

FORMAL SAFETY VERSUS REAL SAFETY: QUANTITATIVE AND QUALITATIVE APPROACHES TO SAFETY CULTURE – EVIDENCE FROM ESTONIA

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Communicated by Andrejs Skaģers

This paper examines differences between formal safety and real safety in Estonian small and medium-sized enterprises. The results reveal key issues in safety culture assessment. Statistical analysis of safety culture questionnaires showed many organisations with an outstanding safety culture and positive safety attitudes. However, qualitative data indicated some important safety weaknesses and aspects that should be included in the process of evaluation of safety culture in organisations.

Key words: occupational health and safety, social capital, safety culture, organisational values, knowledge management.

INTRODUCTION

Many researchers have shown strong interest in the behavioural aspects of safety, and safety culture and safety climate have become essential cornerstones of modern concepts about occupational health and safety (OH&S) management in organisational culture (DeJoy, 2005; Frazier *et al.*, 2013). Safety culture can be defined as the product of individual and group values, attitudes, beliefs, risk-perceptions, competencies, norm, principles, and patterns of behaviour that determine the commitment of employees to health and safety, as well as the style and proficiency of an organisation's health and safety programmes (Anonymous, 2005). Cultural assumptions and propagated values are typically the basis of an organisation's mission and "vision statements", which should be references for appropriate conduct for all employees in the organisation. Frazier *et al.* (2013) stated that this is not always the case, the organisation's mission and values cannot create or change a culture alone. Interventions directed at the individual employee level are necessary. It is essential that employee health and safety behaviour as organisational values are adopted and shared between all employees throughout the organisation and not only formally existing on paper. Reviews of organisational value surveys have identified some common constructs related to such values (Virovere, 2015), such as: described, propagated and shared or real values; and formal or real values. Many organisations claim to have made a serious commitment to safety and they show relevant good

safety performance and accident records. Meliá *et al.* (2012) investigated differences between descriptive and prescriptive safety cultures, and analysed the effort of the construction industry to convert formal safety into real safety in a large plant.

The present article examines differences between formal safety and real safety in Estonian small and medium-sized enterprises (SMEs) from different industries and discusses one of the many possible approaches to safety culture — through managing the safety social capital inherent in an organisation. This study applies intellectual capital (IC) principles to the field of occupational health and safety (OH&S) in Estonia with a special focus on knowledge management (KM) systems. The article proceeds as follows: first, we introduce the concept of IC as the stock of knowledge and skills that an organisation is able to generate and use in its OH&S management system to build safer and healthier workplaces. This section also reviews the content of social capital (SC) and its relationship to shared knowledge and safety culture in the organisation. The second section outlines the methods used in the research. The last sections present an analytical overview of the existing Estonian organisational safety culture, which requires consideration of both SC and safety management systems in organisations. Safety as an organisational value is evaluated and the differences between formal safety and real safety are assessed. In addition, safety programmes are evaluated in SMEs in order to highlight the social and cultural character of learning in

organisations, and thus attribute the role of SC in safety knowledge exchange. The authors' recommendations and arguments conclude with a view of SC and organisational learning concepts toward OH&S, in the light of on-going problems of safety culture in Estonia.

Organisational safety social capital and safety culture.

According to the sociological view of learning, individuals in organisations continuously obtain, combine, modify and use knowledge through their everyday cooperation and interaction (Chang *et al.*, 2011). Nahapiet and Ghoshal (1998) have stated that organisations have potential and capabilities for developing, creating, sharing and utilising knowledge and IC, as well as the development of and cultivation of SC are likely to provide a competitive advantage. Roos *et al.* (1997) conceptualised IC as the sum of all intellectual materials — knowledge, information, intellectual property, skills, experience and knowing capabilities of companies — which can be combined and utilised for competitive advantage. IC is collective brainpower, which can be developed through the processes of sharing and the combination of knowledge (Bahra, 2001). In order for the IC to succeed within an organisation, the sharing of knowledge needs to be managed effectively.

Knowledge development in an organisation is dependent and influenced by the organisation's SC (Davenport *et al.*, 2006). SC is frequently described and defined as one of the three subcategories of IC, a) human capital (consisting of knowledge, skills, experience and abilities of the employees and managers) and b) organisational or structural capital (covering the structures and processes within the organisation, referring to knowledge institutionalised within databases, documents, manuals and culture), and c) SC (consisting of valuable relationships, networks) (Camps *et al.*, 2011; Virovere, 2015). Edvinsson and Malone (1997) suggest that corporate value does not arise directly from any of its IC factors, but only from the interaction among all three. SC as the organisational process requires bringing people together, and creating interdependence through integration and specialisation (Davenport *et al.*, 2006).

