STRENGTHS AND WEAKNESSES OF THE ROMANIAN HEALTH SYSTEM MANAGEMENT

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Abstract

The purpose of this paper is to highlight the main strengths and weaknesses of health services management in Romania and the manner in which the key stakeholders relate to them. Taking into consideration that those who can provide the most valuable information are those directly involved, the identification of strengths and weaknesses is based on an empirical research carried out from a dual perspective: that of the employees and specialists from the healthcare system and that of the patients, as their beneficiaries. The collected data were also used for testing the research hypotheses and most of them were validated. In the end, we point out a series of directions in order to improve the performance and effectiveness of the Romanian health system management.

Keywords: Romania, healthcare, management, strengths, weaknesses

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1. Introduction

In the current healthcare environment, which is characterized as unpredictable, unfamiliar, ambiguous and amorphous (Peoples and Sanders, 1994, p. 1), organizations 'are confronted with challenges and uncertainty in their actions and need to be capable of adapting to new situations and environments in order to 'survive' – remain competitive and be effective.' (Baba *et al.*, 2009, p. 33).

'The strategic management at the level of the health system [...] aims at positioning medical units in their relation with the competitors from the external environment' (Kanellopoulos, 2012, p. 265) in order to accomplish the mission and vision of their organization. Promoting strategic management, based on rigorous diagnostic studies, SWOT analysis, market researches, ecological studies and national strategies, is becoming a necessity for both health organizations and for the health system as a whole.

Strategic health of an organization[1] depends on how the key strengths are leveraged to exploit prime opportunities while, at the same time, minimize exposure of the critical weaknesses to the serious threats in the external environment (Mbachu and Frei, 2011, p. 278). In this context, particular importance should be given to highlighting and analyzing strengths. As shown by Nicolescu, Popa and Nicolescu (2014, p. 74), strengths are essential elements of any system that decisively determine its functionality and performance. Moreover, performance achievement through the development of strengths is faster, with less effort and resources than through eliminating/reducing weaknesses (Nicolescu, Popa and Nicolescu, 2014, p. 74).

The aim of this paper is to highlight the main strengths and weaknesses of health services management in Romania and the manner in which the key stakeholders relate to them, in order to formulate a series of proposals and directions for improving its performance and effectiveness. According to Popa *et al.* (2009, p. 84) 'stakeholders are persons or groups with an interest or a direct or emotional personal involvement in a certain organization and its performance. This category includes: managers, employees, unions, customers, suppliers, banks, etc.' Fottler *et al.* (1989, p. 527) generated an exhaustive list of health organizations' stakeholders, which he divided into three categories: internal stakeholders – those who operate entirely within the bounds of the organization (managers, professional and non-professional employees), interface stakeholders – those who are on the interface between the organization and its environment (e.g., medical staff), and external (suppliers, competitors, government, professional associations, patients and the local community). Taking into consideration that those who can provide the most valuable information are those directly involved, and that in order to shape a comprehensive and realistic image on the main strengths and weaknesses of the Romanian health care system management, we have chosen to

1 Mbachu and Frei (2011) differentiate strategic health of an organisation, which is forward looking and aimed at securing the desired future state, different from its current status quo, from the present organization's health, which may be focused on delivering short-term targets.

analyze them from a dual perspective: that of the employees and specialists from the healthcare system, and that of the patients, who are the beneficiaries.

2. Strengths and weaknesses of the Romanian health system

Over time, various authors have identified a number of strengths and weaknesses of the Romanian health care services, both at the organizational level and at level of the Romanian health system as a whole. For instance, Cicea, Buşu and Armeanu (2011) identified among the strengths of the Romanian health care system: the relatively high number of service suppliers for each type of medical care and the existence of medical centers of excellence, which leads to an inflow of patients, regardless of the area they live in, and the implementation of hospital financing system – DRG; and among the main weaknesses: the precarious condition of the financial resources allocated to the health care system, lack of real financial and managerial autonomy, and high incidence of contagious and chronic diseases.

An overview of the Romanian health system weaknesses, in the European context, is shaped by Euro Health Consumer Index 2013 Report, which is the seventh study made on European healthcare systems with the aim 'to select a limited number of indicators, within a definite number of evaluation areas, which in combination can present a telling tale of how the healthcare consumer is being served by the respective systems.' (Björnberg, 2013, p. 19). Given the scores and ranks, in relation to the other European countries, we can consider that all six fields of interest from the report show weaknesses of the Romanian health system: (1) patient rights and information: rank 23-27 of 35 countries; (2) accessibility/waiting time for treatment: rank 23-30 of 35; (3) outcomes: rank 34-35 of 35; (4) range and reach of services: rank 33 of 35; (5) prevention: rank 24-28 of 35; and (6) pharmaceuticals: rank 32-33 of 35 (Björnberg, 2013, p. 26).

