UDC 614.21(437.6):005.35:351.77
DOI https://doi.org/10.32782/2077-6594/2025.4/12

Jankelová N.[1], Palenčárová J.[1], Jankelová N.[1], Belovičová M[2]

Corporate culture as a tool for implementation of lean management principles in hospitals in Slovakia[1]

[1] Bratislava University of Economics and Business, Bratislava, Slovakia
[2] Slovak Medical University, Bratislava, Slovakia

Янкелова Н.[1], Паленчарова Я.[1], Янкелова Н.[1], Беловічова М.[2]

Корпоративна культура як інструмент впровадження принципів ощадливого управління в лікарнях Словаччини

[1] Економічний університет у Братиславі, Братислава, Словаччина
[2] Словацький медичний університет, Братислава, Словаччина

nadezda.jankelova@szu.sk

Introduction

Lean management is a continuous improvement methodology originating in the automotive industry, which has gradually permeated the service sector and, since the beginning of the 21st century, has also been used in the healthcare and IT sectors. This methodology is based on three concepts, namely customer value, elimination of waste, and continuous improvement. Lean management is showing favourable results in the healthcare sector, with a growing number of research studies on the topic, which examine not only the success factors but also the implementation barriers of lean management in the healthcare sector. The implementation of lean management is a change management project in organizations. It is difficult to set up the processes, but more difficult to sustain lean management over time. Therefore, it is important to examine the factors that influence the sustainability of lean management, both at the organizational and individual levels.

The importance of the implementation of this methodology is related to the increasing pressure on healthcare organizations in terms of increasing efficiency and reducing costs, but on the other hand increasing the quality of healthcare provided [1; 2]. At the same time, Akmal et al. [1] point out the existence of obstacles, problems, and low-quality lean management tools in the healthcare sector, which are mainly related to the implementation processes. Even some of the tools used are questioned because they do not lead to real results of lean processes [3; 4]. Through a systematic analysis of articles, the authors found that the scope of lean management implementation in healthcare is very uncertain in nature, i.e., it focuses not on whole systems, but on individual departments (most notably emergency departments). A few studies were devoted to the implementation of lean management in radiology departments. Another problem is the perception of lean management as a one-off event rather than a process of continuous improvement, which can lead to problems in the long-term sustainability of the system. Many healthcare organizations that have implemented lean management have only implemented the tools, not the philosophy [5]. According to the authors, an obstacle to successful lean implementation is the belief that implementing certain tools will be sufficient to improve processes; instead, the goal should be to implement a lean philosophy, promoting the creation of a culture of excellence. The lean management philosophy encompasses four elements: seen as a long-term journey; with a core of continuous improvement; implemented with multiple tools and techniques simultaneously; and based on cultural changes that support employee empowerment and their drive to implement tools in improvement processes [5].

Alongside the implementation of new technologies [6], the development of organizational culture represents one of the key factors that enhance cost-effectiveness [7] and bolster an organization's resilience to emerging challenges, including those associated with the ongoing aging of society [8]. This demographic trend is linked to the growing prevalence of conditions requiring nonstandard [9] or complex and, therefore, difficult-to-document [10] medical procedures, such as life-threatening cancers [11], as well as neurological [12] and mental disorders [13]. Transformations within healthcare institutions are oriented toward optimizing communication both internally and with external stakeholders and patients [14], including through modern communication media [15]–with all their advantages [16], shortcomings [17], and drawbacks [18]. This creates opportunities for introducing diverse methods of mitigating tension and resolving disputes [19]. As a result, numerous positive outcomes emerge, enabling a more effective reduction of patient risk stemming from

[1] This article is a partial output of research project VEGA no. 1/0010/23 entitled Adaptability of corporate culture – a factor supporting resilience and sustainability of enterprises in Slovakia in the post-covid period.

shortcomings in routine practice [20], as well as in critical organizational situations such as epidemics [21].

In this context, organizations need to create a lean culture as a prerequisite for implementing a lean approach [22]. Underestimating the impact of culture on lean management implementation shifts the implementation to the level of potential failure.

