

THE RISK OF LOSS OF HEALTH AND LIFE ACCORDING TO THE OPINION OF EMPLOYEES IN THE SME SECTOR

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Abstract: Work safety is an autotelic value. The health and life of the employee should be a priority in any work process. The risk of loss of health and life is a frequent phenomenon in manufacturing enterprises. According to the data of the Central Statistical Office, in the first half of 2020, approx. 24 thousand people who were injured in accidents at work were reported to the office. Approximately every third of these accidents is related to a manufacturing company. The SME sector generates the largest number of accidents at work. The results of the survey concerning opinions on the risk of losing health and life at work are presented in this article. The survey was conducted among employees of the SME sector, with particular emphasis on manufacturing companies. The results presented in the article represent only a part of the larger picture.

Keywords: work safety, occupational risk, production enterprises, SME sector.

1. INTRODUCTION

Enterprises of "small size", or so-called micro and small enterprises, are the main part of the Polish economy. They are considered a key element among all economic entities which, above all, strongly create economic growth by shaping the amount of GDP, but also employment growth and social integration. (PARP, 2020). Most of Polish employees are employed in "small size" enterprises (Niciejewska, Kiriliuk, 2020). Therefore, effective management of work safety in micro and small enterprises is an important issue (Micheli, 2019). It is very important to provide appropriate and safe working conditions for employees of "small size" economic entities, but also for their long-term functioning on the market (Lewandowski, Niciejewska, 2019). Unfortunately, the results of publicly available reports and publications in Poland indicate a relatively low level of occupational health and safety in "small-sized" enterprises (Niciejewska, Kasian, 2020). Occupational safety management in the smallest Polish business entities is still a challenge for both employers and employees (Klimecka-Tatar, Niciejewska, 2016). In general, the working environment conditions are not conducive to safe work. Caring for safe working conditions in these entities is still rare, and the

ergonomics of workstations is a desirable component of optimal working conditions (Michalik, 2019). There is a conviction among employers and employees of "small-sized" enterprises that outlays on work safety are only costs. They do not see any direct benefits in them (Niciejewska, 2018). Of course, there are employers who know that expenditure on improving working conditions in their enterprises is a value in itself, and the benefits translate into satisfied, healthy and efficient employees (Peçitlo, 2021). However, there are barriers that prevent such thinking for many employers and employees of "small-sized" enterprises. These are mainly: the high costs of maintaining the company on the market, the enormous amount of work done to acquire customers, keep them and be competitive in a very dynamic and changing environment. The average employer does not think about work safety in the first place, but about a number of barriers that prevent the smooth and effective functioning of his company on the market (Kaewboonchoo et al., 2016). There is a great need for changes both in organizational and legal matters, as well as in the awareness of employers about the need to create safe and accident-free workplaces. Occupational safety management in "small-sized" enterprises is not only necessary, but also possible, although it is certainly a very big challenge for both employers as well as the employees. (Simukonda et al., 2018).

Among Polish employees, awareness of safe and accident-free work is at a low level. This state of affairs is evidenced by numerous reports: the National Labor Inspectorate (PIP, 2020), the National Agency for Enterprise Development (PARP, 2019), as well as the results of research conducted by the Central Institute for Labor Protection in Warsaw (CIOP-PIB, 2019) and the European Safety Agency and Health at Work (EU-OSHA, 2019). It is the human factor that has been responsible for the majority of accidents at work for many years. The main elements of the causes are, first of all, inadequate and dangerous behavior of employees during the performance of employee tasks (GUS, 2020). Both irresponsibility, often thoughtlessness and reckless behavior, which are most often committed by young workers (due to age) and young workers (due to their seniority), proves the lack of awareness of safe behavior in the work process. Institutions that deal with the organization of safe working conditions define the reasons for such behavior of employees as: lack of appropriate initial and on-the-job training, or carried out in an ineffective manner (Znajmiecka-Sikora et al., 2010).

Nowadays, companies take many steps to create safe and accident-free workplaces for their employees. However, it is becoming a common phenomenon in medium and large enterprises. In "small-sized" enterprises, creating safe workplaces, ergonomic shaping of the work environment, or shaping the awareness of safe behavior among employees are still very underestimated concepts and phenomena. The concept of "work safety" is still understood by many employers as only work regulations and guidelines of the Labor Code, in terms of "dead regulations" (Cierniak-Emerych A. et al. 2017, Jagusiak-Kocik M., et al. 2021). Therefore, many state institutions, such as the National Labor Inspectorate, the Office of Technical Inspection, or the Central Institute for Labor Protection prepare meetings for employers and employees of "small-sized" enterprises. Proposed meetings, conferences and competitions are thematically related to the concept of appropriate preparation of the work environment and are of a preventive and training nature. Their aim is to show employers and employees the right path towards safe and accident-free working conditions. Starting from the reliable identification of threats in the workplace, through the effective and rational assessment of occupational risk, the employer should not forget about the most important and

greatest capital and potential of his company - the employee (Rodriguez et al., 2020). In order for the employee to work safely, he should take an active part in managing work safety in the company. Planning safe and accident-free work, organizing safe working conditions and work processes, their implementation, motivating for safe and accident-free work, as well as control of all activities in the aspect of safety - all this should be done with the active participation of employees (Ulewicz et al., 2015). Only then can we talk about good management of work safety in "small size" enterprises. It should be emphasized that well-managed employee capital consists of people who are aware of both working conditions and safety, which should be the supreme value in every work process.

