

WORK STRESS ACCORDING TO THE COMPARATIVE EXAMINATION OF THE PROFESSIONAL STAFF OF HUNGARIAN CUSTOMS AND FINANCE GUARD AND THE TEACHING STAFF OF SECONDARY SCHOOLS UNDER THE SUPERVISION OF SECURITY FORCES

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Abstract

In people's life their job takes a very important place which cuts across exist outside of work as a whole. The health status of the Hungarian population is among the worst in Europe. High mortality and morbidity rates of non-infectious diseases are mainly due to lifestyle factors, and job stress is a significant risk factor. Being an officer of the Customs and Finance Guard is a specific profession, the job stress is significant. If our aim is prevention, we have to start by evaluating the health status of the vulnerable population, and intervention can be designed in view of the results.

Aim: A national context to explore about the customs and finance guard and teachers of police training colleges their stress level, and their chance of their advancement In view of the result, we would like to develop a health promoting project for this population with special profession.

Sample: The study population consisted of 122 employees who have been working for the Hungarian Customs and Finance Guard for more than one year, 481 workers who have been employees of the Hungarian Customs and Finance Guard for less than a year, and 99 teachers of law enforcement schools.

We used an impersonal style should be used self-report questionnaires for evaluation.

The job stress questionnaire showed that the stress level of officers was significantly higher than that of teachers.

The vulnerability of officers of the Hungarian Customs and Finance Guard is significantly higher than that of teachers, therefore, it is imperative to accomplish a health promoting project and burnout intervention.

Key words: *work, stress, comparative study, Hungarian Customs and Finance Guard.*

Introduction

The working environment is the most dangerous human environment; its damaging risk is 1-3 times higher, compared to other environments. The risk factors include psychic and social factors. An intensively studied form of the negative correlation between job and health status is the diseases caused by job stress.

Problem of the Research

There are several models analyzing the effects of job stress on the health status. One of these models is Karasek's (1979) Demand-Control-Support Model. This model hypothesizes that the greatest job stress occurs to workers facing high psychological workload demands/

pressures combined with low control or decision latitude in meeting those demands (Karasek, 1979). Another important model is Siegrist's Effort-Reward-Imbalance Model, which states that if the proportion of effort and reward at work is not appropriate, it leads to stress, and may subsequently damage health (Siegrist, 1996).

There are several studies supporting that high job stress is a major risk factor for physical and mental diseases. Several studies confirm that job stress is related to cardiovascular diseases (Belkic, Landsbergis, Schnall & Baker, 2004; Kristensen, 1996; Landsbergis, Schnall, Belkic, Baker, Schwartz & Pickering, 2001; Schnall, Belkic, Landsbergis & Baker, 2000; Schnall, Landsbergis & Baker, 1994; Theorell & Karasek, 1996; Kopp, Skrabski, Szántó & Siegrist, 1996) and the deterioration of mental health (Norbeck, 1985; Browner, 1987; Boyle, M. J.-Younger & Thornby, 1991; Tsutsumi & Kawakami, 2004; Salavecz, Neculai & Jakab, 2004).

The workplace and all scopes of work have their own stressors. Characterizing and knowing the stressful factors in the complex network of human relations in the workplace is essential for the given organization, as it makes the prevention or the appropriate treatment of the almost inevitable stressors possible. Job stress unfavourably influences the health of the employees. 50-80% of psychosomatic diseases are caused by stress. (Dollar & Winefield, 1996; Jamal & Badawi, 1995; Jette, Theorell, De Faire, Ahlbom & Hallqvist, 2005). In addition, job stress leads to organizational problems, the employees become dissatisfied with their workplace, burn out, high absence rate, and low organizational commitment occur, and the workers' performance deteriorates (Jamal, 1984; Jamal, 1985; Jamal & Baba, 1997; Jamal & Badawi, 1993; Westman & Eden, 1996).

Job is an important factor in the life, it influences the existence beyond work. Thus, it is important to create the conditions of appropriate, harmonic, and effective working, meeting the interest and the aim of the organization.