We assume that hospital managers are responsible for decisions in selecting new methods of efficiency and quality of workflows [23]. Dynamic managerial skills play an important role in the change process, representing the adaptability of managers to changing organizational needs and environments [24]. The concept was brought into management theory by Adner and Helfat [25] who defined it as "the managers' capabilities to build, integrate, and reconfigure the resource base of an organization." It includes human capital, social capital, and managerial cognition, and also includes the analysis of managers' actions and skills in managing any change, including the implementation of lean management. Human capital refers to the skills that managers acquire by investing in education, training, or learning [26]. From this perspective, differences arise among managers, which in turn play an important role in strategic decision-making and considerations for improving the efficiency and quality of health services provided [27]. Social capital is broadly defined as "'the network of relationships possessed by an individual or social unit, and the sum of actual and potential resources embedded within, available through, and derived from such network'" [28]. In any organization, not excluding healthcare, various formal and informal relational ties with positionally strong individuals or organizations can facilitate the flow of information, and opportunities to obtain information that can help managers to make effective strategic decisions [26]. Managerial cognition involves mental processes, relating to the various mental functions at work with knowledge and mental structures (mental frames, mental models, and schemas) [29; 30]. These aspects are very closely related to the beliefs and knowledge of the owner/manager and are reflected in the corporate culture because the ultimate bearer of the corporate culture is its ultimate representative [31].

Dynamic managerial competencies are a combination of different aspects of a business leader. Therefore, they are unique and have a great impact on the successful management of change in an organization [32]. They facilitate the implementation of lean management in the organization and, thanks to their strategic agility, contribute to a greater social and environmental commitment of managers and thus to the sustainability of the preset lean management system [33]. At the same time, they are an important factor due to the fact that there are contradictory logics in the healthcare sector in the form of different professionals and different professions with different norms and values (nurses, doctors, managers), which cause difficulties in implementing changes [23]. Culture and management skills are a prerequisite for the implementation of lean management and lean thinking principles. The foundation of culture must be employee trust and communication [34]. Culture is a key factor in the success of lean management implementation because it determines the acceptance or rejection of the process [35].

Therefore, we propose the following hypotheses:

H1: Corporate culture (CC) is positively related to the implementation of lean management (LM) principles in healthcare organizations (HO).

H2: Dynamic managerial capabilities (DMC) (H2a: human capital (HC); H2b: social capital (SC); H2c: managerial cognition (MC)) positively moderate the relationship between CC and LM in healthcare organizations (HO).

Purpose

The main objective of our research was to examine the relationship between corporate culture and lean management in hospitals in Slovakia and to find out

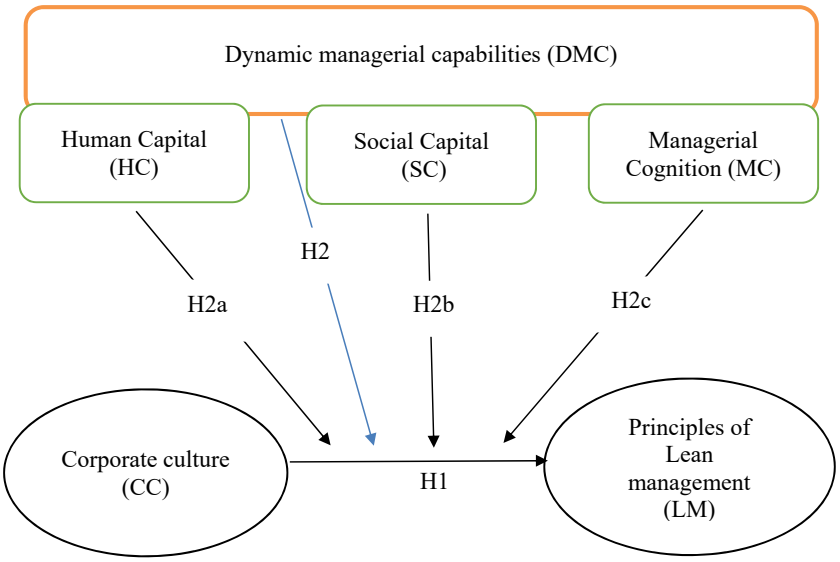

Fig. 1. Theoretical model of the study

the possible reinforcing effect of dynamic managerial skills in this relationship.

Object, materials and research methods

Our research was conducted by questionnaire. We started from a set of 11 university hospitals and 33 general hospitals in Slovakia, which are included in the list of hospitals evaluated by the Institute for Economic and Social Reforms (INEKO) using a set of defined indicators. Representatives of hospitals that manage quality processes were contacted. There were several respondents from managerial positions in each hospital, on average five respondents per hospital. In total, the sample consisted of 175 respondents from 35 hospitals. The survey was administered in 2023. For all variables, participants expressed their opinions on a 5-point Likert scale (1=strongly disagree, 5=strongly agree). Individual variables were created based on theoretical search and validated scales. The definition of CC was based on the Competing Values Framework [20], which divides culture into 4 quadrants namely group culture, hierarchical culture, development culture, and rational culture. Group culture includes – participation, teamwork, people focus, communication, and moral commitment ("participation fosters commitment"). Hierarchical culture contains items – centralization, order, regulation, control, timeliness, and smooth functioning ("control fosters efficiency"). Development culture contains – creativity, growth, flexibility, innovation, and new resources, ("innovativeness fosters new resources"). Rational culture contains – efficiency, task focus, goal orientation, competition, and market share, ("competition fosters productivity").

