

## Organisational Factors Influencing Job Performance of Ambulance Health Care Professionals: Cross-Sectional Survey in Lithuania

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**Key Words:** emergency services, ambulance, work organisation, inter-professional relation, stress.

**Summary.** The aim of this paper was to analyse organisational factors that affect attitudes of ambulance health care professionals to their job during the period of reform in ambulance stations.

**Methods.** A descriptive, cross-sectional study design was applied.

**Results.** An analysis of respondents' attitudes to work organisation has shown that the majority of the respondents maintained that they had to be very accurate in their job, to think all the time and memorise a lot of things, to exploit all their skills and abilities. According to the results of the analysis, 79.2% of the respondents believe that their competences and those of their colleagues are adequate, 71% of the respondents maintain that the organisation provides employees with an opportunity to participate in training, and 61.6% of the respondents agree that an organisation creates favourable conditions for personal growth and improvement. The analysis of major stressors among ambulance health care professionals reveals that the respondents are most likely to suffer from stress when their health and safety is in danger.

**Conclusions.** Work organisation at ambulance stations is rather effective: health care professionals enjoy sufficient professional autonomy even though workload is quite heavy. However, the study participants indicate that support provided by leaders is not sufficient and major occupational stressors include danger to health and safety, communication with violent patients and patient deaths.

### Introduction

Science and its development form a new approach towards work organisation in health care institutions. It is necessary to emphasise that a health care system is one of the systems where the most significant technological changes take place and which is greatly influenced by the environment and these changes (1). Changes are related to the expansion of information technologies, globalisation and increasing activity dynamics, as well as to the growing significance of intangible resources. Efficient use of knowledge, renewal and organisational learning become more important than qualitative achievements. Personnel play a key role in this process since successful organisation learning is closely related to individual achievements and possibilities of organisational development (2).

The science of complex adaptive systems brings new concepts that can provide fresh understandings of troubling issues in the organisation and management of delivery of health care. Effective organisa-

tion and delivery of health care do not need detailed targets and specifications, nor should they focus primarily on "controlling the process" or "overcoming resistance" (3, 4).

Attitudes towards an employee, work as such and work organisation are changing. Responsibility for work and its results is transferred to a work team or a group of employees. Although attitudes towards work organisation have changed, companies and their stereotypes are not as quickly transformed. It is especially typical of Lithuania. Since old structures are not able to adequately respond to the rapidly changing environment, it is necessary to transform both these structures and work organisation (5).

**Ambulance services in Lithuania.** At present, emergency medical services (EMS) are provided by 56 public health care institutions and 2 private EMS providers. Institutions providing EMS are required to provide emergency medical care, which is part of the state funded health care (free of charge) and is financed from the budget of Compulsory Health

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Insurance Funds. In Lithuania, emergency medical services are provided by EMS teams composed of physicians, community and general practice nurses, obstetricians, emergency medical care nursing specialists, nursing assistants and auxiliary workers, paramedics and military paramedics, and drivers.

Ambulance stations in the countryside are serving from 10,000 to 15,000 thousand inhabitants, while in the city one ambulance serves from 12,000 to 17,000 inhabitants. According to the order of the Minister of Health (6), one ambulance should receive from 0.15 to 0.25 calls per hour in the countryside and from 0.2 to 0.3 calls per hours in the city. Ambulance stations willing to provide emergency medical services should have at least two ambulances and serve at least 20,000 inhabitants.

The aim of this paper was to analyse organisational factors that affect attitudes of ambulance health care professionals to their job during the period of reform in ambulance stations.

## Methods

*Participants.* A descriptive, cross-sectional study design was applied. The study sample consisted of health care professionals, namely, physicians, nurses and paramedics, who worked in selected ambulance stations during the research period (in 2012). In total, there were 59 physicians, 185 nurses and 125 paramedics employed at these stations.

