



Scientific quarterly journal ISSN 1429-7264

Agricultural Engineering

2014: 3(151):129-137

Homepage: <http://ir.ptir.org>



DOI: <http://dx.medra.org/10.14654/ir.2014.151.065>

ANALYSIS OF AWARENESS CONCERNING THE OCCUPATIONAL HEALTH AND SAFETY OF FOOD SECTOR EMPLOYEES

Halina Pawlak*, Piotr Maksym, Anna Pecyna

Department of Technology Foundations, University of Life Sciences in Lublin

*Contact details: ul. Głęboka 28, 20-612 Lublin, e-mail: halina.pawlak@up.lublin.pl

ARTICLE INFO

Article history:

Received: June 2014

Received in the revised form:

September 2014

Accepted: September 2014

Keywords:

food industry

health and safety

awareness of employee

working conditions

ABSTRACT

Raising the awareness of workers with regard to the occupational health and safety should be a key role in every workplace. Promoting safety is aimed at involvement of employees in this issue and the change of attitude. The article presents an analysis of the awareness of employees in the food sector. The analysis was developed on the basis of the questionnaire. The questions focused on some important issues concerning the employees' awareness. The survey which was conducted in the agri-food industry in the Lublin region, indicated that employees understand the issues of safety and health at work, they can use the knowledge obtained in the training in their workplace and know the hazard in the workplace.

Introduction

The need for adjustment to new, more restrictive provisions of the market economy requires the use of more effective technologies and production lines, new machines and devices in each branch of economy also in the agri-food industry. An improved machinery park influences a change of the work conditions and many times occupational threats, which have not been known yet, leading to accidents at work. Each year in Poland as a result of improper work conditions few dozens of thousands accidents at work take place. According to the present Main Statistical Office data, the number of injured in 2013 in the food sector was 5821 people (Main Statistical Office, 2014). In many work establishments, increased activities related to ensuring work safety through optimal shaping of technical, organizational aspects and introduction of the work safety and hygiene management system are undertaken. However, long-lasting effects of activities aiming at safety may be reached only when in a work establishment, next to the introduction of technological and organizational changes, shaping awareness of all employees – from a director to a regular employee, is cared for. Employees comply with principles, regulations and safety rules, only when they understand them and are properly motivated to perform safe work. All actions undertaken in order to raise the safety level should be aimed at reaching the aim, which is non-accident work of all employees of the business. Safety should be ensured for guests who visit and companies which carry out the commissioned works on the territory of a given enterprise.

Ignoring safety provisions and rules by employees and also failure to use the safety means causes threat to the work safety. The reason for such conduct may be lack of knowledge and not understanding threats in the work place. Often, also for their own convenience or lack of conviction for their use, employees purposefully omit the use of different types of protection. Thus, informing employees on the implemented safety means is necessary, explanation of reasons for accidents and the occupational risk is necessary. Such actions should cause that employees will implement the safety process on their own initiative. The earlier employees are aware of the need to carry out their work safely, the faster the safety may authentically become an integral part of everyday activities of each employee.

Carrying out visualisation of many types of threats, improper, dangerous conducts and manners of correct conduct is a priority of many companies. More and more frequently, such manner is used also in vocational guidance and analyses of accidents. Detailed elaboration on accidents with the use of pictures allows drawing employees' attention to threats and eliminate the reasons for an accident, before it happens.

Safe work is based on concentration, planning and thinking. Employees' awareness concerning safety is included in the resources, which are the most frequently used and appreciated, and the engagement of which in the safety management system should bring notable effects.

In order to raise the level of knowledge on occurring threats and manner of their elimination effective tools, such as subject seminars, discussions, practices are used. Safety rules trainings should be adjusted to the specifics of work and employees' needs (Milczarek, 2000). Employee's knowledge plays a significant role, also at creating culture of work safety (Pawlak et al., 2006). Employee, according to the requirements of the Labour Code, is obliged to train a new employee on the safety rules and to inform him/her on the safety rules, which are applicable in a company. Moreover, specialist trainings are carried out, which aim at employees who face specific threats which occur at particular work positions in the labour institution. Trainings and meetings of particular company departments allow getting information on current issues and enable informing a greater number of the company employees on issues concerning the work safety (Chmielewski, 2009). The employer's obligation includes also rising professional qualifications by employees. Pursuant to the provision of Labour Code, an employee may make an attempt in order to rise own professional qualifications and an employer should enable execution of this task (Labour Code).