Research focus

The present study focuses on different health indicators of the professional and the teaching members of the Hungarian Customs and Finance Guard (HCFG). The main aim of the study is to analyze different health indicators of members of a law enforcement institution, and to reveal differences between non-teaching officer members and teacher members.

We aimed at analyzing the level of work and private stress affecting the employees in the aforementioned institutions furthermore we also would like to have analyzed organizational commitment, work motivation, work climate, job satisfaction, organizational climate and career opportunities.

Methodology of the Research

Sample of the Research

The sample consisted of 715 employees of law enforcement organizations. The sample was composed of two parts: 112 teachers (90% of them were members of the professional staff as well, and 10% of them were civil servants) of law enforcement vocational secondary schools, and 603 non-teaching officers of the Hungarian Customs and Finance Guard (HCFG).

There are six law enforcement vocational secondary schools in Hungary, and five of them volunteered to participate. Teachers of this type of vocational secondary schools are educators having a university master's degree, whereas (as mentioned above) most of them are in the professional staff as well, having the same promotion and order of ranking system as their non-teaching colleagues.

Non-teaching officers belonged to different organizations of HCFG. 537 officers (89%) belonged to one of the five regional mid-level organizations (see Figure 1 for the location of the regions), the other 66 officers belonged to either the Directorate General of HCFG (central headquarters) or other mid-level institutions.

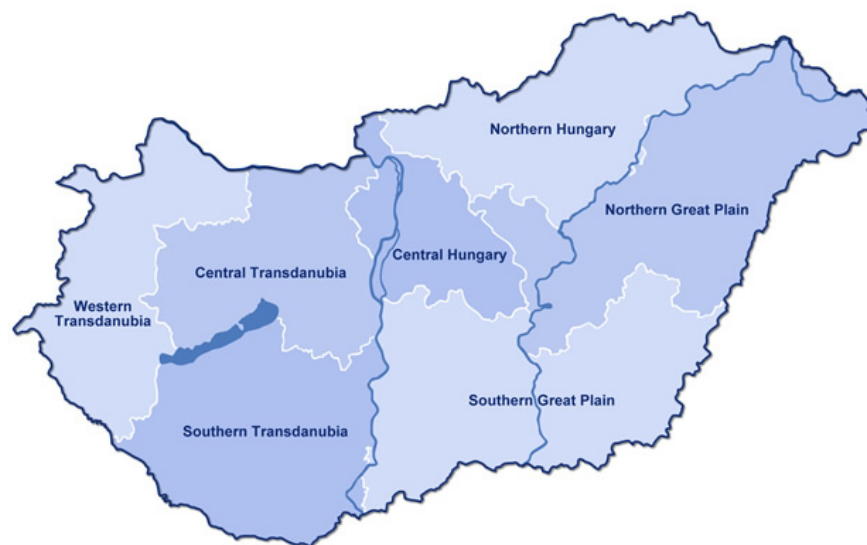


Figure 1: The regions in Hungary.

Source: www.itdh.org/engine.aspx?page=regions

There were 448 male and 267 female participants. The proportion of teachers and non-teachers were similar in both groups.

Instruments and Procedures

In this study, a paper-and-pencil questionnaire was used self-report questionnaires for evaluation. (Siegrist's stress questionnaire, privacy stress questionnaire, motivation, workplace climate, work contentment, and organizational commitment questionnaires.)

The questionnaire consisted of six parts, and contained 99 items altogether

- (1) Demographical and background data (10 items for office members and 9 items for teachers);
- (2) Stress (23 items).

The questions referred to being pressed for time, interruptions, responsibilities, over-times, disturbing factors during work, and to the increasing requirements, expectations, and personal characteristics in work situations. There were questions about the appreciation for work, the possibility for promotion, the existence of a secure workplace, and the unfavourable changes that may occur in the workplace.

Demographical and background data referred to the subjects' gender, study qualifications, marital status, workplace assignment (leader or subordinate), and the length of employment at HCFG. For officers, an additional question concerning their place of occupation was asked, whereas teachers were asked about the number of lessons they held a week.

As for measuring stress Siegrist's (1996) - see also Tsutsumi and Kawakami, 2004 - effort-reward imbalance questionnaire was administered.

