

The importance of performance indicators in occupational safety and health management - a review

Gabriela Caldarescu¹, Laura Florea¹, Gheorghe Nagit², and Mihai-Adrian Bernevig^{2,*}

¹Labor Inspectorate Iasi, Fire Mill Road, no. 31, 707410 Iasi, Romania

²“Gheorghe Asachi” Technical University of Iasi, D. Mangeron Blv., no. 67, 700050 Iasi, Romania

Abstract. Reports on the incidence of accidents at work in Romania show that there is poor management of injury risks, and the component called management has a defining role, which is why performance indicators can be used to increase performance in occupational OSH (occupational safety and health) management and implicitly contribute to reduce the number of accidents and occupational diseases. The paper is a review that aims to perform an analysis of key performance indicators (KPIs) given the relevance of the indicators used in the field of OSH. The first part includes the current use of these indicators and a summary of their effectiveness in the field, which presents lagging performance indicators applicable to OSH, which can measure the results of activities carried out and leading indicators, which are proactive, preventive and predictive, to provide information about the performance of the management system in the field. In the second part, using the survey method for which the research tool is a questionnaire with 10 items, an analysis is performed to test the relationship between the two types of performance indicators. Finally, the results obtained highlighted the existence of direct correlations between the types of selected indicators, but also the existence of limits on their use.

1 Introduction

The statistics of work accidents provided by the Labor Inspectorate for the last 10 years show that at national level every year there is a number of injured people ranging between 4000 - 5800 people [1,2]. In 2018, Romania developed, for a period of 4 years, a new national strategy in the field, a strategy that aimed to create a framework instrument in order to correlate with the strategic directions of the European Union on OSH at work. At the national level, the purpose of this strategy is to prevent accidents at work and occupational diseases and to promote the health of employees. If at the level of the European Union there is a significant reduction in accidents at work and an improvement in prevention, further actions are needed in Romania. Every year in the EU, around 4.000 workers lose their lives in accidents at work, and more than three million workers fall victim to serious accidents at work, which means more than three days off work [3].

* Corresponding author: mihaibernevig@gmail.com

The frequency index for injuries and deaths shows that jobs are more dangerous for small firms than large ones [4-6]. In Europe, 82% of occupational injuries and 90% of deaths occur in SMEs [7,8].

Analyzing these statistics and strategies we can say that the management of OSH remains an essential part of the prevention system for reducing accidents at work and ensuring OSH at any level. In addition to the conventional approach, which is limited to assessing performance by assessing working conditions and accidents, the inclusion of performance factors for management can be an important way of integrating OSH into business management. Although measuring performance is not a new concept, it can include indicators with which to practically identify, monitor and communicate performance results. Performance indicators are generic terms that reflect the quantitative aspect by which objectives are defined and performance is evaluated and compared.

In the literature there are numerous studies on key performance indicators (KPIs) that demonstrate the usefulness of their use in performance management [9]. These indicators can also be extremely useful in the field of occupational OSH management, which includes a variety of risks to be managed in an organization, at all functional levels and at all levels, regardless of its size or structure. In the absence of these key performance indicators for the OSH component of management, certain specialists have identified a series of specific and lagging (progress) type indicators of proactive, preventive and predictive (leading) type of progress to monitor and provide information on the performance of the OSH management system.

2 Literature review

2.1 Lagging performance indicators (regression indicators) associated with OSH

In articles published in scientific journals, conferences, research reports, a series of performance indicators have been identified that we could associate with OSH management, whether we refer to risk management, quality or the organizational one. The relevance of these indicators increases with time or value [10]. For example, an indicator measured daily or weekly will provide available information in time which may allow immediate action to be taken which by comparison if measured monthly or annually cannot provide relevant information in real time and useful in managing critical situations from a managerial point of view.

In the field of OSH, they are frequently used as performance indicators such as sick leave or time lost due to incidents, which can be called "lagging" indicators because they measure the "results" of the safety management process and occupational health compared to past actions. Lagging performance indicators (regression indicators) associated with OSH identified in the literature and frequently used can be classified according to 2 criteria:

1. with a negative accent (measures what did not work): injuries and occupational diseases; lost working days due to sick leave; incidents and near misses; complaints about working conditions; number of retirements due to illness;
2. with a positive focus (measures what worked): planned and completed working days (i.e., 97% completed working days, as opposed to 3% absence of illness); the number of hours worked without injury due to injuries; the number of working days since the last accident; employee satisfaction (survey).

