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Work motivation and job satisfaction of doctors and nurses in the Vojvodina, Serbia

Радна мотивација и задовољство послом лекара и медицинских техничара
у Војводини, Србија

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Радна мотивација и задовољство послом лекара и медицинских техничара у Војводини, Србија

SUMMARY

Introduction/Objective Work motivation and job satisfaction are key issues for organizations today.

The aim of this study was to examine whether there is a difference in the work motivation and job satisfaction among doctors and nurses in the Vojvodina, Serbia.

Methods The study included a sample of 230 doctors and 489 nurses, employed in three health centers. Data collection was performed using a self-administered questionnaire.

Results The doctors, compared to nurses, were significantly more motivated by the work motivation factors: accomplishing goals of the health center, good work relationships, positive work environment, possibilities for improvement, and independence at work. Compared to nurses, doctors were significantly more job satisfied with the level of independence at work.

Conclusion In comparison to nurses, the doctors are more motivated and job satisfied.

Keywords: motivation; job satisfaction; physicians; nurses; questionnaire

САЖЕТАК

Увод/Циљ Радна мотивација и задовољство послом су кључна питања организације рада.

Циљ рада је био да се испита да ли постоји разлика у радној мотивацији и задовољству послом између лекара и медицинских техничара у Војводини.

Метод Истраживање је спроведено на узорку од 230 лекара и 489 медицинских техничара запослена у три дома здравља. Подаци су прикупљени упитником који су запослени самостално попуњавали.

Резултати Лекари, у односу на медицинске техничаре, су били значајно више мотивисани факторима радне мотивације: постизање циљева здравствене установе, добри међуљудски односи, кооперативна радна атмосфера, могућност усавршавања и аутономија у раду. Лекари су били значајно више задовољни степеном самосталности у раду од медицинских техничара.

Закључак Лекари су више мотивисани и задовољнији послом у односу на медицинске техничаре.

Кључне речи: мотивација; задовољство послом; лекари; медицинске сестре/техничари; упитници

INTRODUCTION

Employees are the most valuable assets for economic growth and progress of any organization [1, 2]. Special attention is paid to active management of employees' potentials, so work motivation and job satisfaction are key issues for organizations today [2].

Motivation is the process of initiating human and individual activities which are directed to attainment of certain goals in order to achieve some needs [3]. Work motivation is a set of various processes and methods which induce, maintain and encourage certain behaviors of employees, aimed at achieving specific goals at work [3].

Employee motivation is closely associated with the working process and represents an important factor of job satisfaction [4].

Job satisfaction is the way a person feels about his job and its individual aspects [5]. Job satisfaction is a subjective indicator [6] which is based on the perception that various subjective factors, the nature of the work itself, as well as expectations of individuals engaged in various professions, are important for employees' job satisfaction, but generalization is always associated with certain risks [7, 8]. Job satisfaction of health workers is a very important factor of the quality of healthcare; it has a great impact on achieving good performance and efficiency, and thus the quality of work, healthcare costs, and higher level of satisfaction among the users of health services; it is

directly connected with the organization of the working process, good work relationships, and absenteeism [6, 9, 10]. The results of studies dealing with factors of job satisfaction among health workers indicate that job satisfaction is affected by: income, responsibility, equipment, continuing education, management support, advancement opportunities, colleagues, secure employment, teamwork, superiors, working conditions, workload, appreciation, as well as personal characteristics of employees, such as sex, age, etc. [11-14].

In order to achieve efficiency and effectiveness, and provide high quality care, the health care management teams must take into account the wishes and needs of employees, to motivate them in the right way and provide greater productivity [15].

So far, there have been no studies dealing with work motivation and job satisfaction of doctors and nurses in the Autonomous Province of Vojvodina, Republic of Serbia.

The aim of this study was to examine whether there is a difference in the work motivation and job satisfaction in a sample of doctors and nurses in the Autonomous Province of Vojvodina, Republic of Serbia.