One of the elements of shaping the culture of work safety is engagement of the management in activities which aim at improvement of the safety conditions and work hygiene (Chmielewski, 2009; Lardner et al., 2002). Meaning of the management engagement in safety rules issues were emphasised both in the document ILO-OSH 2001 prepared by the International Labour Office in Geneva concerning guidelines for the work and hygiene safety management systems as well as in the Polish norm PN-N-18004:2004. In many labour institutions the so-called minutes for safety were introduced (Kostka, 2010). These are short conversations, carried out by a direct supervisor with a small group of employees. Subjects of meetings mainly concern specific activities carried out by employees.

Actions based on indirect communication with the use of both traditional media (e.g. printed training materialism, brochures, leaflets, posters on work safety) and electronic media (Internet, intranet) are a helpful tool in construing awareness of employees and promoting work safety (Szczygielska, 2009). Organizing competitions with prizes, awarding

directly at work places of employees, who present a suitable work culture and give a good example to other employees, safety rules knowledge competitions are another effective activity which bring positive results in the process of rising employees' awareness. Employees may report places which are potentially accident prone and ideas for improvement safety rules as a part of programmes and actions, carried out in establishment which aim at raising the level of safety (Mauer, 2013).

Work safety culture is shaped and recorded according to the system of accepted rules among employees of a given enterprise. The pattern will be recorded by employees only when they understand it and it constitutes an indisputable manner of behaviour. Identification with accepted patterns of conduct and awareness of activity is of great significance. As early as at the stage of school education, shaping of conduct of a future employee should take place and it should last during the professional activity.

The issue of safety culture is a difficult issue on account of an individual nature of the approach to safety. Only a systematic approach that includes all aspects which influence the safety facilitates evaluation of the safety culture and predicting shortcomings resulting from habits and behaviour of staff. "Organizational culture may constitute an element of actions strengthened by leadership and structure, which decides on its relations with the quality management" (Szczepańska, 2011).

A factor that the best motivates people to work and raises its efficiency is their full engagement in matters of their own enterprise, inter alia, through cooperation of employees based on the group work. "Employees should be included in the works of a team, which evaluates the professional risk, in consultations and also in searching for technical and organizational solutions, which reduce the risk or maintain it at the acceptable level" (Szczypińska, 2009).

Solution of problems related to the safety is successful only when employees consciously treat risks, which they face at their work places. When there is a need, they will react at dangerous situations and inform their supervisors or the safety rules department on it. Thus, they do not only care for their own safety but also for the safety of their co-workers.

The objective and the methodology of work

The objective of the paper was analysis of the work safety and hygiene awareness among employees of the food sector. The assumed objective was achieved by carrying out the author's questionnaire in nine establishments of various agri-food industry branches. Research was carried out in agri-food establishments in the region of Lublin. Management of particular establishments did not give their consent to provide the names of enterprises.

At the selection of establishments, the number of employed people and the work organization system were taken into account. Research was carried out in two diaries which had automated technological lines and the Diaries which produced a wide assortment of diary products operated in a three-shift system employing 30 employees per a shift. In the assessed diaries in the research 60% of the employees took part. Manufacturer of pasta, was another establishment with a 3-shift work. Whereas, a meat factory, where the questionnaire was carried out, is an average-sized work establishment. It specializes in production of various sausages, smoked products, terrines and raw meat. A fruit and vegetable establishment is a small manufacture, where production takes place in a one-shift work system

every day, but in a peak season, the establishment operates in a 3-shift system and additionally employs, employees, which not always are properly prepared. Research was carried out after the peak season thus the questionnaire was filled in only by 10 employees (at a fixed number of 15 employees). A herb plant, where the research was carried out, is fully automated and employees showed high interest in the questionnaire. An automated bakery offering a wide assortment of bakery products (inter alia various types of bread, white and sweet bakery products), working in a 3-shift system and employing 85 employees was a next establishment. Breweries belong to big, fully automated production establishments, where work takes place in a constant system. The last establishment, where the research was carried out, was the sugar industry establishment which employs over 50 people in a 3-shift work system.

