



Working together
www.rcis.ro

Revista de cercetare și intervenție socială

ISSN: 1583-3410 (print), ISSN: 1584-5397 (electronic)

Selected by coverage in Social Sciences Citation Index, ISI databases

JOB SATISFACTION AMONG FORENSIC PHYSICIANS IN ROMANIA

Magdalena IORGA, Corina DONDAS, Beatrice-Gabriela IOAN, Elena TOADER

Revista de cercetare și intervenție socială, 2017, vol. 56, pp. 5-18

The online version of this article can be found at:

www.rcis.ro, www.doaj.org and www.scopus.com

Published by:

Expert Projects Publishing House



On behalf of:

„Alexandru Ioan Cuza” University,

Department of Sociology and Social Work

and

Holt Romania Foundation

REVISTA DE CERCETARE SI INTERVENTIE SOCIALA

is indexed by ISI Thomson Reuters - Social Sciences Citation Index

(Sociology and Social Work Domains)



Job Satisfaction among Forensic Physicians in Romania

Magdalena IORGA¹, Corina DONDAS², Beatrice-Gabriela IOAN³,
Elena TOADER⁴

Abstract

The aim of the study is to identify the level of job satisfaction among forensic physicians and its relationship with personality traits and alexithymia. A number of 37 forensic physicians from 11 forensic institutions answered some questionnaires. In order to identify the level of job satisfaction *The Job Satisfaction Scale* was used, to evaluate the alexithymia score the *TAS-20* was used and to identify the personality traits the *BIG FIVE Inventory* was applied. Socio-demographic data, information related to the professional activity and self-evaluated psychological data were also registered. Data analysis was done using SPSS Statistics v23.0.0 for MAC.OSX. For the comparative analysis the t-test for independent samples was used and the statistical difference was defined as $p < 0.05$. For the correlational study, Pearson correlations were applied and to identify the influence of our personality factors on job satisfaction we used multiple linear regressions. Regarding job satisfaction, we obtained an average of 4.38 ± 0.75 , which corresponds to a medium level of job satisfaction and the score for alexithymia was 43.27 ± 3.71 , meaning that forensic physicians showed a low level of alexithymia. *Analyzing the job satisfaction, high scores were obtained for the payment and promotion factor.* For the third factor, organization and communication skills, the low scores indicate the employee's dissatisfaction regarding the manner in which his tasks are organized and defined (e.g. defining the tasks, the effort required to do the tasks, communication and feedback).

Keywords: forensic, alexithymia, job satisfaction, personality traits, communication.

¹ University of Medicine and Pharmacy "Grigore T. Popa", Department of Behavioral Sciences, Iasi, ROMANIA. E-mail: magdalena.iorga@umfiiasi.ro

² University of Medicine and Pharmacy "Grigore T. Popa", SCOP Department, Iasi, ROMANIA. E-mail: corinadondas@gmail.com

³ University of Medicine and Pharmacy "Grigore T. Popa", Department of Legal Medicine, Iasi, ROMANIA. E-mail: ioanbml@yahoo.com (Corresponding author)

⁴ University of Medicine and Pharmacy "Grigore T. Popa", Department of Bioethics, Iasi, ROMANIA. Email: toader.elena@yahoo.com

Introduction

For highly educated people, job satisfaction is one of the most important factors related to their work. Many researchers evaluated job satisfaction and its related factors among physicians, and found that it is strongly influenced by individual and institutional conditions (Stoica-Constantin & Constantin, 2009). Also, personal and professional aspects are in close connection that is why private companies with high standards carefully provide and create contexts where personal and professional aspects develop in balance (meetings with extended families, involving members of the families in institutional activities or offering trips for employees and their families).

In national institutions, the stimulation of competitiveness is difficult to achieve, due to the fact that work policies are usually applied to all similar institutions in the country and methods of rewarding employees are not always available. For the healthcare profession, the scores for overall satisfaction rate vary: 41% in Pakistan, 64% in Germany, much higher in Norway and over 70% in the USA. The most frequent reasons for dissatisfaction are related to dignity, low salary, lack of training opportunities and career structure, inadequate supervision, insufficient cooperation and professional support, too little financial reward and freedom to work (Kumar *et al.*, 2013; Voltmer *et al.*, 2012; Shanafelt *et al.*, 2009; Balch *et al.*, 2011). Other studies have proved that the main source of stress related to one's job is on-the-job time pressure, and major sources of satisfaction are relationships with patients and colleagues (Richardson & Burke, 1991). The relationship between individual physicians and their department chairperson is an important aspect of professional satisfaction (Eriksen *et al.*, 2013; Shanafelt *et al.*, 2015).

