OCCUPATIONAL STRESS PERCEPTION IN BUSINESS UNITS IN THE POST OF SLOVENIA

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ABSTRACT

The aim of this study was to present the intensity of perceived job stress in 3 different business units in the Post of Slovenia. The level of stress that postal employees experience at work was measured with one general index based on a 4-point ordinal scale. The study was performed on 356 Slovene postal workers, 114 of them from the business unit of Novo mesto, 103 from the business unit of Koper and 139 from the business unit of Kranj. We tried to determine the effect of two selected independent variables (business unit and profession) on work-related stress in postal employees.

The results of the study have shown that there are no statistically significant differences in experiencing work-related stress among business units of the Post of Slovenia but there are statistically significant differences among the actual work the employees do. The statistical analysis showed that the couriers and postmen experience their work as less stressful than workers at postal counters.

1 INTRODUCTION

The term stress has different meanings. In the 1930s the *physiological* concept of stress was introduced by Hans Selye [1], who defined it as "the non-specific response of the body to any demand made upon it" [2] regardless of the subject's negative (distress) or positive/pleasant (eustress) perception of the specific demand [3]. The physiological concept of stress refers to the body's reaction to a stimulus; while in *physics and engineering* the term stress means a force exerted, which in turn results in demand or load reaction, hence creating distortion [4]. The application of this approach to human behaviour led to the "stimulus model" of stress, which defines stress as the demand placed on a person [5]. The term stress is used in contemporary everyday speech to describe "continuous feelings of worry about your work or personal life, that prevent you from relaxing" [6]. The closest to this view is the *psychological* concept of stress: a perceived imbalance between demands and resources, such that the individual cannot mobilise sufficient resources to meet the current demand [7, 8].

Job stress can be defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker [9]. The terms occupational stress, work stress or job stress are used interchangeably [10]. In this paper the term occupational stress will be used in the above sense. As we inquire into its perception it means that the term stress will be used in psychological sense.

Perhaps now more than ever before, job stress poses a threat to the health of workers and, in turn, to health organizations. Job stress can lead to poor health and even injury [9]. During the last few decades several studies documented that there is a significant relationship

between occupational stress and employee illness [11, 12, 13, 14, 15] and that stress can be a cause of injuries and accidents. The International Labour Organisation (ILO) estimated in the 1980s that job stress expenditures cost employers more than 200 billion USD a year [16]. According to the ILO the costs of occupational stress amount to 0.5% to 3.5% of GNP [17]. A study by Foster Higgins & Company indicated that occupational stress costs the average company 45% of its after tax profits [18]. In the EU 1/3 of workers report having too little control or no control at all over their work.

According to the NIOSH (National Institute for Occupational Safety and Health), working conditions play a primary role in causing job stress. However, the role of individual factors must not be ignored. Exposure to stressful working conditions (job stressors) can have a direct influence on workers' safety and health. At the same time, individual and other situational factors can intervene to strengthen or weaken this influence. Differences in individual characteristics, such as personality and coping style, are important in predicting whether certain job conditions will result in stress. In other words, what is stressful for one person may not be a problem for someone else. Although the significance of individual differences cannot be ignored, scientific evidence suggests that certain working conditions are stressful for most people. Job conditions that may lead to stress are: heavy workload, infrequent rest breaks, long work hours and shift work; hectic and routine tasks that have little inherent meaning, lack of participation by workers in decision- making, poor communication in the organization, poor social environment and lack of support or help from co-workers and supervisors. conflicting or uncertain job expectations, too much responsibility, job insecurity and lack of opportunity for growth, advancement, or promotion; rapid changes for which workers are unprepared, unpleasant or dangerous physical conditions such as crowding, noise, air pollution, or ergonomic problems...[9]

Post activities are a part of the logistics sector that includes transportation of goods and persons, warehousing and other economic activities concerning positioning of goods and persons. Not all jobs inside this industry are characterised as very stressful, yet blue-collar transportation workers are one group that can be considered high risk because of high fatality rates within the industry. According to the National Traumatic Occupational Fatalities Surveillance System (NTOF) the fatal injuries from 1980 to 1995 were highest for construction workers, followed by transportation workers [16]. Of the top ten occupations with fatal occupational injury rates at least 10 times the national average, four (water transportation, taxicab driver, aircraft pilots and truck drivers) are in the transport industry [19]. Workers in transportation industries have been found to have more mental disorders, depression, and worse overall health than workers in other professional and managerial occupations [20].

