WORK INJURY RATE IN THE SLOVAK RAILWAYS COMPANY IN CONNECTION WITH WORK SAFETY

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Like all branches of our economy, also railway transport is based on long-term strategic plans whose aim is to create a transportation policy in order to achieve the most appropriate and equal conditions for all carriers. Coping with safety and hazard prevention must be based mainly on the capabilities of each business entity. The paper points out the issue of employees' work safety in the Slovak Railways company in connection with the European legislation in the field of safety and health protection at work and its implementation into the laws of the Slovak Republic. It also discusses the issues of employees' safety at workplaces and summarizes the duties of employees and employers in the field of health and safety protection in railway transport and deals with the implementation of European legislation into the laws of the Slovak Republic. The paper also analyses the safety of employees in railway transport in the form of a survey, whose aim is to determine the state of employees' safety at workplaces and aims to confirm or refute hypotheses regarding the impact of the quality and effectiveness of internal safety regulations of the Slovak Railways on the safety of employees and also whether the employer implements sufficient measures in order to minimize possible accidents at workplaces.

KEYWORDS

transport, safety, work injury, implementation

1 INTRODUCTION

Business processes according to their importance for the Currently, the railway transport in Slovakia is one of the key sectors of our economy. Railway transport also has a specific character of self-implementation in the field of social development. In order to increase the prestige of railways and return the dominance of railway transport in the area of people and goods transportation, there must be an adequate presentation of this kind of transport through its history and achievements [Korenko 2015]. Consistent promotion, modernization and development of the railway transport can significantly improve the overall perception of this way of transport by potential customers. The transportation policy of the Slovak Republic is maintained as a long-term strategic plan as a response to increased demand on transport associated with the economic growth of the Slovak Republic within the framework of sustainable transport development [Halenar 2014]. The main goal of this policy is to establish equal conditions and reduce risks in the transport market and infrastructure of the Slovak Railways. Another indicator of the quality of transport services is the railway transport operation safety. The issue of safety must not be omitted either in the case of safety and health protection of employees or profit gaining. Neglect of safety leads to the failure of the entire company, and despite the employer's increased attention to safety, various accidents and subsequent undesirable phenomena may occur at workplaces.

The cornerstone for security in the Slovak Republic is the Constitution of the Slovak Republic. The Constitution of the Slovak Republic provides all employees with the same right to fair and satisfactory working conditions, including safety and health protection at work. The Labor Code regulates the basic obligations of employers and employees in the field of work safety with reference to a special law, Act No. 124/2006 Coll. on Health and Safety, in which other obligations of persons involved are defined. According to the Labor Code, safety and health protection at work is a state of working conditions that reduce, or at least minimize dangerous and harmful impacts of the work process and work environment on the health of employees. After joining the EU, the Government of the Slovak Republic agreed to comply with, accept and implement European legislation into our laws. The Council of Europe's basic document for creation of a single market and rail transport services includes the Council of Europe Directive 91/440/EEC of 29 July 1991 on the development of railways, which also includes the safety of rail transport [Bujna 2019a].

The Labor Code imposes obligations on the employer related to the protection of life and health of employees. The employer's broader spectrum of duties includes employees' education, preventive and protective measures and informing employees in order to protect their health and ensure their regular further education [Hujo 2014a, Bujna 2019b, Smeringaiova 2021].

Likewise, employees have their rights, but also obligations towards the employer, which are directly or indirectly related to health protection at work. In relation to the performance of work, railway employees are obligated to comply with the provisions of operational and safety regulations, to participate in all trainings provided by the employer in the field of health and safety protection, to undergo knowledge verification and to undergo an examination in the case of suspicion, but also a random test, whether the employee is not under the influence of alcohol, narcotic or psychotropic substances, always maintain the workplace in a condition (operational) that safety and health of him/her or other employees, are not endangered and use the assigned protective equipment only in the designated manner [Modrak 2017].

2 METHODOLOGY

The analysis of the safety of employees in railway transport is carried out in the form of a questionnaire method, which can satisfactorily describe the current image of safety on railways. With the help of this method, it is possible to focus on operational job positions on the transport route which belong to the most endangered positions in terms of safety issues on the track [Halenar 2014]. The survey itself is divided into eight questions with several sub-questions. The survey questions are divided into several groups containing e.g. regulations, accident rate, protective work equipment, environment, and others. This survey was carried out on a voluntary basis and transport

employees of five stations were questioned. Respondents participating in the survey answered the questions using a scale of one to five, where 1 meant very good and, conversely, 5 represented insufficient [Hujo 2014b].

Data processing was carried out by the Microsoft Excel program (quantitative processing), while the evaluation was done in the form of graphs and tables. In this phase, the processed questionnaire data were used, their results were evaluated, and further recommendations were proposed.

The method of preliminary hazard analysis (PHA - Preliminary Hazard Analysis) was used to assess the signalman job position, which can later serve as a basis for a detailed analysis of the operational hazards of this job position [Bujna 2017].

The research questionnaire was developed according to obtained information on the given issue and was mainly oriented to respondents of 69 stations involved in railway transport. All questions were formulated and directed to safety, accident rate, protective work equipment, working environment and cooperation with the employer.

