DOI: 10.2478/orga-2013-0004

The Impact of The Intellectual Charm of Physicians on the Healthcare Organizations

Elena Marulc[1], Gabrijel Devetak[2]

[1]The Tourism and Marketing Institute, Ljubljanska 11, 3000 Celje, elena.marulc@siol.net
[2]Faculty of Organizational Sciencies, University of Maribor, Kidričeva 55 a, 4000 Kranj, mandrija@siol.net

The recession has greatly affected the business operations of every undertaking, including healthcare organizations. Change is required. This also concerns the relationship towards employees in terms of their influence on the successful business operations of an organization. Among employees, physicians possess a special, now already traditional status; therefore, their influence needs to be taken advantage of. In the empiric part of the study, we have identified twelve key physician competencies, based on the rankings of physicians, which, in their mind, influence successful business operations of their respective healthcare organizations during an economic recession. The comparison of the collected results to the findings on intellectual charm of managers has indicated that the collected key competencies, that are creativity, quality, education and personal development, attitude towards others, team work and cooperation, communication skills, problem management, business integrity, motivation and stimulation, multidisciplinary thinking, attitude towards culture and ethics, and acceptance of differences, form a whole which is named the intellectual charm of physicians.

Key words: intellectual charm, physician competencies, successful business operations, healthcare organizations, factor analysis

1 Introduction

The recession has affected different countries and businesses to a different extent. The pressures on organizations are growing stronger, and demand even better knowledge of consumers (Klemenčič et al, 2012). In this period of recession, where managers are faced with complex business-related issues, only those managers will prove successful who, besides expert knowledge, also possess intellectual charm, which is the sum of communication skills and attitude towards speaking partners, attitude towards teamwork, attitude towards culture and ethics, creativity, encouraging motivation and stimulation, professionalism and correctness, multidisciplinary thinking, and solving problems. In this period, genius and charisma, or apparently beneficial personal characteristics of leadership, are no longer enough (Devetak, 2012).

During an recession, the enhancing of leadership is especially important. The situation is the same in the field of healthcare (Gregorič Rogelj, 2010), as financing in the public domain is tightly interwoven with the economic situation. A solution will have to be found not only in financial abstinence, but also efficient leadership and management. The hierarchy of healthcare organizations is headed by physicians who are content with their posts, which they wish to retain (Marulc, 2011). This has proven problematic to leaders who wish to introduce adjustments aimed at more successful business operations during an economic recession. Healthcare organizations will not be changed overnight. This is why, in the current period of crisis, the situation in healthcare would most easily be resolved by considering the said hierarchy and using the existing organizational culture in order to enhance business operations. Therefore, unexploited competencies of physicians, which are unrelated to formal education (medical, economic), as well as the physicians' desire to reach the top of the healthcare hierarchy, must be taken advantage of with a view to improving the operations of healthcare organizations. The article only deals with physicians who are part of the medical staff.

The *purpose* of this study was to examine the key competencies of Slovenian physicians, which are unrelated to formal education (medical or economic) and which influence suc-

Received: 20th September 2012; revised: 18th December 2012; accepted 9th January 2013

cessful business operations of healthcare organizations during an recession.

The *objectives* of the article are as follows: to collect the competencies of physicians, which are unrelated to formal education (medical or economic) and which influence successful business operations of healthcare organizations during an recession, to identify key physician competencies from the collected competences, based on the physicians' rankings, which influence successful business operations of the physicians' healthcare organizations during an economic recession, and to propose a model of key physician competencies which will assist their healthcare organizations in more successful business operations during an economic recession.

2 Overview of the literature

Various researchers (Calhoun et al., 2008; Stoller, 2008; Scott Derue et al., 2011; Çitaku et al., 2012;) have proposed ideas for successful organization management. Trying to more accurately define management and leadership is a difficult task, as first, a detailed list of the valuable characteristics of leaders must be prepared (Wagner et al., 2011). Here, competencies may be applied. A competency is an underlying characteristic of a person in that it may be motives, traits, skills, self-image, social role and knowledge (Boyatzis, 1982; Spencer & Spencer, 1993).

Economists have been trying to explain the connection between key employee competencies and the successful operations of an organization. It should be emphasized that the results of studies on key competencies may differ, since the activity, country, level of technological development, and the organizational culture may significantly affect the results (Levy & Murnane, 2001). Therefore, in practice, key competencies for each individual case must be defined separately.

2.1 Competencies in healthcare

Although physicians have a great influence within healthcare organizations, there have been few studies conducted on the matter (Hamilton et al., 2008). Studies have mainly concentrated on managers, or physician managers, in healthcare (Smith, 1990; Decker, 1999; Stefl, 2008; Garman & Scribner, 2011). The emphasis on measurable outcomes and competencies did not happen overnight (Stefl, 2008). Defining competencies and measurement criteria is a lengthy process, which results in a model of competencies for a specific employment, profession, or organization. Today, there are several healthcare competency models available, with a different number of competencies.

Models (Chafee & Mills 2001; Decker, 1999; Dye & Garman, 2006; Garman et al., 2004; Garman & Scribner, 2011; Healthcare Leadership Alliance, 2005; National Center for Healthcare Leadership, 2006; Ross et al., 2002; Shewchuk et al., 2005; Smith, 1990; Wagner et al., 2011; Wallick & Stager, 2002;) based on studies of the US healthcare provide structures comprised of a varied number of competences. The scope of models is dependant on the decision of authors on how many organisational aspects to include in the model.