Variables (3) to (6) were measured by 33 items altogether, published by Roe, Zinovieva, Dienes and Ten Horn (2000). In their study, this measurement tool enabled cross-country comparisons among three European countries: The Netherlands, Hungary and Bulgaria.

The questionnaires were posted to the participants, and the return rate was rather high. From the distributed 900 questionnaires, 763 questionnaires were sent back, but only 715 could be evaluated.

Results of Research

There have been several suppositions throughout the inquiry. One is that according to us there is a significant difference in the level of stress when examining the workforce employed in different departments of the Hungarian Customs and Finance Guard.

The target groups to be analyzed were the national organization of the aforementioned institution (high-level organization), the regional administration of the national organization (mid-level organization) and the Customs Offices that are operating under the supervision of the latter organization (low-level organization). According to the results from the fixed-effects model of analysis of variance it can be stated that there seems to be no significant difference ($F(2,601)=1,946, p=0.14$) in the average test level of tolerance for stress in the three groups analyzed thus our hypothesis has not been justified. There is no difference of stress level in each of the three departments, however, there is quite a significant difference in the level of authority in the topmost and lowermost levels of the organization.

According to previous studies we supposed that the stress level for teachers working in police secondaries and in the school for the Hungarian Customs and Finance Guard is higher than for colleagues employed in the institutions of the HCFG for obvious reasons; there are different tasks and work conditions for the employees in the two groups.

This hypothesis seems to be justified when us analyzing numerous cases, whereas there have been found a lower stress level when the teaching force was examined (Table 1).

Table 1. The level of stress in the light of the two populations examined (two-sample T-test).

Variable	Levene F	p	t	p
I do get interrupted while working, many times there are distractive elements as well.	2.95	0.09	4.47	0.00*
My job requires much responsibility.	39.96	0	4.45	0.00*
I get the well-deserved recognition from my bosses.	13.05	0	2.59	0.01*
I have little chance to get promoted.	26.44	0	3.10	0.00*
My job is insecure.	26.67	0	2.43	0.00*
My actual position is in contrast with my qualifications.	9.14	0.00	2.55	0.01*
I do get the well-deserved recognition and esteem for my efforts and achievements.	8.38	0.00	2.81	0.00*
I have a good chance to get promoted based on my efforts and achievements.	22.64	0	3.69	0.00*
I get paid in accordance with my efforts and achievements.	2.89	0.1	4.05	0.00*
I can easily get calm leaving the workload behind once I get home.	9.72	0.00	4.51	0.00*
It is hard for me to get drifted away from work, I often find myself thinking about my work even during bedtime.	27.45	0	3.82	0.00*
I get sleepless nights when putting off work for the next day.	15.78	0	4.22	0.00*

Note: The sign * goes for $p < 0.01$ significance level for |t|.

The higher stress level measured can be considered to be the results of a higher level of responsibility for the professional staff, which can be derived from the higher responsibility tasks of the customs officers. The professional staff is in touch not only with the law-abiding citizens but also with the law-avoiding class of society, which does bear a certain level of heightened stress. The requirements make these employees have a constant link to the stress

they are to take. The teaching staff does not have powers of authority thus there is an obviously lower level of responsibility, whereas there seem to be created work conditions and situations entailing a most different level of stress, which all are clearly reflected in the responses given to the questions asked.

The likelihood for a promotion ((F(26,44)=3,10; p<0.01, $\eta^2 = 0.00$) x=1,92; std(X)=1,04) is a much more significant factor for anyone from the teaching staff than for their counterparts from the professional staff (x= 2,33; std(X)=1,33 p<0.01).

There is an observable increase in the extent of requirements for both groups analyzed, which is best reflected by the variable 'My job demands more and more efforts in the last few years' (F(26,67)=2,43; p<0,01, $\eta^2 = 0.00$) prof. staff x=2,29; std(X)=1,13; teaching x=2,25; std(X)=1,17).