METHODS

A cross-sectional survey was conducted in the period from March to June 2011, evaluating the work motivation and job satisfaction of doctors and nurses employed in one Health Centers in each of three districts of Vojvodina (Srem: "Dr. Milorad - Mika Pavlović" in Indija, Banat: "Dr. Boško Verbalov" in Zrenjanin, and Bačka: Health Center in Apatin). A convenience sampling of health centers was used. A total of 879 (100.0%) health workers were employed in the three health centers. Data collection was performed using a questionnaire, designed by the author of this study. The self-administered questionnaire was anonymous and on a voluntary basis, and was offered to all health workers who were present at work on the day of the survey, 809 (92.0%). A total of 52 (5.9%) health workers refused to fill in the questionnaire, and 757 (86.1%) health workers completed the questionnaire. There were 38 (4.3%) incompletely filled in questionnaires. Of the 719 (81.8%) completely filled in questionnaires, 230 (32.0%) were completed by doctors, and 489 (68.0%) were completed by nurses, and they were included in further analysis. In order to ensure anonymity and confidentiality, the questionnaire was distributed and collected personally by the author. Each respondent was given a blank envelope containing a questionnaire, and returned it to the researcher after completion.

The questionnaire consisted of three parts.

The first one contained questions about respondents' demographic characteristics (gender, year of birth, educational attainment, occupation and years of service).

The second part included 15 factors of work motivation. Respondents evaluated the importance of a factor by selecting one of five possible responses (five-point Likert scale). Responses were scored as follows: 1 = It does not motivate me at all, 2 = It motivates me a little, 3 = It neither motivates nor

unmotivates me, 4 = It motivates me a lot, and 5 = It motivates me the most. Based on the given responses, the total number of points, and the average score were calculated for all respondents. The respondents with a total score over 45 (the average score over 3.00) were considered to be motivated, while the others were considered unmotivated. In this way, a new, dichotomous variable, called "Motivational category" was created (0 - unmotivated, 1 - motivated).

The third part of the questionnaire included 15 statements related to the respondents' job satisfaction with five possible responses (five-point Likert scale). They were scored as follows: 1 = I strongly disagree, 2 = I disagree, 3 = I neither agree nor disagree, 4 = I agree, and 5 = I strongly agree.

The statistical analysis was performed using: χ^2 test, Student t-test, Spearman's rank correlation coefficient, ROC (Receiver Operating Characteristic Curve) analysis and binary logistic regression analysis ($p < 0.05$ was considered statistically significant).

Statistical analysis was done using SPSS (version 17).

Using the ROC analysis, (work motivation related with the respondents' age and length of service) optimal values for grouping the respondents was in regard to age (40 years) and length of service (15 years). The binary logistic regression analysis (method Enter) was used to establish the impact of demographic characteristics of the respondents (gender, age), occupation, length of service as well as places of employment (urban or rural area) on work motivation. In the binary logistic regression analysis, the independent variables were coded as follows: gender (0 - male, 1 - female), age (0 - 40 years and over, 1 - younger than 40 years), occupation (0 - nurse, 1 - doctor), length of service (0 - over 15 years, 1 - up to 15 years), and place of employment (0 - rural area, 1 - urban area). The dependent variable (dichotomous variable), in the binary logistic regression models, was "Motivational category".

The study was approved by the Management Boards of health centers. Ethical approval for the study was received from the Ethical Committee of the authors' institutions.

RESULTS

There were significantly more male responders (27.8% vs 11.9%) among doctors, aged 56 and older (24.8% vs 7.0%), and on average they were older (46.5 ± 10.2 vs 43.6 ± 9.5) compared to nurses.

The doctors, compared to nurses, were significantly more motivated by the work motivation factors: accomplishing the goals of the health center (health promotion, disease prevention, early detection, treatment of patients), good work relationships, positive work environment, possibilities for improvement and independence at work (Table 1). As for the remaining items (Table 1), differences did not reach a level of statistical significance.

Compared to nurses, doctors were significantly more satisfied with the fact that their supervisors allowed them to work independently on routine tasks (Table 2). As for the remaining items (Table 2), differences did not reach a level of statistical significance.

Table 1. Work motivation factors: Comparison of doctors and nurses (%).

