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Quantitative Model for Assessing the Impact of Reward System Elements on Hospital Efficiency

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Abstract

Healthcare managers considered employees' reward and performance as key elements of the work due to the challenges posed by the emigration phenomenon of employees in the industry, which leads to reduced patient satisfaction and a poor image of public hospitals. The issue addressed is how employee reward as a central element of the motivational system influences the efficiency and performance of a hospital belonging to the emergency medical system the effectiveness of the employees and organizational efficiency in providing public services. The research method will be of a quantitative nature using correlation analysis and forecasting models to evaluate optimal reward policies and effects on the effectiveness of the employees and organizational efficiency in providing public healthcare services. Managers from healthcare area can use the findings of study to increase the organizational commitment of employees and ultimately to improve the way they perform their tasks, duties and responsibilities, to motivate employees to work better, achieve more good results to meet organizational goals and improve the image of hospital. Keywords: *Reward, Effectiveness, Efficiency, Performance, Hospitals.*

Introduction

The lack of quality health care is a concern that is in the attention of the entire society in Romania. Health care services include extensive and frequent interactions between employees and patients, as well as high involvement, excitement and anxiety, and

a considerable perceived risk for the patient (Mechinda and Patterson, 2011). A problem faced by the medical sector is the lack of certain categories of human resources sufficient to provide quality medical assistance. The medical sector is under severe pressure due to insufficient resources, such as doctors in certain specialties and generally talented medical professionals (Sorup and Jacobsen, 2013). Hospitals have internal problems, such as health employees which migrate from public hospitals to private hospitals or other highly paid workplaces, due to a lack of reward in such public institutions (Adzei and Atinga, 2012).

In Romania, this problem has been solved partially, very recently, by repeated wage increases (the last, very high - an average of 30% - taking place at the beginning of 2018) and by placing doctors and nurses in a higher position in the salary scale in budget sector. However, as a result, of the growing number of doctors and nurses emigrating a smaller number of healthcare employees will have to manage an increasing number of patients. That is why, in addition to financial rewards it is needed better working time management, which does not affect the work capacity and productivity of healthcare employees (Souliotis et al., 2014).

Few organizational managers believe that the human resource of the organization is the main asset for achieving the organizational goals (Bocean, 2009). Organizations design and rely on different strategies to compete with competitors and enhance organizational performance (Shukla, 2012). Any organization targeting to remain on the market should not underestimate the importance of a capable, well trained human resource with proven skills and capabilities (Constantinescu et al., 2008). Urosevic and Milijic (2012) argued that if an organization wants to achieve its goals, managers must pay maximum attention to employees to achieve their goals and set an optimal organizational climate.

The reasons why an individual works better are the needs, desires and expectations of the individual (Pinto, 2011). The reward system, which includes both financial and non-financial reward, is the central element of the motivational process.

Management can determine the form of incentives that influence employee behavior and motivation to work. Achim et al. (2013) showed that during the economic crisis in Romania in 2008-2011, private sector companies used the financial incentives as the best motivator, while in the public institutions the reward system, in strong rebound, has been an important demotivating factor. Urosevic and Milijic (2012) said that money is the oldest and most common way to motivate people, but in developed countries the financial reward is on the bottom of the motivational scale because minimum wage levels are sufficient for a decent living. In their research, Adzei and Atinga (2012) agreed that money remains the most important motivation strategy. Personal characteristics of employees and wages affect the motivation of work (Bocean, 2008). Employee reward, which includes various forms such as hourly wages, performance-based wages, is still a motivator for some workers, while for others it is not.

Salary is a form of reward that an organization grants to its employee for the work done, salary being a powerful incentive when it is correlated to the productivity and performance of the employee (Marin, 2012). Salary is the main motivational tool that significantly influences the workload of people, being a factor that plays a special role in the motivation of human resources (Muscalu & Muntean, 2013).

Pinto (2011) conducted a quantitative study to identify the extent to which rewards influence the motivation and satisfaction of employees in the Brazilian economy. According to Pinto, the company that pays the smallest salaries in different departments the administrative area presents a group of unsatisfied employees. A recent example is the salary of health care staff in Romania. While wages and salaries of doctors and nurses have increased at the beginning of the year, the salaries of support staff have remained unchanged or even declined what has caused dissatisfaction and trade union movements. Employee perception of wage satisfaction as a motivating factor could depend on the reward system, a differentiated performance reward providing a high level of motivation.

