



# The impact of motivation, personal traits of managers and management education on the performances of public healthcare facilities

Uticaj motivacije, ličnih osobina rukovodilaca i obrazovanja u oblasti upravljanja na rezultate zdravstvenih ustanova u javnom sektoru

Nevena Karanović, Sanja Stošić

Graduate School for Business Studies, Megatrend University, Belgrade, Serbia

## Abstract

**Background/Aim.** Exposed to increasing needs of users for better and faster services, more medications and innovative health technologies, managers of healthcare services in the public sector need motivation, permanent updating of information and constant personal development. The aim of this paper was to evaluate, on the basis of experienced healthcare managers, the impact of their motivation, selected character traits, managerial skills and formal education in management on healthcare facilities performances in the public sector. **Methods.** For the purposes of this study, 97 experienced managers from public hospitals and primary health centers in Serbia answered to 30 questions on the motivation of managers, essential skills for successful management and formal education in management in health facilities. The obtained data about their motivation, governing experience, personal skills and formal education in management were systematized and processed by the Statistical Package for Social Sciences (SPSS). Healthcare facilities performances were expressed by the healthcare facilities ranks in the official annual rankings according to the quality improvement, conducted by the Institute of Public Health of Serbia. Pearson's or Spearman's correlation coefficients were used for proving the potential impact of selected factors on performances of healthcare facilities. **Results.** This study confirmed the association between the healthcare facilities ranks and managers' abilities to organize the working process ( $t = -2.453$ ;  $p = 0.018$ ); expressed high managers' motivation ( $pS = 0.206$ ;  $p = 0.048$ ) and the length of governing experience ( $r = -0.198$ ;  $p = 0.043$ ). Within a 3-year follow-up, this study also confirmed a positive correlation between annual ranks of healthcare facilities and managers quality management courses ( $pS = -0.238$ ;  $p = 0.017$ ) and managers education in human resources management ( $pS = -0.234$ ;  $p = 0.027$ ). **Conclusion.** In addition to management education, permanent personal development and higher motivation of managers have positive influence on healthcare performances.

## Key words:

hospitals, public; organization and administration; motivation; questionnaires; quality control; quality assurance, health care.

## Apstrakt

**Uvod/Cilj.** Zbog sve veće potrebe korisnika za kvalitetnijim zdravstvenim uslugama, savremenim lekovima i novim zdravstvenim tehnologijama, neophodno je da rukovodioci u zdravstvenim ustanovama budu motivisani, dobro informisani i da stalno rade na svom ličnom razvoju. Cilj ovog rada bio je da se na osnovu iskustava rukovodilaca procene uticaji faktora motivacije, nekih ličnih osobina, veština upravljanja i formalnog obrazovanja u oblasti upravljanja na rezultate zdravstvenih ustanova u javnom sektoru. **Metode.** U svrhu ovog istraživanja, 97 iskusnih rukovodilaca državnih bolnica i domova zdravlja u Srbiji odgovaralo je na 30 pitanja o motivaciji rukovodilaca, bitnim veštinama za uspešno rukovođenje i formalno obrazovanju u oblasti upravljanja zdravstvenim ustanovama. Dobijeni podaci sistemizovani su i obrađeni u programu Statistički paket za društvene nauke (SPSS). Postignuti rezultati zdravstvenih ustanova izraženi su u osvojenim mestima (redosleda) koja su zdravstvene ustanove zauzele u godišnjim rangiranjima prema unapređenju kvaliteta koje je sproveo Institut za javno zdravlje Srbije. Za utvrđivanje mogućih uticaja odabranih prediktora na rezultate zdravstvenih ustanova korišćeni su linearna regresiona analiza, Pirsonov ili Spirmanov test korelacije. **Rezultati.** Ovaj rad potvrdio je povezanost osvojenih mesta u rangiranju zdravstvenih ustanova sa stavovima rukovodilaca o značaju njihovih sposobnosti da organizuju posao ( $t = -2,453$ ;  $p = 0,018$ ), izraženom visokom motivacijom ( $pS = 0,206$ ;  $p = 0,048$ ) i vremenom provedenim na rukovodećoj funkciji ( $r = -0,198$ ;  $p = 0,043$ ). Tokom trogodišnjeg praćenja rezultata rangiranja, takođe je potvrđena pozitivna uzajamna veza između rezultata rangiranja zdravstvenih ustanova i obrazovanja iz upravljanja kvalitetom ( $pS = -0,238$ ;  $p = 0,017$ ) i upravljanja ljudskim resursima ( $pS = -0,234$ ;  $p = 0,027$ ). **Zaključak.** Pored obrazovanja iz oblasti upravljanja u zdravstvu, stalni rad na ličnom razvoju i jaka motivisanost doprinose unapređenju rezultata zdravstvenih ustanova.