The current research employed the definition and modified model provided by Nahapiet *et al.* (1998) with respect to safety, which consists of structural, cognitive, and relational dimensions of SC. The authors chose to adopt this definition and framework because it clearly demonstrated the interrelationship between SC and intellectual capital, through which organisational learning is enabled and engaged. In addition, their framework provides a relevant interpretation on how SC can be used for development of IC in an organisation. The structural component or dimension of SC consists of connectedness, networks, employee participation, and behaviour. The cognitive component or dimension of SC comprises: shared norms, sanctions, goals, shared representations, meaning and vision, social trust, perceptions of support, social cohesion and attitudes, shared interpretations, and understanding between the members of a network (Nahapiet *et al.*, 1998; Fukuyama, 2001) that facilitate coordination and cooperation for mutual benefit.

An important facet of the relational component or dimension of SC comprises: trust that is developed among members and personal relationships among members (Davenport *et al.*, 2006). Additionally, communication, participation in decision-making, sharing valuable knowledge and attitudes, employee involvement in processes, as well as social good relationships and conflict management are an essential factors that promote trust. KM is an integrated, systematic approach which can also be used to describe the structures, processes, techniques, methods, and cultures developed to improve the creation, identification, management, sharing and utilisation of all of an organisation's resources/assets, including data bases, documents, policies, procedures as well as expertise and experience of individual workers (Roos *et al.*, 1997; Alvesson, 2004). The KM system is an umbrella for capturing a range of organisational activities in order to manage the integration of human, structural and social capital in order to enhance organisational learning and performance in an organisation (Fig. 1).

Organisational learning is a tool for development of Communities of Practice (CoP) and potentially gives a possibil-

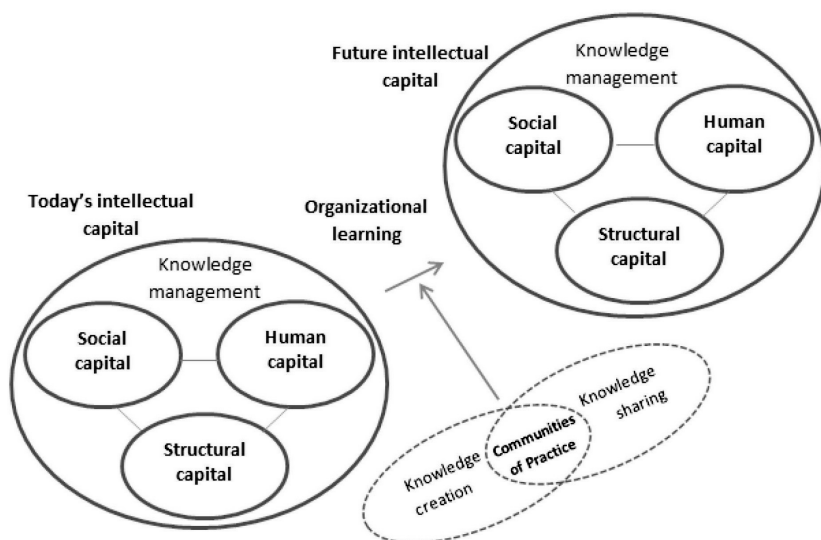


Fig. 1. Intellectual capital grows with use and requires organisational learning (based on: Seemann *et al.* 2002; Järvis, 2013).

ity for employees to exchange explicit and tacit knowledge. According to Hislop (2005), CoP is realised in informal groups of people who have a particular activity in common, and as a consequence have some common values, knowledge, and a sense of community identity. An essential characteristic of knowledge is that it only generates value for the organisation when it is used effectively (Seemann, *et al.*, 2002) and shared (Järvis, 2013). SC has emerged as an area of interest in a large number of studies at different levels, including organisational (Burt *et al.*, 2000; Chang *et al.*, 2011; Nuñez *et al.*, 2011), community, individual and their behavioural (Burt *et al.*, 2000) and national (Fukuyama, 2001) level. Felício *et al.* (2012) investigated relationships between SC and human capital in SMEs. The positive effects of SC connections to KM was studied by Burt *et al.* (2000) and Nahapiet *et al.* (1998); to CoP by Gherardi *et al.* (2000), to knowledge transfer by Wei *et al.* (2011), to organisational learning by McGrath *et al.* (2006); and to improving creativity and innovativeness by Camps *et al.* (2011). Several studies have tried to provide some preliminary evidence on the role of organisational knowledge in building safer and healthier workplaces (Gherardi *et al.*, 2000; Podgorski, 2010; Nuñez *et al.*, 2011) and in enhancing safety culture. At the same time, relatively little is known about how organisations influence and deal with the formation of safety culture with respect to SC among their employees.

