Pilot study on fields with high exposure to psychosocial risk factors

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Abstract. A pilot study concerning psychosocial risk factors that could determine work related stress and effects on work behaviour and health state was developed involving five fields of activity with high exposure on work related stress (education, health, transport, banking, financial consultancy). The study aimed to identify the main specific psychosocial risk factors in every of the five fields, in order to substantiate a method for assessing the risk factors for work related stress. The study used a complex ergonomic methodology, and one of the main instruments used to identify psychosocial factors was the Romanian version of The Copenhagen Psychosocial Questionnaire (COPSOQ).

1 introduction

The European and international policy in the safety and health at work area and consequently the national policies have to adapt themselves to the changes, emerging demands and occupational risks in order to promote a real well-being at work of physical, psychical and social nature that is not measured only by the absence of work accidents and occupational diseases but also by providing the physical, mental and psychosocial well-being. [2, 4, 5]

In the 21st century the work place is a rapid, dynamic, highly incentive environment resulting in a great number of benefits and opportunities for workers. But, at the same time the continuous changing requirements of the working world and work places give rise to several new psychosocial risks that can increase the occupational stress level, especially for those working under pressure. [1]

The last decades have proved that occupational stress can have unwanted consequences both for the personnel's safety and organization's "health". [6]

The continuously changing world of work makes increase the requirements on workers; efforts and higher pressure between professional and extra-professional life are factors that

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contribute to stress at work. Studies show that 50 to 60% of the total loss working days are due to stress. Preventing and managing stress at work require interventions at the organization level, the organization being the cause of stress. Beside the stress situations, the psychosocial risks are more and more present, such concept including every work context leading to various forms of individual and/or collective bad state, suffering at work and/or physical or mental pathology. Consequently, at European and international level concerns have increased as for putting into evidence the psychosocial and stress factors as risks factors for the comfort, safety and health of the personnel involved in various modern professional work activities. The outcomes of various inquiries, reports and action plans of different European organizations acting in the safety and health at work area result in several conclusions, directions and recommendations on the prevention policy of psychosocial risk factors. The available information underlines that the developed actions, according to the specific national conditions and procedures are not only welcome, but also possible. [3]

Thus, the necessity of initiating a reliable strategy and policy at the national level, adopting competent decisions to adapt/complete regulation in the safety and health at work area to allow organizations/companies implement measure to reduce/eliminate occupational risks of psychosocial nature and protect the personnel against their action. Such approach supposes the integration of the occupational stress management in the general company safety and health at work management, necessitating a national policy and an appropriate regulation framework. [7]

2 Methods

2.1 Aims

The study aimed to identify the main specific psychosocial risk factors in five fields of activity with high exposure to work related stress (education, health, transports, banking, financial consultancy) [4].

2.2 Methodology

The following techniques have been used for identification and evaluation of occupational psychosocial factors, as stress factors:

- Copenhagen Psychosocial Questionary (COPSOQ) – Romanian version;
- DATO Questionnaire, for evaluation of individual vulnerability to stress;
- JCQ Questionnaire („Karasek – Job Content Questionnaire”), for evaluation of workload content.

2.2.1 Participants

Investigated subjects: 1.368 persons

Region: Ilfov (12.76%); Sibiu (18.64%); Timiș (16.50%); Iași (26.36%); Cluj (25.29%); No answer (0.45%).

Age: 18-25 yrs (6.11%); 25-30 yrs (13.83%); 31-35yrs (15.97%); 36-45yrs (28.57%); 45-55yrs (27.81%); > 55yrs (7.71%).

Fields of activity: Transport (2.71%); Education (14.44%); Health (21.93%); Banking (9.78%); Financial consultancy (11.14%).

Seniority in activity: > 1 year (3.44%); 1 - 5 years (3.74%); 5 - 10 years (7.41%); 10 - 15 years (26.36%); 15 - 20 years (16.12%); 20 - 30 years (28.57%); > 30 years (12.83%).