Work motivation factors	I am motivated by	Doctors (n = 230)	Nurses (n = 489)	<i>p</i>
Accomplishing the goals of the health center	No	6.1	10.2	0.002
	I am not sure	10.9	18.8	
	Yes	83.0	71.0	
Appreciation for good work performance	No	12.6	14.5	0.277
	I am not sure	11.3	14.9	
	Yes	76.1	70.6	
Good work relationships	No	6.1	9.6	0.012
	I am not sure	9.6	16.0	
	Yes	84.3	74.4	
Possibilities for promotion and improvement	No	13.9	15.9	0.509
	I am not sure	18.3	20.6	
	Yes	67.8	63.4	
Personal characteristics of immediate supervisors	No	11.3	9.2	0.061
	I am not sure	18.7	12.9	
	Yes	70.0	77.9	
Income	No	23.9	30.1	0.131
	I am not sure	13.5	15.1	
	Yes	62.6	54.8	
Working conditions	No	12.2	15.1	0.478
	I am not sure	18.3	19.4	
	Yes	69.6	65.4	
Positive work environment	No	7.4	9.0	0.006
	I am not sure	10.4	19.2	
	Yes	82.2	71.8	
Possibilities for improvement	No	10.4	16.6	0.022
	I am not sure	14.3	18.2	
	Yes	75.2	65.2	
Secure job	No	6.5	5.5	0.130
	I am not sure	8.7	13.9	
	Yes	84.8	80.6	
Management support	No	8.3	9.0	0.836
	I am not sure	13.9	12.5	
	Yes	77.8	78.5	
Independence at work	No	4.8	9.0	0.019
	I am not sure	10.9	15.7	
	Yes	84.3	75.3	
State-of-the-art equipment	No	11.3	12.7	0.750
	I am not sure	16.5	14.7	
	Yes	72.2	72.6	
Bonuses for good work performance	No	17.0	19.2	0.265
	I am not sure	10.4	13.9	
	Yes	72.6	66.9	
Professional supervision	No	17.0	13.7	0.091
	I am not sure	24.3	19.2	
	Yes	58.7	67.1	

The doctors were significantly more motivated than job satisfied by the work motivation factors: accomplishing the goals of the health center, appreciation for good work performance, good work relationships, possibilities for promotion and improvement, income, working conditions, positive work environment, possibilities for improvement, secure job, management support, state-of-the-art equipment and bonuses for good work performance (Table 3). The doctors were significantly less motivated by professional supervision at work, compared to the degree of its fulfillment by

Table 2. Job satisfaction: Comparison of doctors and nurses (%).

Attitudes related to the degree of job satisfaction	I agree	Doctors (n = 230)	Nurses (n = 489)	<i>p</i>
The manager helps me to achieve my professional goals	No	19.1	13.9	0.197
	I am not sure	18.7	20.0	
	Yes	62.2	66.1	
Employer gives me praises when it is appropriate	No	24.3	20.4	0.446
	I am not sure	20.9	20.4	
	Yes	54.8	59.1	
There are good work relationships in my institution	No	13.9	17.2	0.111
	I am not sure	28.3	33.3	
	Yes	57.8	49.5	
The manager helps me with getting a promotion or a better position	No	24.8	23.7	0.943
	I am not sure	26.1	26.0	
	Yes	49.1	50.3	
My immediate supervisor has good personal characteristics	No	13.0	11.0	0.572
	I am not sure	17.4	20.0	
	Yes	69.6	68.9	
I am satisfied with my income	No	60.0	56.9	0.724
	I am not sure	18.7	20.4	
	Yes	21.3	22.7	
My institution ensures good working conditions	No	22.6	24.1	0.675
	I am not sure	24.8	21.9	
	Yes	52.6	54.0	
There is a positive work environment in my institution	No	13.9	14.3	0.098
	I am not sure	22.2	29.4	
	Yes	63.9	56.2	
My institution offeres me possibilities for continuous training	No	17.4	15.7	0.265
	I am not sure	15.2	20.2	
	Yes	67.4	64.0	
My institution guarantees secure employment	No	12.6	12.7	0.767
	I am not sure	21.7	24.1	
	Yes	65.7	63.2	
The manager provides immediate support at work	No	14.3	14.1	0.912
	I am not sure	20.9	22.3	
	Yes	64.8	63.6	
The supervisor allows me to work independently on routine tasks	No	7.4	10.8	0.017
	I am not sure	12.2	18.8	
	Yes	80.4	70.3	
My institution has state-of-the-art equipment	No	25.2	21.1	0.376
	I am not sure	26.1	25.4	
	Yes	48.7	53.6	
My institution pays bonuses for good work performance	No	44.8	44.2	0.777
	I am not sure	25.7	28.0	
	Yes	29.6	27.8	
The manager is qualified for professional supervision of my work	No	13.5	10.2	0.405
	I am not sure	16.1	15.5	
	Yes	70.4	74.2	