Other authors (Stanciu and Jawad, 2013) conducted an analysis of the issues facing the Romanian public health system. These referred to: (1) low wages of the medical staff, which adversely influenced the amount and quality of delivered services and caused the medical staff to migrate towards west; (2) the deficient financing of the national health system; (3) restricted access to health services; (4) the lowest consumption of medicines per capita at the purchasing power parity within the European Union.

3. Strengths and weaknesses of the Romanian health system management – pilot study

We should mention that the present paper is the first attempt to outline, through a quantitative research, the strengths and weaknesses of the managerial component of the Romanian health system, in the view of the most important categories of stakeholders, through an inquiry-based survey.

A similar approach has been implemented in the last six years (2009-2014) by Nicolescu, Verboncu, and Profiroiu (2010, 2011), Nicolescu *et al.* (2012), Nicolescu, Popa and Nicolescu (2013, 2014) which evaluated the 'health' of Romanian management,

both at national and at company level, based on empirical researches which also used questionnaires as data collection tools. Among the parameters examined, an important role was given to the instrumental parameters related to strengths, respectively weaknesses of management practices.

3.1. Methodology and limitations

The research methodology involves the following steps: (1) research hypotheses, (2) questionnaire design, based on the independent and dependent variables necessary in order to test the research hypotheses, (3) choosing the investigated population, (4) selecting the two samples of respondents, (5) collecting and processing information (with technical support of IBM SPSS Statistics 22.0 statistical program), and (5) testing the research hypotheses (Popa, Ștefan and Popescu, 2015a, p. 793).

Taking into consideration the aim of this paper, and based on previous studies and personal empirical observations, we formulated the following hypotheses:

H1. The perception of strengths and weaknesses of the health services management has little variation between the two categories of stakeholders.

H2. There are no significant differences between the patients' opinion, according to their origin – from one of the eight regions, about the strengths and weaknesses of health services management.

H3. There is a significant relationship between the respondents' opinion on the strengths of the Romanian health system management and the performance level, compared to the previous year.

The identification and analysis of strengths and weaknesses of the Romanian health system management was based on an inquiry-based survey, which used the questionnaire as data collection tool. It was requested that from a list of strengths (Table 2) and weaknesses (Table 3) to indicate which are the first five valid ones. The list of the strengths and weaknesses used in the research include items concerning: the management system with the decisional, methodological, informational, structural and organizational subsystems, human resources management, managers, leadership, organizational culture, effectiveness, efficiency, competitiveness and sustainability, and was adapted to the peculiarities of the health system, after the one developed by Nicolescu, Verboncu and Profiroiu (2010; 2011, pp. 215-217), Nicolescu *et al.* (2012, pp. 216-217), Nicolescu, Popa and Nicolescu (2013, pp. 214-216; 2014, pp. 276-278), and which proved its utility in the past six years in the identification and analysis of strengths and weaknesses of the management practiced in Romania, both at national and at firms' level.

In fact, two parallel surveys were carried out during March-April 2013, as part of a broader study on strategy and strategic management in the Romanian healthcare system. The first survey was conducted using a sample of 42 specialists and employees, from the outpatient clinic of the National Institute of Rehabilitation, Physical Medicine and Balneoclimatology. It should be mentioned that, for reasons related to the difficulty of the questions and the real possibility to provide informed answers,

the studied population did not include the auxiliary staff, so the final number of persons was 74, from which we selected the 42 respondents. The sample was determined using the simple random sampling method, and a sampling frame, consisting of the employees list, which provided a guarantee of the outcome probability of 95% and a minimum acceptable error of +/- 10.1%. From the 42 respondents, nearly half (47.6%) have worked within the organization more than 10 years, more than a third (35.7%) between 5 and 10 years, 11.9% between 2 and 5 years and only 4.8% less than 2 years.

The second survey was done online; it was designed to outline an overall picture of the opinions of the second category of stakeholders, patients, who are the beneficiaries of health services. The main reason in choosing this method was that it allowed us to address a larger population, spread over a large geographical area, with an ease of collecting and processing results. Moreover, it implied significantly lower costs (financial, time) compared to the traditional method. Since it is not possible to use probabilistic sampling methods when addressing online surveys to a population as comprehensive as that of the 'patients', we opted for a convenience sampling method. Opt-in e-mails were sent to approximately 600 potential respondents, by using Google Docs as a support platform. The response rate was ≈ 50. As recommended by Van Selm and Yankovski (2006, p. 440), we constructed a screened sample 'by collecting relevant screening data in the survey responses so that only responses from the required sample are analyzed'. Thus, by means of a filter-question, only the respondents who declared they received medical services in the Romanian health system in the last year were identified and included in the sample (as 'patients'). The final sample of 303 respondents 'provided a guaranteed outcome probability of 95% and a minimum acceptable error +/- 5.7%' (Popa and Ștefan, 2014). Typically, an online survey would generate a limitation for the research as it narrows the possibility of being included in the sample, targeting only internet users (generally young and adult people, with above-average training). This time we considered it as an advantage, due to the higher level of knowledge needed to fill in such a questionnaire. The structure of the sample is presented in Table 1.