Principles of Lean management (LM) are "identify customers and specify value added; identify and map value streams; create flow by eliminating waste; organize according to customer pull; improve continuously. Dynamic managerial capabilities (DMC) are taken from the theory developed by Adner and Helfat [25]. They are adapted to take into account other studies in this field [31; 32]. Human capital includes items related to the manager's experience, education, and heterogeneity of work experience. Social capital includes items based on strong relationships based on trust and access to different forms of capital (including social capital of people inside and outside the organization) through the social network of managers. The measurement of managerial cognition reflects the formal education of the parents and the individual for his or her cognitive formation, as well as the socioeconomic class to which he or she belonged when he or she completed primary and secondary school. These aspects, according to researchers, influence mental processes and structures [31].

We used partial least squares structural equation modelling (PLS-SEM) using SmartPLS 3.3 software to analyse the data.

Research Results

In the first step, we validated our theoretical model. All the standardized loadings are greater than 0,70. At the same time, the indices of internal construct reliability satisfy the specified requirements. Cronbach's alpha and composite reliability are in the range of 0.7 to 0.95 for all constructs. Rho_A is also satisfactory and based on theory should be between Cronbach´s alpha and CR. Using the calculation of the average variance extracted (AVE), we verified the convergent validity, which was greater than 0.5.

Discriminant validity was assessed by calculating the three recommended instruments when measuring it [37]. These are the Fornell-Larcker criterion, cross-loadings, and the HTMT criterion. Based on the results of the analysis, we conclude that discriminant validity is established because the square root of AVE for the construct was greater than the inter-construct correlation (Fornell-Lacker criterion). The mean value of the indicator correlations across constructs measured by the HTMT indicator is satisfactory because its value is less than 0.85 – 0.9 depending on the similarity or dissimilarity of the constructs.

The SEM method examines the association of individual variables. We verified the ability of our model to predict these paths by calculating R2 (value greater than 0.1) and Q2 (value greater than 0) values, whose obtained values indicate the predictive significance of the model and the significance of paths.

We analysed the individual path coefficients by the bootstrapping method. We tested the above hypotheses H1 on the direct relationship between CC and LM and H2 (H2a, H2b, and H2c) on the moderating effect of DMC as a whole and its aspects.

The findings indicate that there is a direct relationship between CC and LM (β=0.321, p=0.000), implying that H1 was confirmed. Corporate culture is directly related to the implementation of lean management principles. The above finding is consistent with the findings of many previous studies [4; 34; 36], which are based on the finding that a balanced organizational culture is a prerequisite for successful LM implementation. Group culture supports team processes and employee engagement, employee involvement, and teamwork, developmental culture supports lean processes in terms of creativity, problem-solving processes, and decentralization, hierarchical culture supports lean processes in terms of control, standardization, and predictable performance outcome techniques and rational culture supports lean processes in terms of efficiency, productivity, and continuous quality improvement.

Next, we investigated the moderating effects of DMC on the relationship between CC and LM. The results are shown in Table 1 below.

Regarding H2a, there is no statistically significant moderating effect of HC on the relationship between CC and LM ($\beta = 0.099$; $p = 0.065 > 0.05$), thus rejecting H2a. However, SC ($\beta = 0.055$; $p = 0.001 < 0.01$) and MC ($\beta = 0.115$; $p = 0.016 < 0.05$) have a positive moderating effect statistically significant on the relationship between CC and LM. This means that the higher the level of SC (H2b) and MC (H2c), the higher the effect of CC and LM will be. HOs will be able to increase the level of LM

Table 1

Effect of DMC on the relationship between CC and LM

		Beta	SD	p	f 2
H1	CC -> LM – total effect	0,321	0,069	0,000***	0,140
	HC -> LM	0,152	0,034	0,001**	0,018
	SC -> LM	0,270	0,050	0,000***	0,079
	MC -> LM	0,370	0,069	0,000***	0,120
H2	CC*DMC -> LM	0,180	0,065	0,001**	0,029
H2a	CC*HC -> LM	0,099	0,041	0,065	0,000
H2b	CC*SC -> LM	0,055	0,025	0,001**	0,025
H2c	CC*MC -> LM	0,115	0,049	0,016*	0,048