The stress factor can be affected by the change in the feeling of job security. In our case it simply means that the employees from the teaching staff do feel to have a more secure job than their professional counterparts. (Measured by the variable 'my job is insecure' teaching x= 1,27; std(X)=0,84; x=1,56; std(X)=1,19.)

The realization of recreation shows another significant difference between the two groups (variables 'I don't easily get distracted from my work' and 'I do procrastinate tasks for the following days') as there is a proven lower level for the members of the professional staff than for the ones in the teaching staff ((F(27,45)=3,82; p<0,01, $\eta^2 = 0.00$) ((F(15,78)=4,22; p<0,01, $\eta^2 = 0.00$), (statement 1: prof. staff x=1,32; std(X) = 0,6; teaching staff x =1,09; std(X)=0,51) (statement 2: prof. staff x =1,45; std(X) = 0,62; teaching staff x =1,18; std(X) = 0,62).

We also kept a close eye on how the number of years spent on a certain field affects the personal opinion on the stress level. A lower stress level for those working for the HCFCG for less than a year was assumed than for the ones working there and endorsing work stress for several years.

Table 2. The results of a comparative analysis with the two models reviewed
Note: The sign * goes for p<0,01significance level for |t|.

Variable	Levene F	p	t	p
I have a constant feeling of time loss because of the increased workload.	45.608	0	5,123	0.00
I do get interrupted while working, many times there are distractive elements as well.	1.476	0.225	7,253	0.00
My job requires much responsibility.	4.284	0.039	4,13	0.00
My job demands more and more efforts in the last few years.	12.359	0	6,218	0.00
I get the well-deserved recognition from my bosses.	23.118	0	3,55	0.00
I get the needed support at hard times.	21.692	0	3,37	0.00
I have little chance to get promoted.	9.458	0.002	3,334	0.00
I can easily get calm leaving the workload behind once I get home.	5.006	0.026	4,047	0.00

There were 23 questions asked to measure work stress, 11 of which showed us a significant discrepancy in the two groups (Table 2).

Following the two-sample T-test taken from the answers given to the questions we stated that in all the cases there was a higher stress level demonstrated for the group of customs and finance officers working for the guard for more than a year (avrg=44,80; stdev=12,05) or the reason for the higher level could be seen more dominantly for this group than for the group working for the guard for less than a year (avrg=38,77, stdev=12,33). Our hypothesis has therefore been partially confirmed. It is quite interesting to see though that stress is most frequently

caused by factors considering time (I have a constant feeling of time loss because of the increased workload; I often feel overburdened because of the tight schedules; I do get interrupted while working, many times there are distractive elements as well)

Supposedly the latter group (officers working for the guard for less than a year) the lower stress level is accompanied by a higher level of motivation.

After analyzing the answers given to the questions on stress and motivation using correlation analysis (Table 3) we found that the lower stress level for the group of officers employed for less than a year is accompanied by a higher level of motivation. In the light of all the answers given by the teaching staff and the answers on stress level we can see that there is quite a significant negative correlation demonstrated between these two variables ($r_{TDM, TDS} = -0,39$; $p < 0.001$).

Table 3. Stress and motivation in the light of the time spent working for the guard for the group of officers.

Time spent working	Total data on motivation (TDM)	Total data on stress (TDS)
Less than a year		-0.390*
More than a year		-0.049
Several years		-0.316*

* $p < 0.01$ Correlation is significant when seen on a significance level

We also tested the inner interdependence of different stress related definitions. We aimed to see the correspondence between stress as variable and the factor/cluster correlation of stress for both the professional and the teaching staffs of HCFG. We made cluster analysis based on calculating correlation using the method of the farthest neighbor classification. All linkages are significant. Legend to the dendogram: stress related definitions 10-11, 1-4 and 3-6 seem to create similarity groups with a close similarity. These clearly definable clusters mean that being subjected to a continuous threat may entail depression in the long run, whose symptoms may be hopelessness and woe. In accordance with this there is a correlation between restlessness, anxiety, tension and fear, worry, distress, which seems to be more and more general. There is also a significant interdependence between a continued psychological demand and stress as pressure - the consequence of failure, responsibilities, requirements, difficulties. The cluster analysis also justified that the definition of stress is not only described by physical demand or the category of problems and difficulties as regarding the dendogram they are distantly linked to other attributes of stress. The modifying rule of personality/habit is clearly seen as one of the similarity groups especially when seen as a way of handling restlessness, anxiety, distress, annoyance, impatience and a depressing way of life.