Lagging indicators can measure a managerial failure to implement OSH standards in the workplace but can also be a source of experimental information (a posteriori). These

indicators do not allow the assessment of the level of OSH, but can be expressed in percentages or numbers [11].

Also in the literature, we identify performance indicators divided into different categories: internal, external, operational, qualitative, reactive, proactive, strategic, their names varying according to author and field of research [10].

2.2 Leading performance indicators (progress indicators) associated with OSH

Leading performance indicators associated with OSH generally measure factors that are considered to be positive key elements in OSH management. These indicators offer the possibility to implement preventive measures before accidents (a priori), have a predictive value, can help identify weaknesses in the organization, so they can be used to improve OSH management [10].

Leading indicators must be achievable, significant, transparent, easy to communicate, valid, at time. They can be classified into three categories:

1. Operations-based indicators: are relevant to the operation of an organization's infrastructure (machinery, operations) with a high level of specificity;
2. Systems-based indicators: related to the management of OSH systems; they can be used from the level of a small organization to the level of a corporation;
3. Behavior-based indicators: measure the behavior or actions of individuals, human interactions related to supervision and management.

The main leading performance indicators associated with OSH identified in the literature that correlate and improve performance are:

- managers with training in OSH;
- workers with training in OSH;
- management meetings in which safety and health issues are addressed;
- manager-worker meetings in which safety and health issues are addressed;
- company visits to management related to OSH issues;
- business partners (suppliers, contractors, etc.) evaluated and selected based on their performance in terms of OSH;
- training / informing;
- personal protective equipment;
- inspections related to OSH or the results obtained from them;
- frequency of observing (un)safe behaviors;
- audits performed in the field of OSH;
- projects / activities in the field carried out;
- suggestions or complaints in the field of OSH resolved;
- medical or health check-ups;
- safe climate;
- reports;
- incentives [11-14].

2.3 Comparison of performance indicators whether they are lagging (regression indicators) or leading (progress indicators) in the context of the association with the field of OSH

The use of performance indicators can influence the image of an organization, the career of a manager, but can also become an end in itself, contributing to the performance of OSH management, thus implicitly reducing the number of accidents at work and occupational diseases.

Performance indicators are important in the management of OSH, can provide valuable feedback, can help motivate managers, can determine actions and are valuable in communication. They are also important for the integration of OSH management into business management. Analyzing the two types of indicators we identify the following aspects:

1. Lagging (regression) indicators associated with OSH may not be sufficient to measure performance:
 - a. the gap between the actions taken and their results: lagging indicators may provide information too late;
 - b. the results are the product of several factors (lagging indicators can show how much the result is, but cannot provide information about the reason and corrective actions needed to improve performance);
 - c. the measured result rates are low (for example, good safety also means a low frequency of injuries, but these measures are not enough to provide correct feedback because the frequency can be reduced simply by the fact that there are no accidents);
 - d. the consequences are so severe that they cannot be expected to occur;
 - e. the absence of reporting of events in which there is potential for disaster, but whose probability is extremely low (by lagging indicators) may be an insufficient indicator;
 - f. ignoring latent risks with significant potential to cause disaster (the fact that the engine of a car is running does not mean that it will not fail; regular checking is a precautionary measure and a leading indicator).
2. Leading indicators can be added to lagging indicators as they can compensate for some of their shortcomings and limitations, respectively:
 - a. can measure inputs to a process;
 - b. can monitor the effectiveness of control systems and warn in advance of any defects before problems arise;
 - c. show the state of the systems before the occurrence of accidents, incidents, damages, damages or failures;
 - d. can measure the inputs that people make to the management process;
 - e. provides information that helps the user to take steps to achieve the desired results or to avoid unwanted results;
 - f. contributes to the improvement of future performance by promoting actions to correct potential deficiencies without waiting for their manifestation.