Table 1: Demographic profile of the second sample

Country region		**Gender**	
North – West	4.95%	Female	54.79%
Centre	4.95%	Male	45.21%
North – East	13.86%	**Age**	
South – East	18.81%	Less than 30 years	15.84%
South	19.14%	31 - 40 years	24.09%
Bucharest – Ilfov	31.35%	41 – 50 years	39.93%
South – West	2.64%	51 – 60 years	19.80%
West	4.29%	Over 60 years	0.33%

Source: Authors' calculations

In order to maximize the representativeness of the two samples, we validated them based on the theory of statistical significance of the differences between: the weights of the various layers in the population studied, and the same weights obtained from the sample, by means of a statistical test based on t-Student distribution (Constantin, 2009, p. 122). When it was needed, the sample was adjusted so that the differences in weights of the layers become statistically insignificant.

Being the first attempt to outline the strengths and weaknesses of Romania's health system management from the perspective of two major stakeholders – health care specialists and patients, through a survey, the study has a series of limitations: (1) samples are not nationally representative for either category, thus no generalizations are possible; (2) another limitation, mentioned in the methodology, is the selection method of patients which was made based on convenience and included only individuals with internet access.

3.2. Results and analysis

Further, we refer to the strengths/weaknesses as they emerged from the responses to the questionnaires, applied to the two samples (specialists and employees in the health care system – sample no. 1, and the questioned patients – sample no. 2).

In terms of strengths (see Table 2), the analysis of the responses of the specialists and employees in the health care system reveals: (1) none of the strengths identified obtains over 20% of responses, reflecting a rather high level of diversity of perceptions and options regarding the strengths of the health system management in Romania; (2) the fact that the first is 'the focus on performance' (19.05) is a positive element, since it is the reason of being for any management system; (3) also on the first place, 'effective organization of the activities' and 'development of a high performance IT system' indicate a growing interest towards the most visible aspects of management. From the analysis of the second sample we can draw the following conclusions: (1) as in the case of the first poll, none of the strengths added up as the majority of the options given; (2) also, the respondents of the 2nd group picked as top ranking the following: rank 2 – 'development of a high performance IT system' (39.60%) and rank 3 – 'effective organization of the activities' (39.27%); (3) unlike the first survey, 'rigorous control and evaluation of activities and performance' (40.26%) is in the first place this time, demonstrating the great importance given to it, compared to that of the staff who works directly in the health system. Feedback is noticeably different in terms of 'design and implementation of functional and effective management systems' (2.38% in the first survey, and 25.74% in the second), and in terms of 'the judicious coordination of decisions, actions and behaviors of involved staff' (2.38%, respectively 29.37%). We also note that only patients see 'intense relations with organization's internal and external stakeholders' (0.00% and 7.59%) as a strength, although it has the least amount of responses.

Regarding the weaknesses (see Table 3), from the analysis of the answers of specialists and employees in the healthcare system, the following elements emerge: (1) as in

Table 2: Strengths of management practiced in the healthcare system in Romania

	Strengths	STR_S1 (employees)			STR_S2 (patients)		
		N	(%)	Rank	N	(%)	Rank
S_1	The focus on performance	8	19.05	2	85	28.05	7
S_2	Development of well-founded strategies and policies	3	7.14	15	86	28.38	6
S_3	Effective organization of the activities	8	19.05	2	119	39.27	3
S_4	The judicious coordination of decisions, actions and behaviors of involved staff	1	2.38	18	89	29.37	5
S_5	Intense mobilization of employees in organization	7	16.67	4	74	24.42	10
S_6	Rigorous control and evaluation of activities and performance	6	14.29	7	122	40.26	1
S_7	Design and implementation of functional and effective management systems	1	2.38	18	78	25.74	8
S_8	Quick and effective feedback to developments in the business environment	4	9.52	12	57	18.81	14
S_9	High creativity and innovation	6	14.29	7	53	17.49	17
S_{10}	Intense transfer of managerial know-how from other countries	5	11.90	10	53	17.49	17
S_{11}	The widespread and effective use of modern management methods and techniques	5	11.90	10	77	25.41	9
S_{12}	Unlocking of the operational and decision-making potential of the information	6	14.29	7	67	22.11	12
S_{13}	Intense relations with organization's internal and external stakeholders	0	0.00	19	23	7.59	19
S_{14}	Strong entrepreneurial spirit and initiative	6	14.29	7	72	23.76	11
S_{15}	Development of a high performance IT system	8	19.05	2	120	39.60	2
S_{16}	Intense training of employees	3	7.14	15	56	18.48	15
S_{17}	Effective marketing activities	4	9.52	12	39	12.87	18
S_{18}	The style of work of managers focused on involvement and effectiveness	2	4.76	16	105	34.65	4
S_{19}	Ensuring the sustainability of the organization	4	9.52	12	60	19.80	13