Public institutions do not offer many chances of rewards, but private institutions are able to find ways to evaluate the performance of a physician (number of patients, number of successful interventions, institutional incomes etc.). Evaluating the level of job satisfaction among primary care physicians, some studies showed that the time spent on continuing education was associated with increased satisfaction scores in all subscales and the time spent on administrative work per week (75% of subjects expressed dissatisfaction regarding administrative tasks) was associated with lower satisfaction, with *burden* and *personal rewards* (Bovier & Perneger, 2003; Behmann *et al.*, 2012). The length of experience was also related to job satisfaction: physicians with less experience have the lowest level of satisfaction with their overall career choice and higher rates for the number of home-work conflicts, compared to physician with a longer work experience (Dyrbye *et al.*, 2013).

Alexithymia is a personality construct referring to the ability to identify and describe emotions. Some authors suggest that there are two kinds of alexithymia: *primary alexithymia* (a psychological trait that does not alter over time) and

secondary alexithymia (is state-dependent and disappears after the evoked stressful situation has changed). These two manifestations of alexithymia are otherwise called “trait” or “state” alexithymia (Parker, Taylor & Bagby, 1998). Socio-demographic factors are associated with alexithymia (occupation, financial situation, life satisfaction, health status and work ability) and a strong correlation was identified between alexithymia and depression (Honkalampi *et al.*, 2000). The relationship between job satisfaction and personality traits (neuroticism, extraversion, openness to experience, agreeableness and conscientiousness) was a preoccupation for most researchers, trying to point out which characteristics of personality are most related to the professional fulfillment of an individual. Neuroticism and extraversion were the most related with one’s satisfaction with work, agreeableness and conscientiousness were less related and no relationship was established between job satisfaction and openness to experience.

The paper focuses on forensic physicians. There is an obvious lack of studies focusing on job satisfaction among physicians worldwide who practice this medical specialty. One of the reasons is related to the fact that the number of forensic physicians is lower compared to other medical specialties. Secondly, the main goal of forensic physicians is to evaluate and they are less dependent on the doctor-patient relationship or a long-term trust relationship, like in the case of a patient with a chronic disease. The diversity of patients (children, adults) and population (victims, aggressors, prisoners etc.) and the typology of medical cases (physical, sexual, emotional or psychological aggression, mutilated bodies or dead bodies) demand a lot of abilities and a strong personality in order to find resources to cope with professional stress and reframe the events. The present study tries to find a relationship between job satisfaction, alexithymia and personality traits among forensic physicians. Their influences and relationship with impact on forensic physician life are important, as has been shown on previous articles published by this team (Iorga *et al.*, 2016a; Iorga *et al.*, 2016b).

Material and Methods

The current study has used a sample of 37 forensic doctors, of which 17 are men (45.95%) and 20 are women (54.05%) who work in forensic institutes in 11 Romanian counties, representing $\frac{1}{4}$ of the territory of the country. The research was approved by the Legal Medicine Institute in Iasi, Romania and the participants were informed that they would take part in a study which investigated the influence of certain psychological factors on job satisfaction.

The questionnaires were self-administered and each of them included an informed consent form which offered detailed information about the goal of the research, the fact that the information obtained was confidential and that it would only be used for this study. The forensic doctors who work in Iasi, the university center where this research was conducted, were asked to return the filled-in

questionnaires within 2 days, but the participants who work in institutes in other cities received the questionnaires via e-mail and they were asked to return the filled-in sheets within one week.