The purpose of this quantitative study is to explore the ways in which employee reward as a central element of the motivational system influences efficiency and performance within a hospital unit of the emergency medical system. In order to achieve this objective, we will use statistical data on rewards and organizational efficiency within Slatina County Emergency Hospital. The findings of this paper could help to provide more efficient medical services by improving the reward system. The results could also provide managers with a perspective on reward strategies development in order to increase individual and collective productivity. Improving employee productivity could lead to lower taxpayer spending and better quality of healthcare.

The paper contain five sections. The first section is an introduction, while the second section present the research methodology. The third section is represented by an exploratory research on performance and efficiency in the healthcare sector. The fourth section proposed a quantitative model for evaluating the impact of reward policies on employee productivity and organizational performance in hospitals. The fifth section bring conclusion of the research.

Research Methodology

Research is a process that involves defining the goal, managing the data and communicating the results within the established framework and in line with the existing ethical and methodological guidelines. There are three types of methods: quantitative, qualitative and mixed. Researchers usually select the quantitative method for analyzing research questions that involve the existence of numerical data. Researchers addressing qualitative methods address research questions that involve narrative data, and researchers using mixed methods are addressing research questions that require both numerical and narrative data.

The quantitative method is suitable for this study, in this case quantitative research focusing on the relationships between the values of the variables that characterize reward policies and hospital efficiency. The data used in the quantitative study are collected from the Slatina County Emergency Hospital, Romania. We will look at the indicators of medical efficiency and effectiveness that correlate with the indicators regarding the financial reward of the hospital employees. In particular, the correlation between the variable component of the reward and the medical efficiency indicators will be pursued. If significant correlations are found, simulations and prognoses will be made using reward indicators as independent variables and indicators of medical efficiency as dependent variables. In this

way, it can be determined the impact of an increase in financial rewards. Depending on the results, a human resources reward policy can be established to support, along with other resources (material and financial), an improvement in hospital efficiency and performance by increasing human resource productivity.

Performance and Efficiency in the Healthcare Sector

In the healthcare system, unacceptable losses occurring on a continuous basis, which generate high costs for the entire society. These losses are caused by several causes:

- poor or inefficient health technologies or health services;
- high variations in the performance of medical practice and its outcomes in the various hospitals in Romania;
- unequal access to health services;
- patient dissatisfaction with the services received and increased waiting times for receiving health services.

As such, the quality of health services and, implicitly, performance in health care is becoming a priority for health service providers, managers, patients, National Health Insurance Agency, but also for other government institutions and organizations.

The way hospital managers approach the concept of performance differ greatly according to their experience and training. A high-performance management consists of planning activities, implementing measures, evaluating performance, and reviewing the necessary measures to model services and processes to respond to all the needs of the main stakeholders (clients, suppliers, contributors).

Measuring organizational performance is critical to productivity and quality improvement concepts, providing a way to characterize hospital activity and compare results with initial goals to identify opportunities for improvement. "Performance" should be defined in relation to explicit objectives that reflect the values for different stakeholders (such as patients, professionals, county health insurance agencies, patient associations, etc.). In reality, however, very few performance measurement systems in the area of health care focus on results that are important to patients. "Measurement" implies an objective assessment, but does not include value judgments or perceptions of quality. They can be used in parallel to make data interpretations with greater accuracy.

Measuring performance (productivity, individual effectiveness and organizational efficiency) is essential to the concept of quality improvement. Hospitals have many objectives and many stakeholders; they can be seen as groups of values and interests behind the performance measurement process (Ovretveit, 2001)

Statistical indicators may suggest problems related to performance management and quality improvement. These should be interpreted with caution. Indicators are tools for assessing hospital performance either internally or externally. These should be designed to measure the achievement of predetermined objectives, but in practice they are often selected on the basis of currently available information. Performance measurements in individual hospitals can be presented as calculated indicators or as raw data to be processed, aggregated, analyzed and presented by a central agency (National Health Insurance Agency in the case of Romania).