Source: adapted from Nicolescu, Verboncu and Profiroiu (2010; 2011, pp. 215-217), Nicolescu *et al*. (2012, pp. 216-217); Nicolescu, Popa and Nicolescu (2013, pp. 214-216; 2014, pp. 276-278)

Author's own calculations based on survey responses

the case of strengths, none of the weaknesses meet a majority of responses, reflecting the heterogeneity of opinions and perceptions of those questioned; (2) by far, the first place (26.19%) is occupied by a focal point in human resources management: 'insufficient capacity to motivate employees in the organization', reflecting the importance given by respondents to this resource in achieving performance in the health sector, on the other hand marking a weak point in the current period; (3) in the following position, we have with the same proportion (with 21.43%), 'implementation of empirical and non-professionally designed management systems' and 'improper organization of the activities', both referring to components of the management system of the organization. Analyzing the responses from the 2nd sample of respondents we may conclude: (1) again, the most significant weakness of the health system management is seen as: the 'insufficient capacity to motivate employees in the organization' (53.80%). It should be noted that this opinion is expressed by a higher percentage of

respondents from outside the system, compared to those directly involved and affected, which means there is a high public awareness about this major problem which the health system is facing; (2) on the second place is the 'improper organization of the activities' (46.86%); (3) on the third position is another weak point referring to management functions, 'ineffective coordination of personnel' (40.26%); (3) 'insufficient consideration of organizational culture in the organization' ranks last of the weaknesses in the opinion of both groups of respondents (0.00% respectively 6.93%).

Table 3: Weaknesses of management practiced in the healthcare system in Romania

	Weaknesses	WEAK_S1 (employees)			WEAK_S2 (patients)		
		N	(%)	Rank	N	(%)	Rank
W_1	Not focusing on priorities	5	11.90	9	117	38.61	4
W_2	Poor or nonexistent strategies and policies	1	2.38	22	92	30.36	7
W_3	Improper organization of the activities	9	21.43	3	142	46.86	2
W_4	Ineffective coordination of personnel	7	16.67	6	122	40.26	3
W_5	Insufficient capacity to motivate employees in the organization	11	26.19	1	163	53.80	1
W_6	Ineffective control-evaluation	2	4.76	18	92	30.36	7
W_7	Neglecting internal and external stakeholders of the organization	2	4.76	18	34	11.22	23
W_8	Insufficient economic substantiation of decisions	1	2.38	22	70	23.10	17
W_9	Delayed and ineffective reactions to opportunities and threats in the economic and social environment	6	14.29	8	85	28.05	10
W_{10}	Unawareness and lack of adaptation from the valuable managerial know-how from other countries	7	16.67	6	61	20.13	19
W_{11}	Implementation of empirical and non-professionally designed management systems	9	21.43	3	85	28.05	10
W_{12}	Insufficient preoccupation for valuing knowledge and human resources	8	19.05	4	96	31.68	5
W_{13}	Insufficient knowledge and consideration of developments in the internal and/or international market	4	9.52	11	72	23,.6	16
W_{14}	Insufficient managerial valorization of modern IT values	3	7.14	14	68	22.44	18
W_{15}	Low creativity and managerial innovation	1	2.38	22	82	27.06	12
W_{16}	Insufficient knowledge and use of economic elements relating to productivity, price, liquidity, cash flow, profit, in management	2	4.76	18	46	15.18	21
W_{17}	Low focus on employee training	3	7.14	14	53	17.49	20
W_{18}	Insufficient consideration of organizational culture in the organization	0	0.00	24	21	6.93	24
W_{19}	Improper communication between chiefs and subordinates	7	16.67	6	76	25.08	13
W_{20}	Low initiative and entrepreneurial spirit	4	9.52	11	73	24.09	15
W_{21}	Low functionality of the managerial systems	1	2.38	22	75	24.75	14
W_{22}	Low economic performance	2	4.76	18	85	28.05	10
W_{23}	Low social performance	3	7.14	14	88	29.04	8
W_{24}	Low ecologic performance	3	7.14	14	38	12.54	22

Source: adapted from Nicolescu, Verboncu and Profiroiu (2010; 2011, pp. 215-217), Nicolescu *et al*. (2012, pp. 216-217); Nicolescu, Popa and Nicolescu (2013, pp. 214-216; 2014, pp. 276-278)

Author's own calculations based on survey responses

3.3. Hypotheses testing

3.3.1. H_1 hypothesis

The percentages obtained by each of the strengths and weaknesses (and therefore their rank within the opinion of both groups of respondents), along with the analyses presented above, may entitle us to say that opinions on the strengths and weaknesses of the Romanian health system management do not vary significantly among the different categories of stakeholders. However, we can only make an objective decision by formulating and testing the statistical hypothesis by means of a statistical test. Therefore, four variables were defined as follows (see Table 2 and Table 3): (1) STR_S1 – Strengths of the Romanian healthcare system management in the opinion of the employees in the health system, (2) STR_S2 – Strengths of the Romanian healthcare system management in the patients' opinion, (3) WEAK_S1 – Weaknesses of the Romanian healthcare system management in the opinion of the employees in the health system, and (4) WEAK_S2 – Weaknesses of the Romanian healthcare system management in the patients' opinion. In addition, two sets of statistical hypotheses were formulated:

H_0: There is no significant correlation between the opinions of the two samples regarding the strengths/weaknesses of health services management;

H_A: There is a significant correlation between the opinions of the two samples regarding the strengths/weaknesses of health services management.

