REVALUING THE CULTURE OF HEALTH ORGANIZATIONS. A PATH ANALYSIS APPROACH

Ion Popa[1] and Simona Cătălina Ştefan[2]

[1] The Bucharest University of Economic Studies, Faculty of Management, Bucharest, Romania,
E-mail: iipopa@yahoo.com
[2] The Bucharest University of Economic Studies, Faculty of Management, Bucharest, Romania,
E-mail: simonacatalina_2006@yahoo.com

ABSTRACT: In spite of the increasing importance granted to organizational culture, particularly the culture of health organization, and the common belief on its importance in increasing performance, there is still need to explain the underlying mechanism that enables this link. The results of Path Analysis conducted for 981 employees of Romanian health organizations offered strong support for the proposed theoretical model. We found that Family, Guided Missile and Incubator cultures have a positive impact on Professional Performance. Moreover, Work Motivation and Job Satisfaction fully or partially mediate these relationships, thereby, highlighting their importance in maximizing the effect that organizational culture has on employee performance. Limitations and future research directions are discussed.
KEYWORDS:health organization, job satisfaction, organizational culture. path analysis, performance, work motivations

1. INTRODUCTION

It is common belief that the efficiency and effectiveness of an organization depends on the quality and degree of motivation of employees and managers. But these results also depend on generally not so evident aspects, such a certain common style or manner to solve the problems, providing vision, purpose, direction and energy for evolution, and which sometimes may be stronger than the will of a particular person or a particular group of people. In attempting to understand such not so obvious aspects of an organization, one must go beyond the tangible things, in what is known as organizational culture.

While these features are equally important in all types of organizations, the culture of health organization is not only one of the important aspects of the relationship between the individual and the organization, but it forms the level of cooperation in healthcare organizations and the relations between groups of employees, it can influence employee motivation and job satisfaction, professional performance, and ultimately impacts the quality of healthcare services and the other patient related outcomes. [1] Consequently, the culture in health organizations has gained increased consideration as an important factor that influences the quality of care. [2]

2. APPROACHES TO THE CULTURE–PERFORMANCE RELATIONSHIP

Organizational culture was defined as a complex pattern of beliefs and expectations, including philosophies, values, postulates, attitudes and norms shared by the members of certain organization. [2] Schein [3] describe it as a set of assumptions discovered, invented or developed by a group of persons in the learning process of internal integration and external adaptation, which proved to be valid and worthy to be presented to new members as the right way fell, perceive and think about those problems. In describing the organizational culture, he identifies three levels [3]: observable artefacts, values and basic underlying assumptions.

In studying the relationship between organizational culture and performance, Alvesson [4] identify four distinct points of view:
1. The strong-culture thesis (perhaps the most frequently encountered) assumes that commitment of an organization's managers and employees to the same set of values,

beliefs and norms facilitates goals alignment as well as appropriate means for attaining them and ultimately lead to positive results and increased performance.

2. It could be taken also into consideration a reverse relationship between culture and performance, when performance may contribute to the creation of a 'strong' corporate culture. Thus, a particular common set of orientations, beliefs, meanings and values of a successful organization may be adopted thus, ultimately leading to performance.

3. Contingency thinking suggests that a different type of culture is appropriate, even necessary for each particular conditions, thus, enabling performance.

4. On the contrary, "adaptive culture", characterized by people willing to take risk, trust each other, work together to identify problems and opportunities, able to respond to changes in the environment may lead to performance.

For more accurate understanding of the relationship between organizational culture and performance should not overlook the crucial role of managerial culture, manifested both through the senior managers' decision-making processes and actions [5] and its influence in shaping the overall organizational culture.Also, one should not neglect the existence of a strong professional culture within health organizations, whose core values often differ from those of managers, and may contribute to the existence of a fragmented, heterogeneous culture of these organizations. [6]

Alvesson [4]suggest that it is difficult to support any of this theories through empirical evidences since there are no systematic studies on the culture–performance relationship. Moreover, Schein [3]is rather sceptic about studying something as abstract as organizational culture through survey instruments. He raises questions on both the assumed knowledge on relevant dimensions and items' relevance in capturing the critical cultural themes of each organization.

Nevertheless, a number of studies have attempted to demonstrate the link between organizational culture and performance of health organizations. [6] [7][8] [9] Thus, Davies et all[8]and Jacobs et all [9]in a longitudinal study examined the relationship between senior management team culture and organizational performance in English acute hospitals over three time periods (2001/2002, 2006/2007 and 2007/2008). They found that higher performing organizations are clustered in the Developmental culture with a tendency to shift to Rational culture over time, in contrast with the low performance which are associated with Hierarchical culture. They also found evidences to support the hypothesis that performance aspects which are valued within a certain culture are enhanced in hospitals where that culture is well represented.