For example, Chang with colleagues (2011) examined the influence of SC on knowledge sharing, which in turn enhanced patient safety.

The concept of safety social capital. Workplace safety is a form of organisational expertise, which can be viewed as a situated practice, an emerging property of a social-technical system, the result of a collective process, a “doing” that involves people, interaction, technologies as well as social relations (Gherardi *et al.*, 2002). It is therefore situated in the system of on-going practices and has both explicit (for instance, accident records, theories, safety regulations and guidelines etc.) and tacit (for example, safety engineer’s experience, occupational hazard recognition, perceptual and cognitive skills) dimensions. When people solve complex problems in the field of OH&S, they bring knowledge, skills and experience to the situation, and as they engage in problem-solving they share their internal knowledge with others, so that tacit knowledge is converted into new tacit and explicit knowledge. The process of knowledge sharing creates new knowledge inside the receiver, in the use, and sharing of tacit knowledge (Järvis, 2013). Safety knowledge can be conceptualised as employee understanding of the safety procedures. Safety SC can be defined as an instantiated informal safety norm, assets and collective values that promote interaction and cooperation between members in an organisation in order to maintain an OH&S management system as well as to achieve the highest standards of occupational safety. The contribution of OH&S interventions to the components of safety SC consist of: occupational risk assessment; competence and training; proactive

hazard control and prevention; management of change; emergency preparedness and response; performance monitoring and measurement.

The authors of the current article argue that understanding safety knowledge development and transfer, particularly that related to SC, is essential in the field of OH&S. Although some researchers have investigated and pointed to the positive relation between human capital, reduction of accidents and good working relationship, integrating ergonomics principles and workplace health promotion and how it complements a safety management system (Kuimet *et al.*, 2016), insufficient attention has been paid to the relationship between SC and safety culture as well as to KM in the field of OH&S performance; how SC manifests itself in SMEs.

MATERIALS AND METHODS

The current investigation employed quantitative methods in order to explore employer and employee attitudes, perceptions toward OH&S, values, conflicts, risk awareness and employee involvement. In addition, qualitative methods were used in order to focus on a limited number of case studies and individuals, producing in-depth information, and to investigate the real safety situation in SMEs, with the intention to bring understanding to the concept of safety culture and real safety behaviour in the investigated companies. Substantive parts of the paper present recent comparative survey evidence from quantitative and qualitative safety surveys.

Sample. A national questionnaire survey was carried out by Statistics Estonia in 2009. Two questionnaires measured safety attitudes, perceptions, values, conflicts and relationships, information dissemination, job satisfaction, responsibility and commitment, risk awareness, working conditions and safety measures were administered anonymously to employees and employers from SMEs from different branches of industry. For the current study, the survey was comprised of a sample of 463 employers and 1757 employees who filled out the questionnaires and participated in the study. The sample included both men (52%) and women (48%). Approximately one half (54.2%) of the sample was less than 49 years old, 45.8% were 50 years old or more, and only 5% were less than 25 years old. Work experience is an important characteristic of this sample. A noteworthy 48% had worked at the same company for 1–5 years, 20.8% for 6–10 years and 13.7% for 11–15 years, 7.1% and 8.9% for 16 to 20 years and more than 20 years. A higher response rate (34.9%) and (27.6%) from organisations was obtained for those with less than 50 employees and with 5–9 employees correspondingly. We found that companies with less than 250 employees were more reluctant to respond to the questionnaire, which led to a lower response rate from this type of firm.

Safety interviews with senior management and employees: case studies. The exploratory study was based on

workplace visits and semi-structured interviews with senior managers as well as focus group interviews with workers. Special attention was paid to ascertaining positive aspects expected from a prescriptive safety culture (based on Meliá *et al.*, 2012; Frazier *et al.*, 2013), such as: existence of a safety policy emphasizing safety values and actions in the organisation and shared between all employees; well-defined safety procedures and guidelines for all the operations integrated in work procedures; safety resources and investment; specific safety training and supervision; accidents and near-misses investigation; active employee involvement in OH&S activities and health promotion. Interviews were carried out in eight selected enterprises from different branches of industry (the metal industry (3), textile industry (2), manufacture of devices and plastic processing industry (2), and printing industry (1), from various geographical parts in Estonia. Eight semi-structured face-to-face interviews were carried out with senior managers in charge of production operations, and/or quality sections of their companies and eight interviews with safety managers. All interviews were conducted in Estonian and Russian languages and were fully transcribed and analysed. Each interview with managers lasted an average of two hours and with workers 45 min and was recorded. Data for this exploratory study were gathered from eight focus group interviews with 22 industrial workers (13 males and 9 females). A simple random sample was selected from workers employed at the SMEs. Relevant supplementary safety documents such as safety strategy, plan and instructions, risk assessment, safety procedures, safety records, including incidents and accident investigation were also carefully analysed in order to complement and verify the data collected during the interviews. In addition, company's strategy, policy, values, vision- and mission statements were investigated based on the data available from their homepages.