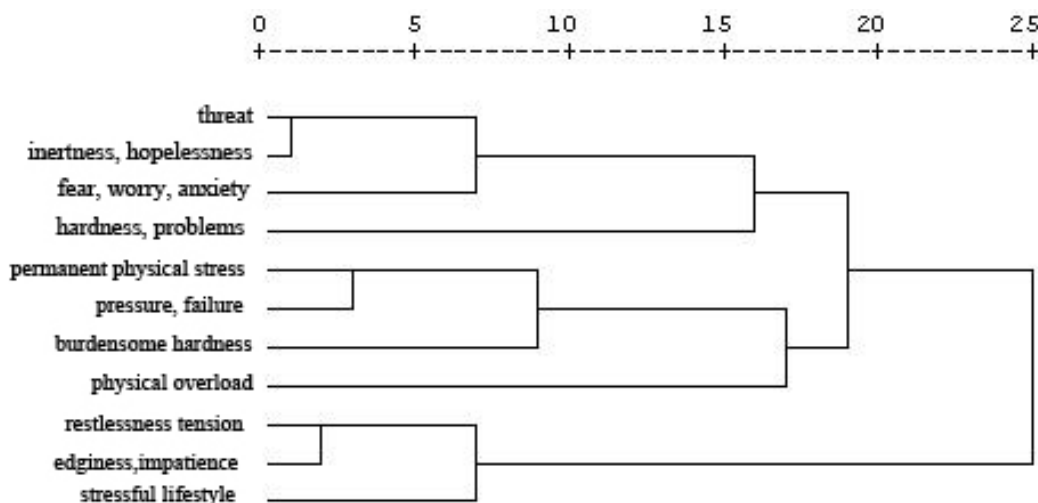


Figure 2: The different stress related definitions (cluster analysis).

Discussion

This research aimed at revealing the cross-country opinions of the professional staff of Hungarian Customs and Finance Guard and the teaching staff of secondary schools under the supervision of security forces on health issues. The work and private stress factors affecting them, their level of contribution to the organization concerned, work motivation, work climate and the career opportunities available were all analyzed. Stress can be related to off-work events as well. Several studies examined the connection between stress and marital status (Mausner-Dorsch & Eaton, 2000), the parental status, the spouse's financial situation, (Almeida & Kessler, 1998; Fuhrer, Stansfeld, Chemali & Shipley, 1999) the relationship to spouses, friends and neighbours (Almeida and Kessler, 1998; Fuhrer, Stansfeld, Chemali & Shipley, 1999). According to the results of this research we can state that there is a significant discrepancy considering gender on the following scale: Family concerns proved to be a higher stress factor for women than for men possibly because of the maternal role, whereas work recognition for men seems to be a higher stressor than for women. A recent survey in Hungary examining marital status among penitentiary staff showed that single women are subjected to a significantly higher stress factor than their counterparts living under stable marital circumstances (married ones or the ones living in a co-habitual relationship). Relationship proves to be a protective environment based on psychological grounds (Bíró, 2009).

Several recent cross-sectional studies cast light upon the fact that blue collar workers and unskilled workers are much more susceptible to psychological stress than senior and middle managers or skilled workers (Niedhammer, Goldberg, Leclerc, Bugel & David, 1998; Vermeulen & Mustard, 2000). This research shows that it is also true for both the professionals and the teachers; the better treatment an employee is likely to receive at their workplace the lower the stress level they are subjected to thus the relationship to the superior does affect the level of stress. The psychic stress may entail inappropriate work management (Shirom, Westman & Melamed, 1999), inconsistent requests from the management, ambiguity of role (de Jonge, Mulder & Nijhuis, 1999; de Jonge, Reuvers, Houtman, Bongers and Kompier, 2000; Demerouti, Bakker, Nachreiner and Schaufeli, 2000), long working hours (Demerouti et al., 2000, Spurgeon, Harrington & Cooper, 1997) and mental, physical and spiritual harassment (McDermut, Haaga & Kirk, 2000; Piotrkowski, 1998). Working as a finance guard entails much responsibility due to overtime, responsible decisions and an enforced stimulation for performance, which all are rooted back in the main features of working for security forces.

