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Türker Topalhan
Gazi University, Faculty of
Economics and Administrative
Sciences, Department of
Labour Economics and
Industrial Relations

Bülent Bayat
Gazi University, Faculty of
Economics and Administrative
Sciences, Department of
Labour Economics and
Industrial Relations

Cemil Kavalcı
Başkent University, Faculty of
Medicine, Department of
Emergency Medicine

Afşin Emre Kayıpmaz
Başkent University, Faculty of
Medicine, Department of
Emergency Medicine

Meliha Fındık
Başkent University, Faculty of
Medicine, Department of
Emergency Medicine

Correspondence:
Türker Topalhan
Gazi University, Faculty of
Economics and Administrative
Sciences, Department of
Labour Economics and
Industrial Relations

“Workload perception”: A study among emergency department healthcare workers

**Türker Topalhan, Bülent Bayat, Cemil Kavalcı, Afşin Emre Kayıpmaz,
Meliha Fındık**

Abstract

The aim of the present study was to investigate the perceived workload level of healthcare workers working in emergency departments of different hospitals. This study was conducted using the survey method in the emergency departments of Başkent University Faculty of Medicine and Gazi University Faculty of Medicine after being approved by the local ethics committee. Emergency department staff (Physicians, nurses, emergency medical technicians) were asked to fill the questionnaire forms used for the study. Two types of data, namely the factual data (categorical data) and the data related to personal workload perception (numerical data) were gathered using the Individual workload perception scale developed by Cox et al. Individual workload perception scale 5 levels: below normal (0-30 points), normal (reasonable) (31-60 points), above normal (61-90 points), heavy (91-120 points), and unmanageable (121-150 points). Study data were analyzed using SPSS 13.00 for windows software package. Descriptive statistics were expressed as number, percentage, and mean. Categorical variables were compared with Chi-Square test. A p value of less than 0.05 was considered statistically significant. The study included a total of 148 subjects, with 102 (68.9%) subjects being male and 46 (31.1%) being female. The mean age of the study population was 27.7±6.06 years. The healthcare workers' perceived workloads by occupational groups were summarized on Table 1. Workload perception was above normal in nurses and emergency medical technicians, and heavy by physicians. The difference of workload perception between the occupational groups was significant ($p < 0.001$).

Conclusion

The results of the present study demonstrated that the majority of emergency department workers (all occupational groups and sectors) had above normal workload perception (including heavy and unmanageable workload). A substantial portion of the emergency healthcare workers perceived their job as heavy, while workers of private sector perceived it above normal.

Keywords: Emergency Department workers, Workload, Perceived Workload, Performance.

1. Introduction

Many variables affect an individual's performance, physical and mental health, and the overall quality of his/her existence at work. It should be a norm that workers work without exposing themselves to excessive workload, with the best performance determined by themselves. The basic requirement to obtain as best performance as possible from workers is making workers feel peaceful and well, particularly in jobs demanding high-quality human resources (professional occupations) (1). To achieve this goal the workload level should be kept at reasonable levels to prevent workers from being adversely affected mentally, physically, or emotionally.

Although workload roughly appears to be related to working duration/time and working conditions, workload is a much more comprehensive concept referring to “various pressures/factors affecting an individuals work performance and attitude at workplace” (2). According to Hart and Wickens (3) workload is “a general definition of costs of one's tasks and duties”. This cost is usually in the form of attention loss, prolonged reaction time, failure to fulfill tasks, stress, fatigue, and reduced performance.

London and Klimoski, in a study on nurses, defined 33 work properties linked to physical and mental fatigue (4). They categorized these properties into 3 main titles as excessive workload, conflict, and supervision of workers. Another study conducted by *Ivancevich ve Smith* determined 29 variables affecting workload of nurses and grouped into 3 the categories as excessive workload, work requirements, and supervisory factors (1). Yüksel and Kurt determined 13 factors for work-related issues of physicians (5).

There are two different workload concepts in the literature. One of them is the objective workload that is required by a task, and the other is the subjective workload perceived by the person that fulfills a task (6). Most of previous research has focused on subjective workload. As a matter of fact, scales aimed to measure workload are designed to measure subjective workload (7,8).