Literature review. In order to investigate media and public attention to the OH&S, safety culture and SC in Estonia, a literature review was performed and newsletters and journals available for the period of 2009 to January 2013 were analysed. A search was conducted via the Database of Estonian Articles Index Scriptorum Estoniae, which contains articles, from newspapers, magazines and journals, serial publications and anthologies and collections from the 1990s onwards, allowing the full-text to be accessed in free digital archives and Web publications. The key words “occupational health and safety, safety culture, occupational accident and disease, risk assessment, safety management, health promotion, conflict management, and employee involvement” were searched for and only the content of those articles related to health and safety and in Estonian, Russian, English or German languages were examined.

RESULTS

Companies' safety response. Company safety response refers to the state and process of safety. The working environment and conditions in the investigated SMEs were analysed in detail and presented in previous studies (Järvis,

2013; Reinhold *et al.*, 2015). Most of the investigated companies showed rather a positive attitude towards contributing to safety: developing safety practices and written work procedures, risk assessment, investigating occupational accidents, and providing safety training for the employees. Most of the occupational hazards were assessed, evaluated and under control. Noise, indoor climate and improper lighting conditions were identified as the main occupational hazards in the mechanical, plastic, and printing industry. However, the main shortfalls of the OH&S system were discovered: the absence of a safety policy, poor quality of risk assessment, weak accident investigation and reporting procedures; and the absence of near-miss reporting procedures. In addition, knowledge about OH&S differed among the various enterprises. The authors identified insufficient safety training of new workers as a problem in all investigated enterprises. During workplace visits and interviews, gaps concerning how safety knowledge transferred were analysed and some safety knowledge transfer barriers were found, such as lack of time and willingness to share information and expertise. Employees were not willing to talk about safety issues and they did not participate much in health and safety activities.

Safety survey. Organisational commitment to safety. Visible commitment by senior management regarding safety includes interest, active participation and time for meetings, provision of resources for OH&S and Occupational Health Services (OHS) for employees, organisation of risk assessment and accident investigation feedback, physical presence in the workplace, participating and supporting OH&S training, and involvement of employees in OH&S activities. All items indicated a positive view of senior management commitment and showed that safety was given high priority by the management. The safety survey showed that organisations in Estonian SMEs have real interest in safety, even more important than production, receiving business objectives and investment. To the question about the main motivation to deal with OH&S issues, 43% of employers stated that the employee health protection, followed by compliance with law and regulations were the main reasons for managing OH&S (Fig. 2).

When asked to rate OH&S in terms of importance on a scale of 1 to 5 (where 5 is very important), along with other workplace issues, employers and employees placed greater importance on safe working conditions, employee awareness about the organisation's activity and work organisation, good relationships and job security issues as the most important aspects in working life. Both for employees and employers, work by itself and possibilities for development were much further down the scale. They rated highly issues such as job security, good relationships between the employer and employees, the balance between work and home life, and employees' involvement in decision making process regarding work organisation and working conditions. Employees and employers both ranked an interesting job, career and opportunity for employee development as less important factors in their working life (Fig. 2).

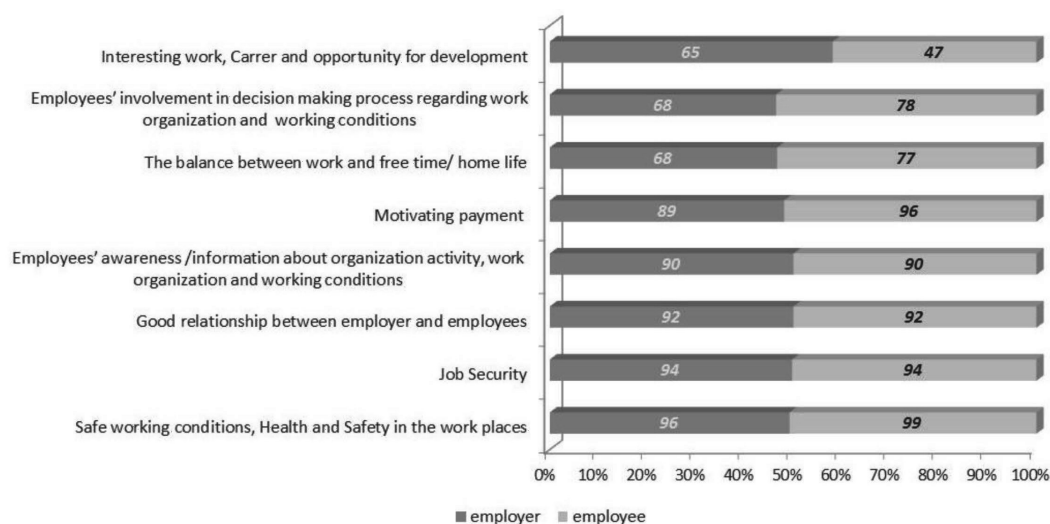


Fig. 2. Importance of different aspects of working life. (Question "Please, tell how important is each aspect for you?")