In the current study we used three questionnaires to test the hypothesis of our research. On a different sheet we also requested some socio-demographic data from our participants in order to determine if any other variables could influence the results of our study. The socio-demographic variables that we requested were: age, the forensic doctors' level of specialization (resident, specialist or primary doctor), the department they work in, the environment they live in (urban/rural), their marital status (married, unmarried, single, divorced). We also requested information regarding their partnership (e.g. if their life partner also works in the medical field), information about their family of origin (number of siblings), about their number of children, number of years of experience as a forensic doctor, their involvement in academic activity, the number of work hours per week and the number of shifts per month. There were also some questions regarding certain aspects of their well-being, for example if they suffer from insomnia, if they use drugs in order to cope with stress, if they suffer or if they have suffered in the past from depression or if they have any chronic diseases. There were also a few items that tried to identify their most distressful job duties (working with sexually or physically abused children, physically abused women, assessing inmates, decomposing bodies etc.). We wanted to see if they have ever solicited professional help when faced with a distressful work-related experience and which coping strategies they have used in order to deal with those disturbing events. Moreover, there was also an item that interrogated the forensic doctors on whether they had ever experienced abuse from a patient.

The *Big Five Inventory* – BFI is a self-report inventory designed to measure five personality factors or dimensions of personality. It only has 44 items and it's quite brief for a multidimensional personality inventory. It has been easy to administer since it consists of short phrases with relatively accessible vocabulary. These descriptors are grouped together using a statistical technique called factor analysis since this model is not based on experiments. The authors suggest five broad dimensions to describe the human personality and psyche. The five personality factors measured by this scale are: *conscientiousness* (9 items, Cronbach's alpha coefficient 0.825), *agreeableness* (9 items, Cronbach's alpha coefficient 0.581), *neuroticism* (8 items, Cronbach's alpha coefficient 0.857), *extraversion* (8 items, Cronbach's alpha coefficient 0.835) and *openness* (10 items, Cronbach's alpha coefficient 0.828). The answers have been recorded using a 5-step Likert scale, where 1 means strong disagreement and 5 means strong agreement.

The *Toronto Alexithymia Scale* (TAS – 20) is a 20-item self-administered scale used to measure alexithymia, a psychological construct that refers to people who have trouble identifying and describing emotions and who tend to minimize emotional experience because they focus their attention externally. The TAS-20

has 3 subscales: *difficulty identifying feelings* or emotions (Cronbach's alpha coefficient 0.793), *difficulty describing feelings* or emotions (Cronbach's alpha coefficient 0.694), and *externally oriented thinking* which refers to people's tendency to focus their attention externally (Cronbach's alpha coefficient 0.514).

The *Job Satisfaction Scale* – JSS - (Constantin, 2004) consists of 32 items - 4 factors related to job satisfaction: payment and promotions (14 items, Cronbach's alpha coefficient 0.851), management and interpersonal relationships (8 items, Cronbach's alpha coefficient 0.835), organization and communication (10 items, Cronbach's alpha coefficient 0.832) and overall job satisfaction (the total score of the scale, Cronbach's alpha coefficient 0.925).

Data analysis was performed using SPSS Statistics v23.0.0 for MAC.OSX. For the comparative analysis, the *t-test* for independent samples was used and the statistical difference was defined as $p < 0.05$. For the correlational study, we used Pearson correlations and in order to identify the influence of our personality factors on job satisfaction, we used multiple linear regressions.

Results and Discussions

Descriptive analysis

Socio-demographic data. Data related to socio-demographic, professional and family aspects were registered. We wanted to point out characteristics of forensic physicians and identify the influences of these variables on the level of job satisfaction. The lot is balanced regarding variables like gender, level of specialization and parenthood status. Compared to other medical specialties, forensic doctors work fewer hours per week, 33.51 ± 9.56 . Data from the literature proves that doctors work more than 40 hours per week (some studies led in the USA prove a rate of 60-70 hours per week) and have fewer shifts per month and a high number of work hours is usually associated with depression, suicidal thoughts and risky behaviors, consumption of alcohol or tobacco and a lower rate of job satisfaction (Umene-Nakano *et al.*, 2013; Rodriguez-Jareno *et al.*, 2014). Other registered data related to the number of children and the involvement in academic activity are presented in *Table 1*.

More than half of the subjects (59.46%) claimed that they had been involved in critical events in the last 5 years and they usually were more impressed when patients were: child victims of various trauma (75.7%), sexual abuse of children (70.3%), physical abuse of children (75.7%), sexual abuse in women (43.2%), decomposing bodies (5.4%) and self-injuries among inmates (2.7%). A number of 10 representing 29.73% declared that they asked for professional help when they were in psychological distress (psychologist or psychiatrist) and in most cases the reasons were related to professional events.