2.4 Previous studies

Hallowell et al. [15] in 2013 identified 13 leading indicators that improve occupational safety performance, including: lack of reporting, OSH control, audit program, pre-work meeting, cleaning program and employee involvement. Later in 2016, in a study of 261 entrepreneurs, Salas and Hallowell [16] found evidence that supported them empirically for the following indicators: lack of reporting, stoppage authority, management involvement in OSH activities, and workers, the beneficiary, auditing, control and risk assessment. Alruqi and Hallowell [14] identify the existence of nine leading indicators that correlate significantly with accidents at work, namely: OSH registration, OSH resources, OSH personnel, involvement of the beneficiary, OSH training, personal protective equipment, incentives, inspections / observations and OSH assessments and meetings before starting work, concluding that these indicators are generally valid in any country, industrial sectors, and types of companies. Relevant to the leading indicators developed in the field of OSH is the Ontario Leading

Indicators Project, which the Canadian Institute for Work and Health has conducted since 2008. In 2015, following an online survey submitted and completed by 840 health and safety specialists in the field of OSH, IOSH has verified that the indicators included in the IOSH Prevention Culture Index are adequate to measure a prevention culture at the company level. The indicators considered most effective were: management commitment and visibility, communication and participation, and the least efficient were: OSH resources, productivity versus OSH, and reporting [12].

The literature on leading indicators also indicates some challenges in their development: conceptual clarity, whether to measure workplace policies and practices through self-assessment or external audit, how to interpret changes in scores, how to use indicators to improve prevention, and how indicators have long been adapted to specific contexts in the workplace [17]. There is also, according to some authors, too little consensus on the methods that should be used to identify leading indicators [18]. Sevar Dilkhaz Salahaddin Neamat in 2019 [12] made a synthesis of lagging and leading indicators found in the literature (15 type indicators and leading four lagging), both as a period of analysis (2010 - 2019) and frequencies of approach in specialized works, where they analyzed their impact and the relationships arising from the correlation (Table 1).

From this synthesis there are four lagging (regressive) indicators associated with OSH that have been studied over the last ten years, which by comparison are much fewer than those of leading (progress) which are in the number of fifteen. Therefore, key performance indicators (KPIs) that can be used for the performance of OSH management should also be selected taking into account the results of previous research. The effectiveness of these indicators could not be fully demonstrated for all types of organizations. In general, the use of dedicated lagging indicators, which, for example, measure the number of accidents, may be irrelevant to the performance of OSH management in the context of organizations working in areas of activity where accidents do not occur and the absence of accidents cannot be associated with management performance and vice versa.

Table 1. Leading and Lagging Indicators [12]

Year	Leading Indicators													Lagging Indicators						
	Alcohol/ Drug Testing	Attitudes and Safety Climate	Fall Protection	Housekeeping	Ladders and Stairs	Near Miss	Pre-Task Safety Plans	Personal Protection Equipment	Railings and Covers	Safety Corrections	Safety Positive Reinforcement	Site Inspections / Audits	Subcontractor Safety	Training / Job Safety Talks	Worker Safety Behavior	First Aid Injuries	Lost Time Injuries	Members of the Public Injured	Reported Incidents	
2010			✓	✓	✓			✓	✓	✓										
2011	✓								✓		✓		✓	✓	✓	✓	✓	✓		
2012			✓	✓	✓			✓	✓	✓										
2012	✓					✓	✓		✓	✓	✓	✓			✓	✓				
2013	✓					✓				✓	✓	✓	✓							
2013						✓	✓				✓			✓	✓	✓				✓
2014	✓	✓	✓	✓			✓		✓									✓		
2015		✓		✓			✓					✓	✓	✓	✓	✓	✓			✓
2015											✓	✓	✓							

2016		✓												✓				
2017	✓					✓			✓		✓		✓			✓		
2017		✓										✓	✓					
2018		✓				✓				✓							✓	✓
2018													✓	✓	✓	✓	✓	✓
2018		✓																
2019	✓		✓	✓	✓	✓		✓							✓	✓		
2019						✓			✓	✓	✓	✓	✓	✓				
2019		✓					✓				✓	✓	✓					✓

From this synthesis there are four lagging (regressive) indicators associated with occupational OSH that have been studied over the last ten years, which by comparison are much fewer than those of leading (progress) which are in the number of fifteen. Therefore, key performance indicators (KPIs) that can be used for the performance of occupational OSH management should also be selected taking into account the results of previous research. The effectiveness of these indicators could not be fully demonstrated for all types of organizations. In general, the use of dedicated lagging indicators, which, for example, measure the number of accidents, may be irrelevant to the performance of occupational OSH management in the context of organizations working in areas of activity where accidents do not occur and the absence of accidents cannot be associated with management performance and vice versa.