The review of the literature, the purpose of which was to find non-US healthcare competency models, has yielded modest results in terms of quantity and content. In the United Kingdom, based on the assumption that today, physicians must possess more than just the ability to practice medicine, the Medical Leadership Competency Framework has been developed (NHS Institute for Innovation and Improvement, 2010).

The review of Slovenian literature on healthcare competencies has indicated that researchers have mainly concentrated on nurses, health technicians, junior nurses, and qualified midwives (Železnik et al., 2008; Kvas & Seljak, 2011). The greatest examination of competencies of physicians is conducted by the Slovene Family Medicine Society (2008).

In the past, physicians were not concerned with the problems of successful operations of healthcare organizations. Most studies connected to the issue at hand were conducted before the current period of recession. Therefore, their findings cannot be applied to the current period. A new study must be conducted.

In view of all above findings we set basic research hypothesis:

Hypothesis: Among the competencies of Slovenian physicians that contribute to successful operations of healthcare organizations also belong the characteristics of intellectual charm (communication skills and attitude towards interlocutors, attitude towards teamwork, attitude towards culture and ethics, creativity, fostering motivation and stimulation, professionalism and integrity, multidisciplinary thinking, and problem management).

3 Research methodology

After reviewing the literature, we have decided to elaborate a list of competencies based on the most extensive foreign study on healthcare competencies (Healthcare Leadership Alliance, 2005) comprising 802 competencies, and the most extensive Slovenian study on physician competencies (Slovene Family Medicine Society, 2008) with 319 competences. The elaborated list contained 1,121 competencies. It was not our purpose to encourage physicians to abandon their medical activities, but rather to inform them that they can contribute to the successful business operations of organizations while performing their duties. This is why business competencies, along with medical ones, were removed from the list. A list of 376 competencies was obtained. The empirical part of this article is composed of the qualitative and quantitative studies.

3.1 Qualitative Study

The qualitative study was conducted among employees in healthcare organizations selected from the list of 1,626 organizations obtained from the Agency of the Republic of Slovenia for Public Legal Records and Related Services, the principal activity of which, according to standard classification, are hospital activities, general medical practice activities, and specialist medical practice activities. 20 organizations were randomly selected and requested to participate in small focus groups, each of which was composed of 4 individuals from the same

organization, namely 2 physicians, 1 employee concerned with human resources, and 1 member of top management. Five organizations responded to our invitation.

In May 2012 participants in each focus group selected the influence of individual physician competencies on the successful operations of healthcare organizations during a recession, with the use of printed list of 376 physician competences and a projector. All participants also received 376 competences cards, which they sorted into 3 equivalent groups: most influential, influential and less influential competences. Once individuals completed their classification independently, a comparison of decisions and coordination of various grades followed among them (Gruban, 2004). Since in groups they could not decide on elimination of precisely 2/3 of the competences, but a few less (difference of 2 to 3 competences less per group), we also retained these competences. Duplicated competencies were only listed once. Participants were requested to give 5 additional different suggestions, which were in turn included in the list. The obtained list contained 141 physician competencies. The quantitative part of research followed.

3.2 Two Quantitative Studies

First study. From the list of all 5,300 physicians registered with the Medical Chamber of Slovenia (2012), we initially randomly selected 5 physicians for testing the pilot questionnaire. We then additionally selected another 100 physicians from the list for the survey at random. The survey was conducted between 4 and 29 June 2012 across Slovenia; anonymity was guaranteed, the questionnaires were sent and delivered in envelopes. The questionnaire included demographic data (gender, age, level of medical education, ownership structure and number of employees of the healthcare organization), a list of 141 physician competencies and 141 competence cards with instructions for use (classify in 3 equivalent groups: most influential, influential and less influential competences; following classification, circle the 47 most influential physician competences on the list). 29 respondents returned the questionnaires. In total, they selected 60 different competences (Figure 1).

Second study. From the main list of physicians, we excluded the names of participating physicians, and 10% (526) of the remaining physicians were randomly selected. The second survey was conducted between 2 and 27 July 2012. The selected physicians were sent a questionnaire with a list of 60 physician competencies selected in the pilot study and competence cards with instructions: first divide the cards in half; one pile with influential competences, the other with less influential physician competences; then, the selected 30 cards with influential physician competences are to be classified based on a drag and drop system, i.e. card by card picked from the left pile, and then on the right, so they are classified by order (Blasius, 2012) of influence from 1 to 30, where 1 is the most influential and 30 the least influential physician competence.

Key physician competencies were established through a factor analysis.

Several *assumptions* were made: the list of physicians of the Medical Chamber of Slovenia was accurate; participants in focus groups and the selected physicians ranked competencies in accordance with their beliefs and opinions; the questionnaires were completed by physicians to whom they were addressed.

Also, *limitations* were defined: the possibility of dishonest answers and rankings, and missing answers; time and cost of implementation of the study borne solely by the study authors; possibility of unreal results due to missing physician competencies.

The guideline for sample size in factor analysis is according to the number of variables, i.e. a minimum 100 studied persons for factor analysis (Kline, 1979; Gorsuch, 1983; MacCallum, Widaman, Zhang and Hong, 1999) or at least 51 cases more than the number of variables (Lawley and Maxwell, 1971). With 116 respondent physicians we exceed both criteria.