Among jobs inside postal logistics there are some typical transport occupations (like drivers of post trucks and vans) that might be considered to consist of higher levels of job stress than jobs of clerical workers. However there are some types of occupations like that of postmen that might involve less stress than that of typical clerical workers. The aim of this paper is to inquire into the perception of job stress of postal units in Slovenia, where the majority of employees represent postmen and clerical manipulative workers.

The Post of Slovenia has around 6700 employees, most of them full-time contract, while 2.3% work on the basis of part-time contracts. There are 10 regional business units (556 postal outlets) where, as said before, the majority of employees are manipulative workers working at the counter and postmen. Beside these there are also employees who work as transporters and employees who work in some of the Post of Slovenia's support services (logistics, marketing, information technology, accounting, finance, human resources...). There are more male employees (63.1%) than female workers, with male employees mostly performing physically more demanding manual work relating to the delivery and processing

of mail items. The average Post of Slovenia employee is 41 years of age, has worked for the company for 20 years and has a level IV technical qualification (three-year secondary school education). In 2009 the medical absenteeism rate, which represents the proportion of days lost per employee due to sick leave, was 4.8%, and was 0.8 percentage points higher than the overall Slovenian absenteeism rate [21].

2 HYPOTHESIS

Hypothesis 1: Business unit impact on the stress perception.
Hypothesis 2: Profession impact on the stress perception.

3 METHODS

3.1 Questionnaire and measures

For this study a special (unique, 6 pages long) anonymous questionnaire was developed. It was divided into 7 sections (I Demographic data, II General state of health, satisfaction and traffic safety, nutritional habits, III Physical factors of health, IV Nutrition, V Other factors of health, VI Valuation of proper lifestyle, VII Improvement of lifestyle and nutritional habits). Many particular lifestyle dimensions were measured; however, in this paper we will not present all of them.

3.2 The sample and data collection

The sample was stratified. We chose three regional organisational units, the logistics center and the administration. Through the help of the personnel office of the Post of Slovenia the questionnaires were distributed to employees, chosen randomly from lists of personnel. Each selected candidate received with the questionnaire a stamped envelope with the address of the research institute.

The collection of data took place in 2010 and 2011. 508 valid answers were received. In this paper just 356 answers from employees in three regional units will be taken in account.

3.3 Statistical analysis

For statistical analyses the statistical program SPSS Ver.17 was used.

First the variables were edited, coded and explored. Frequency tables, basic statistics, data distribution and correlational coefficients among a subset of indicators as a measure for data validity were used. In the last stage we tested the research hypothesis using the bivariate (t-test) or multivariate (linear regression) statistical analyses.

4 RESULTS

In the sample of 356 employees 114 (32%) were from the business unit of Novo mesto, 103 (29%) from the business unit of Koper and 139 (39%) from the business unit of Kranj (table 1).

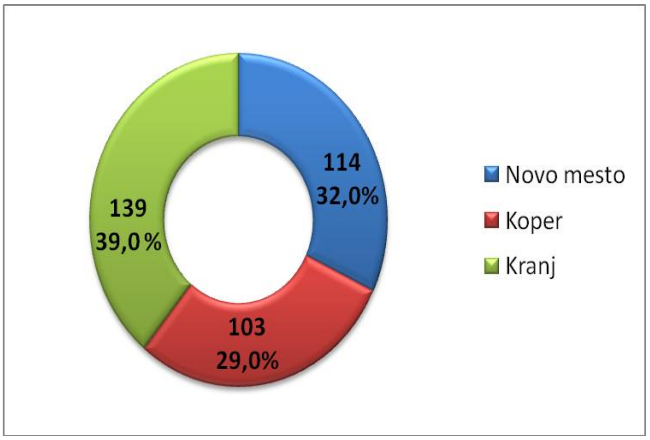

Figure 1: The structure of the sample per regional units

161 (53.1%) interviewed employees work as a couriers/postmen and 142 (46.9%) as workers at postal counters. 53 employees did not answer the question about their profession.