2. METHODOLOGY OF RESEARCH

The survey method was used to carry out the research presented in the article. The research was carried out using the proprietary questionnaire, which is the main tool for quantitative research. Quantitative research was extended to qualitative research conducted with the use of direct interview with elements of open observation. However, this paper presents a part of the larger total of the conducted research, namely the results of quantitative research. 1006 business entities of various profiles participated in the study. In the entire number of surveyed companies, it was the production companies that accounted for 26% of the surveyed business entities. The rest of the research entities were service and trade enterprises. The research also used statistical methods that enable the analysis of survey data, which are presented on an ordinal and nominal scale. Mainly, the structure indicators, correlation analysis using the tau-Kendall coefficient, as well as the independence test χ^2 and the correlation coefficient ϕ -Youl were used. In the case of small numbers of the studied units, the Yates correction was additionally used. In the field of mathematical statistics, the Mann-Whitney test was used as an alternative to the means test.

3. RESULTS AND DISCUSSION

The respondents assessed the risk of losing health and life, indicating the factor that determines it in the most important way. The results concerning the distribution of health and even life risk indications, which occurred most often in the opinion of the respondents according to their age, are presented in Table 1.

Table 1

Distribution of indications (according to average) of risk of losing health and even life, occurring most often in the opinion of respondents, by age of respondents, and the value of the tau-Kendall correlation coefficient between age and types of risk

Variable	Age							Correlation	
	18-24	25-34	35-44	45-54	56-64	65 and over	Together	Tau	P
Due to arduous factors	2.261	2.212	2.720	2.805	2.909	3.500	2.675	0.213	0.000
Due to harmful factors	2.217	2.125	2.576	2.614	2.788	3.250	2.535	0.126	0.000
Due to hazardous factors	2.797	2.839	3.309	3.321	3.303	3.500	3.257	0.071	0.001

(accidents, injuries)									
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Own study * - statistically significant values at the level $\alpha = 0.05$

According to the respondents, the risk of losing health due to nuisance factors ($r = 0.213$, $p < 0.001$), harmful ($r = 0.126$, $p < 0.001$) and dangerous and traumatic factors ($r = 0.071$, $p = 0.001$) increases with the age of the respondents.

The first of these relationships can be considered moderate, the others are weak but statistically significant. The next table (number 2) presents the results concerning the differences in the assessment of the risk of losing health and even life in the current profession, from the point of view of micro and small enterprise employees.

Employees of micro enterprises significantly more often indicated the risk of losing health due to burdensome factors of the working environment ($Z = 2.4327$; $p = 0.0150$) compared to employees of small enterprises.

Table 2

The difference in assessments of the risk of losing health and even life in the current profession from the point of view of micro and small workers (Mann-Whitney test results)

Variable	Micro		Small		M-W test results	
	Average	SD	Average	SD	Z	P
Due to arduous factors	2.7132	0.6609	2.6286	0.7904	2.4327*	0.0150
Due to harmful factors	2.5191	0.7965	2.5538	0.7989	-0.7999	0.4238
Due to hazardous factors (accidents, injuries)	3.2613	1.0067	3.2527	1.1859	0.2545	0.7991

Own study * - statistically significant values at the level $\alpha = 0.05$

Table 3 presents the results concerning the distribution of indications of the risk of losing health and even life, most often in the opinion of the respondents, according to the sector of activity. The respondents did not notice (in general) a high level of risk of losing health or life. More specifically, in the services sector, the risk of hazardous factors was perceived as 3.411. On the other hand, the assessment of the significance of the risk of harmful factors on the part of workers in the manufacturing sector was (although generally low) higher than a similar assessment on the part of the service sector ($Z = 2.516$, $p = 0.012$).

Table 3

Distribution of indications (according to average) of risk of losing health and even life, most frequently in the opinion of respondents according to the sector of activity, and the results of the test of significance of differences between indications for the production and service sectors

Variable	Grade point average					Median	M-W test results	
	Production	Services	Trading	Mixed	Together		Z	P
Due to Arduous factors	2.788	2.703	2.278	2.464	2.675	3.000	1.901	0.057

Due to harmful factors	2.705	2.562	2.361	2.171	2.535	3.000	2.516	0.012
Due to hazardous factors (accidents, injuries)	3.315	3.411	2.389	2.736	3.257	3.000	-1.386	0.166

Own study * - statistically significant values at the level $\alpha = 0.05$

Employees of entities that participated in the study also assessed the factors that, in their opinion, threaten life and health. Table 4 presents the collective results concerning the distribution of respondents' responses to factors that significantly affect occupational safety and pose a threat to health and life.