Remark. p < 0.001*** p < 0.01; * p < 0.05

CC= Corporate Culture, LM= Lean Management, HC= Human Capital, SC= Social Capital, MC= Managerial Cognition

implementation if they are able to seize the opportunity to build a balanced CC and effectively grasp the area of social capital and managerial cognition. H2 was confirmed, indicating that DMCs (β = 0.180; p = 0.001 < 0.01) have a positive moderating effect on the relationship between CC and LM, which is statistically significant. This means that the higher the level of DMC, the higher will be the effect of CC on LM. The table also shows the effect sizes of f2 [38]. Values greater than 0.02, 0.15, and 0.35 represent small, medium, and large f2 effect sizes, respectively. The f 2 effect size values strengthen our hypotheses, which were verified by evaluating them through path coefficients. Figure 2 presents the model with the tested hypotheses.

Healthcare around the world is facing increasing pressure to improve the quality of healthcare, reduce costs, and increase the efficiency of healthcare. Therefore, in recent years, there have been efforts to implement lean management in the healthcare sector as well. However, many studies point to the unsystematic and unsustainable implementation of lean management and lean thinking in healthcare. Therefore, barriers as well as success factors for the implementation of LM are examined.

Hypothesis 1 of a direct relationship between CC and LM was confirmed, indicating that HOs with balanced CC achieve higher levels of LM implementation, based on intensive work on building all four types of cultures. Thus, our study contributes to the stream of literature on the direct link between CC and LM and the advocacy of its importance.

The direct link between CC and LM is thus a fundamental and necessary basis for the development of lean management in HO. To strengthen this relationship, researchers are looking for other factors to occur in order to differently combine and connect resources and capabilities to achieve better performance. Our findings point to the moderating effect of dynamic managerial capabilities, which are made up of human capital, social capital, and managerial cognition. DMCs are a subset of dynamic capabilities, which are higher-level capabilities for the purpose of managing change in a rapidly changing business environment [26]. The results suggest that DMC clearly strengthens the relationship between CC and LM, which is consistent with the findings of other studies that managers, through DMC, create, expand, and modify the resource and cultural base of organizations and contribute to the quality of strategic decisions [29].

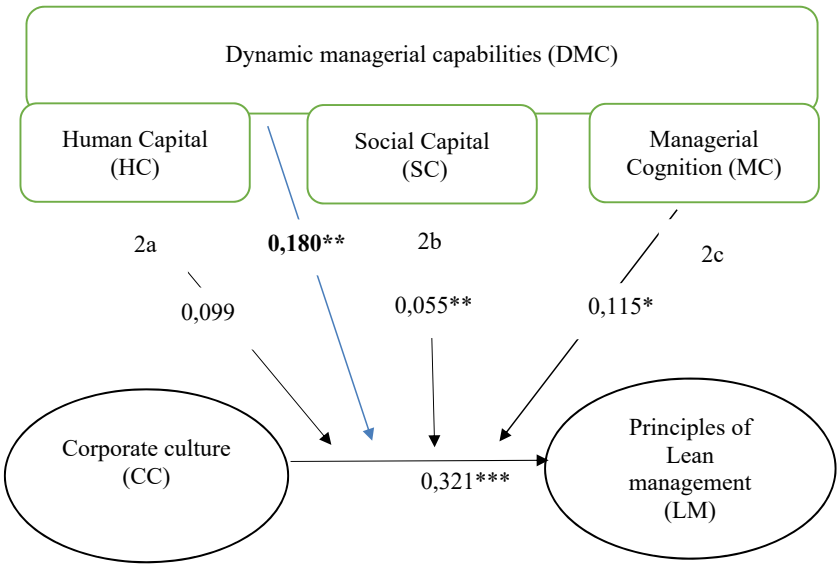

Fig. 2. Empirical model of the study

We tested three hypotheses about the moderating effects of each type of DMC, all of which were confirmed. We also tested the moderating effect of DMC as a complex construct (H2).