The study is only missing values for five variables. The overall summary of missing values indicates that for 5 variables there is at least one missing value, i.e. 2.6% missing data of variable No04, 2.6% of variable No03, 0.9% of variable No05, 0.9% of variable No02, and 0.9% of variable No01.

3.3 Results of the Quantitative Study

3.3.1 Sample

116 or 22.1% of the distributed questionnaires were properly filled out and returned. The collected results were statistically processed through SPSS 20. The majority of the respondents were female (71.6%). Most respondents, who completed the questionnaire, were between 46 and 55 years of age (42.2%). The majority of the remaining respondents were older physicians aged above 55 (30.2%); there were fewer younger physicians aged 35 to 45 (18.1%), and the fewest physicians aged below 35 (9.5%). The majority of the respondents had a university education (91.3%), while a small share had a master's (5.2%) or a doctor's degree (3.5%). Most of the respondents were employed by public healthcare organizations (81.0%). Almost half of the physicians were employed by healthcare organizations with 50–249 employees (48.3%), fewer by organizations with 10–49 employees (35.3%), and the fewest by organizations with 250 or more employees (12.9%), or fewer than 9 employees (3.5%). With regard to gender, age, education, the ownership structure and number of employees of the healthcare organization, the sample was unbalanced.

3.3.2 Questionnaire reliability

In studies, questionnaire reliability is extremely important, as it must be known to what extent identical or similar results can be expected if the same questionnaire was applied to future studies. Cronbach's alpha amounts to 0.808. Based on this, it can be assumed that the reliability of the applied scale is satisfactory.

3.3.3 Factor Analysis

A correlation matrix was made prior to the factor analysis. It indicated that the problem of multicollinearity does not exist, since not a single correlation reaches 0.9.

No01:Facilitate group discussions and meetings.
No02:Provide and receive constructive feedback.
No03:Provide effective communication linkages within the organization and to its external environment.
No04:Recognize and use non-verbal forms of communication.
No05:Speak clearly and effectively before individuals and groups in formal and informal settings.
No06:Build collaborative relationships.
No07:Demonstrate effective interpersonal relations.
No08:Develop external relationships.
No09:Network with colleagues.
No10:Participation in professional associations and networks.
No11:Build effective teams.
No12:Creates a climate that encourages teamwork and trust.
No13:Facilitate group dynamics, process, meetings and discussions.
No14:Foster teamwork between clinical and administrative staff.
No15:Participate in community service.
No16:Create an organizational climate that facilitates individual motivation.
No17:Keeping all colleagues motivated to achieve better business results with the health organization.
No18:Keeping patients motivated to be active, which lead to a faster recovery.
No19:Encourages the motivation of the environment for donations to healthcare.
No20:Motivating all employees for better collaboration.
No21:Anticipate and plan strategies for overcoming obstacles.
No22:Resolve and manage conflict.
No23:Share views in a non-judgmental, non-threatening way.
No24:Understand and manage expectations.
No25:Use effective negotiation skills.
No26:Create an environment which recognizes and values differences in staff, physicians, patients, and communities.
No27:Establish an organizational culture that values and supports diversity.
No28:Represent the organization to non-healthcare to non health care constituents within the community.
No29:Synthesize and integrate divergent viewpoints for the good of the organization.
No30:Cooperating with other experts and services at the level of primary public health.
No31:Create an environment that facilitates the team to initiate actions that produce results.
No32:Provide visionary thinking on issues that impact the healthcare organization.
No33:Recognize one's own reaction to change and strive to remain open to new ideas and approaches.
No34:Support and mentor high-potential talent within the organization.
No35:Support innovation and creativity.
No36:Follow through on promises and concerns.
No37:Foster an environment of mutual trust.
No38:Professional roles, responsibility and accountability.
No39:Use factual data to produce and deliver credible and understandable reports.
No40:Hold self and others accountable for actions and outcomes.
No41:Adheres to ethical business and professional standards.
No42:Integrate high ethical standards and core values into everyday work activities.
No43:Organizational business and personal ethics.
No44:Serve as the ethical guide for the organization.
No45:Respect the four principles of medical ethics.
No46:Demonstrate and promote cultural sensitivity.
No47:Cultural and spiritual diversity for patients and staff as they relate to healthcare needs.
No48:Confront inappropriate behaviors and attitudes toward diverse groups.
No49:Analyze population data to identify cultural clusters.
No50:Recognize one's own method of decision making and the role of beliefs, values and inferences.
No51:Acquire information and skills from a variety of sources to stay current with market and industry trends.
No52:Promote continual organizational learning and improvement.
No53:Create an environment wherein professional and personal growth is an expectation.
No54:Learn from setbacks and failures as well as successes.
No55:Develop effective interpersonal skills.
No56:To provide quality and accreditation of the departments.
No57:That it is necessary to care for quality improvements on the basis of quality indicator monitoring.
No58:That it is necessary to include patient opinions into the system for improving the quality of work.
No59:The importance of constant quality improvement on the basis of monitoring of the quality indicators.
No60:Foster all employees to meet quality standards.

Figure 1: List of 60 physician competences; items marked No01 through No60 represent the competences selected for the second study.

We checked with the KMO and Bartlett's test if the dataset is suitable for a factor analysis. The results show that the Kaiser-Meyer-Olkin measure of sampling adequacy is 0.9 and the Bartlett's test of sphericity value is statistically relevant. Values of KMO testing between 0.8 and 0.9 are great. Our value is in this interval; thus, we can say we obtained a great value. It can therefore be derived that the factor analysis with our dataset is viable.