Although the dataset is at the scale level, it does not meet all the assumptions for the application of parametric tests; therefore, for statistical hypothesis testing we have chosen the nonparametric Spearman's correlation coefficient. To validate or reject the null hypothesis we compared the obtained value of the correlation coefficient (ϱ = .295) with the reference value for a significance level of .05 (.460). In this case, we can see that the correlation coefficient is lower than the reference value, which means that the test is not statistically significant. The same conclusion can be reached noting that the obtained significance level (.220) has a higher value than .05. Therefore, we accepted the null hypothesis, which states that there is no significant correlation between the opinions of the two samples regarding the strengths of health services management.

Table 4: Correlations between STR_S1 and STR_S2

		STR_S1			STR_S2		
		Correlation Coefficient	Sig. (1-tailed)	N	Correlation Coefficient	Sig. (1-tailed)	N
Kendall's tau_b	**STR_S1**	1.000	.	19	.227	.095	19
	STR_S2	.227	.095	19	1.000	.	19
Spearman's rho	**STR_S1**	1.000	.	19	.295	.110	19
	STR_S2	.295	.110	19	1.000	.	19

Source: Authors' calculations with SPSS 22.0

In terms of weaknesses, comparing the obtained value of the correlation coefficient ϱ_{obs} = .500 with the reference value $\varrho_{0.05}$ =.460, one can see that $\varrho_{obs} > \varrho_{0.05}$, which means that the test is statistically significant. The same conclusion can be reached noting that p < .05. Therefore, we reject the null hypothesis, accepting the alternative one, which states that there is a moderate positive correlation (ϱ = .500) between the opinions of the two samples regarding the weaknesses of health services management.

Table 5: Correlations between WEAK_S1 and WEAK_S2

		WEAK_S1			WEAK_S2		
		Correlation Coefficient	Sig. (1-tailed)	N	Correlation Coefficient	Sig. (1-tailed)	N
Kendall's tau_b	**WEAK_S1**	1.000	.	24	.393**	.005	24
	WEAK_S2	.393**	.005	24	1.000	.	24
Spearman's rho	**WEAK_S1**	1.000	.	24	.500**	.006	24
	WEAK_S2	.500**	.006	24	1.000	.	24

**. Correlation is significant at the 0.01 level (1-tailed).

Source: Authors' calculations with SPSS 22.0

In conclusion, the H_1 hypothesis has been validated only in terms of consistency between the opinions of experts in the health system and of patients on the weaknesses of the health system management in Romania. This proves that the weaknesses are more obvious than the strengths, therefore directions for action aimed at improving performance and effectiveness of the health system management should mainly address them.

3.3.2. H_2 hypothesis

For reasons related to the size of the paper, we decided to limit our research only to testing the associations between the top three strengths and weaknesses and the respondents' region of origin. Therefore, seven variables were defined as follows: (1) CR – country region; (2) S3 – effective organization of the activities; (3) S6 – rigorous control and evaluation of activities and performance; (4) S15 – development of a high performance IT system; (5) W3 – improper organization of the activities; (6) W4 – ineffective coordination of personnel; and (7) W5 – insufficient capacity to motivate employees in the organization. Also, two sets of statistical hypotheses were formulated:

H_0: There are no significant differences between the observed and expected frequencies, which mean that there is no relationship between the respondents' region of origin and their opinion regarding the strengths/weaknesses of health system management.

H_A: There are significant differences between the observed and expected frequencies, which mean that there is a relationship between the respondents' region of origin and their opinion regarding the strengths/weaknesses of health system management.

Given that we are dealing with several dichotomous variables and a nominal variable, we have chosen the coefficient of contingency χ^2 based on the contingency tables,