Hypothesis 2a was not confirmed. The moderating effect of human capital was not statistically significant. Managers' skills and knowledge repertoire resulting from their education and experience did not moderate the relationship between CC and LM. In the current rapidly changing times and in a healthcare environment full of dualities, HC as a stand-alone factor is no longer sufficient, especially for strategic HO activities. Hypothesis 2b was confirmed. The moderating effect of social capital was statistically significant. Managers' ability to access resources through relationships and connections is important to maximize the development of LM through CC at the organizational level. Managers' network ties help to obtain important information for lean activities and ultimately for strategic decision-making. Hypothesis 2c was confirmed. The moderating effect of managerial cognition was statistically significant. Managers' mental models and their thought process systems are needed to leverage the culture for lean management implementation and the associated higher efficiency and quality of service delivery. Managers with a higher level of managerial cognition can apply a set of learned mental models to the use of heuristics and shortcuts [24; 39] to activate existing resources and means in order to create conditions for LM implementation. Our findings are in line with the findings of studies on the importance of managers' decision logics that activate their intangible resources and transform them into successful projects [40]. Hypothesis 2 was confirmed. The moderating effect of DMC on the relationship between CC and LM was statistically significant. Dynamic managerial capabilities as a whole strengthen the link between a balanced corporate culture and the implementation of LM tools. Our findings contribute to the knowledge that the linkage between different types of DMCs is an important aspect of bringing about a higher level of LM implementation with a synergistic effect on CC.

Prospects for further research

Since the research was conducted in universities and general hospitals in Slovakia, future studies could focus on other types of healthcare facilities or on the international context. This would help to verify the general validity and long-term sustainability of the relationship between corporate culture, dynamic managerial capabilities, and the implementation of lean management.

Conclusions

This study strongly supports all established hypotheses, confirms the positive impact of corporate culture in the application of lean management principles in healthcare organizations (H1), and demonstrates the moderating role of dynamic managerial capabilities in the relationship between corporate culture and lean management implementation (H2). The study provides theoretical implications by highlighting these relationships, extending our understanding of corporate culture in lean management implementation as a balanced culture of the four CFR types, and exploring the complex construct of dynamic managerial capabilities as a moderator of the relationship between culture and lean management. The study offers tools for healthcare organizations to improve the efficiency and quality of healthcare services in dynamic environments so that they can proactively build and create a balanced corporate culture, invest in dynamic managerial capabilities, and prioritize lean management and lean thinking.

Bibliography

1. Akmal A, Greatbanks R, Foote J. Lean thinking in healthcare – findings from a systematic literature network and bibliometric analysis. Health Policy. 2020 Jun;124(6):615–27. doi:10.1016/j.healthpol.2020.04.008

2. Huhs E, Gliebe W, Sendlhofer G. Qualitative analyse zu lean management im Gesundheitswesen: Sichtweisen österreichischer und Schweizer Experten. Zeitschrift für Evidenz, Fortbildung und Qualität im Gesundheitswesen. 2019 Jun;143:8–14. doi:10.1016/j.zefq.2019.05.003

3. Moraros J, Lemstra M, Nwankwo C. Lean interventions in healthcare: Do they actually work? A systematic literature review. International Journal for Quality in Health Care. 2016 Jan 24;28(2):150–65. doi:10.1093/intqhc/mzv123

4. Poksinska BB, Fialkowska-Filipek M, Engström J. Does Lean Healthcare improve patient satisfaction? A mixed-method investigation into Primary Care. BMJ Quality & Safety. 2016 Feb 10;26(2):95–103. doi:10.1136/bmjqs-2015-004290

5. Bhasin S, Burcher P. Lean viewed as a philosophy. Journal of Manufacturing Technology Management. 2006 Jan 1;17(1):56–72. doi:10.1108/17410380610639506

6. Furtak-Pobrotyn J, Pobrotyn P, Witczak I, Rypicz Ł, Susło R, Jażdż-Zaleska R, et al. The effect of modern medical technology on the availability and cost of cataract treatment in older patients. Family Medicine & Primary Care Review. 2018;20(3):222–6. doi:10.5114/fmpcr.2018.78255

7. Pobrotyn P, Susło R, Witczak IT, Rypicz Ł, Drobnik J. An analysis of the costs of treating aged patients in a large clinical hospital in Poland under the pressure of recent demographic trends. Archives of Medical Science. 2020;16(3):666–71. doi: 10.5114/aoms.2018.81132

8. Susło A, Mizia S, Pochybełko E, Horoch-Łyszczarek E. Loneliness among elderly people as a public health threat. Family Medicine & Primary Care Review. 2023;25(1):107–10. doi:10.5114/fmpcr.2023.126026

9. Susło R, Trnka J, Siewiera J, Drobnik J. Ondine's curse – genetic and iatrogenic central hypoventilation as diagnostic options in Forensic Medicine. Advances in Experimental Medicine and Biology. 2015;65–73. doi:10.1007/5584_2015_143

10. Susło R, Trnka J, Drobnik J, et al. The way of medical documents filling in as cause of faulty medical opinions. Family Medicine & Primary Care Review. 2009;11:506-508.