First, the decision on the selection of the appropriate number of factors to be used in a factor analysis must be made. The Guttman-Kaiser criterion is the cut-off criterion most frequently used. The popularity of this criterion, as against other criteria, is its ease of use, its minimal judgemental element and its intuitively acceptable justification (Yeomans and Golder, 1982). The results of factor elimination through principal component analysis (Table 1) have indicated that, according to the Guttman-Kaiser criterion, only 12 components meet the conditions for preservation and that they explain 84.89% of the total variance. The first component bears the highest eigenvalue of 7.170 and explains 11.95% of the total variance. The twelfth component has the lowest eigenvalue of 1.875 and explains 3.13% of the total variance.

In some cases, the Guttman-Kaiser criterion can exclude too many factors; therefore, the factor structure was also examined graphically. From Figure 2, it is apparent that the slope of the curve after the twelfth principal component is smaller, which indicates the inclusion of the first twelve components. This corresponds to the previous finding.

A final solution is obtained with a rotation of factors, particularly by orthogonal varimax rotation, the advantage of which is its ease of understanding and interpretation (Brown, 2009). Due to better visibility, all factor loadings not considered significant, e.g. factors between -0.3 and 0.3

(Kline, 2002) are erased from Table 2. The correlations between factors and the input variables show that the first factor has the highest factor loading for variable No. 15, and a high factor loading for variables No. 13, 12, 11 and 14. The first factor has a strong positive correlation with the competencies related to teamwork, attitude towards teamwork, and cooperation, therefore, it has been titled teamwork and cooperation. The latent variable was obtained by adding the values of variables from which the factor is composed. The obtained sum is then divided by their total number. A latent variable obtained in such a way is named after the variables of which it is composed.

In a similar manner in this chapter we obtain another 11 groups of variables, which are defined by one factor: variables No. 36, 37, 38, 39 and 40 have a strong positive correlation with factor 2, entitled business integrity; variables No. 21, 22, 23, 24 and 25 have a strong positive correlation with factor 3, entitled problem management; variables No. 26, 27, 28, 29 and 30 have a strong positive correlation with factor 4, entitled multidisciplinary thinking; variables No. 46, 47, 48, 49 and 50 have a strong positive correlation with factor 5, entitled acceptance of differences; variables No. 6, 7, 8, 9 and 10 have a strong positive correlation with factor 6, entitled attitude towards others; variables No. 41, 42, 43, 44 and 45 have a strong positive correlation with factor 7, entitled attitude towards culture and ethics; variables No. 31, 32, 33, 34 and 35 have a strong positive correlation with factor 8, entitled creativity; variables No. 51, 52, 53, 54 and 55 have a strong positive correlation with factor 9, entitled education and personal development; variables No. 01, 02, 03, 04 and 05 have a strong positive correlation with factor 10, entitled communication skills; variables No. 16, 17, 18, 19 and 20 have a strong positive correlation with factor 11, entitled motivation and stimulation. The final factor No. 12 has a strong positive correlation with competencies No. 56, 57, 58, 59 and 60, whose factor loadings range between 0.918 and 0.633 and deal with quality. Factor 12 is therefore entitled quality.

3.3.4 Variability and normality of the obtained factors

The Results of Kolmogorov-Smirnov test, which is exact test for testing normality (Table 3) indicate that the distribution of all factors is not normal.

Table 1: Results of factor elimination through principal component analysis

Component	Eigenvalue	Percentage of total variance	Cumulative percentage of total variance
1	7,170	11,950	11,950
2	5,921	9,868	21,817
3	5,441	9,068	30,885
4	4,824	8,041	38,926
5	4,533	7,555	46,481
6	4,211	7,018	53,499
7	4,055	6,759	60,258
8	3,820	6,366	66,624
9	3,273	5,454	72,079
10	3,147	5,245	77,324
11	2,667	4,445	81,769
12	1,875	3,125	84,894