According to Thompson (1998), "much of the current evidence on the effectiveness of performance indicators is based on observational or experimental data, although much of the policy agenda in this area seems to be based on worse case of dogma. "

Measurement of hospital productivity and performance, with different types of indicators, is the systematic identification of the current level of quality achieved by a unit or a system and consists in quantifying the level of performance according to the standards provided. Indicators are instruments that can provide information on frequency, level, scale, severity, etc. of a problem. An indicator is the expression of a characteristic or a specific variable for a particular problem; is the operation of the variable / variables that define the problem. The indicator is defined by a numeric-denominator ratio. The numerator represents the phenomena observed, and the denominator represents the value to be compared (the standard, the general population, the reference value). There are several types of indicators used in the area of health care.

Access indicators that assess the extent to which patients receive appropriate and timely health care (eg possible avoidable admissions, e.g. through immunization, etc.). *Result indicators* refer to the health status of a patient who has been given health care (eg: percentage of patients with postoperative infections, percentage of patients with relapses, etc.). *Process indicators* evaluate a health service provided to a patient. It usually refers to the compliance of patients with medication or recommendations, and can better identify the level at which interventions are required (eg: percentage of patients satisfied with treatment, percentage of patients requiring change of treatment, non-cesarean delivery, etc.) . Result and process indicators have been greatly diversified by introducing the classification system into diagnostic related groups and classifying procedures. There are obvious drawbacks of these indicators given by the informational limitations of administrative data, the vague definition of some diagnoses or procedures or wrong reporting on the accuracy of the data.

Presentation of the Quantitative Model

Within the quantitative model of assessing the impact of reward policies on employee productivity and organizational performance in the hospitals that we propose, we will use a range of health efficiency indicators used in hospitals in Romania, as well as a series of indicators regarding the financial reward of hospital staff. The case study will be done on the example of Slatina County Emergency Hospital. The health efficiency indicators used in the model, as well as their calculation mode, are illustrated in Table 1.

Table 1. Health efficiency indicators

Indicator	Method of calculation
Beds actually occupied (Bao)	days of hospitalization / no. days of the month
Use of beds (U)	day of hospitalization / beds
Use% (U%)	Use beds / no. days of month x 100
Average hospitalization time (Aht)	no. days of hospitalization / no. total of admissions
Running sick on a bed (Rsb)	total admissions / physical beds
The Operability Index (Oi)	cases operated / cases classified as surgical
Index of case mix / hospital / months (ICM)	Total weighted cases / Total cases solved x 100

Table 2 presents the monthly values of the health efficiency indicators in the years 2016, 2017 and the first three months of 2018 at the Slatina County Emergency Hospital.

Table 2. Values of health efficiency indicators in the period 2016-2018 (Q1)

Year	Month	Beds actually occupied (Bao)	Use of beds (U)	Use% (U%)	Average hospitalization time (Aht)	Running sick on a bed (Rsb)	The Operability Index (Oi)	Index of case mix / hospital / months (ICM)
2016	1	845	23	73.3	6.87	3.3	55.46	1.1950
	2	964	24	83.6	6.15	3.9	54.91	1.1907
	3	999	27	86.6	6.69	4.0	51.71	1.1850
	4	882	23	76.5	6.59	3.5	48.72	1.2472
	5	897	24	77.8	6.78	3.6	48.21	1.2409
	6	899	23	78.0	6.45	3.6	48.46	1.2255
	7	875	24	75.9	6.74	3.5	51.4	1.2039
	8	826	22	71.6	6.36	3.5	53.13	1.2305
	9	872	23	75.6	6.39	3.6	52.90	1.2867
	10	935	25	81.1	6.69	3.8	53.03	1.2587
	11	932	24	80.8	6.67	3.6	54.69	1.3310
	12	769	21	66.7	6.57	3.2	53.34	1.3853
2017	1	978	27	85.8	7.12	3.7	55.56	1.3422
	2	976	24	85.6	6.51	3.7	57.3	1.3777
	3	950	26	83.3	6.57	3.9	55.45	1.3286
	4	802	21	70.4	6.41	3.3	55.89	1.3792
	5	915	25	80.3	6.44	3.9	55.39	1.3206
	6	836	22	72.5	6.57	3.3	52.46	1.2934
	7	858	23	74.4	6.46	3.6	57.07	1.2533
	8	827	22	71.7	6.16	3.6	54.89	1.2777
	9	835	22	72.5	6.22	3.5	58.51	1.2472
	10	910	24	79.0	6.60	3.7	57.96	1.3114
	11	929	24	80.5	6.56	3.7	57.57	1.3342
	12	777	21	67.4	6.62	3.2	57.84	1.3375
2018	1	933	25	80.9	6.80	3.7	58.86	1.3237
	2	1017	25	88.2	6.53	3.8	61.04	1.3585
	3	991	27	85.9	6.69	4.0	56.99	1.3525

