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**Burnout and Turnover Intentions Among Romanian Ambulance
Personnel**

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Abstract

During the last years changes in the Romanian health care system influenced the migration of the medical staff, mostly to western countries. Moreover the literature indicates that turnover intentions are a consequence of burnout. The present research aims to identify burnout predictors and to investigate the impact of burnout on turnover intentions among 105 ambulance personnel. Results of multiple regression analyses highlighted that work demands and negative work-home interaction predicted burnout, while turnover intentions were predicted by all burnout dimensions and workload. These results have implications for designing interventions focused on reducing burnout and turnover intentions among medical professionals.

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1. Introduction

For more than twenty years the Romanian health care system has been in transition and ongoing reform, with no continuity or clear objectives. This may be in part due to the underfinance of the health care sector and to the high turnover of the ministries (Todorova, Băban, Alexandrova-Karamanova & Bradley, 2009; Vlădescu, Scintee, Olsavszky, Allin & Mladovsky, 2008). The World Health Organisation (2009) stated that the Romanian health care system is one of the most poorly financed in Europe and that Romania is one of the lowest-ranked European countries in terms of prioritising healthcare in public-sector resource allocation. The percent of health expenditure as a share of good domestic product was 3.9% in 2006, less than half of the European mean (8.92%) and of other countries, like Hungary (8.3%) or Croatia (9.04%). Although the average salary in the health care sector is smaller than the national average, in 2010 a 25% cut was applied to all the health sector wages. Moreover, Romania is one of the European countries with the lowest density of medical professionals, with less than 2 physicians for 1000 population and less than 4 nurses for 1000 population, which indicates the overwhelming workload of medical professionals (Băban, Balazsi, Bradley, Rusu, Szentagotai & Tătaru, 2005; Schafer, Kroneman, Boerma, Van Der Berg, Wester, Deville & Van Ginneken, 2010).

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Although the Romanian medical system is confronted with an accelerating migration of medical professionals, mostly to western countries, there is little official data about the number of medical professionals which chose to work abroad. According to a study of the Health Solidarity Union (2010) 70% of medical professionals are considering the possibility of working abroad, while 30% has clear intention to work abroad and have started the procedures to get the official papers.

One of the most cited models of burnout, Job Demands – Resources Model (Demerouti, Nachreiner, Bakker & Schaufeli, 2001) suggests that working conditions are the main antecedents for burnout development. High physical, emotional, cognitive or organisational job demands doubled by lack of appropriate and insufficient job resources predict burnout development. High workload is one of the job demands that studies have linked with burnout, suggesting that it is the strongest predictor, especially for exhaustion (Lee & Ashforth, 1996). For example, empirical data indicates that each additional patient per nurse is associated with a 23% increase in the odds of burnout (Aiken, Clarke, Sloane, Sochalski & Silber, 2002). Studies agree that excessive emotional demands predict burnout, but few investigate the role of cognitive demands in burnout development (Bakker, ten Brummelhuis, Prins & van der Heijden, 2011; de Jonge, van Vegchel, Shimazu, Schaufeli & Dormann, 2010). Although negative work – home interaction was evaluated by some authors as a mediator between risk factors and burnout (Geurts, Rutte & Peeters, 1999), most of the literature indicates it is a predictor for burnout development (Bakker, Demerouti & Verbeke, 2004).

Based on the job demands-resources model, many studies were carried out among medical professionals like primary care physicians (Schaufeli, Maassen, Bakker & Sixma, 2011) or residents (Schaufeli, Bakker, van der Heijden & Prins, 2009), but few on ambulance personnel (van der Ploeg & Kleber, 2003). Studies highlight that ambulance personnel have a higher risk of developing physical and mental health problems, although results differ across countries (Sterud, Ekeberg & Hem, 2006). Romanian ambulance personnel have medium to high burnout rates, according to one of the few studies on burnout (Popa, Arafat, Purcărea, Lală, Popa-Velea & Bobirnac, 2010).

As most of the Romanian studies on burnout among medical professionals are descriptive, the present research aims to evaluate the level of burnout among a sample of ambulance personnel and mainly to investigate the predictive value of job demands and negative work – home interaction on burnout. Also, as there are few studies on turnover intentions among Romanian medical professionals, the present research aims to investigate the frequency of turnover intentions and if burnout is an antecedent for turnover.