Furthermore, there are authors who, studying the relationship between organizational culture and performance, take into account other variables such as employees' motivation and job satisfaction.[11][12][2]In a cross-sectional study carried out in 36 primary care pediatric practices Brazil et all [10] examined whether organizational culture is related to job satisfaction and perceived clinical effectiveness. They found that employees of hierarchical and rational oriented organizations, reported lower job satisfaction and perceived work effectiveness. In contrast, Group cultures were associated with higher job satisfaction and perceived work effectiveness, while Developmental culture had no impact on both phenomena.These relationships were found for both medical and non-medical staff.

Based on the preceding discussion, we expect that the culture of health organizations will positively impact on employee Work Motivation, Job Satisfaction and Professional Performance. It is also expected that Work Motivation and Job Satisfaction to act as moderators on the relationship between organizational culture and Professional Performance. We thus suggest the following hypotheses:

H1(a-d). The health organizations' culture types are positively associated with professional performance.

H2(a-d). The health organizations' culture types are positively associated with work motivation.

H3(a-d). The health organizations' culture types are positively associated with job-satisfaction.

H4(a-d). Work motivation and job-satisfaction mediates the effect of each culture of health organizations on professional performance.

Most of the above mentioned studies have sought to examine the organizational culture of health organizations through the Competing Values Framework.However, for the purpose of our research, Trompenaars' classification of corporate culture was considered. In relation with two dimensions (equality - hierarchy and orientation to persons - orientation to tasks), Trompenaars' classification [11] identifies four types of culture, named by means of four metaphors: Family culture, Eiffel Tower culture, Guided Missile culture, and Incubator culture. Each of these four types may be considered as ideal type, while in organizational practice they are mixed or partially overlapped each other, often one of culture being dominant. This separation may prove to be particularly useful in analysing the basis of each type in terms of relationships between employees, attitude toward authority, ways of learning and thinking, attitudes toward people, ways of changing, motivating and rewarding, criticism and conflicts resolution. [11]

3. DATA AND METHODS

3.1 Research design

A questionnaire based survey was carried out during December 2015 and January 2016 within 18 hospitals and pharmacies, both public and private ones. In the sample were included 981 respondents, among which 77.46% were executants and 22.54% in managerial positions. Regarding respondents' profession, there were considered both medical and non-medical staff. Thus, more than a third of respondents (37.24%) were nurses, 23.66% pharmacists, 17.19% physicians and 1.25% physical therapist. In the sample were also included auxiliary medical staff (9.84%), non-medical staff with higher education (4.23%) and non-medical staff with secondary education (6.60%).

3.2 Measurements

A previously developed questionnaire [12] was slightly modified for this purpose. To evaluate the four cultural types, four aggregate variables were computed as average of eight primary variables corresponding to six specific characteristics of each type of Trompenaars's corporate cultures [11]: relationships between employees, attitude toward authority, ways of thinking and learning, attitudes toward people, ways of changing, ways of motivating and rewarding, to which were added two more variables assessing the organization's hierarchy level and the orientation towards tasks/people. For the employees' motivation was defined an aggregate variable as average of 15 primary variables designed to measure, on a 5-point scale, the extent to which they are motivated by different factors inspired by Maslow's hierarchy of needs theory[13]. The overall job satisfaction was measured by only one variable, while the professional performance was assessed as average of three variables: by comparison with the objectives set, with colleagues' performance and with own performance from five years ago. [14]

3.3 Data analysis

The collected data for this study were analyzed in threesteps. (1) First, the path coefficients of direct effects of Family, Eiffel Tower, Guided Missile and Incubator culture on Work Motivation were examined by means of IBM AMOS 24 (H2(a-d) hypotheses)(2) Secondly, in order to validate H3(a-d) and H1(a-d) hypotheses,total effects of each organizational culture on Job Satisfaction and Job Performance were examined(3) Thirdly, a bootstrapping procedure was performed in order to examine the significance of the indirect effectsof each

organizational culture on Job Performance and determine if there were mediation effects (H4(a-d) hypotheses).

4. RESULTS

4.1 Descriptive statistics

Examining the correlation coefficients presented in table 1, was found that all the four independent variables measuring organizational culture types are positively correlated with professional performance while only three of them with work motivation and job-satisfaction. Although the impact of Eiffel Tower on two of the dependent variables seems to be questionable, all of them was included in the final model.