Issues, which were prepared in the form of 15 category questions concerned the awareness in relation to the work safety in the production establishment with possible answers YES, NO were dealt with in the questionnaire. The questionnaire was available as a network service and was active for employees for the time of research. A single access to the form, for each employee was possible after previous obtaining a random code indispensable for identification of employees from particular establishments. Questions from the questionnaire were grouped in 4 categories related to: safety, trainings, threats and care for safety and order in the work place. Whereas, three from among all questions, were not included in the division into categories. Questionnaires with employees were a supplement to the questionnaire.

Research results

174 employees of various branches of agri-food industry participated in the questionnaire. Table 1 presents information on the age and education of employees.

Table 1
Division of employees in relation to their age and education

Education	Age group						Total	
	18-30		31-50		50+		men	Women
	men	women	men	women	men	women	men	Women
Elementary	0	0	2	0	1	3	3	3
Vocational secondary	3	0	14	10	9	5	26	15
Secondary education	13	4	23	18	9	14	45	36
University	9	5	16	13	0	3	25	21
Total	25	9	55	41	19	25	99	75

As a place of residence, respondents provided: 46% rural areas, 23.5% city up to 20 thousand citizens, 6.9% city up to 21-100 thousand citizens, 2.3% city 100-300 thousand citizens and 21.3% city above 300 thousand citizens.

All respondents answered positively to questions, which were not included in categories, i.e. "In your opinion are you well prepared and trained to work at your position?" and "Have you been informed on the rules of conduct in case of accident at work?". Whereas,

only in one establishment out of nine, which were investigated, employees said that supervisors do not verify whether safety rules are complied with. It was confirmed by the answers to the question "Did supervisors verify whether safety rules were complied with". In the remaining eight enterprises, direct supervisors paid attention to the manner, in which employees carry out their duties.

Positive answers on three questions from the first group concerning safety were presented in figure 1. In five establishments out of nine, where research was carried out for all employees, safety is equally significant as work efficiency and quality. Positive answers from employees from the remaining enterprises, were at a high level - over half of the questioned answered that safety is as much significant as work quality and efficiency (range 60-95%) of positive answers). Such attitude of employees towards safety is translated into the level of culture and conscious safe work performance. Only in one work establishment 58% of all employees think that sometimes due to production purposes, one should step back from the safety rules. Whereas in the remaining 8 establishments, 11-37% were for. Similarly, there is no unanimity in relation to usefulness of safety instructions.