## Ključne reči:

zdravstvene ustanove; organizacija i upravljanje; motivacija; upitnici; kvalitet, kontrola; zdravstvena zaštita, obezbeđenje kvaliteta.

## Introduction

Healthcare has significantly changed for the last 50 years. It is still based on human potential and knowledge in medicine, but it greatly depends on new technologies and knowledge in the fields of economics and management. At the population level, the improvement of healthcare services in Serbia is significant in relation to the total transition environment, but still below the expected and satisfactory value<sup>1</sup>. Though insufficient, budgetary allocations for health care are decreasing, and the technological development does not meet the needs of the population. Citizens of Serbia slowly adopt healthy lifestyles, and have difficulties in accepting the inevitable narrowing of health insurance rights. In addition to financial capabilities, the effectiveness of healthcare facilities in such an intricate environment is increasingly determined by the abilities of managers to support and adapt to changes in the health care system and the society<sup>2</sup>. Competencies of successful managers include conceptual, technical and interpersonal skills<sup>3</sup>. Conceptual skills involve manager's ability to solve complex problems. Technical skills reflect the ability of a manager to achieve specific work tasks. Interpersonal skills allow a manager to communicate and cooperate well with other employees, regardless of whether it comes to colleagues, supervisors or subordinates. These are the reasons why managers of healthcare services need permanent updating of information, upgrading of skills and knowledge in different fields, as well as permanent personal development and motivation for these complex tasks.

The most of healthcare managers in the public sector of Serbia are clinicians ("hybrid managers") with little adequate professional management education and preparation for all the managerial duties. Despite these facts in the previous years some healthcare institutions showed good results in the annual rankings according to the quality improvement, conducted by the Institute of Public Health of Serbia. We assumed that except for the training in the field of management of health care institutions, a significant impact on better performances of those healthcare facilities could be the result of personal qualities and high motivation of their managers.

The aim of this paper was to analyze the opinions of experienced managers of primary healthcare centers (PHC) and general hospitals (GH) in Serbia, and to assess whether their opinions are confirmed by the success of institutions they govern. Particular attention is given to managers' motivation and their opinions on relevant personal traits, skills, and formal management education that have the potential to improve the performances of public healthcare facilities.

## Methods

For the purposes of this paper, which was a part of the wider explorative study, we analyzed the statements of 97 top managers of 79 public health facilities (24 GHs and 55 PHCs) that were ranked in the annual rankings during a 3-year period, from 2008 to 2010. The data were collected in March and April 2013, by the questionnaire containing 30 questions. The questions were divided into 5 categories, for-

mulated to provide the data about: healthcare facilities (kind, level, founder, size, and rank); manager's education, gender, position in the healthcare organization and the length of governing; personal views of managers on motivation for governance (we offered 5 potential motivating factors: striving to confirm their own organizational skills, the desire to improve functioning of the health institution, personal dissatisfaction with the way in which their predecessors performed the work, self-affirmation, and "some other personal reasons"); opinions of managers related to personality traits, skills, and formal education that are useful for good leadership in this field (What are the most valuable managers' personal traits? What profession can successfully manage a healthcare facility? How much they are willing to educate themselves formally in the field of management? Who should be teachers in healthcare management courses? Which form of knowledge transfer suits the managers in healthcare best? What training programs would be most appropriate?); opinions of managers on similarities and differences in managing healthcare and business organization; opinions about the differences between the functions of healthcare and business organization managers; opinions about major limiting factors for better management in healthcare services; opinions about differences between managers of successful and non-successful health care organizations.