Employees and employers shared common perceptions of responsibility for managing OH&S and thought that this is "everyone's responsibility", which is a positive sign related to safety culture. To the question to employers about who is actually dealing with OH&S in the organisation, a majority of employers (85%) said that they were dealing with this themselves, and half (54%) of employers reported that they also had a safety manager and safety council (17%) in dealing with OH&S. At the same time, the qualitative survey data revealed that traditionally in all investigated companies, this task was delegated to the safety managers, human resource managers or, even to accountants.

Working conditions, employer and worker perceptions of safety. The vast majority of the employees (66%) and employers (77%) considered that they worked in a safe environment. Employees (18%) were more likely to consider the workplace risky than their employers (9%), who actually had formal responsibility for OH&S within their organisations. Most of the employers tend to underestimate risk and did not believe that their employees were exposed to any dangerous occupational risk. The results from the current

survey are in line with Woolfson *et al.* (2008) and Alvensson (2004) who demonstrated that safety management is still inadequate, especially in SMEs, due to time constraints and lack of knowledge. Employers and employees showed good awareness about possible risks in their work places. When asked in detail about specific common occupational hazards of the workplace, employers and employees mentioned broadly the same issues, but they perceived occupational safety risks differently (Fig. 3).

To make a relative assessment of safety measures, employers and employees have a similar hierarchy of concerns; in particular, two main prevention measures (proper and safety task performance and work organisation according to employee capabilities) appear to be applied in the majority of SMEs. The questionnaire enables us to analyse the practices of prevention and the intervention activities used in the companies investigated. Case studies demonstrated that daily OH&S management activities applied in the investigated companies were equipment maintenance, inspection of premises, provision of personal protective equipment, and risk assessment (evaluation of occupational hazards).

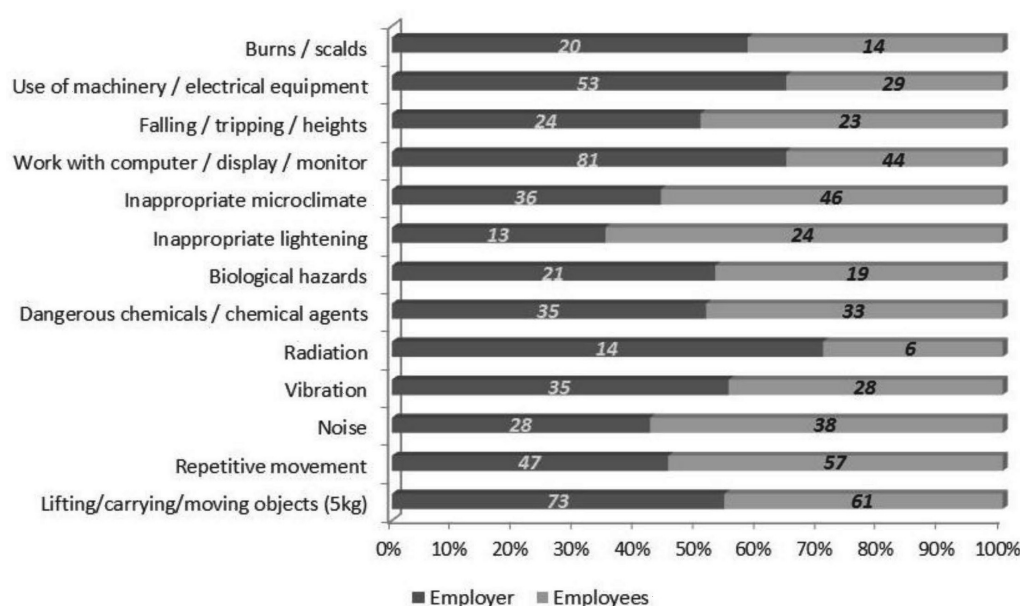


Fig. 3. Question "Factors which present a problem in your workplace?"

Although risk assessment was performed in all investigated companies, the authors identified some shortages in quality of risk assessment and efficiency of safety measures (Järvis, 2013).