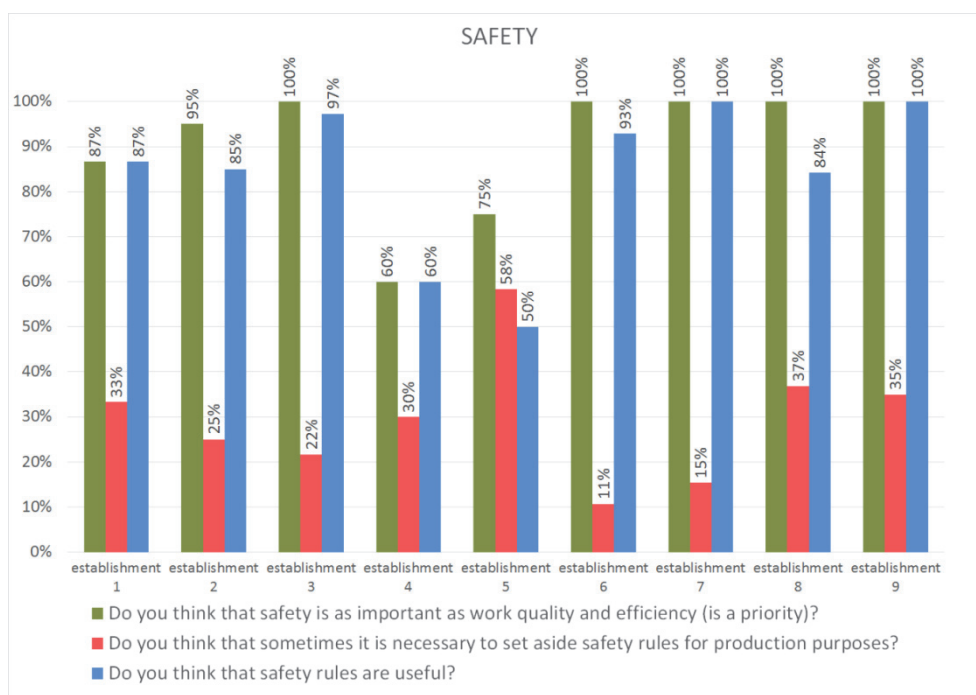


Figure 1. Results of positive answers concerning issues related to safety

Positive answers to three questions from the first group concerning safety were presented in figure 2. Usually, employees think that they are well prepared and trained to work at their positions. Employees are well and systematically informed on threats, risks, protection means and any undesired situations which occur in the work place. However, despite the

fact that there are meetings held, at which rules, safety rules and safety rules issues are discussed in detail, not all employees can transfer the knowledge obtained at the training to their work place. Confirmation for this situation is the fact that in one establishment, only 8% from among all employees can use the obtained knowledge in practice. Employees of all establishments agreed that the issues discussed at the meetings rise awareness on the work safety. Employees of all establishments agreed that the issues discusses at the meetings rises awareness on the work safety.



Figure 2. Results of positive answers concerning issues related to trainings

Positive answers to three questions from the third group concerning safety were presented in figure 3. The fact that over 70% of employees of all establishments see the need to inform supervisors on noticed irregularities, proves awareness of employees concerning safety. Employees (70-100%) know the threats which occur at the work place and react on bad conduct of their co-workers. Only in the establishment no. 4 as much as 80% of employees remain neutral to bad conduct of co-workers.

The last group of answers related to care for order in the work place was presented in figure 4. The obtained answers show that in all establishments, employees declare that their care for order at their work places.

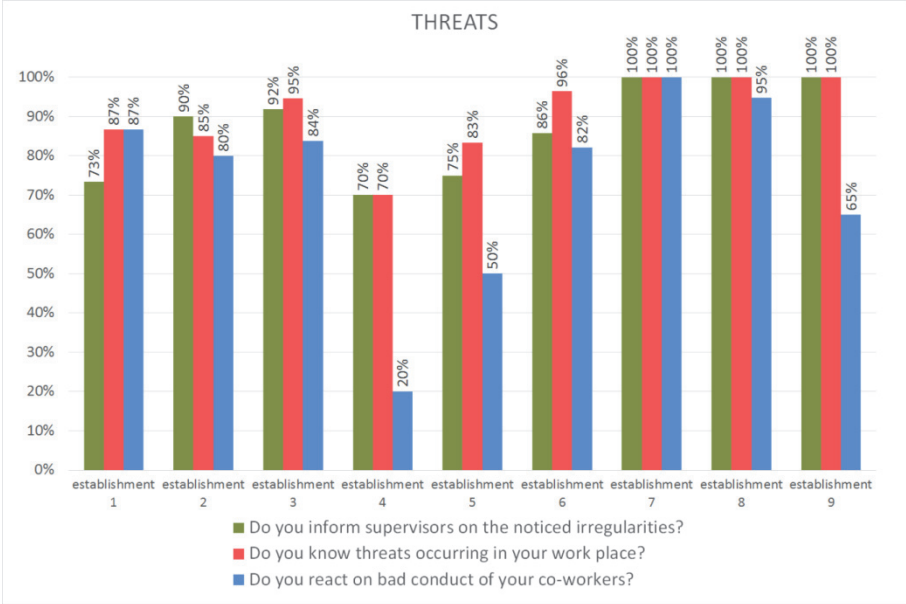


Figure 3. Results of positive answers concerning issues related to threats



Figure 4. Results of positive answers concerning issues related to care for safety and order at the work place

Depending on the specificity of an establishment, employers provide their employees with personal protective equipment equipping them with protective shoes, aprons, caps and masks. Personal protective equipment, which follows from legal provisions, not only is available but also used by staff. Employees know the safety principles and instructions. This information favour shaping appropriate conduct related to safe conduct during performance of works and at the same time rise the users' trust to the system of compliance of products with basic safety requirements and efficiency of the market supervision.