Table 1. Socio-demographic data

Variables	N (%)
Gender	
male	17 (45.95%)
female	20 (54.05%)
Age	39.13 ± 11.78
Level of specialization	
resident	17 (45.95%)
specialist	3 (8.11%)
primary	17 (45.95%)
Marital status	
in partnership	7 (18.92%)
married	21 (56.76%)
divorced	4 (10.81%)
single	5 (13.51%)
The partner is a doctor	
yes	17 (47.22%)
no	19 (52.78%)
The family of origin has children	
1	14 (37.84%)
2	16 (43.24%)
3	5 (13.51%)
more than 3	2 (5.4%)
Having children	
yes	18 (48.65%)
no	19 (51.35%)
Experience as forensic doctor (Myears)	10.61 ± 10.65
Weekly work hours	33.51 ± 9.56
Monthly number of swifts	2.94 ± 2.1
Academic activity	
yes	9 (24.36%)

Psychological data. The cut-off scoring for TAS -20 is the following: less than or equal to 51 (low-level alexithymia or no alexithymia), greater than or equal to 61 (high level of alexithymia) and 52 - 60 is possible alexithymia. Our lot obtained an average of 43.27 ± 3.71 , which corresponds to low-level alexithymia. The job satisfaction questionnaire is comprised of three factors: payment and promotions, management and interpersonal relationships and organization and communication skills (very low, low, medium, high, very high level). For the first factor, payment and promotions, the low scores indicate the employee's dissatisfaction regarding the reward they receive for the work they do (salary, other financial benefits, acknowledgement for the work they do, promotion opportunities). Our lot obtained an average of 4.08 ± 0.86 in this factor, which corresponds to a high level of job satisfaction when it comes to the rewards the employees receive. For the second factor, management and interpersonal relationships, the low scores indicate the employees' dissatisfaction regarding the social climate of the company they

work for, the relationships they have with their colleagues or with their boss or the tense or conflictual atmosphere they work in. Our subjects obtained an average of 4.56 ± 0.89 in this factor, which corresponds to a very high level of job satisfaction when it comes to the relationships the employees have at work. For the third factor, organization and communication skills, the low scores indicate the employee's dissatisfaction regarding the manner in which his tasks are organized and defined (e.g. defining the tasks, the effort required to perform the tasks, communication and feedback). Out lot obtained an average of 4.66 ± 0.76 in this factor, which corresponds to a high level of job satisfaction when it comes to the manner in which their responsibilities are organized. For the overall job satisfaction, the low scores indicate the employees' dissatisfaction regarding the work they do, the way their responsibilities are organized, the rewards they receive for the effort they put in (material or moral benefits) and interpersonal climate in which they have to work. Our participants obtained an average of 4.38 ± 0.75 , which corresponds to a high level of job satisfaction.

Table 2. Results for TAS-20, JSS and BFI

Instruments	Domains	M \pm standard deviation
TAS-20	difficulty identifying feelings	13.94 \pm 5.65
	difficulty describing feelings	12.05 \pm 4.45
	externally oriented thinking	17.27 \pm 3.71
	total score in alexithymia	43.27 \pm 11.73
JSS	payment and promotion	4.08 \pm 0.86
	management-interpersonal relationships	4.56 \pm 0.89
	organization-communication	4.66 \pm 0.76
	overall satisfaction	4.38 \pm 0.75
BFI	extraversion	3.89 \pm 0.73
	agreeableness	3.97 \pm 1.09
	conscientiousness	3.88 \pm 0.65
	neuroticism	2.68 \pm 0.76
	openness	3.77 \pm 0.59

Correlational analysis

In order to perform the correlational analysis and to determine which tests we should use, we first tested the normality of our data distribution. For this, we used the Kolmogorov-Smirnov test for all the variables we investigated. For the overall job satisfaction $K-Sz = 0.132$, $p = 0.099$, $p > 0$, so we conclude that our scores are normally distributed. For the total score of the Toronto Alexithymia Scale $K-Sz = 0.120$, $p = 0.195$ and because $p > 0$, we conclude that for this variable our scores are normally distributed. For the Big Five personality factors: *extraversion* ($K-Sz = 0.99$, $p = 0.200$); *agreeableness* ($K-Sz = 0.20$, $p < 0,001$); *conscientiousness* ($K-Sz = 0.097$, $p = 0.200$); *neuroticism* ($K-Sz = 0.099$, $p = 0.200$); *openness* ($K-Sz =$