Employee involvement and workplace relations. The relevant Estonian legislation and the European Framework Directive on OH&S require that all employees and their representatives be informed of the risks to their health and of the safety measures required. Generally, information and representational channels via individual safety representatives take place in smaller enterprises, while (indirect) via elected representatives meetings together with employer representatives' in health and safety committees occur in larger enterprises (Woolfson *et al.*, 2008). In the investigated SMEs, more than half of employers (51%) and only 43% of employees reported that safety and health worker representatives were elected in their organisation. The questionnaire study revealed that, for employers (40%) and employees (50%), it is very essential that employees be informed about organisation activity, work organisation, and working conditions. Only 17% of employees were very satisfied with the amount of provided information about these issues. Safety culture presumes effective communication and employee safety participation and involvement in OH&S activities. While most employees (91%) stated that it was vital for them to be able to suggest and be involved in decision-making process concerning work organisation, training, payment, safety and working conditions, 53% of employees reported that they could not raise their opinion in training and further training, and 30% reported they could not manifest their opinion in any of the topics. For more than a half of employees (77%), good relationships were very important in the organisation; however, only 2% of employees stated that they have a "very good" and 50% "rather good" relationship with colleagues while 42% of employees reported a very good relationship with their employer. This suggests potential for the occurrence of conflict, but only 22% of employers declared that conflicts with employees took place, and 98% of employees reported that they never had any conflicts with their employers.

Based on these results, it is possible to conclude that conflicts might exist and are more likely between co-workers than between employees and the employer. This can be also one reason for dissatisfaction of employees with their rela-

tionships at work. According to the employer opinion, there are three main causes of conflict in the workplace: noncompliance with the duties and agreements, poor information transfer, and employee absenteeism. Additional possible work-related causes of the conflict have not been investigated. The majority of employers said that the main methods used in order to solve problems were discussion with employees and reprimand. There is a contradiction of results, however, because only 9% of employees reported that they discuss problems with employers in order to solve the conflicts. Virovere (2015) identified similar factors in separate articles on workplace conflicts in 2001: lack of provided information, and of teamwork, as well as unclear work procedures and rules.

Ability to learn. The ability to learn is central for enhancing safety culture through a continuous learning process, which requires transfer and exchange of information. This involves the organisation's ability to recognise problems related to OH&S, to implement solutions, to monitor the effects of the solutions, and to provide feedback. According to results from our questionnaire, employees are generally content with the amount of OH&S information and training they receive (Fig. 4). However, only 30% of employees stated that they have a possibility to continuously complement and improve their knowledge. Only 35% of employees felt that they do not have any possibility for training and receiving new information in their organisation. Half of the respondents (50%) stated that the possibilities for training and receiving new information, as well as opportunities for development at work, were limited. Since in 2009 there was a difficult economic situation in Estonia, it is possible to conclude that at that time, to keep a job was much more important for the employees.

The safety survey demonstrated that the majority of employers (87%) evaluated the level of knowledge of employees who are dealing with OH&S in organisation as very or rather good and sufficient. The main sources of OH&S information were professional literature (94%), published guidelines and regulations (93%). The questionnaire survey enabled us to examine the level of knowledge and amount of training received in the field of OH&S by employers. However, qualitative survey evidence indicated that employers in Estonian SMEs did not receive any special safety training. Respondents were also asked to identify from

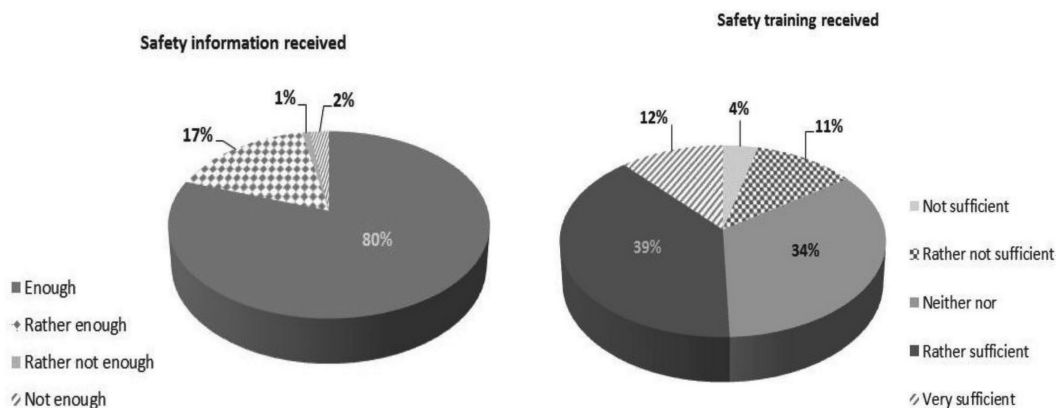


Fig. 4. Safety information and training available in the organisation (Questions: "Do you think the amount of information you receive from your current employer about OH&S issues is ...?" and "Do you think the amount of safety training you receive from your current employer is ...?")

which sources they generally received OH&S information. A total of 89% of employees reported that they received OH&S information from their employer or supervisor. This result is in line with research carried out in three Baltic countries by Woolfson *et al* (2008). Employers (82%) also declared that OH&S information was generally provided by the employer or supervisor. However, according to the present questionnaire, only 4% of employees and 6% of employers stated that generally employees received OH&S information from worker safety representatives.

