

**OPINION OF EMPLOYEES FROM MEDICAL UNIVERSITY OF PLOVDIV ON
ASSURANCE OF OCCUPATIONAL SAFETY AND JOB SATISFACTION –
PRELIMINARY RESULTS**

Rositsa Dimova, PhD

Medical University of Plovdiv, Faculty of Public Health, Dept. Healthcare Management and Health Economics, Bulgaria ros_dimova@yahoo.com

Mariya Pavlova

Medical University of Plovdiv, Expert on Health and Safety at Work, Bulgaria maria_med@abv.bg

INTRODUCTION

The constitutional right to work of every employee is tied to the right of safety and healthy work. The general legal framework in this area for EU Member States determines European and national regulations. Council Directive 89/391/EEC sets forth the employer's obligation to examine employees' attitudes towards the work environment and the factors that are harmful to health and safety (1,2). Work environment includes the physical, chemical, biological, organizational, social, socio-psychological factors surrounding a person and his workplace, while the harmful factors affecting health and safety are physical, chemical, biological, psychological, organizational or other agents or impacts with negative or hazardous effects on the health and safety of employees (3,4). Improvement of the working conditions is a complicated and lengthy process requiring implementation of up-to-date theoretical models for quality supervision and management, occupational safety included, by applying E. Deming's PDCA Cycle of continuous improvement (Plan-Do-Check-Act). Based on Deming's cycle, a model for continuous improvement of the working environment at the Medical University (MU) in Plovdiv can be proposed by giving answers to the following questions: What changes could be made to improve work results? How are we to know that the changes have resulted in improvement? and What do we expect to achieve?

The **aim** of this paper is to investigate the opinion of employees from the Medical University on the provision of safety working conditions and their job satisfaction.

MATERIALS AND METHODS

A cross-sectional survey in eight different units of the Medical University was used. The survey was conducted in the period December 2015 – March 2016 at MU, Plovdiv.

Our own original tool was developed to explore different aspects of employees' satisfaction with the working environment and organization of the labour process. The questionnaire contained 22 specific questions in five main panels: "management of occupational safety and health"; "inter-personal communication"; "satisfaction with the organization of work"; "teamwork and leadership" and "risk factors of work environment" as well as socio-demographic characteristics of the respondents. The answers to the questions were measured on a 5-point scale from "strongly disagree" to "strongly agree".

The internal consistency of the questionnaire was assessed by Cronbach's alpha coefficient (Cronbach's Alpha). A descriptive statistical method was used - frequency analyses, statistical hypothesis testing. For comparison of results in two-dimensional distributions the criterion χ^2 was applied.

In assessing reliability, a split-half-reliability model was used and Spearman-Brown coefficient (r_{sb}) was calculated for each item. Wilcoxon Signed Ranks Test was used to compare two related samples (in this case the results from two points of measurement).

The adopted significance level of the null hypothesis was $P < 0.05$. The data were processed using the specialized statistical product SPSS (version 17).

RESULTS

Out of all 1054 questionnaires, 619 (58.73%) validly completed ones were returned. The analysis of the results was based on 619 validly completed questionnaires. The average age of respondents was 48 ± 11 (min. 23; max. 69), and the other demographic factors are presented in Table 1.

Table 1. Demographic characteristics of respondents

Characteristics		n	%
Gender	Male	159	25.7%
	Female	460	74.3%
Education	Elementary	9	1.4
	Secondary	165	26.5
	College	61	9.9
	Higher	384	62.0

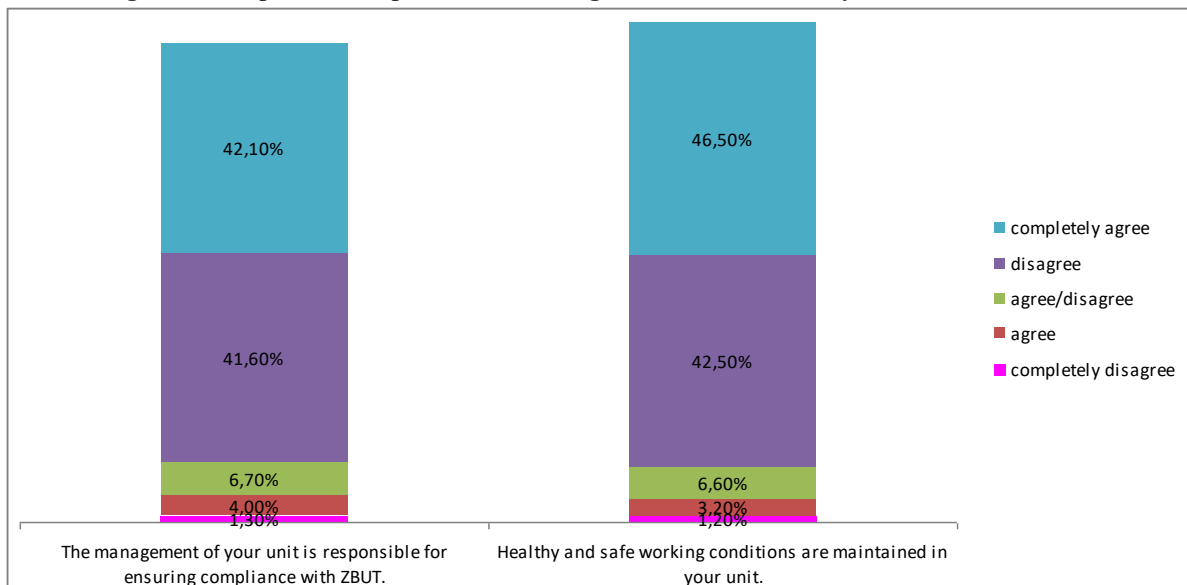
Validity and reliability assessment of questionnaire