0.095, $p = 0.200$). We can see that for almost all the factors of the BFI, the score distributions are normal, except for agreeableness. When it comes to the other socio-demographic variables that we considered in this correlational analysis, we obtained the next results: *age* ($K-Sz = .160$, $p = .018$); *the number of children* ($K-Sz = .402$, $p < 0.001$); *years of experience* ($K-Sz = .263$, $p < 0.001$); *hours per week* ($K-Sz = .300$, $p < .001$); *shifts per month* ($K-Sz = .222$, $p < 0.001$). Since all these variables are not distributed normally, in order to do the correlational analysis we have used the Spearman correlation, a non-parametric test.

In order to identify the link between the dependent and independent variables that we took into account in the current study we used Pearson correlations for parametric data that were distributed normally and for the correlations involving the agreeableness dimension of the Big Five we used the Spearman correlation, because the scores of this variable were not distributed normally. The results between subdomains of job satisfaction and the other variables in our study are presented in *Table 3*. No correlation was identified between the following variables: subjects' age, number of children, years of work experience, the number of hours per week or the number of shifts per month and the overall job satisfaction and its factors: payment and promotion, management and interpersonal relationships and organization and communication.

From the analysis of the statistical results, negative correlations are highlighted between the BFI factor neuroticism and the work satisfaction domains, management and interpersonal relationships and the overall job satisfaction; moreover, the BFI factor extraversion correlates positively with organization and communication, but at the same time, organization and communication correlates negatively with alexithymia factors "difficulty identifying feelings", "difficulty describing feelings" and with the total score in the alexithymia scale.

Extraverts are more likely to have more friends and spend more time in social situations compared to introverts. The interpersonal relationship with colleagues and communication abilities make them find more satisfaction in these aspects related to their job and find it more rewarding (Watson & Clark, 1997). Subjects with a high level of conscientiousness are more prone to be satisfied with their work because conscientiousness represents a general work-involvement tendency that leads to a desire to obtain satisfying work rewards, both formal like payment or promotions and informal like: recognition, respect, feelings of personal accomplishment (DeNeve & Cooper, 1998). The Five-Factor Model is a powerful basis to evaluate the dispositional source of satisfaction with work. Neuroticism, Extraversion, and Conscientiousness present appreciable correlations with job satisfaction and our results are proved by the literature (Judge, Bono & Locke, 2000; Judge, Heller & Mount, 2002; Drosdeck, *et al.*, 2015).

Table 3. Correlational analysis between job satisfaction and BFI, TAS and other variables

	Variables	Payment and promotions	Management and interpersonal relationships	Organization and communication	Overall job satisfaction
TAS-20	extraversion	R = 0.069, p = .688	R = .263, p = .122	R = .380*, p = .022	R = .198, p = .247
	agreeableness	R = .206, p = .228	R = .310, p = .066	R = .297, p = .078	R = .253, p = .137
	conscientiousness	R = .166, p = .334	R = .261, p = .124	R = .315, p = .061	R = .217, p = .204
	neuroticism	R = -.209, p = .222	R = -.486**, p = .003	R = -.506, p = .002	R = -.395*, p = .017
	openness	R = -.030, p = .863	R = .106, p = .539	R = .115, p = .503	R = .025, p = .885
BFI	difficulty identifying feelings	R = -.092, p = .589	R = -.228, p = .174	R = -.387*, p = .018	R = -.201, p = .232
	difficulty describing feelings	R = .061, p = .721	R = -.140, p = .408	R = -.365*, p = .026	R = -.091, p = .594
	externally oriented thinking	R = -.145, p = .393	R = -.059, p = .729	R = -.199, p = .237	R = -.132, p = .437
	total score in alexithymia	R = -.067, p = .694	R = -.182, p = .282	R = -.388*, p = .018	R = -.173, p = .306
Variables	age	R = -.073, p = .666	R = -.116, p = .493	R = -.095, p = .578	R = -.136, p = .421
	number of children	R = .027, p = .874	R = .084, p = .621	R = -.030, p = .858	R = -.004, p = .982
	experience in years	R = -.072, p = .675	R = -.057, p = .743	R = -.042, p = .810	R = -.125, p = .467
	work hours/week	R = -.143, p = .414	R = -.177, p = .309	R = -.146, p = .401	R = -.146, p = .401
	shifts/month	R = -.086, p = .636	R = .029, p = .872	R = .068, p = .709	R = -.012, p = .947