2. Method

2.1. Participants and procedure

Data was collected from the Ambulance Service after receiving the management approval. The questionnaires were handed in to each employee at the beginning of work shift. The participation was voluntary and anonymous; the participants returned the questionnaires in sealed envelopes at the end of their work shift. One hundred and seventeen questionnaires were distributed and 105 returned, giving a response rate of 89.74%.

The respondents' ages range between 23 and 60 years old (mean age = 42.96; SD = 8.93), have between 10 months and 36 years of experience in ambulance service (mean = 11.5 years; SD = 8.64) and work between 8 and 60 hours a week (mean = 43.37; SD = 10.27). The majority of respondents are men (61%) and 79% stated they are married. Most of the participants reported low exhaustion (74.3%), medium (39%) and high (34.4%) cynicism and high efficiency (73.3%).

2.2. Measures

Burnout was measured using the *Maslach Burnout Inventory-General Scale* (Schaufeli, Leiter, Maslach & Jackson, 1996). The 16 items of the questionnaire measure work attitudes (e.g. “*I feel burned out from my work*”, “*I feel confident that I am effective at getting things done*”) on a 6-point frequency scale. The negative influence of work on private life was measured with the corresponding scale from the *Survey Work-Home Interaction Nijmegen* (SWING; Geurts, Taris, Kompier, Dijkers, Van Hoof & Kinnunen, 2005). The eight items of the scale are measured on a 4-point frequency scale (e.g. “*You have to work so hard that you do not have time for any of your hobbies*”). Job demands (workload, emotional demands and cognitive demands) were measured with the *Questionnaire on the*

Experience and Evaluation of Work (QEEW; Van Veldhoven, Meijman, Broersen & Fortuin, 2002). The scales are framed as statements about work characteristics and responses are given on a 4-point frequency scale. Turnover intentions were measured with a 6-item scale developed from the literature. All the subscales used in the current research have acceptable internal consistency, Cronbach's alphas coefficients ranging between 0.51 and 0.85.

3. Results

3.1. Descriptive statistics

Table 1 displays the means, standard deviations, and correlation coefficients between the work demands scales, negative work-home interaction, turnover intentions, and burnout dimensions of the raw data. Missing values were replaced by linear interpolation method. Based on the *z* scores and the observations of histograms and box plots, we identified a few outliers and some skewed distribution for some of the study variables. Logarithmic transformations, according to Field recommendations (2005) produced near-normal distributions and eliminated outliers.

Table 1: Summary of Means (M), standard deviations (SDs), and Pearson Correlations for Scores of Age, Job Demands, Negative Work-Home Interaction, Turnover Intentions, and Burnout (N=105)

Variables	M	SDs	Correlations									
			1	2	3	4	5	6	7	8		
1. Age	42.96	8.93										
2. Workload	50.98	14.29	-.039									
3. Emotional demand	49.27	17.98	-.201*	.628**								
4. Cognitive demands	89.21	12.9	-.059	.283**	.199*							
5. Negative work-home interaction	0.66	0.46	-.011	.422**	.277**	-.015						
6. Turnover intentions	0.53	0.49	-.156	.450**	.443**	.022	.353**					
7. Exhaustion	1.47	1.34	-.004	.526**	.408**	.036	.473**	.631**				
8. Cynicism	1.85	1.25	-.287**	.156	.110	.113	.175	.318**	.342**			
9. Efficacy	5.17	1.07	.237*	.050	.006	.262**	.176	.170	.110	.114		

* $p < 0.05$. ** $p < 0.01$.

3.2. Multiple regression analyses

Three linear regression analyses were performed to predict each burnout dimension from job demands, negative work-home interaction, and age (Table 2). Also, another linear regression was performed to predict turnover intentions from burnout and job demands (Table 3).