in order to test the significance of the association between the variables and Lambda as a measure of the association strength. From the data analysis presented in the contingency table, it can be concluded that 'effective organization of the activities' is considered a strength, mostly by the respondents in the North-West, West and South, 'rigorous control and evaluation of activities and performance' by respondents in the North-West, while respondents in the South-West considered as the main strength the 'development of a high performance IT system'. 'These trends would suggest that the two variables are related, but an objective decision requires the application of the χ^2 test. [...] Testing the significance of differences between observed and expected frequencies is made by comparing the critical report (χ^2_{calc}) with the theoretical value (calculated using the CHINV function in EXCEL) to a level of significance α = .05' (Popa and Ștefan, 2014), and a number of degrees of freedom *df* = 7. By analyzing the obtained values (see Table 6) we can conclude that the differences between observed and expected frequencies existing in the sample are not statistically significant ($\chi^2_{calc} < \chi^2_{0.05:7}$). The same conclusion can be reached noting that the obtained significance level has a higher value than .05 (p > .05). Therefore, we accept the null hypothesis in the sense that there is no significant relationship between the region of origin of the respondents and their opinion regarding the top three strengths of health services management. We also calculated Lambda (with S3, S6 and S15 as dependent variables), as a measure of the strength of the relationship between variables. For the first association between S3 and CR, Lambda has a very low value of 0.076, which means that knowing the region of origin of the respondents reduces the number of errors, in predicting their opinion on the effective organization of the activities, as strengths, by 7.9%. Moreover, it is not statistically significant (Aprox. Sig. = .413). A similar conclusion can be drawn from the analysis of the other two associations.

Table 6: Chi-Square Tests and Directional Measures

No.	Associations	Chi-Square Tests			Directional Measures	
		Pearson Chi-Square	df	Asymp. Sig.	Lambda	Aprox. Sig.
1	S3*CR	7.429	7	.386	.076	.413
2	S6*CR	6.056	7	.533	.034	.284
3	S15*CR	8.294	7	.307	.063	.344

Source: Authors' calculations with SPSS 22.0

When referring to weaknesses, 'improper organization of the activities' is considered a weakness mostly by the respondents in the South-East and North-West, 'ineffective coordination of personnel' by respondents in the North-East and Bucharest-Ilfov, while respondents in the North-West and West considered the main weakness as 'insufficient capacity to motivate employees in the organization'. Comparing the critical report (χ^2_{calc}) with the theoretical, one can see that $\chi^2_{calc} < \chi^2_{0.05:7,}$ p > .05. As in the case of strengths, Lambda (with W3, W4 and W5 as dependent variables), a measure of the strength of association between analyzed variables, has very low and statistically insignificant values.

Table 7: Chi-Square Tests and Directional Measures

No.	Associations	Chi-Square Tests			Directional Measures	
		Pearson Chi-Square	df	Asymp. Sig.	Lambda	Aprox. Sig.
1	W3*CR	9.288	7	.233	.121	.105
2	W4*CR	1.662	7	.976	.000	-
3	W5*CR	5.952	7	.545	.038	.553

Source: Authors' calculations with SPSS 22.0

Therefore, we accept the null hypothesis in the sense that there is no significant relationship between the region of origin of the respondents and their opinion regarding the top three weaknesses of health services management. In conclusion, H_2 hypothesis was empirically validated and the strengths and weaknesses manifest themselves in equal measure in all eight regions. Therefore, the means of action aimed at improving the performance and effectiveness of the Romanian health system management could be designed in a unitary manner for the health system as a whole.

3.3.3. H_3 hypothesis

In order to test the H_3 hypothesis, twenty variables have been defined, as follows: (1) S1, S2, S3 ... S19 – strengths of the Romanian healthcare system management; and (2) PSM – patients' opinions regarding the general performance of the health system management compared to the previous year, measured on a five-point scale, where: 1 – worse and 5 – much better. Also, the statistical hypotheses were formulated as follows:

H_0: There are no significant differences between the observed and expected frequencies, which means that there is no relationship between the respondents' opinions on the strengths and on the performance level, compared to the previous year.

H_A: There are significant differences between the observed and expected frequencies, which means that there is a relationship between the respondents' opinions on the strengths and on the performance level, compared to the previous year.

In order to test the association between those variables, we decided to use the coefficient of contingency χ^2, based on the contingency tables. Further to the application of χ^2 test, the obtained values are shown in Table 8. Comparing the critical rapport χ^2_{calc} with the theoretical values for a significance level of .05 and a number of degrees of freedom df = 4 ($\chi^2_{0.05:4} = 9.4877$), we can conclude that it is statistically significant only for associations no. 8, 9, 10, 14, 15 and 17 ($\chi^2_{calc} > \chi^2_{0.05:4}$, $p < .05$). While the χ^2 test is useful for determining whether there is a relationship, it does not tell you how strong the relationship is. In order to determine how intense these associations are we calculated the Pearson's contingency coefficient and the Cramer's association coefficient.