medical institutions. As for the remaining items (Table 3), differences did not reach a level of statistical significance. The Spearman's rank correlation coefficient indicated that among doctors higher work motivation was associated with higher level of job satisfaction. The nurses were significantly more motivated than job satisfied by the work motivation factors: accomplishing the goals of the health center, appreciation for good work performance, good work relationships, possibilities for promotion and improvement, personal characteristics of their immediate supervisor,

Table 3. Correlation between the significance of factors of work motivation among doctors (n=230) and the degree of their fulfillment (job satisfaction) by their medical institutions.

Work motivation factors (doctors)	Mean score related to the degree of significance of factors ($\bar{x} \pm SD$)	Mean score related to the degree of fulfillment of factors ($\bar{x} \pm SD$)	t-test (p)*	Spearman's ρ (p)†
Accomplishing the goals of the health center	2.8 ± 0.6	2.4 ± 0.8	6.451 (< 0.001)	0.291 (< 0.001)
Appreciation for good work performance	2.6 ± 0.7	2.3 ± 0.8	5.639 (< 0.001)	0.332 (< 0.001)
Good work relationships	2.8 ± 0.5	2.4 ± 0.7	7.261 (< 0.001)	0.382 (< 0.001)
Possibilities for promotion and improvement	2.5 ± 0.7	2.2 ± 0.8	4.977 (< 0.001)	0.318 (< 0.001)
Personal characteristics of immediate supervisors	2.6 ± 0.7	2.6 ± 0.7	0.430 (0.668)	0.379 (< 0.001)
Income	2.4 ± 0.8	1.6 ± 0.8	11.605 (< 0.001)	0.214 (0.001)
Working conditions	2.6 ± 0.7	2.3 ± 0.8	4.689 (< 0.001)	0.307 (< 0.001)
Positive work environment	2.7 ± 0.6	2.5 ± 0.7	5.779 (< 0.001)	0.441 (< 0.001)
Possibilities for improvement	2.6 ± 0.7	2.5 ± 0.8	2.878 (0.004)	0.406 (< 0.001)
Secure job	2.8 ± 0.5	2.5 ± 0.7	5.638 (< 0.001)	0.376 (< 0.001)
Management support	2.7 ± 0.6	2.5 ± 0.7	3.857 (< 0.001)	0.361 (< 0.001)
Independence at work	2.8 ± 0.5	2.7 ± 0.6	1.614 (0.108)	0.344 (< 0.001)
State-of-the-art equipment	2.6 ± 0.7	2.2 ± 0.8	6.964 (< 0.001)	0.406 (< 0.001)
Bonuses for good work performance	2.6 ± 0.8	1.8 ± 0.8	11.516 (< 0.001)	0.314 (< 0.001)
Professional supervision	2.4 ± 0.8	2.6 ± 0.7	2.591 (0.010)	0.270 (< 0.001)

*Level of significance p - Student t-test for associated samples; †Level of significance p - Spearman's rank correlation coefficient.

income, working conditions, positive work environment, secure job, management support, independence at work, state-of-the-art equipment and bonuses for good work performance (Table 4). The nurses were significantly less motivated by professional supervision, compared to the degree of its fulfillment by medical institutions. As for the remaining item (Table 4), difference did not reach a level of statistical significance. The Spearman's rank correlation coefficient indicated that higher work motivation in nurses was associated with higher level of job satisfaction.

The binary logistic regression analysis model showed no statistically significant effects of independent variables: gender, age, length of service and place of employment on the doctors' work motivation (Table 5). It also showed that only age had a statistically significant effect on the work motivation of nurses (Table 6). Nurses under the age of 40 years were almost three times more motivated (95% CI:1.051 – 7.222; p=0.039) than nurses aged 40 and over. Gender, length of service, and place of employment were not statistically significant predictors of motivation among nurses.