The questionnaire consisted of these questions (hereinafter referred to as Q1 to Q7):

1) How would you generally rate the compliance with the Slovak Railways safety regulations at your workplace?
2) Do you have specific suggestions for increasing work safety at your workplace?
3) Is all information in the field of safety (training, consultations, work meetings) sufficient in your work?
4) Have you personally had a work accident?
5) What would you suggest to the employer to reduce work accidents?
6) How would you characterize the working environment at your workplace?
7) How would you characterize the cooperation between the employer and the employee in the field of work safety?

3 RESULTS

From among the participating respondents from five railway stations we selected the positions of administrator, dispatcher, rail switch operator, signalman and rail switch supervisor. In the following graphic displays, we can read the answers to the questions in the form of numbers.

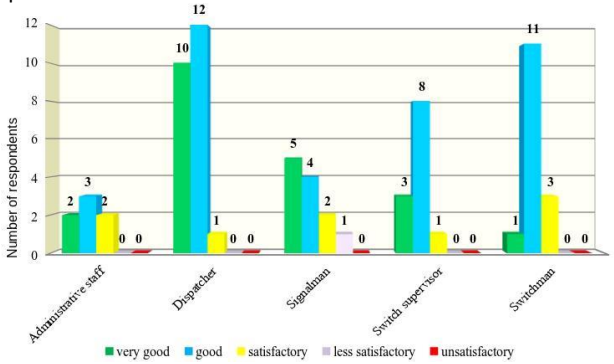

Figure 1. Responses on Q1: How would you generally rate the compliance with the Slovak Railways safety regulations at your workplace?

In Q1, the respondents rated the overall compliance with the Slovak Railways safety regulations at their workplace. Most of the responses given in Figure 1 can be considered positive.

In Q2 the respondents answered whether they had specific suggestions for increasing work safety at their workplace. The answers were summarized and displayed in Table 1.

The question Q3 investigated whether the provided information in the field of safety (training, consultations, work meetings) is sufficient. The interviewed respondents commented on sufficient information in the field of safety and had the opportunity to make their own suggestions, but none of them used it. The graphic representation of the answers to Q3 can be seen in Figure 2.

Table 1. Responses on Q2: Do you have specific suggestions for increasing work safety at your workplace?

Suggestions of respondents	Number of respondents
Higher quality winter protective clothing (signalman, switch supervisor and switch operator)	11
Airier uniforms	9
Replace dispatch batons with more modern ones - night	7
Tidiness at workplaces	7
Track lighting	5
Replacement of flooring in service areas	4
Cleaning and transparency of the track	4
Replacement of windows and doors	3
Reinforcement of access roads	2
Installation of showers	2

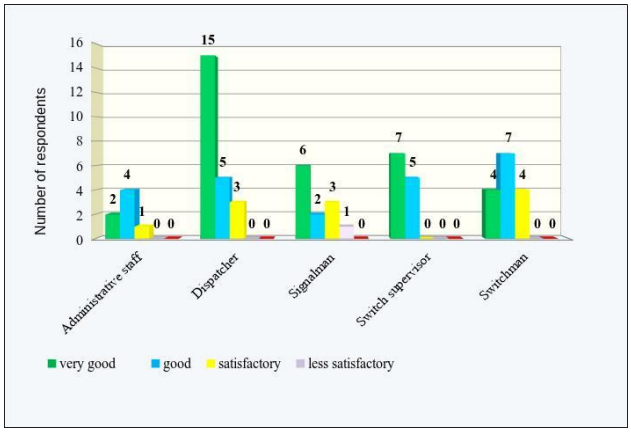

Figure 2. Responses on Q3: Is all information in the field of safety (training, consultations, work meetings) sufficient in your work?

Regarding the occurrence of accidents at the workplace, Q4 asked whether any of the interviewed employees had experienced a work accident. The answers are shown in Figure 3 and it can be seen that no one of them had any work-related accident.

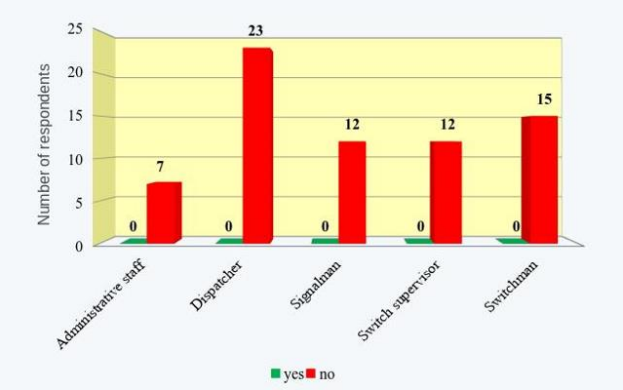

Figure 3. Responses on Q4: Have you personally had a work accident?

Question 5 asked the respondents what they would suggest reducing work accidents at their workplace. As can be seen in Table 2, the majority of respondents did not answer to this option.

Table 2. Responses on Q5: What would you suggest to the employer to reduce work accidents?