3 Identification and analysis of five lagging indicators and five standard indicators using the survey method

To identify a set of lagging (leading) and leading (progress) performance indicators that can provide information on the performance of the OSH management system generally valid for any type of company, starting from literature, we chose a set of five specific lagging (regression) indicators and five leading (progress) indicators that we analyzed empirically using the survey method and the questionnaire as a research tool. The research tool, checklist type, contains ten items related to ten performance indicators, respectively five lagging (regression) type associated with OSH (accidents at work, minor accidents, dangerous incidents, sick leave, petitions) and five leading (progress) types associated with OSH (OSH managers course, Worker Training / Information, OSH internal control, managed risks, direct coordinators) and was applied to a group of 102 subjects (managers, training specialists in OSH and workers).

The research starts from the following hypotheses:

1. There are significant negative correlations between lagging performance indicators (regression indicators) - Accidents at work, Minor accidents, Dangerous incidents, Medical leave, Petitions and performance indicators of type or leading (progress indicators) - OSH course managers, Training / Information of workers, Internal control of OSH, Managed risks, direct coordinators;
2. Leading performance indicators (progress indicators) - Training / informing workers, Consultations with workers are significant predictors for the lagging performance indicator (regression indicators) - no. of work accidents;

3. Type or leading performance indicators (progress indicators) - OSH managers course, Consultations with workers are significant predictors for the lagging performance indicator (regression indicators) - no. of minor accidents;
4. Type or leading performance indicators (progress indicators) - OSH managers course, Consultations with workers are significant predictors for the lagging performance indicator (regression indicators) - no. of medical leave.

Based on the answers received, a database was compiled which was subsequently processed using the computer program SPSS 20 - "Statistical Package for the Social Sciences". The following statistical analysis were performed using the:

- Pearson correlation, to identify if there are links between the ten indicators (Table 2);
- Multiple linear regression (Tables 3-5), to identify whether the leading (progress) indicators that correlate with the lagging (regress) indicators can be used as significant predictors to predict the scores and at what extent they depend on each other, in the sense in which they can explain the incidence of manifestation. By using the multiple regression, we try to get the answer to one of the questions: "what is the best prediction for...?", "who is the best predictor for...?".

Table 2. Pearson Correlation

Lagging (regression) indicators associated with OSH		Leading (progress) indicators associated with OSH (select).				
		OSH course for managers	Training / Inform workers	Internal control in occupational health and safety	Managed risks	Direct coordinators
Work accidents	Pearson Correlation	.111	-.216*	.031	-.130	.197*
	Sig. (2-tailed)	.272	.031	.759	.198	.050
	N	100	100	100	100	100
Minor accidents	Pearson Correlation	-.264**	-.073	.053	-.010	-.709**
	Sig. (2-tailed)	.008	.471	.597	.922	.000
	N	100	100	100	100	100
Dangerous incidents	Pearson Correlation	-.020	-.010	-.268**	-.024	-.016
	Sig. (2-tailed)	.845	.887	.007	.812	.872
	N	100	100	100	100	100
Medical leave	Pearson Correlation	-.315**	-.101	-.026	.014	-.759**
	Sig. (2-tailed)	.001	.317	.796	.887	.000
	N	100	100	100	100	100
Petitions	Pearson Correlation	-.017	.131	.014	.219*	-.093
	Sig. (2-tailed)	.864	.195	.891	.029	.360
	N	100	100	100	100	100

The results obtained by calculating the Pearson correlation coefficient are:

1. for the relationship number of OSH courses of managers - figure of light accidents, $r = -0.264$, $p = 0.008 < 0.05$; for the relationship number of OSH courses of managers - figure of medical leave, $r = -0.315$, $p = 0.001 < 0.05$;

Therefore, these results reveal that there is a significant negative correlation between the number of managers OSH courses and the figure of light accidents, the correlation being valid only for 7% of subjects ($r^2= 0.069$), and a significant negative correlation between the number of managers with OSH courses and the figure of medical leave, the statistically significant correlation being valid for 10% of subjects ($r^2=0.099$). Thus, we can mention that as the number of managers with OSH courses increases, the figure of light accidents and the figure of medical leave decreases, resulting in the leading indicator being well identified contributing to the decrease of two lagging indicators.

