Share of EI scheme expenditure spent on prevention work	Employment injury arrangements in a number of countries
Share of EI		
Austria	5%	
Belarus	5%	
Canada (Ontario)	5.8%	5.8% (CA\$33)
Germany	6.9%	8.5% (€24.6 per full-time employee)
Japan	2.1%	
Republic of Korea	less than 8%	
Poland	0.07%	
Spain	0.5%	
Switzerland	6.5%	
Kazakhstan	6%	
Insurance contributions		
New Zealand	-	7.7% (NZ\$24 per employee)
Canada (Quebec)	-	4.8% (CA\$28)
Australia (Victoria)		3.09% (AU\$51.50)

Source: information is derived from the ILO Report [13, p. 24], which examined occupational injuries in multiple countries and obtained the subsequent data

It is crucial to highlight that irrespective of the conducted surveys, it is apparent that what is inherently ingrained in OECD nations functions as a longstanding custom. This emphasizes the importance of preventive initiatives within occupational injury programs both in OECD countries and worldwide. Although certain countries have already incorporated preventive measures, additional endeavors are required to allocate resources and strengthen

these programs, thereby augmenting worker safety and well-being through proactive preventive endeavors.

Lesson learning discussion

Analysis of preventive programs in insurance in the EAEU includes the examination of approaches and measures adopted by member states to prevent workplace accidents and occupational diseases within their mandatory social insurance systems. This analysis, although general due to limitations in accessing specific current documents, provides a framework based on principles and practices commonly found in EAEU member countries.



Picture 1. Key components of preventive programs
Designed by Diana B. Kazbekova

Preventive programs in EAEU countries are typically aimed at:

- A. Reducing the frequency of workplace accidents and occupational diseases;
- B. Promoting a culture of safety and health in the workplace;
- C. Increasing awareness and compliance with occupational safety standards by employers and employees;
- D. Facilitating early intervention and rehabilitation for workers affected by workplace hazards.

Analysis of preventive programs in insurance within the framework of the EAEU underscores the intention to enhance workplace safety and health standards. However, the efficacy of these programs can be further augmented through the harmonization of regulations in the field of labor protection, the enhancement of stakeholder collaboration, and the utilization of technological advancements and innovations. Addressing these concerns may foster a more cohesive and efficient regional approach to preventing workplace accidents and occupational diseases. The regulation of mandatory insurance against industrial accidents and occupational

diseases is governed by legislation of the Republic of Kazakhstan. The corresponding insurance funds and supervisory bodies implement and monitor insurance programs.

In the Republic of Kazakhstan, the mandatory insurance framework for industrial accidents and occupational diseases is established by national legislation. This framework includes designated insurance funds and supervisory bodies that oversee the implementation and monitoring of these insurance programs. This regulatory foundation demonstrates a commitment to ensuring workplace safety and health.

Preventive measures in the workplace play a central role in enhancing occupational safety. These measures include comprehensive risk assessment programs, fundamental safety and health training for employers and employees, compliance with labor protection regulations, and the use of personal protective equipment (PPE). Regular medical examinations and continuous health monitoring of the workforce are also integral components of these preventive strategies.

Various preventive programs have been implemented, such as educational initiatives on occupational safety, programs aimed at preventing injuries and diseases, and medical programs focused on early detection and intervention. These programs are tailored to different groups, including workers in hazardous sectors like construction and manufacturing, office personnel, occupational safety specialists, and HR managers. This multifaceted approach to preventive care ensures that the specific needs of each group are addressed.

An examination of current practices reveals areas in need of improvement. Non-compliance with safety protocols, inadequate training on PPE use, insufficient ventilation, and poor air quality monitoring are examples of systemic weaknesses in existing preventive measures.

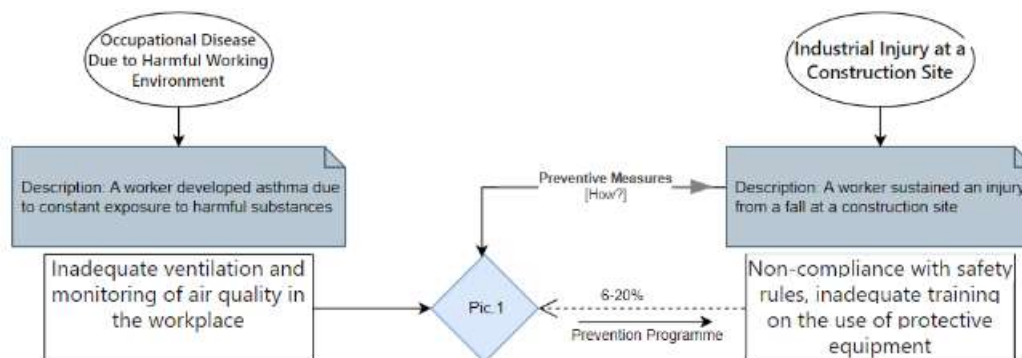
To enhance preventive strategies, it is recommended to provide specialized training on ergonomics for office workers, introduce psychological support programs to address workplace stress, and implement physical activity programs for sedentary employees. These proposed initiatives aim to address the multifaceted nature of workplace health and safety, promoting a holistic approach to preventive care.