To illustrate the financial reward of hospital employees, synthetic indicators will be used: the amount of basic salaries paid to employees (the fixed part of the reward), the amount of bonuses paid to the employees (the variable part of the reward), the total wages paid to employees (total financial rewards). These series of indicators will be used in both

the gross amount (including salary tax and social contributions paid by the employee) and in net amount (the amount actually received). Table 3 presents the monthly values of reward indicators in the years 2016, 2017 and the first three months of 2018 in the Slatina County Emergency Hospital.

Table 3. Values of reward indicators in the period 2016-2018 (Q1)

	Month	Gross basic wages	Gross bonuses	Gross total wages	Gross average wages	Net basic wages	Net bonuses	Net total wages	Net average wages
2016	1	5393503	1809679	7203182	4352	3748485	1257727	5006211	3025
	2	5356198	1714321	7070519	4267	3722558	1191453	4914011	2966
	3	5399737	1732028	7131765	4307	3752817	1203759	4956577	2993
	4	5294914	1739253	7034167	4230	3679965	1208781	4888746	2940
	5	5300680	1753000	7053680	4257	3683973	1218335	4902308	2959
	6	5188921	1688384	6877305	4155	3606300	1173427	4779727	2888
	7	4895846	1655600	6551446	3983	3402613	1150642	4553255	2768
	8	4929403	1547652	6477055	3942	3425935	1075618	4501553	2740
	9	5252780	1616093	6868873	3925	3650682	1123185	4773867	2728
	10	5800327	2003401	7803728	4406	4031227	1392364	5423591	3062
	11	5170520	1415026	6585546	4038	3593511	983443	4576954	2806
	12	6331382	2506083	8837465	5415	4400310	1741728	6142038	3764
2017	1	5393503	1809679	7203182	4406	3748485	1257727	5006211	3062
	2	5356198	1714321	7070519	4332	3722558	1191453	4914011	3011
	3	5399737	1732028	7131765	4335	3752817	1203759	4956577	3013
	4	5294914	1739253	7034167	4276	3679965	1208781	4888746	2972
	5	5300680	1753000	7053680	4275	3683973	1218335	4902308	2971
	6	5188921	1688384	6877305	4188	3606300	1173427	4779727	2911
	7	4895846	1655600	6551446	3995	3402613	1150642	4553255	2776
	8	4929403	1547652	6477055	4013	3425935	1075618	4501553	2789
	9	5252780	1616093	6868873	4171	3650682	1123185	4773867	2899
	10	5800327	2003401	7803728	4732	4031227	1392364	5423591	3289
	11	5170520	1415026	6585546	4011	3593511	983443	4576954	2787
	12	6331382	2506083	8837465	5402	4400310	1741728	6142038	3754
2018	1	8355176	3286458	11641634	7051	4887778	1922578	6810356	4125
	2	8268869	3150213	11419082	6942	4837288	1842875	6680163	4061
	3	10801320	3263655	14064975	8529	6318772	1909238	8228010	4990

Since the medical efficiency indicators have a relatively linear evolution, and the indicators illustrating the rewarding a linear trend we used to test the correlation of the Pearson coefficient. We used the values of the variables recorded monthly in 2016, 2017 and three months in 2018 at the level of the Slatina County Emergency Hospital. After analyzing the correlations between the health efficiency indicators used in hospitals in Romania and the indicators regarding the financial reward of the hospital employees, it can

be noticed that there is no strong correlation between the two series of indicators (Table 4). Most of the efficiency indicators depend not only on the involvement and motivation of human resources, but also on the quantity and quality of the financial and material resources available to the hospital. It can be noticed that two effectiveness indicators (operability index and index of case mix) that depend more on the human resource available to the hospital (medical staff in particular) are influenced quite strongly by an increase in incomes of nature as it was at the level of the entire Romanian medical system in general, and especially at the level of Emergency County Hospital Slatina.

