

RISK MANAGEMENT. RISK COMMUNICATION

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OCCUPATIONAL RISK COMMUNICATION IN INDUSTRIAL ENTERPRISES (ANALYSIS ON THE EXAMPLE OF PERM REGION)

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The article presents an analysis of the occupational risks communication at the industrial enterprises of Perm Region. According to the results of a sociological research, three models of dissemination of information on the health risks at industrial enterprises (limited parity; paternalistic; formal) have been distinguished. Each one differs in the degree of involvement of employees in the process, used channels and forms of risk communication. It is concluded that these models are not of the nature of communicative dialogue. They are characterized by the dominant of the formal channels, the limited information provided about the risks, the low degree of involvement of workers in the discussion of sources, levels and ways to reduce health risks. On the basis of data typing and evaluation of existing models the transition to interactive occupational risk communication model was grounded. The interactive model is capable to improve the efficiency of the employee health management at industrial enterprises.

Key words: job-related risks, job-related risk communication, industrial employee health.

Employee safety and health protection in Russia requires adoption of the concept of professional risk that will help improve the preventive measures at the workplace [1]. Analysis of professional risks includes the following stages: risk assessment, risk management, and reporting [2]. Reporting is an important component of health risk analysis; without it, risk analysis is pointless, and risk management decisions are hard to make.

Reporting about professional risk is a responsibility of the employer, state authorities, and the public organizations. Employees' right to accurate information about the job-related health risks, and means of protection from the hazardous and (or) dangerous workplace factors is set forth in the RF Labor Code Article 219 [4].

A recent trend in the implementation of the concept of professional risk analysis is re-thinking of the employee's role at all the stages of the process especially in raising awareness. Today reporting is referred to as risk communication which involves a two-way exchange of the risk-related information among the risk assessment specialists, company managers, government authorities, and акцтедшту ццклуку which entitles everyone to openly sharing their opinion

about the risk level and mitigation measures [5]. In other words, an employee is not solely a recipient of information, but also an active participant of the discussion about risk. And the goal of reporting changes from raising awareness of non-specialists to finding consensus about the decisions, actions or policies aimed to manage or control the risks [6].

In the situation when an employee's health is exposed to various job-related factors (physical, chemical, and socio-psychological) and there is a risk of workplace injuries, a dialogue-based model of risk communication can increase the effectiveness of employee health management measures. However transition from the linear model of risk reporting to two-way risk communication must be preceded by a thorough analysis of the current system of disseminating information about professional health risks at industrial plants.

The purpose of the research is to validate the best model for communicating professional health risks based on categorization and assessment of the effectiveness of the current information disseminating models at industrial plants in Perm Krai.

Materials and Methods. The empirical data included the results of a qualitative study which involved a series of unstructured interviews with plant employees. The interviews were conducted at 10 plants (chemical, oil and gas, machine-building, carbon, and consumer goods industries) in Perm region. The main criterion that guided the selection of informants who participated in the study was that they had to be exposed to hazardous work-related factors. The guide developed for in-depth interviews consisted of three topical units: 1) questions about the employees' awareness about hazardous health factors; 2) questions about the forms and channels of distribution information about professional health risks as well as about the quality and sufficiency of that information; 3) questions about the employees' initiative in requesting information about the risks.

Quotes from the interviews below are marked in cursive; the original wording of the respondents' responses was preserved as required by the qualitative sociological tradition.

To analyze the collected data, open coding, axle coding, and selective coding (grounded theory) were used [3]. The analysis was based on identifying topical units which were defined originally by the objectives of the research. At the same time, in coding, the researchers relied on empirical data (transcripts) to adjust the first-choice topical units based on the informant responses, and to "see" new topics.