In some questions, respondents were asked to rank the offered evidence by the degree of relevance, from 1 (highly significant) to 5 (not important), according to the own knowledge and experience.

The attitudes respondents expressed through the questionnaire pointed to the managers' personal traits, skills and formal education in management that potentially affect health facilities management are considered as potential predictive factors for success. These factors were correlated with the official results of annual rankings, conducted by the Institute of Public Health of Serbia. Annual rankings use four groups of indicators – the quality of healthcare facilities, satisfaction with services provided, a professional satisfaction of employees in healthcare services and indicators relating to the education and training of employees. Annual ranking is the original methodology based on the estimation of the quality of work, stemmed from the initiative of the Commission for Improving the Quality of Work (the regulatory body of the Ministry of Health of the Republic of Serbia)<sup>4</sup>. In particular, as a measure of achieved performances of health facilities, we used the winning seats ("ranks") of healthcare institutions in the rankings conducted in 2008<sup>5</sup>, 2009<sup>6</sup> and 2010<sup>7</sup>. During this period, all of the respondents were in governing positions in healthcare organizations. For determining a possible relationship between the ranks and potential predictive factors for success, we used Pearson's or Spearman's rank correlation coefficient. Health institutions ranked in the upper third of the ranking tables were considered as "successful". The health institutions ranked in the middle third, and the last third of the tables were considered as "less successful" and "unsuccessful", respectively. The obtained data were systematized and analyzed by the Statistical Package for Social Sciences (SPSS).

**Results**

The general data about managers involved in this study (age, length of governing, gender, managers' positions in the healthcare institutions, number of PHCs' and GHs' managers and type of education in the field of management) are shown in Table 1. Among surveyed managers, 84.55% were executives of medical profession – physicians, dentists or pharmacists. The majority were medical doctors (78.35%). Managers with non-medical qualifications – economists and lawyers, were presented in a smaller percentage (9.27% and 6.18%, respectively).

The percentages of individual answers to motivation for governing are presented in Figure 1. The study confirmed the association between expressed leader's high motivation to improve the functioning of healthcare facility and institution's rank. The strongest correlations (Spearman's rank correlation coefficient –  $r_s$ ) with respect to this item were found in the rankings after the first years of managers' mandates ( $r_s =$

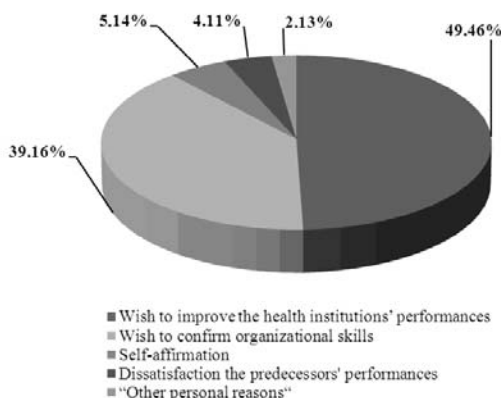
0.206;  $p = 0.048$ ). Pearson's correlation has showed that the length of managers governing experience positively correlated with the institutions ranks in this research ( $r = -0.198$ ;  $p = 0.043$ ).

Assessment of opinions about competencies required for governing revealed that more than one-third (37.97%) of the respondents considered that for the successful leadership managers of healthcare facilities in the public sector need the same skills as business leaders. On the other hand, almost half (49.37%) of them do not agree with this statement. The managers also judged and evaluated the impacts of certain managerial skills that they considered as necessary for the successful management of healthcare facilities. According to the responds, the most essential skills for good managing results in health services are: the ability of managers to make decisions based on evidence, ability of prediction, and of good communication. In comparison with the mentioned skills, managers' capacities for adaptation and ability to work under pressure were valued as "less important skills" (Figure 2).

