Attitudes towards occupational safety and health in small and medium-sized Bulgarian and German enterprises

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ABSTRACT

There are many contemporary approaches aimed at improvement of international cooperation in occupational safety and health (OSH). To address decision-makers in small and medium-sized enterprises very precisely in an OSH campaign, their exact motivational structure and safety-attitudes in different countries should be known. In the present work we compare them in Bulgaria and Germany. The results show that Bulgarian decision-makers are less convinced, that OSH situation at their workplaces could be changed at all and that they would have personal influence on the OSH situation. Furthermore the Bulgarians are not prepared to invest the same extent of money and time into OSH improvements in comparison to German counterparts.

Keywords
Safety attitudes, safety motivation, small and medium-sized enterprises, international differences, occupational safety and health

INTRODUCTION

Many studies show, that the main OSH problems are to find in small and medium-sized enterprises (SMEs), where both the OSH staff qualifications and the state controls are low. According to a recent report of the European Agency for Safety and Health at Work (EU-OSHA) the highest accident rates occur in companies with 25-100 workers [6]. It seems that in this context prevention does not form part of the regular activities of SMEs. In such enterprises the management, often the owner, tends to believe that the situation is under control. The time constrains of the owner force him to focus on problems requiring immediate action, which does not include prevention normally. Since the financial resources of SMEs are generally poor, they are applied more to directly profitable ends, which do not contain the rather long-term oriented OSH issues.

Before the EU-framework directive 89/391, which was already called the “EU-Constitution of OSH” [5], many European countries had less strict OSH laws for SMEs. With the upcoming eastern enlargement of the European Union there will be the same OSH legislation for all enterprises even in Central and Eastern European Countries (CEECs) such as Bulgaria, which apply for membership in the European Union.
However, it is not clear, if the same legal framework will guarantee equal working conditions in Europe. To reach the common EU goal – safe, healthy and productive jobs in Europe – it is first necessary to analyze in-depth the OSH situation in different countries. Only from that analysis one can identify the key challenges on the European agenda and develop a new strategy for improving working conditions.

Since many countries have similar OSH problems and common work-related problems in general, it appears to be a good idea to tackle such issues together. Today there are already some approaches to improve OSH international co-operation, for example EU-OSHA, International Labour Organisation (ILO) and World Health Organisation (WHO). These organisations offer information about OSH best practices and even carry out OSH training for specific target groups. However the question is, in how far it is useful to apply a unique OSH strategy in all European countries or to what extend differences in local conditions and mentality of the people should be considered. Maybe OSH interventions from the West would give wrong results when based on assumptions that do not hold in Eastern Europe.

A key role for the enforcement of OSH objectives play the decision-makers in SMEs. In most cases this is the owner. If this target group should be addressed very precisely in an OSH campaign, one should know about the exact motivational structure and the safety-attitudes of those decision-makers in different countries.

**METHOD**

In our study Bulgarian and German decision-makers of SMEs were asked about their attitudes and motivation towards OSH. In Bulgaria the data were collected throughout two OSH trainings, which took place during a joint project between the Sofia and Braunschweig University of Technology [4] with the scope to improve the OSH education in Bulgaria. The German sample was drawn during four OSH trainings of the work accident insurance of the chemical industry [1].

The instrument used is partly based on scales originally published in the research literature and partly on an item pool developed by the authors. The basic version of the questionnaire was written in German. During the phase of construction the scale items were critically reviewed by the multilingual team of researchers in order to achieve semantic equivalence, and modified or supplemented by additional items. The items were translated into Bulgarian by a professional translator and back-translated into German by independent researchers.

The scales about safety attitude are based on the “Safety-Attitude-Questionnaire” [7], from which were taken the most important scales “Responsibility and Commitment to Safety” and “Use of Time on Safety”. The motivation scale was developed from the authors based on the Heckhausen psychological motivation model [3]. This approach assumes, that only a person who believes

1. that the result is not determined by the situation (situation-result-expectation);
2. that the result can be caused by oneself action (action-result-expectation) and
3. that the result will have desirable consequences (meaningfulness)

will start a certain action. This model was transformed into items, on which the subjects could agree or disagree on 6-point scale. According to the same evaluation scheme the decision-makers were asked about which media to use to inform themselves about OSH and who they think is most responsible for good OSH.
EXPECTED DIFFERENCES BETWEEN COUNTRIES

Although there is not so much evidence from previous research, some hypotheses about differences can be derived from background information on the countries. Bulgaria is a former communist country, which began the transition towards a democratic political system and a market economy by the end of the 1980s. The economy was organized around the Soviet model, with a central role of planning. In Bulgaria even small private enterprises had been virtually nonexistent. In contrast to other former communistic countries, such as Hungary or Poland, Bulgaria did not follow the model of fast and drastic reform. Instead a rather slow and stepwise scenario was chosen with deferred privatization.