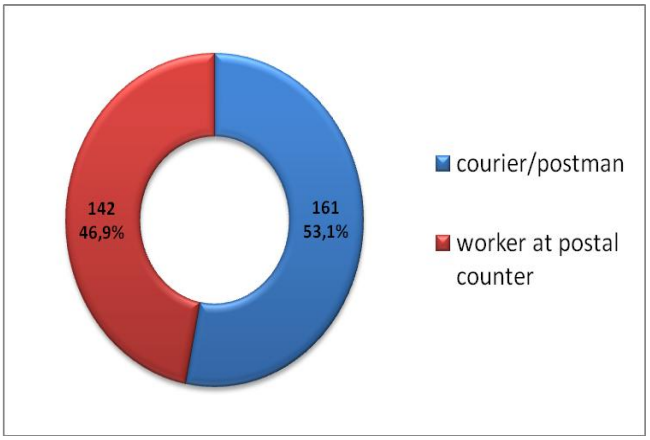

Figure 2: The structure of the sample per type of logistics job

Stress perception was measured on a 4-level measure scale with one general question: "how do you perceived your work?" Most of the employees (55.0 %) included in the sample perceived their work as stressful (45.6 %) or very stressful (9.4 %), while the minority (45.0 %) perceived it as not so stressful (34.5 %) or not stressful (10.5 %).

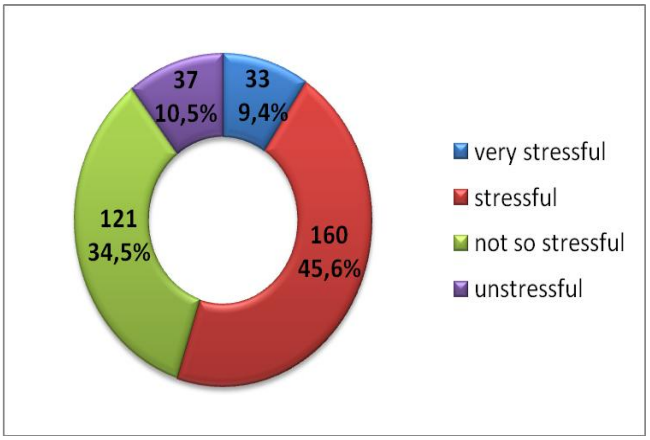

Figure 3: Perception of job stress

Important factors that could have an impact on stress perception are, among others: social support, poor communication in organization, unpleasant or dangerous physical conditions such as crowding, noise, air pollution, or ergonomic problems...All these factors

can be different in different business units; therefore stress perception can be different in different business units. We tried to determine this with the first hypothesis: Business unit impact on stress perception.

There were no major differences in stress perception between business units. In all business units the majority of interviewed employees perceived their work as stressful or not so stressful. In the business unit of Novo mesto 50.5 % of interviewed employees perceived their work as very stressful or stressful. In Koper the relative share of such workers was 60.2 %, and in Kranj 54.7 %. The results are shown in table 1.

Table 1: Perception of job stress per regional units

	very stressful	stressful	not so stressfull	not stressful	total
Novo mesto					
(N=111)	11.8%	38.7%	36.9%	12.6%	100%
Koper					
(N=103)	8.7%	51.5%	33.0%	6.8%	100%
Kranj					
(N=137)	8.0%	46.7%	33.6%	11.7%	100%

The analysis of variance shows that the business unit does not impact on the stress perception – no statistically significant difference at the 0.05 level was found (F statistics is 0.598; its statistical significance is 0.617).

We tested hypothesis 2 (profession impact on stress perception) by using the bivariate (t-test) statistical analysis.The t-statistics value amounts to 3.138 and it is statistically significant at almost null level of significance. Couriers/postmen perceived their job as less stressful than workers at postal counters.

Table 2: Perception of stress per type of logistic job

	very stressful	stressful	not so stressful	Not stressful	total
couriers - postmen (N=161)	6.8%	39.8%	38.5%	14.9%	100.0%
workers at postal counters (N=142)	12.7%	49.3%	31.0%	. 7.0%	100.0%

The first hypothesis was neither confirmed nor denied, as the analysis showed that the business unit does not significantly affect stress perception. The second hypothesis was confirmed, as the statistical analysis shows that the couriers and postmen experience their work as less stressful than workers at postal counters.

5 DISCUSSION

The results on stress perception are comparable with research results of Ostan, Poljšak and Podovšovnik Axelsson [22] determined in the study of railroad workers using a similar questionnaire. The perception of the job stress of railroad workers in Slovenia (N=245) was of nearly the same intensity as it was in regional units of the Slovene post. Namely, among inquired railroad workers 54.3% of respondents declared their job as stressful or very stressful, nearly equal to the 550 % of respondents in the regional postal units.