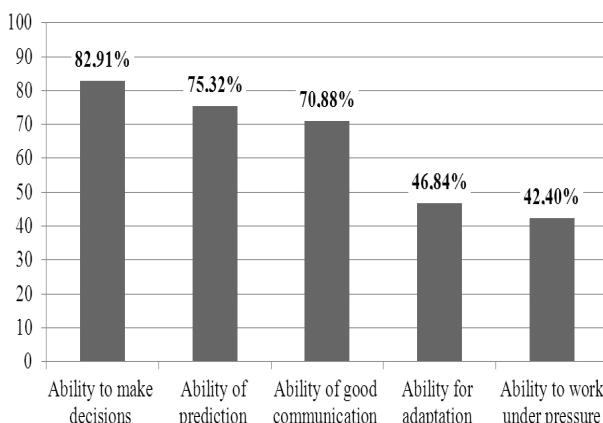
**Table 1**  
**Some of the characteristics of the surveyed group of healthcare managers**

| Parameters                                 | n  | %     |
|--|----|-------|
| Gender                                     |    |       |
| female                                     | 37 | 38.14 |
| male                                       | 60 | 61.86 |
| Position in the health care institution    |    |       |
| general manager                            | 61 | 62.89 |
| deputy manager                             | 11 | 11.34 |
| assistant manager                          | 25 | 25.77 |
| Managers according the size of PHC centers |    |       |
| small PHC ( $\leq 25,000$ inhabitants)     | 17 | 17.54 |
| medium PHC (25,000–50,000 inhabitants)     | 19 | 19.58 |
| large PHC ( $\geq 50,000$ inhabitants)     | 19 | 19.58 |
| Total                                      | 55 | 56.70 |
| Managers according the hospital size       |    |       |
| small ( $\leq 100,000$ inhabitants)        | 18 | 18.54 |
| large ( $\geq 100,000$ inhabitants)        | 24 | 24.76 |
| Total                                      | 42 | 43.30 |

PHC – primary healthcare centers.



**Fig. 1 – Individual answers about the motivation for governing.**



**Fig. 2 – Managerial abilities considered necessary for successful management in healthcare facilities.**

The dominant opinion among surveyed is that only a medically qualified person can successfully manage healthcare service (Figure 3).

The respondents estimated that responsibility (94.31%), consistency (84.83%) and ability to communicate well (74.68%) were the most important personal characteristics of successful managers in healthcare services. About two-thirds (65.83%) of the respondents believe that flexibility is not necessarily a characteristic of a successful director. Also, even 65.45% of the surveyed do not think that tolerance is an important characteristic of a successful healthcare service manager.

According to the attitudes of managers stated in the questionnaire, some factors (Figure 4) are essential for the success in managing healthcare institutions. These factors are tested by linear regression analysis, as a group of “selected

predictors of success“. Regression analysis confirmed that this group of selected predictors explains 36.72% of the variance in this sample of managers, and that the obtained model is statistically significant ( $R^2 = 0.367$ ;  $p = 0.046$ ). In individual testing of performances of each of the factors of the “selected predictors of success“, only the managers’ abilities to organize the working process showed a statistically significant connection ( $t = -2.453$ ;  $p = 0.018$ ). Zero correlations of potential positive influence on health facilities performances were found for other enumerated factors (available human resources in the organization, teamwork, financial discipline and a political support for the manager).

The cumulative number of surveyed managers that attended courses dealing with management in healthcare facilities was 65 (67.01%) (Table 2).

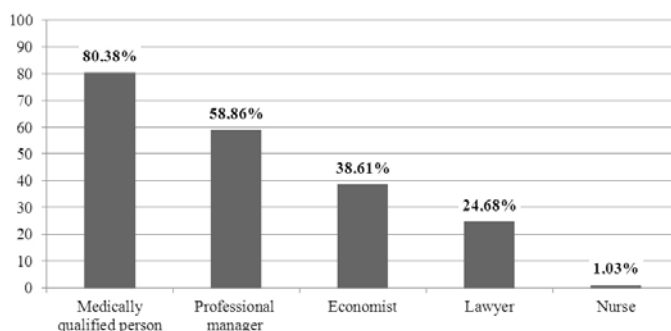


Fig. 3 – Managers’ opinions on who is capable to manage the healthcare services.