Table 2. Linear Regression Analysis Predicting Burnout from Job Demands, Negative Work-Home Conflict and Age

Variables	Exhaustion	Cynicism	Efficacy
	B	B	B
Age		0.287**	-0.268*
Workload	0.331**		
Emotional demands	0.177	0.205*	
Cognitive demands	-0.113		0.195*
NWHi	0.258**		-0.226*
R ²	0.361	0.113	0.150
F	13.811***	6.458**	5.905***

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$; NWHi=negative work home interaction

Table 3. Linear Regression Analysis Predicting Turnover Intentions from Burnout and Job Demands

Variables	Turnover Intentions
	B
Exhaustion	0.544***
Cynicism	0.184**
Efficacy	-0.151*
Workload	0.163*
R ²	0.562
F	31.707***

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

High workload and negative work-home interaction are risk factors for exhaustion while cognitive demands are not. High emotional demands (B=0.421 at $p=0.000$) predict exhaustion only if a simple linear regression was

computed: $F=22.003$, at $p=0.000$ and $R^2=.177$. Results of the second regression analysis indicate that cynicism is predicted by high emotional demands and older age whereas efficacy is predicted by high cognitive demands, younger age, and low negative work-home interaction. Turnover intentions are predicted by all three burnout dimensions and workload: high exhaustion, high cynicism, low efficacy, and high workload. Cohen's d coefficients were calculated to test the magnitude of the relationship between study variables and results indicate a small effect size between predictors of efficacy (0.17) and cynicism (0.12), medium for predictors of exhaustion (0.56) and large for predictors of turnover intentions (1.28).

4. Discussion and conclusions

The Romanian health care system has long been confronted with a shortage of personnel and more recently with medical professionals' migration mostly to western countries. Moreover, medical professionals' migration was accelerated by the underfinance of the health system and by its slow reform. In this context the present study aims to investigate the frequency of burnout and turnover intentions among a sample of Romanian ambulance personnel. Mainly we want to identify if job demands and negative work – home interaction predict burnout and if burnout is an antecedent of turnover intentions.

First findings of the current study point out that almost one third of the participants (32 out of 105) admitted that they thought of working abroad. Similar results were found by other studies; for example, according to Covaliu (2011) only 4% of Romanian medical professionals who visited work fairs are willing to practice medicine in Romania, while 74% would like to work solely in western countries.

Although the migration of Romanian medical professionals to work abroad has become a widespread phenomenon, there are currently no studies investigating the antecedents of their decision to emigrate. In this light, an important finding of our study brings evidence that burnout and high workload shape one's intentions to change their job. Moreover all three burnout dimensions and high workload are strong predictors for turnover intentions and these results are supported by other studies within different medical health care settings (Leiter & Maslach, 2009; Sjögren, Fochsen, Josephson & Lagerström, 2005). An interesting study indicates that not only workload but high on-call burden makes physicians more willing to leave their jobs (Heponiemi, Kouvonen, Vanska, Halila, Sinervo, Kivimaki & Elovainio, 2008).

We found a surprising burnout pattern, with small levels of exhaustion but very high cynicism levels: only 14% are confronted with high exhaustion, while more than two thirds experience high and medium cynicism. Ambulance personnel participating in this research work 43 hours a week on average, which represents a medium workload and could explain the low exhaustion rates (Lee & Ashford, 1996). High cynicism could be a consequence of the chronically exposure to emotionally demanding job tasks, as our results point out, doubled by lack of resources like proper work conditions, financial and material resources or promotion opportunities.

According to the job demands-resources model of burnout (Demerouti et. al., 2001) high job demands combined with insufficient resources are predictive for burnout. In the present study we tested the impact of high job demands on medical professionals. In line with this model, we found that emotional job demands are risk factors for exhaustion and cynicism, while high cognitive demands boost efficacy. High workload is an antecedent for ambulance personnel's exhaustion too, while cynicism seems to become more accentuated with age.

The negative influence of a professional role on private life is a powerful risk factor for burnout, as previous studies mentioned (Montgomery, Panagopoulou & Benos, 2006). We obtained the same results, negative work - home interference predicting especially high exhaustion and also low efficacy.

To summarize, the present research brings evidence about the high turnover intentions among Romanian medical professionals and about turnover determinants. Still, because the present study includes a sample of medical professionals from just one specialty, the results should be interpreted with caution. Also, relations between study variables could not be viewed as causal, as this is a cross-sectional design.

The current study and its results are useful in organising interventions aimed at reducing burnout and decreasing turnover intentions among medical professionals.

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