2. for the number of training/information workers and the figure of accidents at work $r = - 0.216$, $p = 0.031 < 0.05$;

Therefore, these results show that there is a significant negative correlation between the number of training/information workers and the figure of accidents at work, the correlation being valid for 5% of subjects ($r^2= 0.046$). Thus, we can mention that as the number of training/information workers increases, the figure of accidents at work will decrease, from which it follows that the second lead indicator has been well identified contributing to the decrease of another lagging indicator.

3. for the number of internal OSH controls and the figure of dangerous incidents $r = - 0.268$, $p = 0.07 < 0.05$;

Therefore, there is a significant negative correlation between the number of internal OSH controls and the figure of dangerous incidents, with the statistically significant correlation being valid for 7% of subjects ($r^2=0.071$). Thus, we can conclude that as the number of internal OSH controls increases, the figure of incidents will decrease, resulting in the third leading indicator well identified contributing to the decrease of a new lagging indicator.

4. for the number of direct coordinators and the figure of light accidents $r = - 0.709$, $p = 0.001 < 0.05$; for the number of direct coordinators and the figure of medical leave $r = - 0.759$, $p = 0.001 < 0.05$.

Therefore, the results show that there is a significant negative correlation between the number of direct coordinators and the figure of light accidents, the correlation being significantly valid for 50% of subjects ($r^2= 0.052$), that is a significant negative correlation between the number of direct coordinators and the figure of medical leave, the statistically strong correlation being valid for 57% of subjects ($r^2= 0.576$). Thus, we can conclude that as the number of direct coordinators increases, the number of light accidents and the number of medical leave will decrease, from which it follows that the lead indicator has been well identified. It contributes to the decrease of two lagging indicators and has a confirmation of more than 50% of the statistical group.

These data show that selected leaders are to be taken into account by managers in order to improve performance. This represents an ideal situation in the given problem, transposed into practice managers should take into account these indicators because they respond to a fairly high percentage to the selected regression indicators.

The results obtained by calculating the Pearson correlation coefficient highlight the following aspects: for the number of risks managed and the number of petitions $r = 0.219$, $p = 0.007 < 0.05$; number of direct coordinators and number of work accidents $r = 0.197$, $p = 0.050 < 0.05$). Therefore, there is a significant positive correlation between the number of risks managed and the number of petitions, the statistically significant correlation being valid for 5% of subjects ($r^2= 0.047$), that is a significant positive correlation between the number of direct coordinators and the number of accidents at work, the statistically significant correlation being valid for 4% of subjects ($r^2= 0.038$). Thus, we can conclude that as the number of risks managed increases, the number of petitions will increase, i.e., as the number of direct coordinators increases, so will the number of accidents at work.

Therefore, by analyzing the data and numerical links of these indicators put into the relationship we can detect a malfunction within these relationships.

Table 3. Multiple linear regression for leading indicators associated with OSH (selected) that correlate with a lagging indicator (work accidents)

Model		Coefficients ^a									
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	8.124	1.555		5.226	.000					
	Training/Worker information	-.736	.336	-.213	-2.192	.031	-.216	-.217	-.213	1.000	1.000
	Direct coordinators	.097	.049	.193	1.989	.049	.197	.198	.193	1.000	1.000

a. Dependent Variable: Accidents at work

By applying multiple stepwise regression, we checked whether the two variables (training/information workers, direct coordinators) that correlate with the number of work accidents can be used as significant predictors to predict the scores of the dependent variable (number of work accidents). According to the regression analysis we find the following statistical situation: there are two independent variables that explain in proportion 9% the variance of the criterion (number of accidents at work). The partial correlation for the variable number of accidents at work and the number of training/information workers is $r = -0.213$, $p = 0.031 < 0.05$, for the variable number of accidents at work and the number of direct coordinators is $r = 0.193$, $p = 0.049 < 0.05$, values which, in square terms, justify 5 %, respectively 4 % variance in the number of accidents at work, where no account is taken of their common variance.

Table 4. Multiple linear regression for leading (progress) indicators associated with OSH (select) that correlate with a lagging indicator (minor accidents).

Model		Coefficients ^a									
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	Constant	8.994	.247		36.459	.000					
	Direct coordinators	-.216	.024	-.713	-9.192	.000	-.709	-.682	-.658	.851	1.176
	OSH course for managers	.003	.023	.011	.146	.884	-.264	.015	.010	.851	1.176

a. Dependent Variable: Slight accidents

By applying multiple stepwise regression, we checked whether the two variables (OSH managers course, direct coordinators) that correlate with the number of light accidents can be used as significant predictors to predict the scores of the dependent variable (number of light accidents). According to the regression analysis we find the following statistical situation: there is only one independent variable (no direct coordinators) that explains the variation of the criterion (number of light accidents). The partial correlation for the variable number of light accidents and direct master number is $r = -0.658$, $p = 0.010 < 0.05$, which in square, explains in 43% the variance of the criterion (number of light accidents).