Comparative analysis

To identify statistically significant differences, we used the t-test for independent samples even though the scores for the agreeableness dimension of the Big Five are not distributed normally. There are a lot of authors that suggest that Independent Samples T-Tests are sufficiently robust and can be used even if not all the variables that we analyze are distributed normally. After statistical processing, no statistically significant differences were found between subjects according to their gender regarding the total scores in the alexithymia scale or in the work satisfaction scale.

Statistical differences were observed neither in the alexithymia, nor in the work satisfaction total scores when the participant’s partner works in the medical field, the forensic doctor also has didactic activity, whether they witnessed a critical event or not in the last five years, when the victims are children, whether these children were abused sexually or physically, whether women were abused sexually, whether they faced aggressive prisoners’ suicides, decomposing bodies,

whether they talk to one of their colleagues when they are affected by an event at work, whether they talk to a specialist (psychologist, psychotherapist, social worker, officer) when they are affected by an event at work, whether they talk to a family member when they are affected by an event at work or whether they talk to nobody when they are affected by an event at work, whether they suffer from insomnia, whether they suffer from depression, whether they take drugs to relieve stress, whether they suffer from chronic diseases or whether they think that the specialty they chose has changed their vision of life.

One of the limitations of the current study and one of the explanations for the fact that we have not obtained any statistically significant differences is that we have few participants in our study; but they are still significant for the population we have studied, because they work in forensic institutes in 11 Romanian counties, representing $\frac{1}{4}$ of the territory of the country.

Regression analysis

The correlational study emphasized the influence of some variables on others (for example, the statistically significant connection between some of the BFI factors and some dimensions of the work satisfaction scale). To identify the most effective model for estimating job satisfaction, multiple linear regressions was used by the hierarchical method and the following prediction models were defined for payment and promotions, management and interpersonal relationships, organization and communication skills and overall job satisfaction. The results are presented in *Table 4*.

For the payment and promotions criterion and overall job satisfaction, none of the predictive models proved to be significant. Of the 8 models where the management and interpersonal relationships was the criterion, only the fourth one was found to be significant. This consists of the extraversion, agreeableness, conscientiousness and neuroticism predictor and it explains 16.4% of the variance of the management and interpersonal relationships. Also, among the 4 predictors of this model, only the factor neuroticism has a significant influence on management and interpersonal relationships ($p = 0.026$), mostly explaining the variance of the dependent variable ($b = - 0.492$, $\beta = - 0.415$), its effect on the criterion being a negative one. So, based on these results, we appreciate that the more present this personality trait (neuroticism) is in a person's structure, the lowest the management and interpersonal relationships scores will be.

For the organization and communication skills criterion all the predictive models were significant. We found that two models provide the most significant contribution: the first model (that has extraversion as a predictor) and the fourth model (including extraversion, agreeableness, conscientiousness and neuroticism as predictors) explain the best the variable organization and communication skills, the contribution of all these variables being statistically significant. The fourth

one is the strongest and it explains 24.5% of the variance of the organization and communication skills. Also, among the predictors of this model, only neuroticism has a significant influence on organization and communication skills ($p = 0.033$), mostly explaining the variance of the dependent variable ($b = -0.381$, $\beta = -0.376$). Its effect on the criterion is a negative one. Based on these results we conclude that the less present this personality trait (neuroticism) is in a person's structure, the higher the organization and communication skills scores will be.