Germany is a parliamentary democracy with a well-functioning market economy. The standard of living in Germany is very high compared to Bulgaria, which had experienced a period of sustained economic crisis, high unemployment, and widespread poverty since the end of the 1980s. On the one hand there is a well-developed industrialized country and on the other hand a former communistic country in the process of transition. Compared to a standardized mean value (100) of the gross domestic product per head of all EU countries, Germany reaches a score of 108 and Bulgaria only 23.

**Hypotheses 1:** Situation-result-expectation and Action-result-expectation in the Bulgarian group are lower than in the German one.

The communistic socialization of many workers and employers in Bulgaria did not improve the conviction that one individual is able to control his environment. The strong economic and social crisis during the process of transition could also have led to a fatalistic attitude. Therefore we conclude the above hypotheses.

**Hypotheses 2:** The assessment of the meaningfulness of safety and health is not different between the countries.

Obviously the lack of an effective OSH framework and infrastructure in Bulgaria results from organizational and economic problems of society. It is not a result of general low appreciation of the value of safety and health in the Bulgarian population.

**Hypotheses 3:** Attitude towards OSH will be lower in the Bulgarian group in both factors “Responsibility and Commitment to Safety” and “Use of Time on Safety”.

According to recent studies the working conditions in Bulgaria are by far under the level of German working conditions. Elsler, Nikov, Kirchner & Jijanov [2] compared 53 workplaces in Bulgarian and German enterprises with the same job-analysis instrument. The results show very evident, that in Germany the workplaces from an ergonomic viewpoint are better in comparison with Bulgaria. If under that conditions the safety attitudes would be the same in Bulgaria as in Germany, this would lead to a state of cognitive dissonance. This is an emotional aversive state and people generally tend to avoid it. If a person cannot change the situation towards its attitude it has the tendency to adopt its attitude to the situation.

RESULTS

First the motivational differences were checked. Because the criterion of variance homogeneity between the two samples was not sufficient for variance analysis, the non-parametric Mann-Whitney-U-Test was chosen. The difference in situation-result-
expectation and action-result-expectation was significant at .05 level between the German (n = 78) and the Bulgarian (n = 12) group. Bulgarian decision-makers are less convinced that OSH situation at their workplaces could be changed at all and that they would have personal influence on the OSH situation. Nonetheless the objectives of OSH are regarded very positively from both Bulgarians and Germans, there were no significant differences in the meaningfulness of OSH. Therefore we can conclude that hypotheses 1 and 2 are supported by the data gathered (cf. Figure 1).

![Figure 1: Differences in safety motivation between Bulgarian and German SME decision-makers (1 = Minimum, 6 = Maximum)](image)

The safety attitude difference was significant at .05 level in both factors “Responsibility and Commitment to Safety” (Commitment) and “Use of Time on Safety” (Time). This supports hypotheses 3, but the differences in number may not appear very high. However, if we look at single items from the scale, such as the willingness to spend money (no money) or time (no time) for proper ergonomic design of workplaces, we see significant even higher differences at .05 level (cf. Figure 2).

![Figure 1: Differences in safety attitude between Bulgarian and German SME decision-makers (1 = Minimum, 6 = Maximum)](image)

**DISCUSSION**

The generally poor OSH situation in Bulgaria is reflected in motivation and safety attitude of Bulgarian SMEs decision-makers. The unsuccessful transition process of the last years left them with only little confidence, that the OSH situation can be improved at all or even that they themselves can influence positively the situation in their
workplaces. In Bulgaria the awareness for individual responsibility for OSH matters among SMEs managers is apparently lower than in Germany. The Bulgarian decision-makers are less willing to invest in the improvement of OSH than their German counterparts.

We can conclude that there is a mutual correlation between the objective OSH situation and the attitudes and motivation of the decision-makers. Both should be considered in the context of international OSH co-operation. In Bulgaria the poor OSH situation and the corresponding negative motivation form a kind of vicious circle, which should be interrupted at different levels. At the level of legislation a precondition is already fulfilled with harmonization of the Bulgarian law to the EU-framework directive 89/391. However, it is still missing the complete enforcement of the new legislation. The infrastructure of public and private OSH organisations has still to be improved a lot.

At the level of the individual enterprises the decision-makers of SMEs should be convinced by training programs that it is possible to improve working conditions without extraordinary high costs. In addition, the economical advantages, such as higher productivity and less absenteeism have to be pointed out. There are already a few model approaches existing, such as a local initiative of the European Network for Workplace health promotion [8]. This network wants to improve the communication and co-ordination between Bulgarian enterprises to promote good practice examples in OSH. Other projects concentrate more on education, such as the development of a university degree in Ergonomics according to the model of the European Ergonomist [4].

REFERENCES