Table 8: Chi-Square Tests and Symmetric Measures

No.	Associations	Chi-Square Tests			Symmetric Measures		
		Pearson Chi-Square	df	Asymp. Sig.	Cramer's V	Contingency coefficient	Approx. Sig.
1	PSM*S_1	4.815	4	.307	.137	.136	.307
2	PSM*S_2	1.734	4	.785	.082	.082	.785
3	PSM*S_3	2.769	4	.597	.104	.104	.597
4	PSM*S_4	6.496	4	.165	.160	.158	.165
5	PSM*S_5	4.388	4	.356	.313	.130	.356
6	PSM*S_6	0.581	4	.985	.048	.048	.985
7	PSM*S_7	7.080	4	.132	.167	.164	.132
8	PSM*S_8	15.835*	4	.003	.249	.242	.003
9	PSM*S_9	10.519*	4	.033	.203	.199	.033
10	PSM*S_{10}	13.148*	4	.011	.227	.221	.011
11	PSM*S_{11}	2.107	4	.716	.091	.091	.716
12	PSM*S_{12}	2.073	4	.722	.090	.090	.722
13	PSM*S_{13}	1.599	4	.809	.079	.079	.809
14	PSM*S_{14}	10.824*	4	.029	.206	.202	.029
15	PSM*S_{15}	11.698*	4	.020	.214	.209	.020
16	PSM*S_{16}	7.433	4	.115	.171	.168	.115
17	PSM*S_{17}	10.712*	4	.030	.205	.201	.030
18	PSM*S_{18}	6.171	4	.167	.156	.154	.167
19	PSM*S_{19}	2.418	4	.659	.097	.097	.659

Source: Authors' calculations with SPSS 22.0

By analyzing the obtained values we can conclude that there is a weak but statistically significant association between the performance level of the Romanian health system management, compared to the previous year, and S_8 – 'quick and effective feedback to developments in the business environment', S_9 – 'high creativity and innovation', S_{10} – 'intense transfer of managerial know-how from other countries', S_{14} – 'strong entrepreneurial spirit and initiative', S_{15} – 'development of a high performance IT system' and S_{17}– 'effective marketing activities'. Given the above empirically demonstrated correlations, the means of action aimed to improve performance and effectiveness of the Romanian health system management should primarily take into account such elements.

4. Conclusions

Despite the inherent limitations of a pilot study, among which the most important is that the research results are representative only for the studied population, constraining the generalization of its findings and conclusions, this paper proposes an assessment from a quantitative perspective regarding the main strengths and weaknesses of the Romanian health services management. It also aims to identify how the main categories of stakeholders (specialists in the health system and the patients, which are the beneficiaries) relate to them, and the possible implications which the

identified strengths could have on the development of the performance level of the health services management.

Further to the detailed analysis of the respondent's answers, these findings have resulted: (1) H_1 hypothesis has been validated only in terms of consistency between the perceptions of experts in the health system and of patients on the weaknesses; in this case being accepted the alternative hypothesis, which states that there is a moderate positive correlation ($\rho = 0.500$) between the perceptions of the two samples regarding the weaknesses of health services management in Romania. This proves that weaknesses are more obvious than the strengths, therefore directions for action aimed at improving performance and effectiveness of the health system management should mainly address them. Moreover, it can be seen a perfect match of ranks occupied by first two weaknesses: 'insufficient capacity to motivate employees in the organization' and 'improper organization of the activities', can thus be considered the main weaknesses of Romanian health services management. (2) H_2 hypothesis has been validated too, in the sense that there are no significant differences between the patients' opinion, according to their origin – from one of the eight regions, about the strengths and weaknesses of health services management. Therefore, the means of action aimed at improving the performance and effectiveness of the Romanian health system management could be designed in a unitary manner for the health system as a whole. (3) In case of H_3 hypothesis, we demonstrated that there is a weak, but statistically significant relationship between respondents' opinion on the performance level, compared to the previous year and six of the strengths taken into consideration: S_8 – 'quick and effective feedback to developments in the business environment', S_9 – 'high creativity and innovation', S_{10} – 'intense transfer of managerial know-how from other countries', S_{14} – 'strong entrepreneurial spirit and initiative', S_{15} – 'development of a high performance IT system' and S_{17} – 'effective marketing activities'. Given the above empirically demonstrated correlations, the means of action aimed to improve performance and effectiveness of the Romanian health system management should primarily take into account such elements.

In continuation to this study, a complete diagnosis of the Romanian health system management would require: extending the research population, comprised from health services specialists, so that it would be representative for the whole country, by consulting other categories of stakeholders (e.g., managers of healthcare organizations), and by including other variables in the research.

5. Directions for improving performance and effectiveness of the Romanian health system management

A number of directions for improving performance and effectiveness of the Romanian health system management have emerged from the analysis of the responses to the questions contained in the questionnaire, and from the literature study.