Main findings from safety interviews. The results from the interviews with senior managers and employees are presented in Jarvis (2013). Our results obtained from the content of the safety interviews showed similar results to those obtained by the questionnaire study and also made it possible to indicate and identify important safety flaws such as a lack of management awareness and commitment to safety in all investigated enterprises as well as a lack of real safety talks and cooperation between some supervisors and their workers in four enterprises. In three companies, employers and employees stated that they accepted unsafe behaviour of employees in order to accomplish production goals, and even, willing to compromise on safety for increasing production. In addition, the authors evaluated unsuitable programmes of work and an unrealistic daily required working load, which was impossible to achieve during the shift. Production always competes with workplace safety, however, this is unacceptable from the safety point of view as well as from labour rights and this decreases employee motivation.

In all of the investigated enterprises, written safety guidelines and procedures existed, but their fulfilment was not periodically updated and monitored. Additionally, safety programmes were established formally but not used, like a strictly formal use of preventive observations and audit. Regarding unsafe jobs, and supervisors' and employee unsafe behaviour (working without safety devices), written safety guidelines and rules do not guarantee that employees understand all information and thus will be able to foresee all risks in their working environment. The interviewed employees said that they have all necessary technical and personal protective equipment and that they were provided with OH&S. At the same time, employees said that senior managers did not show interest in the safety of workers and did not participate in safety meetings and that there was no information available about discussions of OH&S issues at the top management level. One employee said: "Generally we do not discuss OH&S issues with my colleagues. According to my opinion, all the system (training, risk assessment etc.) in our enterprise is formal and exists just on paper..." Fear of litigation does not come out as a major concern in the survey. All interviewed managers stated that the need to meet legislation and maintain good profit is the main reason why organisations are taking OH&S management seriously. To the question about the need to maintain a good business and a positive reputation in the community, media and industry, six of eight managers suggested that

they do not much worry about it, because the OH&S issue does not attract media attention in Estonia. These results were confirmed by a public media survey carried out by the authors.

Company's homepage analysis. The authors carried out textual content analysis of the homepages of the eight investigated companies. In addition, twenty randomly chosen company homepages of SMEs from different branches of industry were also investigated. Altogether, eleven company homepages contained issues related to OH&S and two represented companies included in case studies. One example of a statement available from a homepage was: "health and safety goals are highly appraised and paramount, we ensure that employees will be informed about whether and how health and safety goals have achieved". In order to obtain data for comparison, the authors randomly chose twenty five industrial SMEs of the most competitive fifty enterprises from the Estonian Companies' Competitiveness Ranking 2012. A total of 309 companies were compared against each other in the category "The Most Competitive Small and Medium-Sized Enterprise" and "The Most Diversely Competitive Company" whose competitiveness was simultaneously based on its size, dynamism (speed of development) as well as efficiency (Estonian best enterprises, 2012). The objective of the homepage analysis was to evaluate how important OH&S was for those companies and how essential its promotion/ advocacy was for its competitiveness in Estonia. Survey results showed that topics related to OH&S were mentioned only in three company homepages of the investigated twenty five companies. For instance, one statement was: "We recognise the importance of improvement of working environment and occupational safety". It was impossible to make any conclusions about the attention devoted to safety inside the investigated companies, nor the presence or absence of safety culture nor poor safety. However, it was possible to surmise that OH&S is not a company core issue and the safety is not considered as a vital factor for promotion/ advocacy in the company homepages as a part of the company identity.

National media analysis. The results showed that topics related to occupational accidents and incidents, safe working environment, good industrial relationship and conflict management, worker health, SC and leadership were mentioned only in 3 to 21 articles published between 2009 and January 2013. Altogether in 2009–2013, 261 articles about the topic "occupational health" were published (215 articles in journals, 42 in newspapers, and 4 in collections) and 160 on "occupational safety" (112 articles in journals, 46 in newspapers, and 2 in collections) as well as 75 about "occupational accidents" (42 in journals and 33 in newspapers). No publication was found in 2009–2013 about "safety culture", "occupational health services", "personal protective equipment", "occupational hazards". The number of mentions of such topics in media was small. For example, search for articles on the topic "strategic management" yielded more than 1100 articles, but they did not include OH&S issues, and only 22 included issues of knowledge management.