Workload is a comprehensive organizational variable having many consequences on workers. Unfortunately, the workload of emergency department workers are beyond the acceptable limits. Hence, the perceived workload excess must be common among emergency department healthcare workers.

The aim of this study was to investigate the level of perceived workload in healthcare workers working in emergency departments of various hospitals.

Materials and Method

This study was approved by the local ethics committee and conducted using the survey method in the emergency departments of Başkent University Faculty of Medicine and Gazi University Faculty of Medicine. Emergency department staff (Physicians, nurses, emergency medical technicians) were asked to fill the questionnaire forms used for the study. Two

types of data were gathered using the Individual workload perception scale developed by Cox et al: factual data (categorical data) and data related to personal workload perception (numeric data). Individual workload perception have 5 levels: below normal (0-30 points), normal (reasonable) (31-60 points), above normal (61-90 points), heavy (91-120 points), and unmanageable (121-150 points). Study data were analyzed using SPSS 13.00 for windows software package. Descriptive statistics were expressed as number, percentage, and mean. Categorical variables were compared with Chi-Square test. A p value of less than 0.05 was considered statistically significant.

Results

The study included a total of 148 subjects, with 102 (68.9%) subjects being male and 46 (31.1%) being female. The mean age of the study population was 27.7±6.06 years. The healthcare workers' perceived workloads by occupational groups were summarized on Table 1. According to this categorization, workload was perceived above normal by nurses and emergency medical technicians, and heavy by physicians. The difference of workload perception between the occupational groups was significant (p<0.001).

Table 1: The relationship between occupation and workload perception

	Workload perception				X ² , p
	(Normal) Reasonable	Above Normal	Heavy	Unmanageable	
Physician	8,8%	32,4%	58,8%	0,0%	0.000
Nurse	0,0%	50,0%	25,0%	25,0%	
EMT	3,1%	65,6%	28,1%	3,1%	
Total	5,4%	48,6%	41,9%	4,1%	

EMT: Emergency medicine technician

The results showed that no occupation group in the emergency department had a “below normal” perception of workload. Workload perception started from the level of “normal” and heavily cumulated in the “above normal and heavy” workload categories.

The most striking finding of this study was that all nurses had a workload perception that was “above normal”, “heavy”, or “unmanageable”. No worker perceived his/her workload as normal/reasonable or below normal.

No physician working in the emergency department perceived his/her workload as unmanageable”. On the other hand, a great majority of physicians (58,8%) perceived their workload as

heavy. The percentage of physicians perceiving workload as “heavy” was 32.4%.

Emergency medical technicians (EMTs) were distinguished from the other two groups with respect to workload perception. The EMTs were cumulated in the “above normal” workload perception category. They also had some members with “heavy” (28.1%) and “unmanageable” (3.1%) workload perception.

Workload perception by working sector was summarized on Table 2

Table 2: The relationship between working sector and workload perception

	Workload perception				p value
	(Normal) Reasonable	Above normal	Heavy	Unmanageable	
Private sector	5.4%	59.5%	32.4%	2.7%	0.002
Public sector	5.4%	37.8%	51.4%	5.4%	
Total	5.4%	48.6%	41.9%	4.1%	

Workload perception by working sector was summarized on Table 2. The majority of all occupational groups of emergency department workers working in private sector perceived their workload as above normal (59.5%), while emergency healthcare workers working in public sector reported heavy

workload (51.4%). Considering the difference between the two working sectors with respect to “unmanageable” workload perception, there was a significant difference between public and private sector emergency healthcare workers with respect to their workload perception (p<0.005).

Discussion

Work-related behaviors (work activities), environmental (organizational and administrative) factors, and institutional (status) discomfort are significant work-related stress factors that also directly determine workload. Hence, many of these factors considered to affect workload become the determinants of workload under organizational conditions and determine individual's health, performance, and/or physical, emotional, and mental efficiency (9). Yeh and Wickens (6) suggested an organic relationship between workload and performance. There is also a strong relationship between the perceived workload level and stress level affecting performance (10).