The discussion of these case studies not only assesses the current state of preventive measures in Kazakhstan but also explores the potential of proposed programs to significantly improve occupational health and safety. This critical analysis emphasizes the importance of proactive and comprehensive approaches to preventing workplace accidents and diseases. It

advocates for the continuous development and refinement of preventive programs to protect the well-being of workers in Kazakhstan.



Picture 2. Challenges and areas for improvement
 Designed by Diana B. Kazbekova



Scheme 1. Development of Case Studies on Preventive Measures. Typical Cases (Current State)
 Designed by Diana B. Kazbekova

Developing Case Studies on Preventive Measures in the Republic of Kazakhstan

Reflecting the current state and identifying the pros and cons of the situation case studies on preventive measures in Kazakhstan (current state):

Case 1: Non-compliance with personal protective equipment (PPE) usage rules in production:

Description: Workers at construction sites often disregard rules regarding the wearing of protective helmets and eyewear, thereby increasing the risk of injuries.

Pros of the Current State: The cost of PPE is low, and it is readily available for enterprises. Some companies provide the necessary equipment to employees.

Cons of the Current State: There is inadequate supervisory control by regulatory bodies. Workers have low awareness regarding the importance of using PPE, which leads to an increased risk of workplace injuries.

Case 2: Insufficient Conduct of Medical Check-ups at Enterprises:

Description: Many enterprises do not regularly conduct medical check-ups for employees, which may result in the failure to detect early signs of illnesses.

Pros of the Current State: Enterprises save resources, as there is no need for additional medical staff and equipment.

Cons of the Current State: There is a risk of missing the early stages of illnesses in employees, which may have consequences for their health and productivity.

Case 3: Lack of Systematic Training on Safety and Occupational Health:

Description: Many companies do not provide regular training to employees on safety and occupational health issues.

Pros of the Current State: Training costs for enterprises are reduced, and time spent on conducting training events is minimized.

Cons of the Current State: Workers are not adequately prepared to conscientiously and safely perform their duties, leading to an increased probability of workplace incidents.

Case 4: Non-compliance with Equipment Maintenance:

Description: Many enterprises ignore deadlines and regularity of equipment maintenance, which can lead to breakdowns and hazardous situations.

Pros of the Current State: Resources and time are saved for enterprises, and there is no need for constant technical support.

Cons of the Current State: There is a risk of accidents and injuries for personnel, and possible financial losses may occur due to equipment downtime and repair works.

Case 5: Insufficient Awareness of Employees about Their Rights and Responsibilities:

Description: Employees at many enterprises are unaware of their rights and responsibilities regarding safety and occupational health.

Pros of the Current State: Time spent on training and informational campaigns is reduced for enterprises.

Cons of the Current State: Employees have insufficient awareness about prevention methods and safety, leading to an increased risk of workplace accidents and illnesses.

Conclusion

The current state of research on the sociology of safety, particularly focusing on preventive measures in insurance, highlights a multi-faceted approach that encompasses the health and safety of workers, the impact of occupational hazards, and the effectiveness of preventive measures. Key findings from the literature review reveal significant insights into the challenges and strategies related to occupational safety and health (OSH).

Research demonstrates the substantial impact of occupational risks on chronic diseases, indicating that conditions like back pain, hearing loss, chronic obstructive pulmonary disease (COPD), asthma, and depression can be significantly attributed to workplace hazards. This underscores the importance of effective preventive measures to mitigate these risks and protect worker health.

A study conducted on the proactive prevention in occupational safety and health highlighted the evolving nature of workplaces due to global trends such as digitalization, globalization, and demographic change. It emphasized the need for labor inspectors and OSH professionals to identify future prevention priorities, suggesting that familiar issues like musculoskeletal strain and noise continue to demand significant attention alongside emerging challenges.

Another critical aspect of preventive measures in insurance involves addressing health hazards of industrial workers, including both physical and psychological risks. Preventive strategies outlined include pre-employment medical examinations, periodic health checks, emergency treatments for accidents, health and hygiene education, first-aid training, and proper job design to mitigate monotony and fatigue. These measures are foundational to creating a safer work environment and ensuring the well-being of workers.

The literature suggests a growing acknowledgment of the occupational illness burden and the need for suitable policy frameworks, modern strategies, and enhanced knowledge on occupational health and safety measures. The gap between the required and available trained human resources in the field of occupational health and safety is also highlighted, indicating a pressing need for advancements in training and education.

In conclusion, the research emphasizes the critical role of preventive measures in the sociology of safety within the insurance sector. It calls for continued research, policy development, and practical interventions to address both traditional and emerging challenges in occupational health and safety. The findings suggest a holistic approach that not only focuses on mitigating existing hazards but also anticipates future risks, fostering a culture of prevention and ensuring the health and safety of workers in the face of changing global work environments.

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