Results and Discussion. Based on the data analysis, the following three models of dissemination information about the health risks at industrial plants were found: 1) restrictedly parity, 2) paternalistic, and 3) formal. The models differ by the level of inclusiveness of the employees and the used channels and forms of informational interaction. The first model "restrictedly parity" is based on the formal interaction between the management and employees as well as on the employee initiatives.¹ Here, employees serve as feedback agents with

¹ There are two types of initiative practices. The first one is an independent search for information about hazardous job-related factors outside of work; second, employee initiative in seeking health risk related information from the company employees including the management. Independent search practices include specialized literature, internet, discussions with the surrounding community (coworkers, family members). The practice – initiative – includes referrals to the health and safety departments and immediate managers..

the company management and thus take on a dual role of source and recipients of information in the health risk communication.

The official information channel is the main one. The management provides information as prescribed by the RF Labor Code. In this communication model, there is a connection between the information content transmitted by the management and the high level of employees' knowledge about hazardous factors. The employees are informed about the categories of labor conditions, hazardous job-related factors and associated health effects (*"if you do not use protective equipment, then you will be exposed to chrome and dust, among all the catalyzers"*). The scope of informational activities is rather varied: *"work safety and health workshops"*, *"lectures and classes"*, handouts *"brochures, instructions"*. Safety trainings included information about prevention of accidents and *"...health factors...catalyzers, hydrogen, benzanol, and methanol"*. Safety training take place on a regular basis: *"safety trainings and corporate trainings take place every six months"*. Individual employee folders contain instructions with the description of hazardous factors and associated risks.

New employees are briefed on the hazardous factors during the welcome training which includes a final test: *"we had to take a test... and know all the chemical rules"*. They also have to take regular tests throughout their employment: *"every three years we take a labor safety test, and every five years we take an occupational safety test"*.

Regular medical check-ups keep the employees informed about their state of health. After a check-up, employees receive a written report as well as orders, decrees, and instructions.

In addition to the health risk-related reporting from the management, employees also show initiative in finding information about professional health risks: *"we read up on the topic, look up information online, especially about the health effects. We can also read technical literature"*. They also discuss the issue with co-workers, and seek information from other departments (e.g. Health and safety). Their reasoning is that *"more experienced employees in those departments know better"*.

The quality of the content of the obtained information about the hazardous factors, variety of the forms and information channels, and the length of employment determine the confidence

in the sufficiency of experience: *“we have worked here for so long, so we know ourselves what we can and cannot do”*.

The accumulated experience makes the representatives of this group feel like they are (unofficial) mentors: *“The employees working in the reactor cannot speak without a respirator. We have to remind them about the protective measures since dust stays in the body forever”*.

This risk information model is most similar to the dialogue communication model. However exclusiveness of the employees form determining risk acceptability, low inclusiveness in the discussion of the mitigation measures, lack of participation in the dialogue about the occupational risks with the management and risk assessment specialists, show certain restrictions which do not let the model be completely parity.

The second model called “paternal” is based solely on the formal communication between the management and employees set forth by the law. Employee initiative includes communication with the departments responsible for informing about hazardous occupational factors.

Unlike in the first model, information about the health risks provided to the employees is not complete. For this reason, employees do not have full knowledge about the job-related risk factors and the associated health effects. Their knowledge about the hazardous occupational factors varies: some employees can list them while others are not so sure. Employees are not fully aware about the health effects; they do not know about possible occupational diseases¹, or attribute all of their illnesses to the job-related factors².

The above characteristics indicate the limitation of one-way reporting about hazardous job-related factors. This is proved by the emphasis on the information about safety measures: *“everything about job safety, standards”* and the rules of using individual protective gear: *“special breathing great to prevent injuries... they inspect”*.

The scope of knowledge of the employees from this group about the available health risk

reporting system and the content of this knowledge depends on the employee’s position. Managers (foremen, shift managers) have a deeper knowledge on the topic. They inform their subordinates about hazardous job-related factors at briefings, trainings, and welcome training: *“Surely we do tell about those factors...and the protective measures”*. They also provide information about the assessment of job-related health risks: *“draft an assessment report... and give it to the managers to decide whether the foremen need to know.,, and we have departmental meetings every day”* via information boards or workplace assessment.