Table 4

Distribution of indications (by average) of threats to life and health, most frequently occurring in the opinion of respondents by sector of activity, and the results of the test of significance of differences between indications for the production and service sectors

Variable	Grade point average					Median	M-W test results	
	Production	Services	Trading	Mixed	Together		Z	P
Hazardous factors (accidents, injuries)	3.734	3.888	3.194	2.993	3.702	4.000	-2.556	0.011
Physical factors	2.983	2.859	2.833	2.514	2.840	3.000	1.709	0.087
Chemical factors	2.589	2.565	2.389	2.157	2.508	2.000	-0.089	0.929
Biological factors	2.519	2.615	2.472	2.221	2.532	2.000	-1.878	0.060
Psychophysical factors	2.925	3.148	3.222	2.700	3.035	3.000	-2.979	0.003

Own study * - statistically significant values at the level $\alpha = 0.05$

Among threats to life and health, the highest score for indications (on average) was given to dangerous factors. Half of the respondents assessed that it is precisely the dangerous factors that are very important. They were considered the most dangerous both in the production and service enterprises sector, while in the second case the assessment was significantly higher ($Z = -2.556$, $p = 0.011$). Another highly rated risk factor for health and life were, according to the respondents, psychophysical factors. Also in this case, the assessment of service sector employees (3.148) in relation to the manufacturing (2.925) was significantly higher ($Z = -2.979$, $p = 0.003$). The risk from physical and chemical factors was assessed as insignificant.

In addition, the analysis of the results concerning the distribution of indications of threats to life and health, which are most common in the opinion of the respondents, according to their age, was performed. It turned out that as the age of employees increases, the importance of such life-threatening factors as: traumatic factors ($r_T = 0.087$, $p < 0.001$), physical factors ($r_T = 0.126$, $p < 0.001$), chemical factors ($r_T = 0.101$, $p < 0.001$) and biological factors ($r_T = 0.086$, $p < 0.001$) also increases. The presented relationships are not high but statistically significant. Employees of small enterprises (10-49 employees) significantly more often indicated the importance of dangerous traumatic factors ($Z = -2.4665$; $p = 0.0136$), and in particular of biological factors ($Z = -2.6071$; $p = 0.0091$), as

threats to life and health in comparison with employees of micro enterprises (1-9 employees).

Employees of the SME sector more and more often perceive occupational threats as those that can actually harm their health. They are also increasingly aware of the consequences of unsafe behavior. They consider burdensome factors to be the most dangerous factors for their health and life.

According to the research, older workers more often perceive the risk of losing health and life due to burdensome factors than young workers. Next, they pay attention to harmful and dangerous factors, i.e. traumatic ones. Moreover, employees of the smallest business entities (1-9 employees) more often than employees of small enterprises (10-49 employees) indicated burdensome factors as the cause of loss of health. Service companies more often perceived the risk of losing health or life due to traumatic (dangerous) factors. Harmful factors as the reason for the risk of losing health or life were more often indicated by production and service companies. Apart from the hazardous factors, the most important threats affecting the health and life of employees are psychophysical factors.

4. CONCLUSION

The ability to identify occupational hazards in the workplace is the basis for effective management of occupational health and safety in an enterprise. The employer is responsible for carrying out the hazard identification and occupational risk assessment. However, a responsible employer should make sure that his employees are aware of potential risks and their consequences. The aim of this article was to check the skills of employees of enterprises in the SME sector in the area of identifying occupational hazards and indicating those that affect the risk of losing health and even life. Based on the analysis of available reports and submissions (National Labor Inspectorate, National Agency for Enterprise Development), less attention is paid to activities in the field of broadly understood health and safety in the smallest business entities. In the same aspect, a better situation can be noticed in the case of larger enterprises (medium and large economic entities). This is due to many reasons, incl. economic, legal and organizational opportunities and obligations, as well as personal resources. However, the greatest impact on the skillful and effective identification of occupational hazards that significantly affect the risk of loss of health and life is the awareness of safe behavior among employees. A positive factor that should be taken into account when analyzing the results of the study, is the perception of psychophysical factors by the respondents. Over the years, this type of factor that may pose a threat to human health and life has been treated lightly. First of all, because the identification of threats belonging to this group was very difficult for both employers and employees. Today, such threats as work monotony, stress, burnout, mobbing, conflicts in employee relations or even non-ergonomic working conditions are noticed by employers and employees and identified in an appropriate way. Unfortunately, this skill does not mean that companies deal with these risks. However, the two elements are not clear cut, and this slight difference is of great importance. There is still a very great need for preventive actions in the area of minimizing threats from the group of psychophysical factors. Employers of the smallest business entities, more often than medium and large ones, should draw workers' attention to occupational hazards that accompany them during the performance of employee tasks, as well as use appropriate methods and tools to shape awareness of safe behavior. Because safety is a supreme value and

should be the most important for all employees at every stage of their professional work (and beyond). Knowledge of your industry and skilful identification of occupational hazards that affect the risk of losing health and even life may pay off in the reduction of accidents, as well as reduce the impact of harmful and burdensome factors on the well-being and health of the company's most important capital, which is undoubtedly the employee.

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