Table 1. Means, standard deviations, and correlations among variables

No.	Variables	Mean	SD	1	2	3	4	5	6
1	Family culture	3.261	0.537						
2	Eiffel Tower	3.263	0.523	0.434**					
3	Guided Missile	3.203	0.550	0.240**	0.400**				
4	Incubator	2.753	0.633	0.335**	0.066*	0.302**			
5	Work Motivation	3.708	0.738	0.147**	0.026 (ns)	0.471**	0.230**		
6	Job Satisfaction	3.993	0.902	0.144**	0.006 (ns)	0.366**	0.183**	0.620**	
7	Job Performance	3.862	0.763	0.114**	0.092**	0.220**	0.150**	0.468**	0.444**

*Note: ns = "not significant", *= $p < 0.05$, **= $p < 0.01$*
Source: made by authors with IBM SPSS Statistics 23.0

4.2 Testing H3 – H5 hypotheses – Path Analysis

Path Analysis was applied in order to determine whether the theoretical relationships specified in the hypothesized model are supported by the data. Figure 1 presents the full model, as well as the squared multiple correlations of dependent variables and standardized path coefficients. Overall, the hypothesized structural model was very useful in explain variance in Work Motivation (R^2 = 27.3%, Job Satisfaction (R^2= 39.9%), and Job Performance (R^2 = 26.8%).
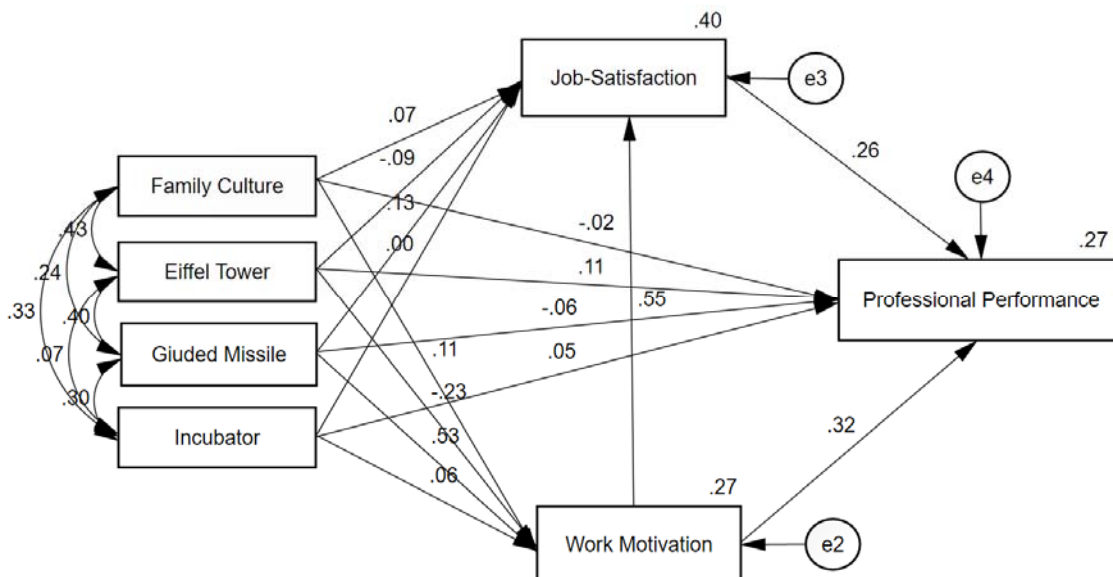

Figure 1. Statistical estimates for the conceptual model
Source: made by authors with IBM SPSS Amos 24

In order to validate H1(a-d) hypotheses, the total effects of each organizational culture on job-performance were examined by means of IBM AMOS 24. Thus, Guided Missile culture proved to have the highest total effect on Job Performance (0.215, $p < 0.001$), Family and Incubator cultures- smaller, but still statistically significant total effects (0.053, $p < 0.01$

respectively 0.081, p < 0.001), while the Eiffel Tower culture – negative and not significant total effect (- 0.023, ns).Thus, the analyses provided support for hypothesis H1a, H1c and H1d, predicting that Family, Guided Missile and Incubator culturesare positively associated with Professional Performance. However, H1b is not supported, which suggests that Eiffel Tower culture is not positively associated with Professional Performance.