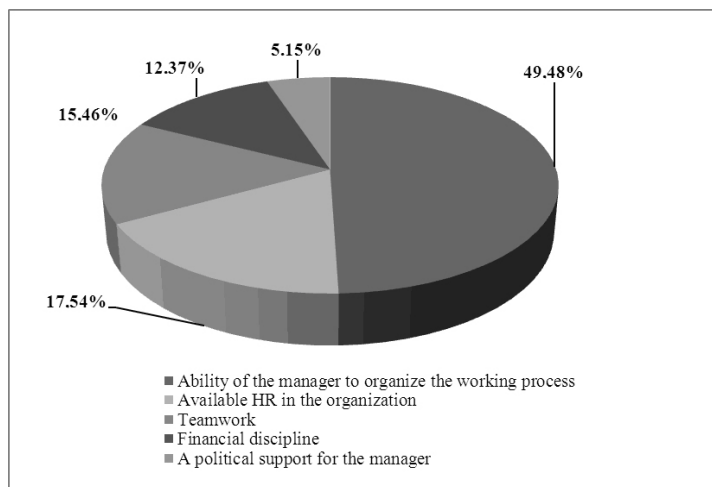


Fig. 4 – Managers’ opinions on essential factors for successful governing.  
HR – human resources.

Table 2  
Number of surveyed managers who attended management courses and their opinions about the applicability of some programs

| Program               | n (%)      | HRM        | QM         | SP         | FM         |
|-----------------------|------------|------------|------------|------------|------------|
| MH                    | 31 (32.96) | 31         | 5          | 31         | 31         |
| FOS                   | 5 (5.15)   | –          | 5          | 5          | 5          |
| SM                    | 20 (20.62) | 20         | –          | 20         | 20         |
| FBS                   | 9 (9.28)   | 9          | 9          | –          | 9          |
| Score                 | 65 (67.01) | 59         | 19         | 56         | 65         |
| Applicable for, n (%) |            | 53 (89.83) | 17 (89.47) | 50 (89.28) | 53 (72.31) |

MH – specialized courses for hospital managers, Ministry of Health of Serbia; FOS – Faculty of Organizational Sciences, postgraduate course; SM – School of Medicine, Belgrade University, accredited postgraduate course; FBS – Faculty of Business Studies, Megatrend University, accredited postgraduate course; HRM – Human resource management program; QM – Quality management program; SP – Strategic planning program; FM – Financial management program.

According to the personal experience of educated managers, they gained the most applicable knowledge from the programs of human resources management (HRM) – 89.83%, quality management (QM) – 89.47%, strategic planning (SP) – 89.28%, and financial management (FM) – 72.31 (Table 2). A statistically significant positive correlation was found between managers' education in the field of HRM and institutions rank in all three rankings. It means that those facilities whose managers stated that the courses of HRM were very applicable had better rankings than the institutions whose managers did not. The facilities whose managers found the QM program most useful in practice also had better rankings than those institutions whose managers had no such experience (Table 3).

## Discussion

Due to the significant influence of healthcare managers on functioning of public healthcare facilities, most of the researchers take into account their experience and opinions. On the other hand, some authors suggest that the observation in

best top managers in healthcare services. This statement is not surprising because most of the responders were medical doctors. However, some of them accepted the fact that a health institution can be successfully run by a non-medical professional manager, lawyer, economist, and even – a nurse.

In Europe, the proportion of top hospital managers with clinical expertise varies from country to country. Managers with clinical degrees run approximately 93% of hospitals in Sweden, 71% in Germany, 64% in France, and 58% in the United Kingdom<sup>11</sup>. According to this survey, there was a strong relationship between an increase in the number of managers with a clinical degree and an improvement in organization's management score. The authors indicate that managers with clinical expertise may have a deeper insight into clinical challenges, better communication with clinical staff in a language they understand and enjoy credibility that non-clinicians rarely achieve. However, these facts do not mean that doctors are fully competent to manage medical facilities.