Table 4. Correlation between the significance of factors of work motivation among nurses (n=489) and the degree of their fulfillment (job satisfaction) by their medical institutions.

Work motivation factors (nurses)	Mean score related to the degree of significance of factors (x̄ ± SD)	Mean score related to the degree of fulfillment of factors (x̄ ± SD)	t-test (p)*	Spearman's ρ (p)**
Accomplishing the goals of the health center	2.6 ± 0.7	2.5 ± 0.7	2.222 (0.027)	0.226 (< 0.001)
Appreciation for good work performance	2.6 ± 0.7	2.4 ± 0.8	4.142 (< 0.001)	0.256 (< 0.001)
Good work relationships	2.6 ± 0.6	2.3 ± 0.7	9.243 (< 0.001)	0.346 (< 0.001)
Possibilities for promotion and improvement	2.5 ± 0.7	2.3 ± 0.8	5.052 (< 0.001)	0.297 (< 0.001)
Personal characteristics of immediate supervisors	2.7 ± 0.6	2.6 ± 0.7	3.314 (0.001)	0.383 (< 0.001)
Income	2.2 ± 0.9	1.7 ± 0.8	13.467 (< 0.001)	0.356 (< 0.001)
Working conditions	2.5 ± 0.7	2.3 ± 0.8	5.197 (< 0.001)	0.377 (< 0.001)
Positive work environment	2.6 ± 0.6	2.4 ± 0.7	6.286 (< 0.001)	0.421 (< 0.001)
Possibilities for improvement	2.5 ± 0.8	2.5 ± 0.7	0.101 (0.919)	0.293 (< 0.001)
Secure job	2.7 ± 0.5	2.5 ± 0.7	7.427 (< 0.001)	0.320 (< 0.001)
Management support	2.7 ± 0.6	2.5 ± 0.7	6.091 (< 0.001)	0.413 (< 0.001)
Independence at work	2.7 ± 0.6	2.6 ± 0.9	2.090 (0.037)	0.380 (< 0.001)
State-of-the-art equipment	2.6 ± 0.7	2.3 ± 0.8	7.422 (< 0.001)	0.387 (< 0.001)
Bonuses for good work performance	2.5 ± 0.8	1.8 ± 0.8	14.632 (< 0.001)	0.279 (< 0.001)
Professional supervision	2.5 ± 0.7	2.6 ± 0.7	2.948 (0.003)	0.340 (< 0.001)

* Level of significance p - Student t-test for associated samples; †Level of significance p - Spearman's rank correlation coefficient

Table 5. Independent variables and their impact on work motivation of doctors.

Variables	B	S.E.	p	OR	95% CI for OR
Gender (female)	0.570	0.427	0.182	1.768	0.766 – 4.080
Age (younger than 40 years)	0.284	0.868	0.743	1.328	0.243 – 7.277
Length of service (up to 15 years)	0.448	0.785	0.568	1.565	0.336 – 7.294
Place of employment (urban area)	0.028	0.485	0.954	1.028	0.397 – 2.663
Constant	1.296	0.541	0.017	3.654	

OR – odds ratio; CI – confidence interval

Table 6. Independent variables and their impact on work motivation of nurses.

Variables	B	S.E.	p	OR	95% CI for OR
Gender (female)	0.127	0.420	0.763	1.135	0.498 – 2.588
Age (younger than 40 years)	1.014	0.492	0.039	2.756	1.051 – 7.222
Length of service (up to 15 years)	0.598	0.477	0.210	1.818	0.714 – 4.628
Place of employment (urban area)	0.378	0.307	0.218	1.460	0.799 – 2.665
Constant	0.848	0.490	0.084	2.334	

OR – odds ratio; CI – confidence interval.

DISCUSSION

Our research shows that compared to nurses, doctors were significantly more motivated by the following factors: accomplishing the goals of their health center, good work relationships, positive work environment, possibilities for improvement, and independence at work. The results of the study performed by Dieleman et al. [11] carried out in Mali, show that the main motivators of health workers other than income, are responsibility, improvement and appreciation. The salary increase is a significantly higher motivator in nurses than in doctors [11], which is not in agreement with the results of our study, because it shows that doctors were more motivated by their income than nurses. A study conducted in the Clinical Center in Banja Luka shows that among the factors that could stimulate employees to invest extra efforts in their work income is the most dominant motivating factor [16]. Similar to our results, the results of research conducted in health institutions in central Serbia show that compared to nurses, doctors are more motivated by accomplishing the goals of their institutions, appreciation of their work, good work relationships, possibilities for improvement and promotion, income, working conditions, positive work environment, possibilities for improvement, secure job, independence at work, and awards for a job well done [17].