Our data suggest that a great majority of emergency department healthcare workers (in all occupations and sectors) had a workload perception of above normal (including heavy and unmanageable levels). Among various occupations, nurses as a whole group perceived that their workload was above acceptable (normal/reasonable) level.

A substantial proportion of physicians also considered their workload heavy. A large proportion of emergency department healthcare personnel working in public sector perceived their workload heavy. For a significant proportion of EMTs workload was above normal or heavy. The number of workers with "unmanageable" workload perception was quite low in this group. Although the consequences of workload perceptions of the study participants were not in the scope of this study, results of other studies in the literature exploring workload perception both support our results and indicate the possible results of this condition. A study entitled "working passion; workload, flexible working hours, manager support, and work-family conflict and relations" performed by Turgut in 2011 revealed that adverse effects of the variables such as workload, flexible working hours, administrative support, and work-family conflict augmented the senses of "burnt out" and "alienation" (11). A study by Soysal demonstrated that organizational factors were directly related to components of perceived (subjective) workload (long working hours, crowded workplace etc) (12). Szalma et al reported that there was a significant correlation between perceived workload level and performance (10).

Conclusion:

The results of the present study demonstrated that heavy (at least above normal) workload perception was very common among emergency department healthcare workers. The heaviest workload perception was among emergency medicine technicians. The proportion of nurses perceiving their work as unmanageable was quite high. All results of this study should be carefully assessed by the readers.

Limitations

This research is limited to "the answers of participants" and "the questionnaire for measurement of workload perception".

Conflict Interest

The authors declare no potential conflict of interest

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References

1. Ivancevich, J.M, Smith, S. Identification and Analyses of Job Difficulty Dimension and Emprical Study. *Ergonomics* 1981;24: 351-363.
2. Cox KS, Teasley Susan L, Lacey SR, Carroll CA, Sexton KA. Work Environment Perceptions of Pediatric Nurses. *Journal of Pediatric Nursing* 2007;22(1): 9-14
3. Hart SD and Wickens CD. Workload Assessment and Prediction. In: Boher HR (ed). *Mannprint: An Approache to System Integration*. Van Nostrad Reinhold Publication, Newyork 1990. P. 257-294
4. London M, Klimoski RJ. A Study of Perceived Job Complexity. *Personnel Psychology*. 1975;28(1): 45-56
5. Yüksel İ, Kurt M. Hekimlerin iş güclüğü boyutlarının belirlenmesi. 6. Ergonomi Kongresi, Ankara,1998. Bildiri Kitabı. p. 631-642
6. Wickens CD, Yeh YY. POC's and Performans Decrements; A Reply to Kantowitz and Weldon. *Human Factors (j)* 1985;27(5):549-585.
7. Ameersing LR. Simplified Subjective Workload Assessment Technique. *Ergonomics*. 2001; DOI: 10.1080/00140130010000901.
8. Lin SY, Lin CH, Yeh MC, Lin SY, Hwang YJ. A Psychometric Evaluation of The Taiwan Version of The Individual Workload Perception Scale. *Journal of Clinical Nursing*. 2011;20: 494-503. doi: 10.1111/j.1365-2702.2010.03495.x
9. Dağdeviren M, Eraslan E, Kurt M. Çalışanların Toplam İş Yüğü Seviyelerinin Belirlenmesine Yönelik Bir Model ve Uygulaması. *Gazi Üniversitesi Mühendislik, Mimarlık Fakültesi Dergisi*, 2005;20(4):517-525
10. Szalma J, Shawn L, Stafford C, Hancock PA. The Workload and Performance Relationship in The Real World: a Study of Police Officers in a Field Shooting Exercise. *International Journal of Occupational Safety and Ergonomics (JOSE)*. 2008;14(2):119-131
11. Turgut T. Çalışmaya Tutkunluk: İş Yüğü, Esnek Çalışma Saatleri, Yönetici Desteği ve İş-Aile Çatışması ile İlişkileri. *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi* 2011;25(3-4):155-177
12. Soysal A. Farklı Sektörlerde Çalışan İşgörenlerde Örgütsel Stres Kaynakları: Kahramanmaraş ve Gaziantep'te Bir Araştırma. *Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*. 2009;14(2):333-359.