The communication forms and channels used to inform the employees about the job-related factors and health effects in this model do not differ from those in the previous model. In addition to the workshops and safety trainings, safety talk during the welcome training, and reporting following a medical assessment of the job-related health risks, communication forms and channels include *“lectures”, “leaflets, brochures”*, and medical checkups. Similarly to the first communication model, employees here receive medical reports based on the regular checkups – from the shop head or a department organizing the checkups: *“organizations which arrange the checkups...they inform through the safety and health department”*. The employees receive written medical reports in the form of bulletins, health passports, etc.

This group has several communication barriers which impede the flow of health-related information. The first type of barriers is of administrative nature. For example, information may not be passed on from the management to the employees: *“the managers receive our health reports, and that’s it... they don’t pass them on even to the foremen”*. Also, there might be lack of communication between the management and healthcare organizations. In this case, the employees themselves have to obtain their health reports at the clinic based on the medical checkups.

The employees in this group consider receiving information from the management at regular team meetings or via various mediums including information boards, brochures, etc. to be the most convenient communication form³.

¹ Common statements – *“I don’t feel it... maybe there is no effect”*; *“I don’t know... I haven’t really noticed”*; *“we haven’t had job-related illnesses caused by noise or dust”*

² Common statements – *“Anything, there is anything imaginable”*; *“cardiovascular system, nervous system”*, *“everything has an effect”*

³ Common statements: *“If it is about safety, then a safety specialist. If it is at the workplace, then a*

They are ready to take the initiative in obtaining information about the health risks, workplace assessments, health reports by communicating with their immediate managers or middle-level managers: “I go, first of all, to the person who assigns tasks to me... if (s)he cannot explain something, I will go to the shop head then”, or by referring to the department in charge: “*I can go to the environmentalists and ask them; they will tell me everything*”. The reason for this is the management’s attitude, to a large extent, which has improved over the past years in terms of communicating with the employees about the job-related health risks: “*..it has become stricter.. medical exams, and stuff like that... previously, it was more formal, but now they pay much more attention it*”.

The second risk communication model is based primarily on formal interaction. The management is perceived as an “*influential*” information channels and specialized departments – as competent. Informal channels are rarely used by the employees except for discussions of the health-related topics with co-workers at work or sometimes at home.

The third model is called “formal”. It is dominated by the administrative measures as set forth by the labor code, lack of employee feedback, and lack of employee initiative in obtaining information about the health risks. The reasons for the passive behavior in obtaining information about the job-related risk factors include a) confidence of long-term employees in their own knowledge; b) character traits and the way of thinking of pre-retirement or retirement age reflected in the fear of layoff.

The employees in this group also have little interest in health risk factors¹. At the same time, they refer to the official communication channels: “*probably documents, papers; brochures, possible.. what are lectures for?*” or other organizations, like nonprofits, labor unions, etc. The lack of initiative in obtaining information about the health risk factors is also manifested in unwillingness to seek information from the work safety and health departments. Such passive behavior can be explained by the current

communication practice. Like in the second communication model, the communicated information focuses mainly on the safety measures rather than on describing the health effects of the job-related factors². Risk communication is fragmented. For example, safety message contain instructions on how to use protective gear: “*please remember that it is noisy there.. do not forget to wear the protective gear*”. The communication system in this model is not well regulated, trainings are irregular, there are no standards or procedures in place: “*information about the hazard is passed on only in the event of an accident... we haven’t had accidents in a while*”.

This model lacks regulated communication, regular safety trainings, and well-developed standards and procedures: “*information about the hazard.. only when an accident happens; and we haven’t had accidents in a while*”.