Postmen and couriers are an interesting study group. Their type of job is mostly manual, not mechanised (including locomotion). Thus it might be considered as a remnant of a

preindustrial type of logistics work in industrialized economy. Both postmen and truck drivers perform a type of transport job; however studies have shown that driving a truck is usually more stressful than clerical work, while our study showed that the postman's job is less stressful than clerical work, at least the clerical work of workers at the postal counter. A further study of stress perception in post is needed in order to compare the level of job stress perception of other profession groups (postal truck drivers, other types of clerical workers), but we are assuming that results will show that also postal truck drivers perceive more stress than clerical workers (workers at postal counters) and that other types of clerical workers (Post of Slovenia's support services) perceive less stress than workers at postal counters.

From the job stress point of view the result is very interesting in that there are no statistically significant differences in job stress perception among respondents employed in different regional organisational units. Considering that the technology of work and other physical stressors are probably similar in all units, this might signify that the management style in all three units is similar from the point of view of the job stress it might provoke.

REFERENCES

1. H. Selye, A syndrome produced by diverse nocuous agents, Nature, 1936, 138, 32.
2. H. Selye, Stress without disease, Lippincott, Philadelphia, 1974, 24.
3. H. Selye, Confusion and controversy in the stress field, Journal of Human Stress, 1, 1975, 37-44.
4. C. L. Cooper, P. J. Dewe, & M. P. O'Driscoll, Organisational stress: A review and critique of theory, research and applications, Sage publications, Thousand Oaks, CA, 2001.
5. H. Goodell, S. Wolf, & F. B. Rogers, Historical perspective, In S. Wolf, & A.J. Finestone, (Eds.). Occupational stress, health and performance at work, PSG Inc.,Littleton, MA, 1986.
6. Longman dictionary of contemporary English: Third edition, Essex: Longman Group Ltd., 1978/1995
7. R.S. Lazarus, & S. Folkman, Stress, appraisal, and coping. New York: Springer, 1984.
8. C. Strahan, B. Watson & A. Lennonb, Can organisational safety climate and occupational stress predict work-related driver fatigure?, Transportation research Part F: Traffic Psychology and Behaviour, 11(6), 2008, 418-426.
9. NIOSH Publication No. 99-101: Stress at Work, http://www.cdc.gov/niosh/docs/99-101/ 4.4.2011
10. M.F. Dollard, Introduction: Context theories and intervention. In M.F. Dollard, A.H. Winefield, & H.R. Winefield, (Eds.): Occupational stress in the service professions. Taylor & Francis, New York, 2003.
11. R. D. Caplan, S. Cobb, J. R. P., French Jr., R. V. Harrison & S. R. Pinneau Jr., Job demands and worker health (NIOSH publication No.75-160). National Institute for Occupational Safety and Health, Cincinnati, 1975.
12. J. S. House, A. J. McMichel, J. A. Wells, B. H. Kaplan & L. R. Landerman, Occupational stress and health among factory workers, Journal of Health and Social Behaviour, 20, 1979, 139-160.
13. R. L. Repetti, Short-term effects of occupational stressors on daily mood and health complaints, Health Psychology, 12(2), 1993, 125-131.

14. J. H. Humphrey, Job stress, Allyn and Bacon, Boston, 1998.
15. National Institute for Occupational Safety and Health, Work-related lung disease surveillance report 1999 (DHHS No. 2000-105), Cincinnati, OH: U.S. Department of Health and Human Service, 1999.
16. G. A. Diem, Job stress in the transportation industry, Ph.D. Thesis, University of Denver, Denver, 2002.
17. S. Treven, Stress coping/ Premagovanje stresa, GV založba, Ljubljana, 2005, 97-99.
18. D. Lee, Employee stress, Standard Publishing Corporation, Boston, Ma, 1997.
19. Census of Fatal Occupational Injuries, Census of fatal occupational injuries 1992-1997, U.S. Department of Labor, Bureau of Labor Statistics, Washington, DC, 1999.
20. J. W. Grosch & L. R. Murphy, Occupational differences in depression and global health: Results from a national sample of US workers, Journal of Occupational and Environmental Medicine, 40(2), 1998, 153-164.
21. Post of Slovenia, Annual Report 2009, http://www.posta.si/seznam-dokumentov/553/Letno-porocilo
22. I. Ostan, B. Poljšak, E. Podovšovnik Axelsson, Occupational Stress Perception and Healthy Lifestyle in Railroad Workers, Promet Traffic & Transportation (in print), 2011.