In order to validate H2(a-d) hypotheses, the path coefficients of direct effects of each organizational culture on Work Motivation were examined. Thus, the highest direct effect on Work Motivation was found for Guided Missile (0.526, p < 0.001), followed by Family and Incubator cultures (0.108, p < 0.001 respectively 0.055, p < 0.001), while the Eiffel Tower culture has a negative direct effect on Job motivation (- 0.252, p < 0.001). Thus, the analyses provided support for hypothesis H2a, H2c and H2d, predicting that Family, Guided Missile and Incubator cultures are positively associated with Work Motivation. However, H2b is not supported, which means that Eiffel Tower culture is not positively associated with Work Motivation.

To validate H3(a-d) hypotheses, we examined the total effects of each organizational culture on Job Satisfaction. Thus, Guided Missile culture proved to have the highest total effect on Job Satisfaction (0.420, p < 0.001), Family and Incubator cultures - smaller, but still statistically significant total effects (0.132, p < 0.001 respectively 0.033, p < 0.001), while the Eiffel Tower culture – a negative total effect (- 0.218, p < 0.001). Thus, the analyses provided support for hypothesis H3a, H3c and H3d, predicting that Family, Guided Missile and Incubator cultures are positively associated with Job Satisfaction. However, H2b is not supported, which suggests that Eiffel Tower culture is not positively associated with Job Satisfaction.

To validate H4(a-d) hypotheses, a bootstrapping procedure was performed to verify the significance of the indirect effects of each type of culture on Job Performance.The standardized indirect (mediated) effect of Family culture on Job-Performancewas 0.069, significantly different from zero at the 0.001 level (p= 0.001 two-tailed). Furthermore, the direct effect was not statistically significant (0.016, ns). In sum, we confirmed that Work Motivation and Job Satisfaction fully mediate thepositive effect of Family culture on Job Performance, giving support for H4a hypothesis. Considering that the total effect of Eiffel Tower on job Performance was not statistically significant, we may conclude that in this case there is no mediation and H4B hypothesis was not supported.Considering that he standardized indirect (mediated) effect of Guided Missile culture on Job-Performance was 0.279, significantly different from zero at the 0.001 level (p = 0.001 two-tailed) and direct effect was negative (- 0.063, p < 0.001), we may conclude that Work Motivation and Job Satisfaction have a partial suppression effect [15]on the relationship between Guided Missile and Job Performance, thus supporting H3c hypothesis. Examining the standardized indirect (mediated) effect of Incubator culture on Job-Performance (0.026, significantly different from zero at the 0.001 level, p = 0.001 two-tailed) and the direct effect (0.054, p < 0.001), we may conclude that Work Motivation and Job Satisfaction partially mediate the effect of Family Incubator on Job Performance, which support H4d hypothesis.

Table 2. Path Analysis outcomes

No.	Hypotheses	Relationships	Direct Effects	Indirect Effects	Total Effects	Decision
1	H2a	FC→WM	0.108***	-	0.108***	Supported
2	H2b	ETC→WM	- 0.232***	-	- 0.232***	Not Supported
3	H2c	GMC→WM	0.526***	-	0.526***	Supported
4	H2d	IC→WM	0.055***	-	0.055***	Supported
5	H3a	FC→WM→JS	0.073***	0.059***	0.132***	Supported
6	H3b	ETC→WM→JS	- 0.091***	- 0.127***	- 0.218***	Not Supported
7	H3c	GMC→WM→JS	0.131***	0.288***	0.420***	Supported
8	H3d	IC→WM→JS	0.002 (ns)	0.030***	0.033**	Supported

9	H1a	FC→WM→JS→JP	- 0.016 (ns)	0.069***	0.053**	Supported
10	H4a					Supported
11	H1b	ETC→WM→JS→JP	0.109***	- 0.132***	- 0.023 (ns)	Not Supported
12	H4b					Not Supported
13	H1c	GMC→WM→JS→JP	- 0.063***	0.279***	0.215***	Supported
14	H4c					Supported
15	H1d	IC→WM→JS→JP	0.054***	0.026***	0.081***	Supported
16	H4d					Supported

Note:FC = Family, ETC = Eiffel Tower, GMC = Guided Missile, IC = Incubator, WM = Work Motivation, JS = Job Satisfaction, JP = Job Performance,ns = "not significant", *= p < 0.05, **= p < 0.01, ***= p < 0.001
Source:made by authors with IBM SPSS Amos 24

5. CONCLUSIONS

The aim of this study was to investigate theparticularities of the organizational culture of health organizations through Trompenaars corporate culture typology as well as the implications that each of those typeswould have on employees' professional performance.