11. Pajewska M, Partyka O, Czerw A, Deptała A, Cipora E, Gąska I, et al. Management of metastatic pancreatic cancer–comparison of global guidelines over the last 5 years. Cancers. 2023 Sept 2;15(17):4400. doi:10.3390/cancers15174400

12. Suslo R, Trnka J, Siewiera J, Drobnik J. Hypoxia-related brain dysfunction in Forensic Medicine. Advances in Experimental Medicine and Biology. 2014;49–56. doi:10.1007/5584_2014_84

13. Trnka J, Gesicki M, Suslo R, Siuta J, Drobnik J, Pirogowicz I. Death as a result of violent asphyxia in autopsy reports. Advances in Experimental Medicine and Biology. 2013;413–6. doi:10.1007/978-94-007-6627-3_56

14. Trnka J, Drobnik J, Susło R. The specificity of the doctor-patient relationship in the case of the family doctor. Family Medicine & Primary Care Review. 2010;12:488-490.

15. Grata-Borkowska U, Sobieski M, Drobnik J, Fabich E, Bujnowska-Fedak MM. Perception and attitude toward teleconsultations among different healthcare professionals in the era of the COVID-19 pandemic. International Journal of Environmental Research and Public Health. 2022 Sept 13;19(18):11532. doi:10.3390/ijerph191811532

16. Susło R, Trnka J, Drobnik J, et al. Influence of service, scientific and teaching activities of medical institutions on their information systems. Family Medicine & Primary Care Review. 2008;10:696-698

17. Susło R, Paplicki M, Dopierała K, Drobnik J. Fostering Digital Literacy in the elderly as a means to secure their health needs and human rights in the reality of the twenty-First Century. Family Medicine & Primary Care Review. 2018;20(3):271–5. doi:10.5114/fmpcr.2018.78273

18. Susło R, Trnka J, Drobnik J. Current threats to medical data security in family doctors' practices. Family Medicine & Primary Care Review. 2017;3:313–8. doi:10.5114/fmpcr.2017.69297

19. Benedikt A, Susło R, Paplicki M, Drobnik J. Mediation as an alternative method of conflict resolution: A practical approach. Family Medicine & Primary Care Review. 2020;22(3):235–9. doi:10.5114/fmpcr.2020.98252

20. Susło A, Horoch-Łyszczarek E, Pochybełko E, Mizia S. Evaluation of potentially inappropriate prescribing and deprescription as elements of good medical practice in elderly patient care. Family Medicine & Primary Care Review. 2023;25(3):371–5. doi:10.5114/fmpcr.2023.131272

21. Drobnik J, Pobrotyn P, Witczak I, et al. Influenza as an important factor causing increased risk of patients' deaths, excessive morbidity and prolonged hospital stays. Archives of Medical Science. 2023;19:941-951.

22. Hasle P, Nielsen AP, Edwards K. Application of lean manufacturing in hospitals–the need to consider maturity, complexity, and the value concept. Human Factors and Ergonomics in Manufacturing & Service Industries. 2016 May 16;26(4):430–42. doi:10.1002/hfm.20668

23. Eriksson N. Hospital management from a high reliability organizational change perspective. International Journal of Public Sector Management. 2017 Jan 9;30(1):67–84. doi:10.1108/ijpsm-12-2015-0221

24. Tenggono E, Soetjipto BW, Sudhartio L. Navigating institutional pressure: Role of dynamic managerial capabilities and strategic agility in healthcare organizations' renewal. International Journal of Healthcare Management. 2024 Feb 29;18(3):502–11. doi:10.1080/20479700.2024.2323846

25. Adner R, Helfat CE. Corporate effects and dynamic managerial capabilities. Strategic Management Journal. 2003 Sept 12;24(10):1011–25. doi:10.1002/smj.331

26. Tasheva S, Nielsen BB. The role of Global Dynamic Managerial Capability in the pursuit of international strategy and Superior Performance. Journal of International Business Studies. 2020 Jun 22;53(4):689–708. doi:10.1057/s41267-020-00336-8

27. Haynes KT, Hillman A. The effect of board capital and CEO power on strategic change. Strategic Management Journal. 2010 Sept 15;31(11):1145–63. doi:10.1002/smj.859

28. Nahapiet J, Ghoshal S. Social Capital, intellectual capital, and the organizational advantage. The Academy of Management Review. 1998 Apr;23(2):242. doi:10.2307/259373

29. Helfat CE, Martin JA. Dynamic managerial capabilities. Journal of Management. 2014 Dec 11;41(5):1281–312. doi:10.1177/0149206314561301

30. Durán WF, Aguado D. CEOS' managerial cognition and dynamic capabilities: A Meta-analytical study from the microfoundations approach. Journal of Management & Organization. 2022 May;28(3):451–79. doi:10.1017/jmo.2022.24