3 Results

In relation to the level and symptomatology of stress, as well as the level of psychosocial risk factors, identified through Copenhagen Questionnaire (COPSOQ) și JCQ Questionnaire, the situation is presented in the following table and figures (Table 1 and Fig. 1 and 2):

Table 1. Levels of psychosocial risk factors (COPSOQ)

Symptomatology of stress	Level				
	Education	Health	Transport	Banking	Financial consultancy
Work satisfaction	58.8	56.5	45	57.6	51.6
General health	57.6	33.2	31.2	53.4	43.2
Mental health	32.2	20	17.4	25	34
General vitality	52.8	30.8	22.8	33.8	32.5
Behavioral stress	48.6	55.8	31.6	47.6	46.6
Somatic stress	39.2	38.4	23.8	32.2	23.2
Cognitive stress	37.2	34	30	29.6	25.6
Psychosocial risk factors	Level				
	Education	Health	Transport	Banking	Financial consultancy
Quantitative / temporal demands	69.2	58.4	70.6	66.2	67.4
Cognitive demands	88.6	79.2	77.8	81.6	78.2
Emotional demands	63.8	53.2	51	52.4	41
Hiding of emotions demands	65	61.6	46.6	51	48.2
Sensory-perceptual demands	90	86.6	88	78.6	75.6
Demands from responsibilities in activity	70	63.2	73.6	77.4	66.6
Influence in activity	57	50	58.4	52.2	35.6
Development possibilities	43.4	40.8	38.8	40.8	30.6
Degree of autonomy	39.6	40	55.6	78.4	68.2
Involvement in activity	43.8	31	44	37.6	24
Degree of information (consult)	39	41.6	36.6	42.2	43.2

Clarity of role	25.2	41.8	23.4	45	44.5
Conflicts of role	32.8	30	43.8	41.2	40
Management style	45	45.8	42.2	48.8	43.2
Social support (from fellows and superiors)	40.2	33.2	27.2	52.2	49
Feedback	37.8	30	24.4	48.4	33.2
Communication possibilities	34.4	38.4	40	29.2	33.8
Team spirit	34	41.6	24.4	29.5	45.4
Fear of unemployment	28	24.4	58	56	53

Fig. 1. Levels of psychosocial risk factors related to the field of activity

Fig. 2. Levels of stress symptoms related to the field of activity

In relation to **DATO stress questionnaire**, that targets evaluation of individual vulnerability to stress factors, *in the plan of individual symptoms, needs and skills*, the following results have been obtained:

In relation to *individual symptomatology*, of a somatic nature (headaches, muscular tension, fatigue, appetite disorders, gastrointestinal disorders, tachycardia, hypertension, sleep disorders...) or of a psychic nature (attention disorders, irritability, nervousness, hyperactivity, frustration, anger, anxiety, depression...) no pathological findings were recorded, in any of the investigated fields.

However, a subjective symptomatology has been noticed. This symptomatology is situated in a normal range, the accused symptoms not exceeding average, hence the results are insignificant from a psychopathologic point of view:

- *Education*: sleeping disorders - problems getting to sleep, intermittent sleep; tachycardia; irritability; nervousness etc.
- *Health*: fatigue; muscular tension; irritability; frustration etc.
- *Transport*: muscular tension; irritability; hypertension; appetite disorders etc.
- *Banking*: sleeping disorders – problems getting to sleep; muscular tension; gastrointestinal disorders; hyperactivity; frustration; anxiety etc.
- *Financial consultancy*: headaches; fatigue; gastrointestinal disorders; hyperactivity; nervousness etc.

Individual needs (nutrition, activity, rest, protection, stability, control, acceptance, approval, understanding, identity, commitment, responsibility, accomplishment, respect...) were reported by subjects as being satisfied at a moderate level, and in some cases, at a high level.

Individual skills (sensory-perceptual, cognitive, behavioral and emotional) were perceived by the majority of subjects as being at a level of development above average, regardless of the investigated field.

4 Conclusions and discussions

The study was carried out on five geographical regions (Ilfov, Sibiu, Cluj, Iași, Timiș), based on an investigation in relation to five fields of activity identified by the reports of the European Agency for Safety and Health at Work as fields in which staff is exposed more often and at a higher level, to psychosocial risk factors, also identified as stress factors. The concerned fields of activity were: education, health, transport, banking, financial consultancy.

In relation to the five fields of activity, at the level of each region, two representative organizations were randomly selected. Representatives of selected organizations were instructed regarding to be applied questionnaires during information and training sessions organised by IM, together with territorial labor Inspectorates, with the participation of specialists from INCDPM "Alexandru Darabont".

Questionnaires used in the survey were distributed to the study participants, employees of the selected organizations, who were assured of the confidentiality of their answers to ensure greater accuracy of the study, thus eliminating elements of subjective variability. Questionnaires applied at the level of organizations on randomly selected lots of personnel, were collected by territorial Inspectorates and introduced for primary processing in the online database created by INCDPM "Alexandru Darabont".

The database, once constituted, has included the necessary information for secondary processing, to highlight the psychosocial risk factors/ stress factors for each field of activity in relation to which the investigation was carried out.

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