This study can present both theoretical and managerial implications. One of the theoretical implications lies in the consideration for the first time, the typology of Trompenaars's corporate culture in analyzing the culture of health organizations. Furthermore, the existing models in the literature, explaining the relationships between organizational culture, work motivation, job satisfaction and job performance has been developed by considering the contribution of each type of organizational culture, not just the organizational culture as a whole.

The hypothesized theoretical model was evaluated by means of path analysis, with technical support of IBM Amos 24 program. The results and findings supported most of our hypotheses. We found that Guided Missile proved to be the most performant culture type since it has the highest effects on Work Motivation, Job Satisfaction and Professional Performance. The effects of Family and Incubator cultures are also positive and statistically significant. As regards the Eiffel Tower, this type of culture does not seem to be as efficient, given that its effects on employee Motivation and Satisfaction are negative, and statistically insignificant when related to Professional Performance.

In addition, results support the hypothesized multiple mediating effect of Work Motivation and Job Satisfaction between three of the Trompenaars's organizational culture types (Family, Guided Missile and Incubator) and employee Professional Performance, thereby, highlighting their importance in maximizing the effect that organizational culture has on employee performance.

Although presenting both theoretical and managerial implications, the study is not free of limitations which future research should address: (1) the sample representativeness, in terms of territorial distribution, and (2) the constructs assessing the culture types was not previously validated through Factor Analysis, but only driven by theory.

REFERENCES

1. Jermář, M.: Preferred Culture of Healthcare Organizations in Czech Republic. In : Proceedings of The 26th IBIMA Conference, Madrid, Spain, pp.913-925 (2015)
2. Brazil, K., Wakefield, D., Cloutier, M., Tennen, H., Hall, C.: Organizational culture predicts job satisfaction and perceived clinical effectiveness in pediatric primary care practices. Health Care Management Review, 365-371 (2010)
3. Burduș, E., Căprărescu, G.: Fundamentele managementului organizației. Editura Economică, București (1999)
4. Shein, E.: Organizational culture. American Psychologist 45(2), 109-119
5. Alvesson, M.: Understanding Organizational Culture. SAGE Publications, London (2002)

6. Prenestini, A., Lega, F.: Do Senior Management Cultures Affect Performance? Evidence from Italian Public Healthcare Organizations. Journal of Healthcare Management 58(5), 336-35 (2013)

7. Vandenberghe, C.: Organizational Culture, Person-Culture Fit, and Turnover: A Replication in the Health Care Industry. Journal of Organizational Behavior 20(2), 175-184 (1999)

8. Davies, H., Nutley, M., Mannion, R.: Organisational culture and quality of health care. Quality in Health Care 9(2), 111-119 (2000)

9. Davies, H., Mannion, R., Jacobs, R., Powell, A., Marshall, M.: Exploring the Relationship between Senior Management Team Culture and Hospital Performance. Medical Care Research & Review 64(1), 46-65 (2007)

10. Jacobs, R., Mannion, R., Davies, H., Harrison, S., Konteh, F., Walshe, K.: The relationship between organizational culture and performance in acute hospitals. Social Science & Medicine 76, 115-125 (2013)

11. Tett, R., Meyer, J.: Job satisfaction, organizational commitment, turnover intention, and turnover: Path analyses based on meta-analytic findings. Personnel Psychology 46(2), 259-293 (1993)

12. Zazzali, J., Alexander, J., Shortell, S., Burns, L.: Organizational Culture and Physician Satisfaction with Dimensions of Group Practice. Health Research and Educational Trust 42(3), 1150-1176 (2007)

13. Trompenaars, F., Hampden-Turner, C.: Riding the Waves of Culture: Understanding Diversity in Global Business 2nd edn. McGraw-Hill, New York (1998)

14. Burduş, E., Popa, I.: Reproiectarea managementului organizaţiei. Pro Universitaria, Bucureşti (2016)

15. Babic, L., Kordic, B., Babic, J.: Differences in motivation of health care professionals in public and private centers. Singidunum Journal of Applied Sciences 11(2), 45-52 (2014)

16. Popa, I., Ştefan, S., Popescu, D.: A Pilot Study on Management Systems Implemented within Romanian Organizations. In : Proceedings of The 26th IBIMA Conference - Innovation Management and Sustainable Economic Competitive Advantage: From Regional Development to Global Growth, Madrid, Spain, pp.791-803 (2015)

17. Cheung, G., Lau, R.: Testing Mediation and Suppression Effects of Latent Variables. Organizational Research Methods 11(2) (2008)