31. Corrêa RO, Bueno EV, Kato HT, Silva LM a. Dynamic managerial capabilities: Scale Development and valid [Internet]. John Wiley & Sons, Ltd.; 1970 [cited 2024 Jul 21]. Available from: https://ideas.repec.org//a/wly/mgtdec/v40y2019i1p3-15.html

32. Beck JB, Wiersema MF. Executive decision making. Journal of Leadership & Organizational Studies. 2013 Jan 30;20(4):408–19. doi:10.1177/1548051812471722

33. Buil-Fabregà M, Alonso-Almeida M del, Bagur-Femenías L. Individual dynamic managerial capabilities: Influence over environmental and social commitment under a gender perspective. Journal of Cleaner Production. 2017 May;151:371–9. doi:10.1016/j.jclepro.2017.03.081

34. Dannapfel P, Poksinska B, Thomas K. Dissemination strategy for lean thinking in Health Care. International Journal of Health Care Quality Assurance. 2014 Jun 3;27(5):391–404. doi:10.1108/ijhcqa-01-2013-0001

35. Pakdil F, Leonard KM. The effect of organizational culture on implementing and sustaining Lean Processes. Journal of Manufacturing Technology Management. 2015 Jun 1;26(5):725–43. doi:10.1108/jmtm-08-2013-0112

36. Helfrich CD, Li Y-F, Mohr DC, Meterko M, Sales AE. Assessing an organizational culture instrument based on the competing values framework: Exploratory and confirmatory factor analyses. Implementation Science. 2007 Apr 25;2(1). doi:10.1186/1748-5908-2-13

37. Henseler J, Ringle CM, Sarstedt M. Testing measurement invariance of composites using partial least squares. International Marketing Review. 2016 May 9;33(3):405–31. doi:10.1108/imr-09-2014-0304

38. Hair JF, Risher JJ, Sarstedt M, Ringle CM. When to use and how to report the results of PLS-SEM. European Business Review. 2019 Jan 14;31(1):2–24. doi:10.1108/ebr-11-2018-0203

39. Kerr J& C. Weaving network theory into effectuation: A multi-level Reco [Internet]. Elsevier; 1970 [cited 2024 Aug 2]. Available from: https://ideas.repec.org//a/eee/jbvent/v35y2020i2s0883902617309527.html

40. Karami M, Tang J. Entrepreneurial orientation and SME International Performance: The Mediating Role of networking capability and experiential learning. International Small Business Journal: Researching Entrepreneurship. 2019 Feb 27;37(2):105–24. doi:10.1177/0266242618807275

Purpose. The main objective of our research was to examine the relationship between corporate culture and lean management in hospitals in Slovakia and to find out the possible reinforcing effect of dynamic managerial skills in this relationship.

Materials and methods. The research aimed at investigation of the interrelationship between corporate culture and the implementation of lean management principles in healthcare organizations in the Slovak Republic and at identification of the moderating effect of dynamic managerial capabilities in this relationship. The sample consisted of 175 managers from 35 hospitals. The SEM method in Smart Pls 3.3 software was used to test the hypotheses at a significance level of 0.05.

Results. We found out that there is a statistically significant association between a balanced corporate culture of healthcare organizations and the implementation of lean principles. Dynamic managerial capabilities strengthen the effect of culture on lean implementation.

Conclusions. Our research shows the clear importance of building a balanced corporate culture as an organizational factor in the application of lean management principles in healthcare, simultaneously with work on the development of dynamic managerial capabilities as an individual factor for the development of lean management.

Key words: healthcare, lean management, corporate culture, dynamic managerial capabilities.

Мета нашого дослідження полягала в тому, щоб вивчити взаємозв'язок між корпоративною культурою та ощадливим управлінням у лікарнях Словаччини та з'ясувати можливість посилення впливу динамічних управлінських навичок у цих відносинах.

Матеріали та методи. Дослідження були зосереджені на вивченні взаємозв'язку між корпоративною культурою та реалізацією принципів ощадливого управління в організаціях охорони здоров'я Словацької Республіки, а також на виявленні пом'якшувального впливу динамічних управлінських здібностей у цих відносинах. Дані збиралися за допомогою анкетування, а відповіді респондентів оцінювалися за 5-бальною шкалою Лайкерта (1 = абсолютно не згоден, 5 = повністю згоден). Вибірку склали 175 керівників з 35 лікарень, які брали безпосередню участь в управлінні процесами якості. Обрані лікарні відносяться до списку оцінюваного Інституту економічних і соціальних реформ (ІНЕКО) з використанням набору певних показників, що забезпечило репрезентативність і порівнянність даних. У дослідженні взяли участь менеджери різних рівнів управління, що дозволило вловити різні погляди на реалізацію процесів LEAN і роль корпоративної культури в цих змінах. Для перевірки гіпотез використовувався метод SE (Structural Equation Modling) в програмі Smart PLS 3 при рівні значущості 0,05. Модель була перевірена за допомогою тестів надійності та валідності, включаючи альфа Кронбаха, комплексну надійність, середню виділену варіацію (AVE) та індикатори дискримінаційної достовірності. Ці процедури дозволили підтвердити внутрішню узгодженість вимірюваних конструкцій та забезпечили високу якість аналітичної обробки.