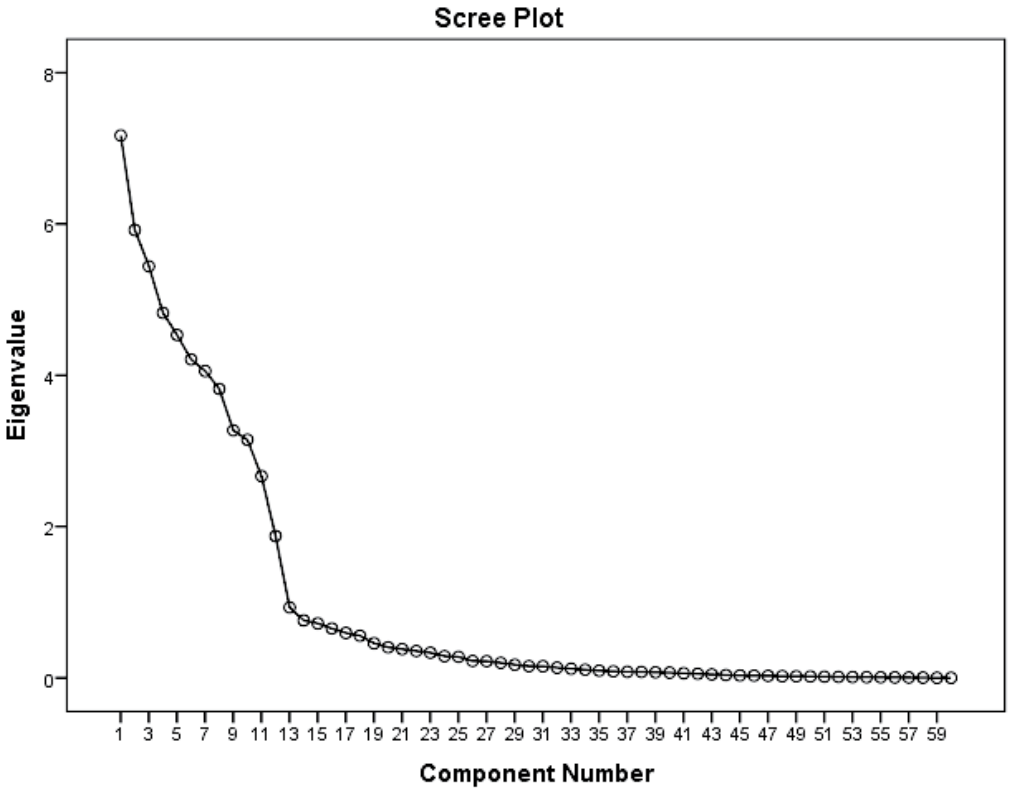

Figure 2: Scree plot of eigenvalues of 60 physician competencies.

Thus, distribution will be assessed with the aid of skewness and kurtosis (Table 4). The variability (CV=29.01) has indicated that the group is homogeneous in the teamwork and cooperation factor. The distribution (skewness= -0.509, kurtosis= -1.040) is left-skewed and restricted, not normal. The business integrity factor has low variability (0.24); consequently, the group is homogeneous. The distribution is left-skewed (-0.992) and flat (2.000), not normal.

The variability of the problem management factor is low (14.75) and the group is homogeneous. The distribution is right-skewed (2.618) and flat (12.224), not normal. With the multidisciplinary thinking factor, it is evident (CV= 18.50) that the group is homogeneous. The distribution is left-skewed (-0.544) and flat (0.988), not normal. The acceptance of differences factor has a low arithmetic mean (only 1.338). The variation coefficient amounts to 46.39 and therefore the group is heterogeneous. The distribution is right-skewed (1.869) and flat (2.220), not normal. The attitude towards others factor group is homogeneous (CV=18.26). The distribution is left-skewed (-1.190) and flat (0.650), therefore not normal. The attitude towards culture and ethics factor group is homogeneous (CV=20.94). The distribution is left-skewed (-0.348) and flat (3.181), not normal. The variability of the creativity factor is low (7.56) and the group is homogeneous. The distribution is left-skewed (-3.206) and flat (11.113), not normal. The education and personal development factor has low variability (CV=8.95) and the group is homogeneous. The distribution is left-skewed (-2.493) and flat (6.341), not normal. The variability of the communication skills factor is low (CV=17.16) and the group is homogeneous. The distribution (skewness = -0.040, kurtosis= -1.178) is left-skewed and restricted, not normal. In the motivation and stimulation factor, a low standard deviation and variability coefficient (6.86) indicate that the group is homogeneous. The distribution is left-skewed (-4.480) and flat (24.444), not normal. The quality factor has the highest arithmetic mean (4.874). The arithmetic mean, median value, and mode are very similar. The group is homogeneous (CV=6.26). The distribution is left-skewed (-3.333) and flat (13.522), not normal.

3.3.5 Differences between the factors according to socio-demographic variables

Since the variable distribution is abnormal in all the factors, we applied non-parametric tests in order to examine the characteristics of the groups.

The results of the Mann-Whitney test for gender indicate that p-values are between 0.266 and 0.961. Therefore there are no statistically relevant differences for any of the twelve factors when dealing with gender. As is evident, men and women rank the importance of individual factors for successful business operations of a healthcare organization during economic recession in an identical manner.

The Kruskal-Wallis test has indicated (p-values are between 0.100 and 0.850) no difference in the ranking of factors, regardless of the education of the responding physicians. Thus, there is no deviation in the ranking of the importance

Table 2: Factor loadings of excluded two factors (varimax raw factor rotation)

Factor / Competency	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Factor 11	Factor 12
No15	,986											
No13	,983											
No12	,982											
No11	,973											
No14	,972											
No36		,962										
No37		,952										
No38		,951										
No39		,949										
No40		,941										
No21			,989									
No22			,989									
No23			,976									
No24			,971									
No25			,959									
No28				,957								
No29				,946								
No27				,937								
No30				,928								
No26				,846								
No47					,970							
No46					,970							
No48					,935							
No49					,918							
No50					,912							
No06						,973						
No08						,967						
No10						,918						
No07						,904						
No09						,885						
No42							,944					
No41							,943					
No45							,931					
No44							,918					
No43							,915					
No35								,965				
No33								,897				
No34								,890				
No31								,860				
No32								,824				
No54									,931			
No51									,924			
No53									,876			
No52									,847			
No55									,768			
No05										,865		
No04										,854		
No03										,842		
No02										,826		
No01										,771		
No18											,897	
No16											,818	
No20											,777	
No17											,736	
No19											,715	
No56												,918
No60												,760
No59												,745
No58												,700
No57												,633