Table 4. Correlations between selected indicators within the model

	Bao	U	U%	Aht	Rsb	Oi	ICM	Gbw	Gb	Gtw	Gaw	Nbw	Nb	Ntw	Naw
Bao	1	0.901	0.998	0.283	0.875	0.169	0.033	0.362	0.222	0.327	0.315	0.308	0.120	0.257	0.240
U	0.901	1	0.904	0.494	0.856	0.091	-0.009	0.383	0.245	0.348	0.335	0.351	0.167	0.302	0.283
U%	0.998	0.904	1	0.286	0.873	0.177	0.061	0.347	0.209	0.312	0.301	0.295	0.110	0.244	0.229
Aht	0.283	0.494	0.286	1	0.000	-0.082	0.117	0.238	0.277	0.253	0.249	0.255	0.294	0.274	0.268
Rsb	0.875	0.856	0.873	0.000	1	0.134	-0.076	0.302	0.132	0.257	0.241	0.259	0.037	0.196	0.172
OI	0.169	0.091	0.177	-0.082	0.134	1	0.524	0.424	0.441	0.435	0.453	0.397	0.403	0.409	0.434
ICM	0.033	-0.009	0.061	0.117	-0.076	0.524	1	0.404	0.414	0.413	0.431	0.430	0.425	0.439	0.464
Gbw	0.362	0.383	0.347	0.238	0.302	0.424	0.404	1	0.927	0.994	0.991	0.986	0.868	0.974	0.969
Gb	0.222	0.245	0.209	0.277	0.132	0.441	0.414	0.927	1	0.963	0.961	0.916	0.981	0.960	0.957
Gtw	0.327	0.348	0.312	0.253	0.257	0.435	0.413	0.994	0.963	1	0.997	0.981	0.914	0.985	0.980
Gaw	0.315	0.335	0.301	0.249	0.241	0.453	0.431	0.991	0.961	0.997	1	0.976	0.912	0.981	0.985
Nbw	0.308	0.351	0.295	0.255	0.259	0.397	0.430	0.986	0.916	0.981	0.976	1	0.885	0.989	0.982
Nb	0.120	0.167	0.110	0.294	0.037	0.403	0.425	0.868	0.981	0.914	0.912	0.885	1	0.944	0.940
Ntw	0.257	0.302	0.244	0.274	0.196	0.409	0.439	0.974	0.960	0.985	0.981	0.989	0.944	1	0.994
Naw	0.240	0.283	0.229	0.268	0.172	0.434	0.464	0.969	0.957	0.980	0.985	0.982	0.940	0.994	1

Starting from these significant correlations, we will make simulations and prognoses using reward indicators as independent variables and index of case mix variable as dependent variables. We chose this indicator because it is more complex and covers the whole activity of the hospital, while the operability index targets only the surgical component. As independent variables we chose the net values of reward indicators as a result of the stronger correlation and because they express the actual amount of money received by medical staff. For the forecasting model we used a potential increase in wage earnings by 9.37% in the last 9 months of 2018 (1% per month).

In the table 5 we presented the predictions for ICM values in the last months of 2018, as well as the confidence interval. We applied the ARIMA forecasting model using as an independent variable all reward indicators expressed in net values, then each individual indicator (excluding the net average wage where the results were similar to those obtained with net total wages given the small variation in the number of employees).

Table 5. Forecasting model

Month	All indicators			Net basic wages			Net bonuses			Net total wages		
	Predicted value (P)	Lower confidence limit (UCL)	Upper confidence limit (LCL)	P	UCL	LCL	P	UCL	LCL	P	UCL	LCL
4	1.38	1.26	1.50	1.40	1.28	1.51	1.35	1.23	1.47	1.39	1.27	1.50
5	1.39	1.27	1.51	1.40	1.28	1.52	1.35	1.23	1.47	1.39	1.27	1.51
6	1.39	1.27	1.51	1.40	1.28	1.52	1.35	1.24	1.47	1.39	1.27	1.51
7	1.39	1.27	1.51	1.40	1.29	1.52	1.36	1.24	1.47	1.39	1.28	1.51
8	1.39	1.27	1.51	1.41	1.29	1.52	1.36	1.24	1.47	1.40	1.28	1.51
9	1.40	1.28	1.52	1.41	1.29	1.53	1.36	1.24	1.48	1.40	1.28	1.52
10	1.40	1.28	1.52	1.41	1.30	1.53	1.36	1.24	1.48	1.40	1.29	1.52
11	1.40	1.28	1.52	1.42	1.30	1.53	1.36	1.25	1.48	1.40	1.29	1.52
12	1.40	1.28	1.53	1.42	1.30	1.54	1.36	1.25	1.48	1.41	1.29	1.52