Результати. Встановлено, що існує статистично значущий зв'язок між збалансованою корпоративною культурою організацій охорони здоров'я та реалізацією принципів ощадливого управління. Це сприяє гіпотезі 1 і передбачає, що лікарні з добре розвиненою комбінацією культурних цінностей з більшою ймовірністю будуть успішними у впровадженні ощадливого управління. Збалансована культура тут діє як елемент стабілізації, який допомагає подолати опір змінам і сприяє участі співробітників у процесах поліпшення. Також були перевірені три гіпотези про ефекти помірності кожного типу DMC. Модераційний ефект людського капіталу не був підтверджений. Навпаки, соціальний капітал і управлінське пізнання показали значні позитивні ефекти. Ментальні моделі та процеси прийняття рішень менеджерами дозволяють використовувати бізнес-культурні ресурси для реалізації ощадливого управління, в той час як менеджери з більш високими рівнями пізнання здатні активувати доступні ресурси за допомогою вивчених моделей, евристичних методів і ярликів та створювати умови для більш ефективного і кращого надання медичних послуг. Гіпотеза 2 була підтверджена – динамічні навички управління в цілому статистично значимо зміцнюють взаємозв'язок між збалансованою бізнес-культурою і впровадженням Lean Management. Їх взаємозв'язок вносить вклад у вищий рівень реалізації і створює синергетичний ефект, який примножує позитивний вплив корпоративної культури. Ці результати також є значними з практичної точки зору, оскільки вони показують, що знань і досвіду менеджерів (людський капітал) більше недостатньо, але також важливо розвивати соціальний капітал і управлінське пізнання, що дозволяє більш ефективно поєднувати корпоративну культуру з реалізацією Lean Management і підвищує якість і ефективність послуг, що надаються.

Висновки. Наше дослідження наочно показує важливість побудови збалансованої корпоративної культури як організаційного фактора застосування принципів ощадливого управління закладом охорони здоров'я у поєднанні з розвитком динамічних управлінських здібностей як індивідуального фактора менеджерів. Для медичних організацій це означає, що довгостроковий успіх ощадливих ініціатив не може бути досягнутий тільки за рахунок впровадження інструментів, але також вимагає культурної готовності та розвитку управлінського потенціалу. Таким чином, наші результати є не тільки теоретичним внеском, але й практичною основою, яку можна використовувати для створення стратегій розвитку лікарень і при розробці освітніх програм для менеджерів охорони здоров'я.

Ключові слова: охорона здоров'я, ощадливе управління, корпоративна культура, динамічні управлінські здібності.

Conflict of interest: absent.
Конфлікт інтересів: відсутній.

Information about the authors

Jankelová Naďa – MUDr., Mgr., MBA, postgraduate student at the Faculty of Public Health, Slovak Medical University, Bratislava; doctor at Bratislava Bory Hospital, Slovakia.
n.jankelova@gmail.com, ORCID ID: 0009-0002-5979-6499 [A, D]

Palenčárová Jana – Ing., PhD., MBA, teacher at the Faculty of Public Health, Slovak Medical University, Bratislava; HR director at Bratislava Bory Hospital, Slovakia.
jana.palencarova@szu.sk, ORCID ID: 0009-0005-1261-6632 [B]

Jankelová Nadežda – Prof., Ing., PhD., MPH, teacher at the Faculty of Business Management, University of Economics in Bratislava, Slovakia.
nadezda.jankelova@szu.sk, ORCID ID: 0000-0002-0045-4737 [C, F]

Belovičová Mária – Prof., MUDr., PhD., teacher at the Faculty of Public Health, Slovak Medical University, Bratislava, Slovakia; doctor in Bardejov Spa policlinic.
maria.belovicova@szu.sk, ORCID ID: 0000-0001-7397-6133 [E]

Стаття надійшла до редакції 08.09.2025
Дата першого рішення 14.11.2025
Стаття подана до друку 30.12.2025