*Study Organisation.* Questionnaires were sent to all those identified in the final sample frame. In total, 369 questionnaires were distributed. The voluntary questionnaire was filled in and returned by 66% of the health care professionals. The final sample consisted of 245 working-age health care professionals.

*Study Instruments.* The questionnaire included the following types of questions: questions indicating factors related to work organisation, questions aimed to assess factors that are major occupational stressors as well as information on job type, years in post, age, and gender. The five-point Likert scale was used for data assessment. The choice of answers ranged from 1 point ("never") to 5 points ("always"). The results presented in this study indicate the proportion of respondents who perceived things described in statements as happening "always" and "often".

*Ethical Considerations.* Research was carried in accordance to ethical principles of scientific research, the Declaration of Helsinki as well as the Code of Ethics of the Lithuanian Social Research Centre (LSRC).

Before filling out the questionnaire, each participant who freely agreed to participate in this study was acquainted with the study aims, the anonymity of the questionnaire and the fact that generalised

study data would be used for scientific purposes only.

*Data analysis.* To process the data, SPSS 20 for Windows was used. Descriptive statistics were used to describe the basic features of the data in the study. They provide simple summaries about the sample and the measures. Together with simple graphics analysis, they form the basis of virtually every quantitative analysis of data.

## Results

*Management and Administrative Issues.* An analysis of respondents' attitudes to work organisation showed that the majority of the respondents maintained that they had to be very accurate in their job, to think all the time and memorise a lot of things, to exploit all their skills and abilities. The majority of the respondents confirmed that they had to solve work problems on their own and that work provided them with a possibility to think and decide independently, which was illustrated by the statement that work at ambulance stations was based on the principle of professional autonomy. In addition, the majority of health care professionals were aware of what was expected of them at work. Only a small percentage of the respondents (20%) indicated that they received contradictory orders from their leaders (Table 1).

The analysis of the study results showed that 79.2% of the health care professionals believed that their competences and those of their colleagues were adequate, 71% of the respondents maintained that an organisation provided employees with an opportunity to participate in training, and 61.6% of the health care professionals agreed that an organisation created favourable conditions for personal growth and improvement. Unfortunately, only 32.7% of the ambulance health care professionals believed that their work required creativity (Table 2).

*Inter-professional and Inter-organisational Relations.* Support provided by team leaders and colleagues is a very significant factor of work organisation for employees. The study results revealed that 79% of the respondents could discuss work problems with colleagues, and 63% could ask their colleagues for help. However, only 57% of the health care professionals could discuss work-related problems with leaders, and even less of them (54.3%) believed they could expect help from their leaders in case of difficulties. A small part of the study participants (17.6%) maintained that conflicts and unpleasant situations happened with both colleagues and principals (Table 3).

*Stress Issue.* The analysis of major stressors among the ambulance health care professionals revealed that the respondents were most likely to suffer from stress when their health and safety was

Table 1. Attitudes of Respondents to Work Organisation

Statement	Always/Often	
	%	N
An employee has to be very accurate at work	93.9	230
An employee has to memorise a lot of things at work	92.6	226
Work requires a lot of concentration	90.6	222
It is necessary to think all the time at work	90.2	221
An employee knows exactly what he is responsible for and what are the areas of responsibility	86.5	212
An employee has to use all his skills and abilities at work	84.9	208
An employee has to take care of many things at the same time	82.4	202
An employee may independently decide in what order to perform tasks	81.2	199
There is excessive workload	80.8	198
Work requires personal input	80.4	197
Employees have to solve problems at work on their own	80.0	196
Employees know what other people expect from their work	77.6	190
Employees have to work very hard in order to complete their tasks properly	76.7	188
Work provides a possibility to think and act independently	76.3	187
Employees work under time "pressure"	67.3	165
Employees receive contradictory orders from team leaders	20.0	49

Table 2. Attitudes of Respondents to Growth and Improvement Possibilities at Work