Suggestions of respondents	Number of respondents
Station lighting	2
Employees' access to work safety	2
Equipment of workplaces in accordance with safety regulations	1
Equipment for employees – railway lanterns	1
Work well-being - less stress	1
Furnishment of service rooms	1
Nothing	6
No answer	55

In Q6, the respondents evaluated the working environment of their workplace and had the opportunity to express their opinion, where they evaluated the working environment positively, one answer was less satisfactory, and no respondent answered that it was insufficient. These data are presented in Figure 4.

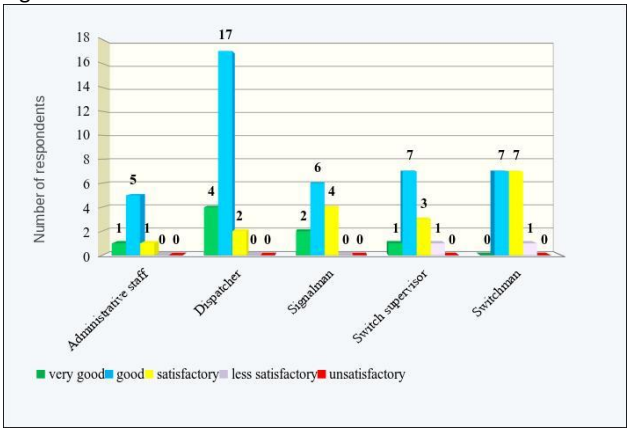

Figure 4. Responses on Q6: How would you characterize the working environment at your workplace?

The last question of the questionnaire was how the participating respondents would characterize the cooperation with the employer in the field of work safety. The graphical representation of the answers to this question, which can be seen on Figure 5, shows that the majority of the involved respondents spoke positively about the cooperation and two negatively.

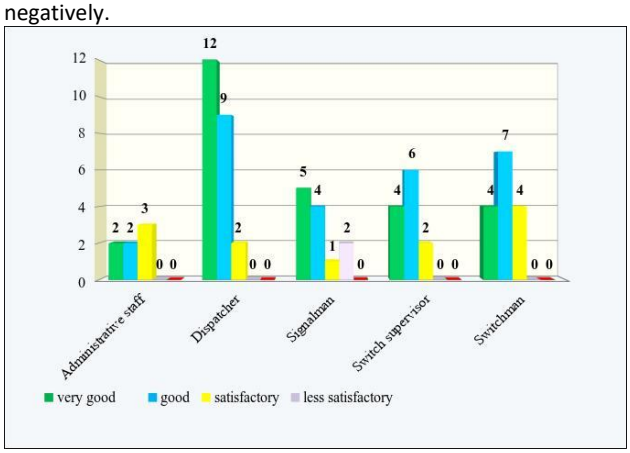

Figure 5. Responses on Q7: How would you characterize the cooperation between the employer and the employee in the field of work safety?

CONCLUSION

Currently, all employers must have a good overview of the hazards and threats that may occur at workplaces. The employer's primary duty is to prevent hazards and inform employees about possible threats that may affect them. The evaluation of the safe system and the seriousness of hazard in work activities can be considered acceptable only if the risks at the workplace are smaller than the acceptable risk, which consists of a predetermined limit of acceptable risk [Krenicky 2022]. Acceptable risk represents a risk that is reduced to a level that can be tolerated in the organization under the conditions that the requirements of binding regulations and own policy are respected [Sitko 2018].

By amending Act no. 513/2009 Coll. and Directive 2004/49/EC, the traffic management system has been significantly changed. It includes activities and measures created by the Slovak Railways to guarantee traffic safety on railways with an emphasis on risk reduction. The necessity of employers and also of employees, is to search for and create mutually satisfactory working conditions as well as to cooperate with other natural and legal persons, to inform each other about facts that could affect the safety and level of joint work [Dima 2010, Bujna 2017].

The paper points out the impact of the work safety of the Slovak Railways employees in connection with the European legislation in the field of safety and health protection at work and its implementation into the laws of the Slovak Republic. On the basis of the obtained results, it is possible to draw conclusions that concern employees and their compliance with railway safety regulations as a priority in relation to themselves and their employment. The employer, on the other hand, must verify the safety knowledge of his employees every three years. Measures in the field of health and safety protection are beneficial in the area of accident prevention, and schooling of employees takes place regularly every three months. Schooling of employees in the field of health and safety is provided every two years, taking into account the nature of work the employee performs at the workplace. The employer and employees constantly create and improve working conditions that ensure a suitable working environment to ensure work safety. On the basis of the obtained facts, we can point out the zero-accident rate due to regular prevention and the approach of employees, which ultimately contributes to the overall well-being at work at the individual workplaces. The overall evaluation of the

employer by the employees can be considered satisfactory based on the obtained facts.

Despite all described and drawn conclusions, it is also necessary to take measures that can lead to further successful functioning of the given organization. Among such recommendations, it is possible to include the creation of more suitable working conditions that meet today's requirements. The employer should improve two-way communication to improve work well-being at the workplace as well as the use of more suitable materials for personal protective equipment due to the current climatic conditions. On the part of the employees, it would be appropriate to be more interested in the individual plans of the employer's safety policy in each organization in which they work.

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