Table 5. Multiple linear regression for leading (progress) indicators associated with OSH (select) that correlate with a lagging indicator (minor accidents).

Model		Coefficients ^a									
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	Constant	9.019	.211		42.814	.000					
	Direct coordinators	-.210	.020	-.749	-10.454	.000	-.759	-.728	-.691	.851	1.176
	OSH course for managers	-.007	.020	-.025	-.351	.727	-.315	-.036	-.023	.851	1.176

a. Dependent Variable: Medical leave

By applying multiple stepwise regression, we checked whether the two independent variables (OSH managers course, direct coordinators) that correlate with the number of medical leave can be used as significant predictors to predict dependent variable scores (number of medical leave). According to the regression analysis we find the following statistical situation: there is only one independent variable (number of direct coordinators) that explains the variation of the criterion (number of medical leave). The partial correlation for the variable number of medical leave and direct coordinator number is $r = -0.691$, $p = 0.001 < 0.05$, which in square time explains 48% of the criterion variance (number of medical leave).

Analyzing the data obtained as an urn of the application of multiple stepwise regression for lagging indicators (work accidents, light accidents, medical leave) that correlate significantly with those of the leading type, we can observe that the leading performance indicator - direct coordinators can constitute an impact factor in order to improve regression indicators, improving the prediction in terms of the number of work accidents together with the lagging indicator (number of training/information workers).

Also, the leading performance indicator - direct coordinators is an important impact factor in order to improve the lagging indicators (number of light accidents) and last but not least the number of medical leave. In other words, this lagging indicator is an impact indicator within a company, which is why managers should give it greater importance and lean more in the use of their activity both through improvement and direct coordination of activities.

Identifying the most appropriate key performance indicators (KPIs) and grouping them into categories can be a preliminary model for measuring OSH management. The results of studies and research on these indicators highlight at least 5 reasons why the performance of OSH management should be measured: reduces uncertainty; stabilizes information;

facilitates communication; stimulates the capacity for reflection (thinking); contributes to a better control (control) of the risk.

OSH-specific lagging (progress) and leading (progress) performance indicators can only be key performance indicators when they are selected and applied as keys to OSH. They should provide quantitative or semi-quantitative data that reflect OSH issues and activities within an organization, should include condensed information on existing hazards, assessed risks, exposures, and preventive activities. Key Performance Indicators (KPIs) should be based, as far as possible, on objective and validated measurements; although some OSH issues (such as worker satisfaction) are difficult to measure objectively. In principle, it is only useful to measure a performance indicator if it can be used for decision-making. In other words, key performance indicators (KPIs) to be designed are short, focused, relevant, measurable, repeatable forms of key success factors specific to OSH.

4 Conclusions

This paper will be useful as a starting point in future research, the main aim being to identify performance indicators specific to OSH management that we propose for the study on three levels of organizations: small, medium and large.

This study was designed to test the relationship between lagging performance indicators (regression indicators) and leading or performance indicators (progress indicators) in the context in which they can influence the image of an organization, the career of a manager, and the association with the field of OSH, can contribute to the performance of the management of OSH, so implicitly to the reduction of the number of accidents and occupational diseases.

The study of OSH management performance based on a small and equal number (five) of lagging (regress) and leading (progress) performance indicators, confirmed the hypothesis that there are direct correlations between them and there is a need for in-depth studies and research that allow the correct identification of the minimum number and types of performance indicators that can contribute to the performance of OSH management.

Analyzing the obtained data, it was observed that the leading performance indicator - direct coordinators can be an impact factor:

- in order to improve the regression indicators, improving the prediction regarding the number of work accidents together with the indicator - number of training / information workers;
- in order to improve the lagging type indicators (number of minor accidents) and last but not least the number of medical leave.

In other words, this leading indicator can be an impact within companies, which is why managers should give it more importance and apply it more in their activities both by training and by direct coordination of activities.

The limits of the research are: the choice of indicators that although it was based on previous studies was random; the small number of participants and the impossibility of verifying the correctness of the answers.

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