Statement	Always/Often	
	%	N
Permanent employees are well qualified	79.2	194
An institution provides a possibility to participate in training or attend courses	71.0	174
Work provides possibilities for personal growth and improvement	61.6	151
Work requires creativity	32.7	80

Table 3. Attitudes of Respondents to the Role of Leaders and Colleagues in Work Organisation

Statement	Always/Often	
	%	N
Employees can discuss work-related problems with colleagues	79.2	194
Employees can ask their colleagues for help, if necessary	63.3	155
Employees can rely on their colleagues in case of difficulties	62.0	152
Employees can discuss work-related problems with their leaders	57.0	139
Employees can expect help from their leaders in case of difficulties	54.3	133
There are conflicts with colleagues	17.6	43
There were unpleasant incidents between you and your leader	17.6	43

in danger (83.7%), when a patient died (82.9%), when they had to communicate with violent patients (80.8%) and when they were uncertain about the functioning of specialised medical equipment (69.4%) (Table 4).

### Discussion

Emergency medical care is an essential part of prevention of secondary injuries and unexpected deaths. The major community expectations as well as requirements for emergency medical care include

Table 4. Major Occupational Stressors

Statement	Especially/Often	
	N	%
When the employee's health and safety is in danger	205	83.7
When the patient dies	203	82.9
When employees have to communicate with violent patients	198	80.8
When employees are uncertain about the functioning of specialised medical equipment	181	73.9
When employees have to confront abusive patients	170	69.4

timely arrival and quality service provided by emergency medical service (EMS) units (7).

Health care personnel working in the field of emergency medical service often face situations that place high demands on their creativity and competence. Care is to be given in all contexts that may involve patients with physical, psychological and social problems (8).

In Lithuania, the national health care concept, dedicated to the reform of emergency health care, emphasises the importance of changing an approach towards emergency care (9). In the United Kingdom, the National Health Care Programme also underlines the need to strengthen leadership at the emergency care level and to adjust principles of work organisation management in order for services to meet expectations of society and patients (7). Therefore, a new approach to work organisation is necessary. A study carried out by Dutch scholars (10) has shown that more than a half of ambulance workers participating in the survey indicated such disadvantages of work organisation as poor communication, insufficient salary, the lack of information and professional autonomy. According to our study, one of the main disadvantages of work organisation indicated by health care professionals at an ambulance was small salary (66%). However, the majority of the respondents believed they could make decisions on their own and independently determine in what order to perform tasks (76.3% and 81.2%, respectively).

Another important factor of work organisation is the clarity of functions and roles. Many researchers note that when employees are aware of the organisation's goals and the limits of their own responsibility, they are more satisfied with their work and provide better quality services (11, 12). Our study data also correspond to findings of other researchers, since 86.6% of the respondents maintained that they knew exactly what they were responsible for and what were the areas of responsibility as well as what were other people's expectations of their work (77.6%).

Strong leadership is essential to bring about positive changes in health care work environments. Leaders must initiate and guide this process of organisational renewal (13, 14). The role of leadership and interpersonal communication is essential in a multidisciplinary team composed of physicians, nurses and paramedics. It has also been suggested that professionals with more powerful positions have the least interest in collaboration (14, 15). A study conducted by Scandinavian researchers has shown that nurses are more inclined towards teamwork and collaboration than physicians (17, 18). This statement is illustrated by our study data. All leaders of ambulance stations were physicians, while the main workforce was composed of nurses and paramedics, who maintained that only occasionally they could talk to their leaders (57.0%) or expect their help (54.3%).