Table 4. Regression analysis

	Models		Payment and promotions	Management and interpersonal relationships	Organization and communication skills	Overall job satisfaction
Step 1	Extraversion	R ² adjusted	-0.024	0.042	0.120	0.011
		ΔR^2	0.005	0.069	0.145	0.039
		F	0.164	2.518	5.755*	1.387
Step 2	Extraversion, agreeableness	R ² adjusted	-0.042	0.052	0.155	0.020
		ΔR^2	0.012	0.037	0.058	0.036
		F	0.287	1.950	4.209*	1.350
Step 3	Extraversion, agreeableness, conscientiousness	R ² adjusted	-0.048	0.047	0.151	0.010
		ΔR^2	0.025	0.023	0.021	0.020
		F	0.464	1.573	3.075*	1.122
Step 4	Extraversion, agreeableness, conscientiousness, neuroticism	R ² adjusted	-0.060	0.164	0.245	0.073
		ΔR^2	0.020	0.131	0.107	0.084
		F	0.507	2.716*	3.833*	1.690
Step 5	Extraversion, agreeableness, conscientiousness, neuroticism, openness	R ² adjusted	-0.086	0.140	0.242	0.057
		ΔR^2	0.008	0.004	0.019	0.013
		F	0.445	2.144	3.235*	1.423
Step 6	Extraversion, agreeableness, conscientiousness, neuroticism, openness, difficulty identifying feelings	R ² adjusted	-0.122	0.114	0.279	0.033
		ΔR^2	0.002	0.003	0.052	0.007
		F	0.367	1.753	3.259*	1.200
Step 7	Extraversion, agreeableness, conscientiousness, neuroticism, openness, difficulty identifying feelings, difficulty describing feelings	R ² adjusted	-0.118	0.086	0.276	0.007
		ΔR^2	0.035	0.003	0.018	0.007
		F	0.472	1.469	2.910*	1.035
Step 8	Extraversion, agreeableness, conscientiousness, neuroticism, openness, difficulty identifying feelings, difficulty describing feelings, externally oriented thinking	R ² adjusted	-0.139	0.057	0.257	-0.024
		ΔR^2	0.016	0.004	0.005	0.004
		F	0.468	1.263	2.510*	0.897

*** $p < .001$, ** $p < .01$, * $p < .05$

We found that none of the models predicts the payment and promotion factor. One of the possible reasons is that forensic physicians work in forensic institutions and promotion and remuneration are provided by the state, none of these being influenced by personality traits, but based on professional criteria, such as the specialty level or the number of years in this medical field. Salaries are influenced by other variables like: number of patients, level of the difficulty of cases etc. The salary does not accurately represent the physician's abilities or the benefits that he brings to the institution.

The research has some limitations. Firstly: the number of subjects is small, due to small number of doctors of this specialty, so the results cannot be generalized. The questioned subjects represents, approximately 10% of the registered forensic doctors in Romania. Secondly: it is possible that subjects suffering from burnout refused to fill in the papers. The third limitation is related to the statistical analysis of the collected data being more difficult to perform for a small number of subjects.

Conclusion

Job satisfaction among forensic physicians has higher scores compared to general scores. Analyzing the job satisfaction factor, high scores were also obtained for the payment and promotion factor. Variables like age, number of children, work experience, the number of working hours per week or number of shifts per month do not influence job satisfaction. Among personality traits, neuroticism and extraversion were found to have a strong correlation with factors of job satisfaction. Neuroticism is the strongest predictor for the following two factors: management and interpersonal relationships, organization and communication skills. Alexithymia was found to be negatively correlated with this latter factor.

References

- Balch, C. M., Shanafelt, T. D., Sloan, J. A., Satele, D. V., & Freischlag, J. A. (2011). Distress and career satisfaction among 14 surgical specialties, comparing academic and private practice settings. *Annals of surgery*, 254(4), 558-568.
- Behmann, M., Schmiemann, G., Lingner, H., Kühne, F., Hummers-Pradier, E., & Schneider, N. (2012). Job satisfaction among primary care physicians. *Deutsches Arzteblatt International*, 109, 193-200.
- Bovier, P. A., & Perneger, T. V. (2003). Predictors of work satisfaction among physicians. *The European Journal of Public Health*, 13(4), 299-305.
- DeNeve, K.M., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin*, 124, 197-229.