There has been a relevantly lower level of stress for the teaching staff, however, stress

management is a key issue for this latter group of employees as well. Several studies have explored the consequences of stress for teachers (Benmansour, 1998; Byrne, 1999; Chan & Hui, 1995; Dunham & Varma, 1998; Kyriacou, 2001; Pithers and Soden, 1998). The main reasons generating stress for teacher according to recent studies are work overload, work conditions, inappropriate relationship with colleagues, parents' and students' attitude and students' disrespect (Galloway, Panekhurst, Boswell and Green, 1984; Finlay-Jones, 1986; Payne & Furnham 1987; Hart, Wearing & Conn 1995; Montalvo, Bair & Boor, 1995). This study shows that the main reasons generating stress for the teaching staff are the complicated work process, the manageability of timetables and trainings, the inappropriate flow of information and scheduling problems. Studies examining teachers generally aim at defining the features that are likely to foretell the possibility of them leaving the profession. The phenomenon of leaving the profession is closely connected to wages, age, gender and the subject taught (Boe, Bobbit, Cook, Whitener & Weber, 1997). In many cases low wages are an excellent indicator of leaving the profession (Stinebrickner, 1998; Theobald, 1990). The teaching profession is best defined by a U-shaped curve. A novice teacher is full of ambitions and enthusiastic at the beginning of their career. With ageing they become more likely to lose interest and stay in the profession as at the beginning of their career they have a high chance for leaving whereas there is a lower chance for leaving with the middle aged teachers and again there is a high chance for the elder teachers with retirement looming (Grissmer & Kirby, 1987, 1992). This study showed similar results; the teachers starting out new in the profession seem to be more motivated especially when compared to those counterparts that have been in the profession for several years. Most of them are dissatisfied with their wages though; they would consider a wage in accordance with the EU average as acceptable.

Conclusions

Healthcare (health conservation and improvement) is considered to be of top priority on certain levels of society with new initiations and programs to get it promoted in workplaces. More and more time is spent working in workplaces thus people tend to resort to their final resources to achieve their goals.

In this research we meant to underline the importance of health care issues for both the professional and the teaching staff of HCFG and to come up with a health improvement framework which aims at the improvement of workers' health status. Grounded on the findings we can state that decreasing work stress is of key importance. In our health improvement program we decided to set the following goals:

Short-term goal

Work stress level shall be decreased by introducing individual and group interactions.

Mid-term goal

By defining competences and interactions on both individual and organizational levels, clearing roles, establishing an environmental connection system we shall aim at improving the relationship between managers and employees and colleagues. Special programs facilitating physical activities serve as one way of stress management by enhancing relationship networking within the company.

Long-term goal

All the physical, organizational and social environmental features in a workplace may promote decreasing stress level. Interactions shall be taken, however, to reorganize work and create an organizational improvement program. This can be done by the involvement of senior managers.

Built environment significantly affects the health status of anyone working in a given spot. An appealing working environment facilitates bonds to the workplace and identity. Creating individual and social places helps improve the way employees feel. In order to achieve all

this, there shall be infrastructure improvements made; an indoor gym for physical activities, an outdoor sports ground and a social area, which all help improve the out-of-work relationship of employees and which also presents a great opportunity for organizing group activities such as trainings, group sessions and certain social events.

In order to create an efficient health improvement program, first and foremost the total support and commitment of higher levels of management shall be sought. Employees' participation and commitment is also significant in each phase of the program. A sufficient technical capacity shall also be provided prior to launching the program.

This health improvement program shall be filed to the headquarters of HCFCG where the coordination of both lower and mid level of organizations is done. Following the introduction of the actions planned, supervision is to be done in order to monitor the staff by way of surveys and interviews.

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