In today's management science, a lot of attention is paid to a healthy work organisation model. This model attempts to link healthy work environments to improved health outcomes for individual employees and improved business results. Among health promotion researchers, there is an emerging consensus about the need for a more holistic and integrative approach that addresses workplace and organisational factors (19, 20). However, according to the World Health Organisation, from 1 to 2 million employees in the world are subject to violence at workplace. Furthermore, the majority of employees subject to violence work in the health care system. Nurses are more likely to suffer non-fatal injuries while at work than are members of any other profession (13). Both the International Council of Nurses and the Australian Institute of Criminology have acknowledged that violence in the health care sector is a major problem (21, 22). A study conducted by the Australian Institute of Criminology has found that the health care sector was the most violent industry (23). Nurses working at the emergency departments maintained that they experienced violence at workplace at least once a week. In fact, 92% of perpetrators were patients or their relatives; however, other

staff members were also implicated. Non-reporting of violence is an issue as over 70% of incidents were not referred to authorities. Drugs, alcohol and emergency department waiting times are the most significant predisposing factors. Most emergency nurses are not satisfied with the response of administration to violent incidents within hospitals (24). Ambulance workers frequently have to take rapid action and provide medical care under life-and-death circumstances in unfamiliar and inconvenient conditions, while being scrutinised by bystanders and relatives (25, 26). Our study supports findings of other researchers. According to health care professionals at an ambulance, the major occupational stressors included situations when their health and safety was in danger, when the patient died and when they had to communicate with violent patients (83.7%, 82.9% and 80.8%, respectively). Training workshops about teamwork in a health care system would increase personnel knowledge and competences in building effective inter-professional and inter-organisational rela-

tionship to ensure safe and stress-free work conditions.

#### Limitations

The study represents the work peculiarities of only one emergency medical services centre.

#### Conclusions

Work organisation at ambulance stations is rather effective: workers enjoy sufficient professional autonomy even though workload is quite heavy. However, study participants indicate that support provided by leaders is not sufficient and major occupational stressors include danger to health and safety, communication with violent patients and patient deaths. This study revealed the necessity to optimise work organisation and provide the assistance to health care professionals in solving management and administrative issues.

#### Statement of Conflict of Interest

The authors state no conflict of interest.

## Organizacinių veiksnių sąsajos su greitosios medicinos pagalbos darbuotojų atliekamu darbu: skerspjūvio tyrimas Lietuvoje

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**Raktažodžiai:** skubioji medicinos pagalba, darbo organizavimas, tarpusavio santykiai, stresoriai.

**Santrauka.** *Straipsnio tikslas* – išanalizuoti organizacinių veiksnių sąsajas su greitosios medicinos pagalbos darbuotojų atliekamu darbu reformos vykdymo laikotarpiu.

*Metodai.* Greitosios medicinos pagalbos darbuotojų anketinė apklausa.

*Rezultatai.* Remiantis atlikto tyrimo duomenimis, didžioji dalis respondentų teigė, kad privalo labai tiksliai atlikti savo darbą, kad dirbant nuolatos reikia mąstyti ir daug ką atsiminti ir kad darbo metu išnaudoja visus savo gebėjimus ir įgūdžius. 79,2 proc. respondentų teigė, kad jų ir jų kolegų įgyta kompetencija atitinka darbo pobūdžiui keliamus reikalavimus. 71 proc. respondentų pabrėžė, kad organizacija suteikia darbuotojams galimybę tobulėti. 61,6 proc. respondentų sutiko, kad organizacija sudaro palankias sąlygas darbuotojams tobulėti ir įgūdžiams tobulinti. Didžiausią stresą respondentai patiria situacijose, susijusiose su paciento mirtimi, bendraudami su agresyviais pacientais, kai iškyla grėsmė sveikatai ir saugumui.

*Išvados.* Respondentai tiksliai žinojo, už ką yra atsakingi ir kokios jų atsakomybės sritys. Dirbdami jie išnaudoja visus savo gebėjimus ir įgūdžius. Teigia, kad jiems yra suteikta pakankama profesinio savarankiškumo laisvė, tačiau pasigenda didesnio lyderio palaikymo ir dalyvavimo sprendžiant problemas. Didžiausias respondentų įvardytas stresorius – veiksniai, keliantys grėsmę jų pačių sveikatai bei saugumui, bendravimas su agresyviais pacientais ir pacientų mirtis.

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