Conclusion

Based on the analysis of the results obtained from questionnaires it was determined that

1. Employees from the investigated food sector establishments know the concept of the work safety and hygiene.
2. Food sector employees from the region of Lublin regularly participate in the trainings and can transfer the obtained knowledge during the training to their work place.
3. Respondents proved the knowledge on threats, which occur in the work place and after they notice irregularities they inform their direct supervisors.
4. Awareness concerning the work safety and hygiene is also a care for order at the work place, which was emphasised by the questioned employees in the questionnaire.

Due to the engagement of all employees, developing conduct principles and organizational and technical solutions at the work place is possible. In order to improve awareness within the work safety, habits of save conduct should be worked out in employees. Information obtained from the research which was carried out, will be used at developing a programme of safety rules in food sector labour institutions in the Lublin region.

References

- Chmielewski, J. (2009). *Kultura bezpieczeństwa i higieny pracy*. Praca i zdrowie 10, 40.
- Główny Urząd Statystyczny. Monitoring Rynku Pracy. Departament Badań Demograficznych i Rynku Pracy. (2014). *Wypadki przy pracy w 2013 r.* Pozyskano z: http://www.stat.gov.pl/cps/rde/xbr/gus/PW_wypadki_przy_pracy_1-4kw_2013.pdf.
- Kostka, J. (2010). *Minuty dla bezpieczeństwa*. Pozyskano ze strony: <http://www.kirschstein.org/download/art-sawo-minutes-pl.pdf>
- Lardner, R.; Fleming, M.; Joyner, P. (2002). *Towards a Mature Safety Culture*. Institution of Chemical Engineers Conference, Symposium Series No. 148, Menchester.
- Mauer, E. (2013). Kreowanie bezpieczeństwa pracy. *Bezpieczeństwo Pracy*, 12, 2-5.
- Międzynarodowe Biuro Pracy. (2001). *Wytyczne do systemów zarządzania bezpieczeństwem i higieną pracy ILO-OSH 2001*. Genewa, tłumaczenie polskie: CIOP, Warszawa.
- Milczarek, M. (2000). Kultura bezpieczeństwa w przedsiębiorstwie – nowe spojrzenie na zagadnienia bezpieczeństwa pracy. *Bezpieczeństwo Pracy*, 10, 17-20.
- Pawlak, H.; Jasiński, K.; Maksym, P. (2006). Tworzenie kultury bezpieczeństwa pracy w zakładzie przemysłu spożywczego. *Inżynieria Rolnicza*, 6(81), 117-123.
- PN-N-18004:2004. *Systemy zarządzania bezpieczeństwem i higieną pracy. Wytyczne*.
- Szczepańska, K. (2011). *Zarządzanie jakością. W dążeniu do doskonałości*. Warszawa, wyd. C.H. Beck, ISBN 978-83-255-1600-0.
- Szczygielska, A. (2009). Promowanie bezpieczeństwa pracy w przedsiębiorstwach – na przykładzie Forum Liderów Bezpiecznej Pracy. *Bezpieczeństwo Pracy*, 4, 26-29.
- Ustawa z dnia 26 czerwca 1974 r. Kodeks pracy (Dz. U. 1998 r. nr 21, poz. 94 z późn. zm.).

ANALIZA ŚWIADOMOŚCI BEZPIECZEŃSTWA I HIGIENY PRACY PRACOWNIKÓW SEKTORA SPOŻYWCZEGO

Streszczenie. Podnoszenie świadomości pracowników w zakresie bezpieczeństwa i higieny pracy powinno stanowić kluczową rolę w każdym zakładzie pracy. Promowanie bezpieczeństwa ma na celu zaangażowanie pracowników w tę problematykę i zmianę postawy. Celem pracy była analiza świadomości bezpieczeństwa i higieny pracy pracowników sektora spożywczego. Analizy dokonano na podstawie opracowanej ankiety, której pytania zwracają uwagę na kilka istotnych kwestii dotyczących poziomu świadomości pracowników. Ankieta, która została przeprowadzona w zakładach przemysłu rolno-spożywczego na terenie Lubelszczyzny, wykazała że pracownicy znają problematykę z zakresu bezpieczeństwa i higieny pracy, potrafią wykorzystać zdobytą na szkoleniach wiedzę na swoim stanowisku pracy oraz znają zagrożenia występujące w miejscu pracy.

Słowa kluczowe: przemysł spożywczy, bezpieczeństwo i higiena pracy, świadomość pracownika, warunki pracy