OH&S management as a part of management was also a neglected topic in the media. It is interesting that “safe behaviour” was a topic mentioned in 34 publications, but “ethical behaviour” which also should mean and include fulfilment and implementing of safety requirements and rules, was not mentioned in any publication. We found 1671 publications that mentioned “working environment”, but only three of them contained the term “safe working environment” and 20 of them were related to “risk assessment”. This result is in line with employer and employee opinion in interviews that the subject of safety and safe working environment does not attract media interest in Estonia. Mass media could play an essential role when planning health and safety information dissemination for the general public and for raising employee and employer awareness. National media can offer added-value presenting, discussing and analysing various opinions of practitioners, experts, trade unions and employer federations, highlighting causes and consequences of occupational accidents and incidents. Essential contributions could be made by national journals, websites that contain publications and also contain access to scientific publications on safety culture, SC and OH&S issues.

DISCUSSION

The results of the current study contribute important empirical evidence on how small and medium-sized business worksites address OH&S. Results from the questionnaire survey revealed that employees evaluated positively all aspects of work, such as: general management practice, job satisfaction and work organisation. However, employee involvement in different activities in an organisation was limited and weak. While, SC requires collective activities, networks, cooperation, active employee involvement and commitment, the results from the current survey showed a lack of SC in SMEs in Estonia. Analysis of safety culture questionnaires showed many SMEs with an outstanding safety culture and positive safety attitudes. Safety training, safety work procedures, relevant information provision, communication and supervision, which are all important aspects of the organisational life, were viewed from the OH&S perspective and were positive, which Meliá *et al.* (2012) called “prescriptive safety culture”. In order to explore and verify the “real” situation in SMEs, direct case studies and interviews were conducted. Qualitative approaches to safety assessment, provided by safety interviews, observation and documentation analysis indicated some important safety flaws. The authors would like to emphasise that the results from the quantitative and qualitative research cannot be generalised to other SMEs and play an illustrative role. The study revealed essential aspects that should be considered in the process of evaluation of safety culture, like organisational, human and social perspectives in safety. It is clear that a quantitative approach using a reliable and valid tested questionnaire can provide an overview of the safety climate (employee perception and attitudes) and an overall safety organisational picture. However, safety documentation and questionnaires tend to reflect only

“formal” procedures in the organisation. This is not enough to understand the “real” state of the safety, procedures, the shared and active values and beliefs that guide behaviour patterns and OH&S activities in the organisation. Therefore, integrated approaches should be used, which allow employees and employers to declare and reflect some important safety flaws.

In order to avoid an “illusion of safety”, it is vital to focus less on paperwork (formal safety rules) and more on implementing organisational structures that allow for managers and employees to interact and cooperate, to learn from safety practice and experience. The authors take the community of practice (CoP) as a source of safety culture and as the privileged focus of learning and transmitting practical safety knowledge. To do so, managers must spend time in CoP and build trust among the members, which is vital for the opportunity to convert tacit knowledge into explicit shared knowledge. Therefore, CoP can provide a possibility for learning, sharing values among members of the CoP, through which organisation can grow and develop new intellectual capital.

ACKNOWLEDGEMENTS

The authors gratefully acknowledge the valuable comments and suggestions made by Charles Woolfson and assistance provided by Elviira Povel during the preparation the article.

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Received 9 September 2016

FORMĀLA DROŠĪBA UN REĀLA DROŠĪBA: DROŠĪBAS KULTŪRAS KVANTITATĪVA UN KVALITATĪVA NOVĒRTĒŠANA. IGAUNIJAS PIEREDZE

Darbā apskatītas atšķirības starp formālu drošību un reālu drošību Igaunijas mazos un vidējos uzņēmumos. Iegūtie dati atklāj galvenās problēmas drošības kultūras novērtēšanā. Drošības kultūras anketu statistiskā analīze rāda daudzas organizācijas ar izcilu drošības kultūru un pozitīvu attieksmi. Tomēr kvalitatīvie dati uzrāda dažus svarīgus trūkumus un aspektus, kas būtu jāiekļauj novērtēšanas procesā un drošības kultūras organizācijā. Darbinieku iesaistīšanās (uzskati par drošības kultūru un attieksme pret to), dažādu aktivitāšu organizēšana bija ierobežota un vāja. Pētījums atklāj būtiskus aspektus, kas būtu jāņem vērā drošības kultūras un procesu novērtēšanā, t.sk. gan organizatorisku, gan cilvēkresursu, gan sociālo drošību.