In our study, compared to nurses, doctors were significantly more satisfied with the fact that their supervisors allowed them to be independent in performing routine tasks. Just like in our study, compared to nurses, doctors participating in the study of Bođur [12] conducted in health centers in Konya (Turkey), are more satisfied with positive work environment. Lorber and Skela Savič [13] in a survey performed in Slovenia (Maribor, Slovenj Gradec, Celje and Murska Sobota) show that nurses are least satisfied with their pay, and most satisfied with their jobs and colleagues. The results of Barać et al. [14] obtained in a survey conducted in health institutions in Osijek show that, in specific areas of job satisfaction, nurses are satisfied with their work activities, but least satisfied with the possibilities for promotion. The research performed by the Institute of Public Health of Serbia indicates that the level of job satisfaction decreases in health institutions in the Republic of Serbia each year [6]. Kuburović et al. [18] conducted a study on job satisfaction of health workers in public hospitals in Belgrade. The research results show that, in comparison with health workers with secondary/high education, doctors/pharmacists are more satisfied concerning all the individual aspects of their jobs related to the good professional relationships and opportunities for promotion, as well as those related to the organization of work and work conditions [18].

Doctors and nurses taking part in our study were significantly more motivated than satisfied with their incomes, which is not unexpected if we take into account the economic situation in the country. In 2007, the Republic of Serbia passed the "The Regulation on detailed conditions for the implementation of continuing education for health workers and associate health workers" [19] so it is important to emphasize that in our study, there were no significant differences among nurses in terms of evaluating the possibilities for improvement and the degree of its fulfillment by medical

institutions. This result was expected, due to mandatory attendance of accredited courses for obtaining a license [19]. A study conducted in a health center in Tuzla shows that the most valued factors are the least satisfied: salary, secure job, career advancement and independence at work [20]. A low satisfaction score and high significance score of certain job characteristics indicates that there is a serious prospect to improve job satisfaction by modifying certain job characteristics [21].

This study has several limitations. Being a cross-sectional study, comparisons were made at a single point in time, and inferences on cause-effect relationships could not be made [22]. Also, all the employees of institutions, especially the management, show high sensitivity to studies dealing with the employees' opinions on their institutions, as well as some aspects of the work, therefore the greatest problem is the inability of researchers to determine the sincerity of given answers [3]. Due to the fear of potential unpleasant situations and unwanted consequences, employees are often dishonest [3]. Employees are afraid that the researchers collecting information on the work motivation and job satisfaction will not keep the obtained results in strict confidence, despite being ensured in advance [3]. Also, the respondents fear that the researchers will not preserve the anonymity of the respondents, and that some things they said may be identified [3]. In our study we also used an anonymously filled-in self-administered questionnaire, but despite the emphasis on the anonymity of the research, and explanation that the results will not be available to the managers, and only be used for research purposes, we are sure that our respondents were not completely sincere, because the global attitude to work motivation and job satisfaction on the level of the examined institution also represents a kind of a danger for employees in terms of their relationship with the management [3]. In the end, the limitation of this study is the fact that the survey was conducted among health workers of health institutions that have been chosen by method of convenience sampling. Since the health centers were not randomly selected, the results cannot be generalized to all the doctors and nurses in Vojvodina.

CONCLUSION

Compared to nurses, doctors are more motivated and satisfied with their jobs. In order to perceive, monitor and constantly improve the quality of work in health care facilities, it is necessary to continually examine the factors of motivation among health professionals. Also, it is necessary to continuously monitor their job satisfaction in order to identify factors that influence it. The examination of work motivation factors and monitoring of job satisfaction are necessary on a representative sample of health workers in the territory of the Republic of Serbia. The management teams of health institutions should analyze the results of investigations and undertake measures and activities for continual improvement of work motivation and job satisfaction of employees, which would enhance the quality of work of health institutions and quality of health care generally.

NOTE

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