- Drosdeck, J. M., Osayi, S. N., Peterson, L. A., Yu, L., Ellison, E. C., & Muscarella, P. (2015). Surgeon and nonsurgeon personalities at different career points. *Journal of Surgical Research*, 196(1), 60-66.
- Dyrbye, L. N., Varkey, P., Boone, S. L., Satele, D. V., Sloan, J. A., & Shanafelt, T. D. (2013, December). Physician satisfaction and burnout at different career stages. In *Mayo Clinic Proceedings*, 88(12), 1358-1367.
- Eriksen, A.M., Simonsen, K.P., Rasmussen, A.R. (2013). Conservation of mitochondrial DNA in fast enzyme-macerated skeletal material. *International Journal of Conservation Science*, 4(2), 127-132.
- Honkalampi, K., Hintikka, J., Tanskanen, A., Lehtonen, J., & Viinamaki, H. (2000). Depression is strongly associated with alexithymia in the general population. *Journal of Psychosomatic Research*, 48(1), 99-104.
- Iorga, M., Soponar, C., Hanganu, B., Ioan, B.G. (2016a). The burnout syndrome of forensic pathologists. The influence of personality traits, job satisfaction and environmental factors. *Romanian Journal of Legal Medicine*, 24(4), 325-332.
- Iorga, M., Dondas, C., Ioan, B.G., Petrariu, F.D. (2016b). The contribution of alexithymia to burnout in forensic physicians. *Rev. Med. Chir. Soc. Med. Nat., Iași*, 120(4), 900-908.
- Judge, T. A., Bono, J. E., Locke, E. A. (2000). Personality and job satisfaction: The mediating role of job characteristics. *Journal of Applied Psychology*, 85, 237-249.
- Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: a meta-analysis. *Journal of applied psychology*, 87(3), 530-541.
- Kumar, R., Ahmed, J., Shaikh, B. T., Hafeez, R., & Hafeez, A. (2013). Job satisfaction among public health professionals working in public sector: a cross sectional study from Pakistan. *Human resources for health*, 11(1), 1. doi: 10.186/1478-4491-11-2.
- Parker, J. D., Taylor, G. J., & Bagby, R. M. (1998). Alexithymia: relationship with ego defense and coping styles. *Comprehensive Psychiatry*, 39(2), 91-98.
- Richardson, A. M., & Burke, R. J. (1991). Occupational stress and job satisfaction among physicians: sex differences. *Social Science & Medicine*, 33(10), 1179-1187.
- Rodriguez-Jareno, M. C., Demou, E., Vargas-Prada, S., Sanati, K. A., Škerjanc, A., Reis, P. G., ... & Serra, C. (2014). European Working Time Directive and doctors' health: a systematic review of the available epidemiological evidence. *BMJ Open*, 4(7), e004916.
- Shanafelt, T. D., Balch, C. M., Bechamps, G. J., Russell, T., Dyrbye, L., Satele, D., ... & Freischlag, J. A. (2009). Burnout and career satisfaction among American surgeons. *Annals of Surgery*, 250(3), 463-471.
- Shanafelt, T. D., Gorringer, G., Menaker, R., Storz, K. A., Reeves, D., Buskirk, S. J., ... & Swensen, S. J. (2015, April). Impact of organizational leadership on physician burnout and satisfaction. In *Mayo Clinic Proceedings*, 90(4), 432-440.
- Stoica-Constantin, A., & Constantin, T. (2009). *Conflict, Change, and Organizational Health*. Iasi: Editura Universitatii Alexandru Ioan Cuza.
- Umene-Nakano, W., Kato, T. A., Kikuchi, S., Tateno, M., Fujisawa, D., Hoshuyama, T., & Nakamura, J. (2013). Nationwide survey of work environment, work-life balance and burnout among psychiatrists in Japan. *PLoS one*, 8(2), e55189.

- Voltmer, E., Rosta, J., Siegrist, J., & Aasland, O.G. (2012). Job stress and job satisfaction of physicians in private practice: comparison of German and Norwegian physicians. *International Archives of Occupational and Environmental Health*, 85(7), 819-828.
- Watson, D., & Clark, L. A. (1997). Extraversion and its positive emotional core. In R. Hogan, J. A. Johnson, & S. R. Briggs (Eds.), *Handbook of Personality Psychology* (pp. 767-793). San Diego: Academic Press.