To assess the reliability and validity of the designed tool, a pilot study was conducted among 20 persons, nine (45.0%) men and 11 women (55.0%) aged between 27 and 68 (mean age 48.58 ± 11.60). Following a preliminary instruction, the participants were asked to complete the questionnaire twice within two weeks. When answering the questionnaire for a second time, the participants had no access to the first copy they had completed. The resulting high values for r_{sb} (> 0.6) and the values for Cronbach's α for the entire panel (0.749) show that the questionnaire had a very good reliability.

Employee's opinion of the factors work environment, psychological climate and satisfaction

Most of the employees (80.0%) showed significant confidence in ISO 9001 - Quality management in ensuring occupational safety and health at workplaces (Fig.1).

Figure 1. Respondents' opinion on securing the Health and Safety at Work Act (ZBUT)



The majority of respondents were satisfied (completely satisfied or satisfied) with the inter-personal communication between staff and supervisor. The prevailing part of respondents were more satisfied with the organization of work – working hours, beginning and end of the work day and the intensity of work (Table 2).

Table 2. Respondents' opinion on internal communication as part of health and safety management at work

	completely disagree	disagree	agree/ disagree	agree	completely agree
	n %	n %	n %	n %	n %
1. When there is a problem/ flaw related to the health and safety of employees, it is discussed openly in close cooperation with a supervisor.	10 (1.6)	24 (3.9)	46 (7.4)	262(42.4)	276(44.7)
2. Every employee can make suggestions for improvement of the working conditions in their unit.	14 (2.3)	35 (5.7)	51 (8.3)	253(41.0)	264(42.8)
3. When changes have been made to improve working conditions, you receive feedback from management about how effective they are.	10 (1.6)	58 (9.4)	88(14.3)	266(43.3)	193(31.4)
4. In the case of a problem/ flaw alert, it is perceived that criticism is directed towards the person, not the causes of the problem.	68 (11.0)	185(29.9)	102(16.5)	191(30.9)	72(11.7)

Where people are supportive and respectful to each other, and not being afraid of discussing openly the actions of officers of higher hierarchical level in the organization, they are more likely to have a democratic style of leadership ($P=0.000$). In addition, when such leadership style was put into practice, employees more often received feedback about their job performance ($P=0.000$). On the list of risk factors, respondents indicated firstly: work with chemical agents and powder -182 (29.4%), followed by work involving mental strain - 176 (28.4%), and work with biological agents - 153 (24.7%). Respondents evaluated the management style in the workplace as: democratic (40.0%), consulting (19.0%), liberal (11.0%) and authoritarian (7.0%), and a quarter were unable to define it. In resolving conflicts in the workplace, most often the management resort to consultative style and cooperation (45.0%) and compromise (34.0%), and least often avoidance (9.0%) and adaptation (12.0%).

DISCUSSION

Although job satisfaction in university teachers has received increasing attention worldwide, the relevant research is still under represented in Bulgaria. However, few investigations pertaining to the factors associated with job satisfaction among Bulgarian university teachers have been conducted (5,6,7).

The present research investigated the provision of safety working conditions and job satisfaction among university teachers in the Medical University of Plovdiv as well as explored its associated factors. The medical university teachers of our study indicate that improving the perceived organizational support and provision of occupational safety may increase the level of job satisfaction for university teachers.

Empirical studies in Bulgaria also showed that interpersonal relationships are one of the most important factors in quality management aiming to achieve a high level of academic teaching and were related to teachers' job satisfaction (8,9). Davidkov's results obtained in a survey of university teachers are similar to the results in this survey, which reveal that the level of satisfaction with the relationship with the supervisor is the highest, followed by freedom (autonomy), which can be explained by the implementation of a democratic management style (8,9).

The risks increasing the stressogenicity of the environment are: presence of hidden conflicts and the inadequate resolution of conflicts. On the other hand, effective leadership occurs when there is an effective team and a high degree of job satisfaction (10). Our results revealed that employees who can receive support at work facilitate conflict resolution. Another study revealed that turnover intention, occupational stress and chronic disease all had negative impacts on job satisfaction, whereas perceived organizational support and psychological capital were positively associated with job satisfaction among the university teachers (11). Usop A, Askandar D and co-

authors have revealed that employees who are satisfied with their job are more likely to be creative, innovative and initiate the breakthroughs that can increase their job performance (12). A research conducted in an Australian university showed that of all the staff members, academic staff who engaged in both teaching and research had the highest psychological distress and lowest job satisfaction, indicating that high work load may be the cause of work stress (13).

CONCLUSION

In conclusion, our preliminary findings revealed that university teachers in the Medical University enjoyed a satisfactory level of job satisfaction and good interpersonal communication relationship between employees and supervisors. In additional it will be carried out analysis, which will establish an association between demographic and working characteristics, the frequency of absence from work due to sickness of the employees and their job satisfaction. Therefore, attention should be focused on modifying these factors with the purpose of increasing job satisfaction among university teachers.

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