5.1. Promotion of motivation at individual, team and organizational level, as well as efficient use of human resources

By far, the main weakness of the management of the health system is seen (by both categories of respondents) as one of the focal points of human resources management: 'insufficient capacity to motivate employees' in the organization, which 'reflects the importance, given by the respondents to this resource, in achieving performance in the health sector, on the other hand marking a weak point of the current period.' (Popa, Ștefan and Popescu, 2015b, p. 1022). It is worth mentioning that this opinion is expressed by a higher percentage of respondents from outside the system (53,80%), compared to those directly involved and affected (26.19%), which means a high public awareness in terms of this major problem which the health system is facing. Moreover, the 'insufficient concern for valorization of knowledge and human resources' is also one of the top five weaknesses, according to both samples of respondents. These results are consistent with those of a survey conducted in the same year (2013) by Nicolescu, Popa and Nicolescu (2014), which points out as the main weaknesses of the Romanian companies' management those above-mentioned, which proves that the reduced capacity to motivate employees represents an issue not only for the health system management, but also for other organizations' management. In order to obtain performance throughout the organization, the manager's ability is imperative to recognizing the value of the employees' work, giving thanks, appreciation, and time for appropriate training opportunities, without which the medical act would be far from perfect. Based on the unique mission of the profession, which implies healing people, managers must motivate top activities, because of the strong need of fulfillment and accountability, which determine the doctor's performance. Currently, maintaining medical staff is a sensitive issue for the healthcare organizations, therefore strategic decisions regarding the human resources should be directed towards attracting and retaining the staff. In this respect, in the Report of the Presidential Commission for the analysis and public health policy in Romania the following recommendations were made on the direction that the health human resources policy should follow (Vlădescu, Pascu and Astărăstoaie, 2008, pp. 57-62): 'developing a coherent policy for formation, development and allocation of human resources in health, increasing the availability of human resources in the health sector in Romania, and stimulating the development of careers in the medical field.'

5.2. Promotion and use of modern management tools and application of rigorous managerial methodologies

'Implementation of empirical and non-professionally designed management systems' is seen as one of the main weaknesses of the health system management by respondents from the first sample (with a percentage of 21.43%). Moreover, the 'design and implementation of functional and effective management systems' is considered a strength only by 2.38% of the specialists in the health care system and by 25.74% of its interviewed beneficiaries and 'the widespread use of modern management and

effective methods and techniques' by 11.90%, respectively 25.41%. Both for the fulfillment of management functions and managerial roles, managers make use of systems, methods and techniques. In a broad sense, those are the tools used by managers to conduct management processes (Burduş and Popa, 2014, p. 365) 'For public institutions, managerial instruments primarily include: management by objectives, project management, dashboard, delegation and the diagnostic analysis.' (Verboncu, Profiroiu and Văruicu, 2010, p. 169). In order to professionalize management and substantially enhance the functionality and performance of the organization (Nicolescu, Popa and Nicolescu, 2013, p. 184) 'promoting the use of modern management tools (management by objectives, dashboard, delegation, decision-making methods with economic foundation) and use of rigorous methodology of design and maintenance of management system and its subsystems is required.' (Nicolescu, Popa and Nicolescu, 2013, p. 106). According to Nicolescu, Popa and Nicolescu (2014, p. 268) 'accelerating the adoption of modern management styles and use of modern management tools, through the transfer of know-how, will allow: boosting the professionalization of management in the health system, the increase of the economic performance of the hospitals, and the improvement of the quality and functionality of management systems.'

5.3. The use of a complex and complete management, which should include all five managerial functions

Among the first weaknesses of the health system management in Romania as mentioned by respondents in both samples are those that refer to the exercise of the managerial functions. Thus, 'improper organization of the activities' is mentioned by 21.43% of respondents in the first group, and by 46.86% of respondents in the second, while 'ineffective coordination of personnel' is referred to as a weakness by 16.67%, and respectively by 40.26% of respondents. In order to ensure the functionality, efficiency and effectiveness of their organizations, the managers need to exercise a complex and complete management, including, in their natural succession, all of the five managerial functions: planning, organizing, coordination, training and control-evaluation. 'The absence or insufficient use of one or more of them, both directly and indirectly, affects other management components, major dysfunctions in the entire system and, consequently, results, which will be at least partially inappropriate and below the limits of possibilities and needs.' (Nicolescu, Popa and Nicolescu, 2014, p. 252).

5.4. Intensifying the transfer of international managerial know-how

The surveyed employees and specialists in health care placed 'unawareness and lack of adaptation from the valuable managerial know-how from other countries' among the first weaknesses of the health system management, while only 11.90% of them and 17.49% of its beneficiaries consider 'intense transfer of managerial know-how from other countries' as a strength. Moreover, it was empirically demonstrated that there is a weak but statistically significant association between S10 – 'intense

transfer of managerial know-how from other countries' and the progress of the performance level of the health system management in Romania. 'The increased trend towards globalization and internationalization of economies requires a permanent information exchange between organizations and agencies from other countries, aimed at obtaining the managerial knowledge necessary to increase competitiveness and efficiency.' (Popa *et al.*, 2009, p. 87). From this point of view, several extra important issues can be emphasized (Porter, 1990 *apud* Popa *et al.*, 2009): (1) the capitalization of theoretical and pragmatic achievements from other countries in the organizational management area, with a focus on managerial tools; (2) the development of informatics systems designed in an international vision, especially data warehouse specialized on international domains, which provides information that can be used by units from several countries.

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