Table 3: Results Of The Kolmogorov-Smirnov Test For The Obtained Factors

		Factor					
		communication skills	attitude towards others	teamwork and cooperation	motivation and stimulation	problem management	multidisciplinary thinking
N		116	116	116	116	116	116
Normal Parameters	Mean	4,029	4,388	3,864	3,916	3,034	2,814
	Std. Deviation	,6953	,8010	1,1242	,2692	,4478	,5214
Kolmogorov-Smirnov Z		1,259	3,454	2,311	5,134	5,159	4,010
Asymp. Sig. (2-tailed)		,084	,000	,000	,000	,000	,000
		Factor					
		creativity	business propriety	attitude towards culture and ethics	accepting the difference	education and personal development	quality
N		116	116	116	116	116	116
Normal Parameters	Mean	4,850	2,736	2,966	1,338	4,802	4,874
	Std. Deviation	,3672	,6815	,6243	,6177	,4338	,3059
Kolmogorov-Smirnov Z		4,307	4,594	3,858	3,737	4,776	4,597
Asymp. Sig. (2-tailed)		,000	,000	,000	,000	,000	,000

of factors for successful business operations in of a healthcare organization during the recession.

Also, the Kruskal-Wallis test has shown (p-values are between 0.068 and 0.851) that respondents of different ages bear no statistically relevant differences in terms of ranking the importance of individual physician competencies for the successful operations of a health organization during the recession.

We have also examined the differences in ranking between physicians employed by public and by private healthcare organizations. The Mann-Whitney test has shown that the creativity factor is the only statistically relevant result (p-value =0.047). This means that the views on the importance of the creativity factor for successful operations of a healthcare organization during the recession, of physicians employed by public and private sector organizations, differ. P-values of other factors are between 0.196 and 0.851 and therefore there are no statistically relevant differences for any other eleven factors when dealing with ownership structure of the organization. Physicians employed in the public sector have a higher mean rank (60.80) than those employed in the private sector (48.66). Physicians employed in the public sector have ranked the creativity factor as more important for successful operations of a healthcare organization during the recession compared to private sector physicians. No differences have been established in other eleven factors.

In regard to the correlation between the number of employees in healthcare organizations, which employ the respondents and the results obtained, the Kruskal-Wallis test has shown no statistically relevant results for any of the factors. This means that physicians employed by healthcare organizations with a different number of employees, rank the importance of factors for successful operations of a healthcare organization during the recession in an identical manner.

3.3.6 Ranking

We were also concerned with establishing the importance of individual physician competencies for successful operations of a healthcare organization during an economic recession. For this purpose, we used the method of ranking. The results (Table 5) indicate that, according to physicians' ratings, the most important competencies for successful operations of a healthcare organization during the recession are as follows: "provide visionary thinking on issues that impact the healthcare organization" (No. 32), "support innovation and creativity" (No. 35), "create an environment that facilitates the team to initiate actions that produce results," (No. 31) and "support and mentor high-potential talent with the organization" (No. 34). The following competency was considered the least influential: "recognize one's own method of decision making and the role of beliefs, values and inferences" (No. 50).

Next, we have added together the ranks of individual competencies, which were then ranked according to the sum to obtain 12 ranking factors (Table 6). According to the respondents, creativity is considered the most important factor for successful operations of a healthcare organization during an economic recession. It is followed by quality, and education and personal development. Acceptance of differences was considered the least influential factor.

Table 4: Central Tendencies And The Variability Of The Obtained Factors

	Factor					
	communication skills	attitude towards others	teamwork and cooperation	motivation and stimulation	problem management	multidisciplinary thinking
Mean	4,029	4,388	3,864	3,916	3,034	2,814
Median	4,000	5,000	4,000	4,000	3,000	3,000
Mode	5,0	5,0	5,0	4,0	3,0	3,0
Std. Deviation	,6953	,8010	1,1242	,2692	,4478	,5214
Variance	,483	,642	1,264	,072	,201	,272
Skewness	-,040	-1,190	-,509	-4,480	2,618	-,544
Std. Error of Skewness	,225	,225	,225	,225	,225	,225
Kurtosis	-1,178	,650	-1,040	24,444	12,224	,988
Std. Error of Kurtosis	,446	,446	,446	,446	,446	,446
Coeff. of variation (%)	17,16	18,26	29,01	6,86	14,75	18,50
	Factor					
	creativity	business propriety	attitude towards culture and ethics	accepting the difference	education and personal development	quality
Mean	4,850	2,736	2,966	1,338	4,802	4,874
Median	5,000	3,000	3,000	1,000	5,000	5,000
Mode	5,0	3,0	3,0	1,0	5,0	5,0
Std. Deviation	,3672	,6815	,6243	,6177	,4338	,3059
Variance	,135	,464	,390	,382	,188	,094
Skewness	-3,206	-,992	-,348	1,869	-2,493	-3,333
Std. Error of Skewness	,225	,225	,225	,225	,225	,225
Kurtosis	11,113	2,000	3,181	2,220	6,341	13,522
Std. Error of Kurtosis	,446	,446	,446	,446	,446	,446
Coeff. of variation (%)	7,56	0,24	20,94	46,39	8,95	6,26

4 Discussion

Despite the unbalanced sample, the examination of differences between factors according to control variables has indicated that male and female physicians, differently educated respondents, respondents of different ages, employees in public and private healthcare organizations, with different numbers of employees, rate the importance of individual factors for successful operations of a healthcare organization during the recession in a similar fashion. The only exception is the ranking of the importance of the creativity factor, when comparing rankings by physicians from public and private organizations: the latter, in comparison to the former, believe the said factor has a smaller influence on successful operations of a healthcare organization during the recession.