In a qualitative study made in Australian public hospitals in 2003, the interactive interviews of healthcare mana-

**Table 3**

**Correlation between managers' education in human resource management program (HRM) and quality management program (QM) with the institutions' ranks in the period 2008-2010**

| Year   | HRM education<br>v.s. rank | QM education<br>v.s. rank |
|--|----------------------------|---------------------------|
| 2008   |                            |                           |
| correlation coefficient (Spearman's rho)                           | -0.275                     | -0.208                    |
| sig. (2-tailed)  | 0.046                      | 0.046                     |
| number of healthcare facilities ranked in the Annual ranking 2008  | 49                         | 49                        |
| 2009   |                            |                           |
| correlation coefficient (Spearman's rho)                           | -0.292                     | -0.279                    |
| sig. (2-tailed)  | 0.005                      | 0.007                     |
| number of healthcare facilities ranked in the Annual ranking 2009  | 49                         | 49                        |
| 2010   |                            |                           |
| correlation coefficient (Spearman's rho)                           | -0.234                     | -0.238                    |
| sig. (2-tailed)  | 0.027                      | 0.017                     |
| number of healthcare facilities ranked in the Annual ranking 2010* | 47*                        | 47*                       |

**\*Due to the consequences of earthquakes in Kraljevo (2010) the General Hospital and primary healthcare centers (PHC) in Kraljevo did not participate in the an-**

this field should be more objective<sup>8</sup>. They point out that observation can generate a partially independent researcher's view, based on the experiences that the respondents drew on to construct their realities<sup>9</sup>. The combination of mentioned approaches would certainly be the most useful one for objective consideration and improvement of management in the field of healthcare in the public sector.

The professional background determines the influence strategies that managers use in healthcare. It may be both a resource and a constraint<sup>10</sup>. According to this survey, the most managers of GHs and PHCs in Serbia are not professional managers, but medical doctors. Initially, they had little knowledge about management in healthcare services. They acquire the managerial knowledge and skills mainly through work in the governing positions. The vast majority of the respondents in this survey believed that clinicians can be the

managers showed that they supported the hybridized configurations of leadership in public hospitals<sup>12</sup>. The terms "hybrid leadership" and "hybrid management" have been used to describe managers who combine a professional medical background with managerial skills and responsibilities<sup>13</sup>. Some other studies suggest that it is not possible to predict what the impact of leadership concept is likely to be on health services in the future or on those who provide the services<sup>14</sup>. Professional roles and influence strategies should be a significant theme in leadership development programs for health care professionals<sup>15</sup>.

There are not enough accurate data about the motivation of managers for taking the responsibility for health institutions' governance in the public sector. The term "motivation" in the available literature usually relates to the managers' impacts on staff and offenders to work better. It deals with

the ways in which managers encourage assistants and other employees to contribute to organization to achieve its goals. Motivation is also connected with the ways in which managers at various levels of organization motivate their associates and other employees to work to achieve their personal goals<sup>16</sup>. Managerial positions in the public health services in Serbia are relatively poorly financially evaluated in comparison to the wages of doctors. This study proceeded from the assumption that the non-pecuniary compensations are of a particular influence on why physicians replace their profession usually with a dual position of "hybrid manager". It confirmed an assumption that managers of healthcare facilities were mostly driven by a desire to affirm their organizational potentials and to improve the functioning of health institutions.

As with business leaders and other organizations, there are some features of individuals that can help defining who the good managers of healthcare facilities are. These qualities can be character traits (commitment, personal beliefs, analytical thinking, and self-awareness), but they can also be developed like motivation and education<sup>17</sup>. In this study, we proved that public health institutions managed by directors whose primary motivation was the improvement of health facility functioning showed better results in rankings than healthcare services run by leaders whose main motivation was dissatisfaction with results of their predecessors. The results in annual rankings were also good for those managers who were led by self-assertion or the other personal reasons.