The safety talk during the welcome training is not perceived as a memorable event either. Employees do not recall the information about the risk factors, health hazards, and had troubles remembering the induction training: “*induction training... what do you mean?.. what is it for?...*” They do not recall having signed the consent form about the work in hazardous and dangerous conditions: “*I don’t think they gave us anything to sign....*” Overall, the lack of interest in obtaining information about hazardous job-related factors at the start of the job can be explained by negligence: “*Well, who is thinking about health when just starting a job?*”

As for the medical checkups, employees are familiar with the procedure, and know how to obtain the results: “*They send the results to the shop, and there we can find out what we passed and what we did not pass*”, “*the doctor gives the results in a bundle to the manager*”. In this regard, the model does not differ greatly from the previous two models.

Unlike in the above communication models, the employees here are oriented at the paternal manner of communication. They do not initiate obtaining the medical results or seeking recommendation on improving their health: “*we are called in on a mandatory basis*.” Besides, the employees tend to be indifferent to the information about possible health effects manifested in the lack of interest to the medical

foreman”; “*preferably in a written form with a detailed explanation to make it clear*”

¹ Common statements – “I don’t know what to say”, “I don’t do anything, I don’t need it”, “I don’t care about it”

²“About all the accidents at plants – sure.. usually, safety trainings”

checkups “[results] are not passed out, and nobody is really interested.” There are several reasons underlying this behavior. First, the fear of layoff, and a satisfactory level of income: “don’t complain, where else are you going to find a job?” These fears are typical mainly of retirement-age employees who are more likely to have an illness. Secondly, it is thought that medical referrals or interest to the health level may exacerbate matters or reveal illnesses which are “better unknown”: “my heart is not doing that great anyway... it’s better not to know about such diseases”.

The following channels are used for communicating the health risks to the employees: from the management; directly from the specialists conducting the assessments. The communication channel warranted by the law and implying reporting based on the occupational health risk assessment via giving out workplace assessment reports is not considered by the employees to be the communication channel informing about hazardous factors: they either do not receive the information, or miss the information, or are not sure what they have heard. At the same time, the employees show lac of initiative, unwillingness to seek the necessary information. Firstly, they expect the management to show initiative or obtain the information via the local documents. They expect the management to show initiative or would like to receive information via internal documents (“we want that information to be distributed like the order, so that I could read them through and sign the paper”). Second, the employees bring their concerns about the lack of information up to the corporate management: “Nobody gives us details, I don’t know what the management knows, and how they determine stuff”.

Due to the above reasons, the employees do not really care about their health. Irresponsibility is manifested in the lack of interest to obtaining information about the hazardous job-related factors: “I did not ask [about specific criteria. Why?] Having a job is more important to them than receiving workplace assessment reports: “We have got a job and will continue working”. Initiative in obtaining information about hazardous production factors is considered threatening in terms of keeping the job¹. The lack

of interest is also explained by the feeling of uselessness: “what’s the point? You cannot change anything”.

The communication models outlined in the course of the research can be used at a plant simultaneously (at the same time).

Conclusions and recommendations. The conducted analysis showed that the communication models used to spread the health-related information to the employees of the industrial plants selected for the survey are not dialogue-based. The current risk reporting systems are characterized by the predominance of formal channels, limited risk-related information, and low inclusiveness of the employees in the discussion of the health risk sources, levels, and mitigation measures.

To introduce a dialogue-based communication model at an industrial enterprise, it is necessary to implement the following tasks: 1) Develop a scientifically based methodological foundation for job-related health risk communication; 2) Form an open-dialogue culture; 3) Create the regulatory framework for risk communication; 4) create organizational and technical opportunities for risk communication; 5) maintain successful risk communication practices at different levels.

These tasks call for collaborative actions of all the interested parties with the government agencies authorized to conduct risk assessment, and healthcare professionals; identification of communicative interaction within a plant that suggest expansion of the risk information distribution forms, active use of visual aids, and modern media (official website, corporate communications, etc.); development of informed and communicative capabilities among all the risk-communication parties: management, health and safety specialists, and frontline workers.

¹ Характерное высказывание: «мне-то от этого легче станет что ли? что я получаю информацию, не получу, чего я добьюсь-то?».

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