Through factor analysis, we have isolated 12 components, which explain 84.89% of the total variance. The comparison of factors and input variables has indicated a strong correlation between certain variables. Based on these variables, the factors can be defined as follows: teamwork and cooperation, business integrity, problem management, multidisciplinary thinking, acceptance of differences, attitude towards others, attitude towards culture and ethics, attitude towards creativity, attitude

Table 5: Average or Mean Rank of Variables

Competencies	Valid	Median	Mode	Mean Rank	Competencies	Valid	Median	Mode	Mean Rank
No32	96	2,00	1	1	No24	91	21,00	21	15
No35	91	2,00	1	1	No23	75	21,00	22	15
No31	70	2,00	2	1	No20	34	25,00	22	16
No33	65	3,00	3	2	No39	40	23,00	23	17
No34	84	3,00	3	2	No30	37	26,00	24	20
No56	83	5,00	5	3	No36	56	24,00	24	18
No59	82	5,00	5	3	No40	94	24,00	24	18
No58	72	6,00	5	4	No17	63	25,00	25	19
No60	50	6,00	6	4	No18	29	26,00	26	20
No57	56	6,00	7	4	No38	82	23,00	26	17
No53	91	8,00	8	5	No27	31	27,00	26	21
No51	69	9,00	8	6	No19	37	25,00	27	16
No54	42	9,00	9	6	No28	66	27,00	27	21
No52	79	9,00	9	6	No26	18	28,00	28	22
No55	38	9,50	10	7	No42	20	28,50	28	23
No06	81	10,00	10	8	No44	24	28,00	28	22
No10	46	12,00	11	9	No41	12	28,50	29	23
No08	99	12,00	12	9	No43	65	29,00	29	24
No09	68	12,00	13	9	No45	21	29,00	29	24
No11	63	14,00	13	10	No47	39	29,00	29	24
No12	45	15,00	13	11	No46	16	30,00	30	25
No14	97	14,00	13	10	No48	43	30,00	30	25
No13	88	14,00	14	10	No49	28	30,00	30	25
No15	37	14,00	14	10	No50	12	30,00	30	25
No03	91	16,00	16	12	No07	49	12,00	10[a]	9
No04	47	17,00	16	13	No02	70	17,00	16[a]	13
No01	55	17,00	17	13	No22	62	20,00	17[a]	14
No05	80	17,00	17	13	No37	43	20,00	21[a]	14
No25	58	20,00	18	14	No16	62	25,00	25[a]	19
No21	77	20,00	20	14	No29	61	27,00	27[a]	21

Note: a Multiple modes exist. The smallest value is shown. It is evident from the frequency table that the modes are No07: 10 and 12, No02: 16 and 19, No22: 17 and 19, No37: 21 and 25, No16: 25 and 27, No29: 27 and 29.

towards education and personal development, communication skills, motivation and stimulation, and quality.

The reliability of the questionnaire, which served as the basis for the study, as well as the gathered results was considered acceptable according to Cronbach's alpha.

The examination of variability and variable normality has indicated that all factor groups, excluding the group of acceptance of differences, are homogeneous and that the variable distribution is abnormal.

The ranking of physician competencies in regard to their influence on the successful operations of a healthcare organization during an economic recession, and the calculations of individual factor rankings have indicated that according to the responding physicians, creativity is the most important factor. Following creativity, factors ranging from most to least important are quality, education and personal development, attitude towards others, team work and cooperation, communication skills, problem management, business integrity, motivation and stimulation, multidisciplinary thinking, attitude towards culture and ethics, and acceptance of differences.

The results of the study comply with the findings on intellectual charm, which is required by present day managers, along with professional know-how, for successful business operations of their organizations during an economic recession. The comparison has shown that every constituent of the intellectual charm of a successful manager during a recession, i.e. communication skills and attitude towards interlocutors, attitude towards teamwork, attitude towards culture and ethics, creativity, fostering motivation and stimulation, professionalism and integrity, multidisciplinary thinking, and solving problems (Devetak 2012 a), is essential for present day physicians, as they help physicians contribute to successful operations of their healthcare organizations during the recession.

Table 6: Ranking of obtained factors

Factor	Factor competencies	Sum of competence ranks	Mean rank
creativity	No31, No32, No33, No34, No35	7	1
quality	No56, No57, No58, No59, No60	18	2
education and personal development	No51, No52, No53, No54, No55	30	3
attitude towards others	No06, No07, No08, No09, No10	35	4
teamwork and cooperation	No11, No12, No13, No14, No15	51	5
communication skills	No01, No02, No03, No04, No05	64	6
problem management	No21, No22, No23, No24, No25	72	7
business propriety	No36, No37, No38, No39, No40	84	8
motivation and stimulation	No16, No17, No18, No19, No20	90	9
multidisciplinary thinking	No26, No27, No28, No29, No30	105	10
attitude towards culture and ethics	No41, No42, No43, No44, No45	116	11
accepting the distinctive	No46, No47, No48, No49, No50	124	12