The correlations between a manager's motivation and institution's rank were mainly registered in the first year of directors' mandates. In the latter rankings, the direction of the association was positive, but the correlation was not proven. These findings can be explained by assuming that the managers are more motivated in the first years of their mandates. Motivation increases their activities, and they find ways to solve problems. Practice experience has shown that over the time and by facing many problems in the public healthcare sector, the managers' motivation is getting weaker. A higher impact on management outputs in the following years of governing have other factors, such as working experience, practical knowledge, skills, and talents.

Of all the tested predictors of health services' progress in this study (manager's ability to organize the working process; available human resources in the health care institution; importance of financial discipline; teamwork and political support for management), only the "managers' abilities for organizing the working process" had statistical significance. This result means that GHs and PHCs whose managers recognized that the success of health institution depends on managers' abilities to organize the working process had better ranks than those managers who did not recognize it as the most important. The other tested factors mentioned above were not proved to influence the health facilities' performances. These results point to the weakness of the health care system, poor organization and lack of regulation of the system. In the well-organized healthcare systems, personal qualities and attitudes of managers should not predominantly affect the quality of health care facilities, but formal education,

continuous training and development of skills that are necessary to perform management functions.

A positive correlation between the length of time that a manager has spent in a managerial position and better institution ranking may derive a logical conclusion that the accumulation of manager's experience reflects the success of the healthcare institution. A statistically significant positive correlation can be interpreted in the opposite direction, that is, the performance of the manager of the health institution "extends the time" of its mandate. In any case, there is a positive and significant correlation of greater experience in management positions with better healthcare facility ranking.

Practice has shown that there are no reliable ways to train the proper healthcare managers. Modern management courses usually suggest to leaders in healthcare to achieve their maximal potentials and to direct resources towards everything that will make their facilities achieve better results. Development of adequate postgraduate management programs for managers of public healthcare services started in Serbia in 2006, through the "Serbia Health Project" of the Ministry of Health. The World Bank financially and technically supported it<sup>18</sup>. In cooperation with the Chamber of HealthCare Institutions of Serbia, within the "Serbia Health Project – Additional Financing", planned activities were also directed towards supporting the improvement of healthcare management. The project also intended to promote the improvement of the legal framework in all the areas where project activities were taking place, as a necessary precondition for the reform of management<sup>19</sup>. Both courses had different curricula, but they mainly focused on the development of management skills that are necessary for training healthcare managers for complex tasks imposed by the health system reform – strategic planning, human resource management, quality management, financial management.

Accredited one-year postgraduate programs started later, in 2009, at the School of Medicine (SM) of the University of Belgrade, as master studies "Management in the healthcare system", through the "Serbia Health Project – Additional Financing"<sup>18</sup> and "The Training in Health Service Management in Serbia"<sup>19</sup> of the Ministry of Health. The specialized academic studies "Management of the healthcare facilities" started the same year at the Faculty of Business Studies of the Megatrend University (FBS). The curricula of both postgraduate programs cover all the areas of management, from health economics, management of finances, through strategic planning and development in the health care system, to HRM, organizational behavior, and QM in healthcare.

Better healthcare services performances in this study were associated with managers' education in the field of HRM and QM, no matter what educational program they attended. This fact suggests that in these areas the educational programs were well programmed and adapted to the needs of the healthcare system in transition. On the other hand, although a great percent of surveys stated that the strategic planning and financial management programs were very applicable, we did not find a significant association with the management success in respect of these items.

## Conclusion

Healthcare facilities of the public sector in Serbia became complex organizational and technical systems in the healthcare system with many weaknesses. In that intricate surrounding, their managers have to develop skills in the planned and systematic way – through the formal education and regular training for the responsible tasks they perform. Though the current management programs are still under development in Serbia, this study shows that they have positive

influences on better performances in health care, together with the permanent personal development and higher motivations of managers. However, there is the need for evaluation and development of curricula of existing management courses and postgraduate programs. Their quality and applicability could be of particular importance for maintaining and improving the healthcare system. Introducing continuing education in this area and the appropriate licensing of managers for healthcare should also become a real challenge to health authorities in the future.

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