Analyzing the results, we notice that the impact of the increase in fixed financial rewards (basic wages) is stronger than the impact of the variable wage component (bonuses). The human resources reward policy must take into account that basic wages for staff are still low. In order to support the improvement of hospital performance alongside other resources (material and financial) by increasing the productivity of human resources, it is necessary to further increase salaries of healthcare workers to ensure decent living in accordance with their social status. The next step was the increase in the variable component of pay and its linking especially to individual and collective performance, and not to the characteristics of the workplaces (special working conditions) or the extra time worked (the guards). This will stimulate the increase of the medical services quality at the same time with increasing the efficiency and effectiveness of the medical staff.

Conclusions

In the course of the research, data from a single organization in the area of health care was analyzed. Although the area of research is limited, the results can be replicated later in the whole country and even in hospitals outside the country, because the pay system is relatively unitary at the level of hospital units in Romania, and for the determination of efficiency and performance, specific indicators are collected from the records of County Emergency Hospital Slatina and hospital reports to the National Health Insurance Agency. The quantitative model presented in this paper allows to determine the influences of the different components of the reward system on some indicators that express the efficiency and effectiveness, the overall performance within the hospital. For further research, which could involve more human, financial and institutional resources, the research could extend the area to several Romanian hospitals.

The recommendations in this study could help hospital managers improve employees' motivation, management relationships, employee morale, employee retention,

employee productivity or efficiency, patient care, and the effectiveness of organizations. This study will clarify the vision of reward policies and their effects on productivity. Future research focusing on health organizations could continue to expand this line of research and create knowledge to help health managers.

References

1. Achim, I. M., Dragolea, L., & Balan, G. (2013). The importance of employee motivation to increase organizational performance. *Annales Universitatis Apulensis: Series Oeconomica*, 15, 685-691.
2. Adzei, F. A., & Atinga, R. A. (2012). Motivation and retention of health workers in Ghana's district hospitals. *Journal of Health Organization and Management*, 26, 467-485.
3. Bocean, C.G. (2008). *Auditul resurselor umane [Human resource audit]*. Bucharest: Tribuna Economica.
4. Bocean, C.G. (2009). *Managementul performanțelor personalului [Staff performance management]*. Bucharest: Tribuna Economica.
5. Constantinescu, D., Ogarcă, R., Bocean, C.G., Barbu, C., Băloi, C. (2008). *Management: funcții, structuri, procese [Management: functions, structures, processes]*. Craiova: Universitaria.
6. Marin, I. (2012). Increase employee motivation in Romanian SME'S. *Revista De Management Comparat International*, 13, 804-810.
7. Mechinda, P., & Patterson, P. G. (2011). The impact of service climate and service provider personality on employees' customer-oriented behavior in a high-contact setting. *The Journal of Services Marketing*, 25, 101-113.
8. Muscalu, E., & Muntean, S. (2013). Motivation - A stimulating factor for increasing human resource management performance. *Revista De Management Comparat International*, 14, 303-309.
9. Ovretveit J. (2001). Quality Evaluation and Indicator Comparison in Health Care. *International journal of health planning and management*, 16(3), 229-241.
10. Pinto, E. P. (2011). The influence of wage on motivation and satisfaction. *The International Business & Economics Research Journal*, 10(9), 81-91.
11. Shukla, N. K. (2012). How motivation factor affect the organizational effectiveness. *International Journal of Management Research and Reviews*, 2, 430-435.
12. Sorup, C. M. & Jacobsen, P. (2013). Health care performance turned into decision support. *Journal of Health Organization and Management*, 27, 64-84.
13. Souliotis, K., Mantzana, V., Rekleiti, M., Saridi, M., & Contiades, X. (2014). Human resources' satisfaction in the health care sector: A case of a specialized not-for-profit hospital in Greece. *International Journal of Caring Sciences*, 7, 226-238.
14. Thomson, R. (1998). Clinical indicators: do we know what we are doing? *Quality in Health Care*, 7, 122.
15. Urosevic, S., & Milijic, N. (2012). Influence of demographic factors on employee satisfaction and motivation. *Organizacija*, 45, 174-182.