Based on all these findings *we confirm the hypothesis "Among the competencies of Slovenian physicians that contribute to successful operations of healthcare organizations also belong the characteristics of intellectual charm (communication skills and attitude towards interlocutors, attitude towards teamwork, attitude towards culture and ethics, creativity, fostering motivation and stimulation, professionalism and integrity, multidisciplinary thinking, and problem management)."*

The physicians' attitude towards quality, education and personal development, and towards differences, is important as well. Consequently, these characteristics can be considered specific for the intellectual charm of physicians. Based on these findings, we have proposed a model of a physician's intellectual charm (Figure 3). Physicians with such charm can contribute to successful business operations of their healthcare organizations during the recession. The most important characteristics are the physician's creativity and his attitude

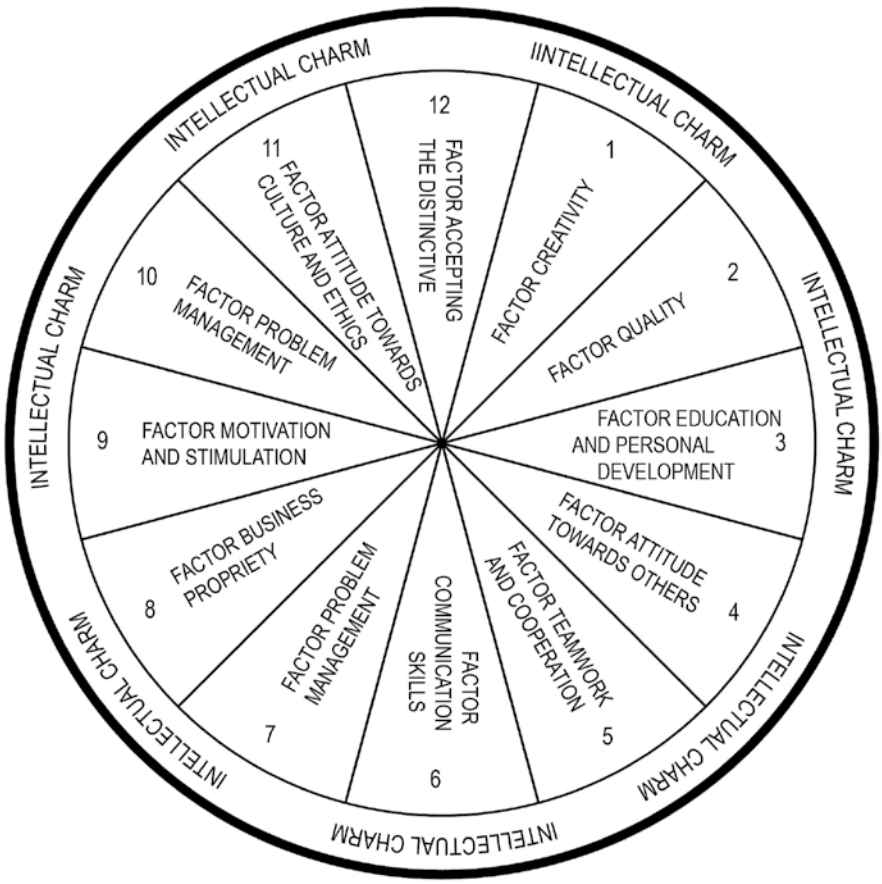

Figure 3: Model of a physician's intellectual charm (model of key physician competencies which will assist in more successful operations of his organization during the recession)

towards creativity. In the order of decreasing importance they are followed by quality, education and personal development, attitude towards others, teamwork and cooperation, communication skills, problem management, business integrity, motivation and stimulation, multidisciplinary thinking, attitude towards culture and ethics, and acceptance of differences.

5 Conclusion

The study performed among randomly selected Slovenian physicians has shown that according to their ratings, a physician's creativity, quality, education and personal development, attitude towards others, teamwork and cooperation, communication skills, problem management, business integrity, motivation and stimulation, multidisciplinary thinking, attitude towards culture and ethics, and acceptance of differences are of key importance for successful business operations of their healthcare organizations during an economic recession. All of these key competencies comprise a whole defined as a physician's intellectual charm.

Despite several studies on competencies, there has never been a study which would examine physician competencies positively affecting the operations of a healthcare organization during an economic recession, in a comprehensive manner. The expression "intellectual charm" is also considered a novelty in healthcare.

In the recession, the results of the study can be applied to benefit everyday practices. Physicians and other healthcare employees must be informed of these findings on physician competencies which benefit the business operations of their organizations; they must be reminded of their implementation, while physicians lacking in certain competencies should work to develop them to a sufficient degree.

In the future, the competencies and intellectual charm of other healthcare employees will have to be examined as well, and strive for maximizing the beneficial impact of every healthcare employee on the business operations of their organizations during an economic recession.

This model can also be applied to other activities, those concerned with production, as well as services.

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Elena Marulc is the director of the Tourism and Marketing Institute. She is active in the fields of marketing, tourism, and healthcare. Her work comprises 24 bibliographic units; among others, she is the co-author of People and sustainable organization, published in Frankfurt/Main. She is currently finishing her PhD studies.

Gabrijel Devetak is an associate professor of marketing and innovations. In his long career, he has given lectures at all four Slovenian universities. He engages in innovation and marketing and holds marketing lectures at various Slovenian faculties. He has published nine scientific titles. His work consists of 1,125 bibliographic units. He is an expert in the fields of innovation and marketing.