


Strategic Analysis of the Key Success Factors of Cooperation-Competition in the Healthcare: Scenario Analysis and Fuzzy Cognitive Map Approach

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Abstract

Purpose: Cooperation strategy or cooperation-competition is a popular strategic approach in the healthcare. Despite the acceptance of this approach, organizations have faced difficulties implementing it to benefit from all its advantages. Therefore, the current research was conducted with the aim of identifying the key success factors of the cooperation-competition strategy in the healthcare and analyzing the scenario of these factors.

Method: This research has mixed method research (qualitative-quantitative). In the first stage of the research (qualitative) based on semi-structured interviews and thematic analysis, the key success factors were identified and in the second stage (quantitative), fuzzy cognitive map and scenario analysis was used to rank these factors.

Findings: As a result of the first stage of research, 74 key factors of success were identified and categorized to 15 major categories: "human resource management", "skills to detect and resolve inconsistencies", "training of managers", "management of relations between organizations", "degree of dependence and similarity", "Information management", "Smart monitoring and evaluation", "Smart service", "Appropriate culture creation", "Positive manager", "Multiple sources", "Work environment design", "Team work", "Management of contracts" and "benchmarking". Based on the output of the fuzzy cognitive map, "Training of managers" and "Management of contracts" are the driver and "Smart service" is the receiver. Other key success factors are typical. "inter organizational relationship management" and "intelligent monitoring and evaluation" have the highest degrees of dependence. "benchmarking" and "skill to detect and resolve inconsistencies" have the highest degree of influence, and "management of relations between organizations" and "skill to detect and resolve inconsistencies" have the highest degree of centrality. The overlap of the backward scenarios indicates the special position of "smart monitoring and evaluation", "management of contract" and "proper culture creation". Also, the overlap of future scenarios shows the importance of "benchmarking" and "training managers".


Conclusion: Based on the findings, the development of information infrastructure, benchmarking, regulation of contracts based on the coverage of challenges and management training are recommended for the development of cooperation-competition strategy in health care sector.

Key Words: Key Success Factors, Cooperation-Competition Strategy, Healthcare, Scenario Analysis, Fuzzy Cognitive Map.

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Introduction

The health organizations continuously face what is known as "deep uncertainty," which has diminished their ability to predict the outcomes of strategic actions and decision-making, creating new challenges and threatening their survival (Gifford et al., 2024). As a result of these developments, it is necessary for health sector strategies to be well-defined. However, health programs often lack proper oversight and may not be based on scientific methods (Verulava, 2023). This highlights the need for strategic management in this sector.

Strategic management involves managerial activities aimed at achieving organizational success, improving employee performance, and maximizing the quality of products and services. The steps of strategic management include setting goals, defining mission and vision, developing strategies, policies, tactics, and values. Effective implementation of plans and programs at an optimal level also requires the creation of collaboration between employees and management (Öztrak, 2023).

One of the most important strategic approaches is collaborative competition, which has also garnered serious attention in the health sector. Collaborative competition refers to the strategic integration of cooperation and competition (Meena et al., 2024). Several advantages of collaborative competition have been noted, including improved financial performance, market performance, and innovation (Xie et al., 2023), effective management of corporate social responsibility (Bouncken et al., 2024), and knowledge acquisition (Mariani & Belitski, 2023). Despite the mentioned advantages of collaborative competition, its complex nature can lead to a lose-lose situation if not managed effectively. Therefore, it is essential to identify and analyze the factors that influence its success. A comprehensive understanding of these factors remains unclear (Meena et al., 2024), necessitating further research in this area.

The existing studies reveal a research gap regarding the identification, modeling, and scenario analysis of these success factors in the healthcare sector. Consequently, this research aims to achieve the following objectives:

1. What are the critical success factors for collaborative competition in the healthcare sector?
2. How can we model the critical success factors for collaborative competition in healthcare?
3. How can we analyze scenarios related to the critical success factors for collaborative competition in healthcare?

Materials and Methods

This study employs a mixed-methods approach and is conducted in two phases. In the first phase, qualitative thematic analysis is used to address the first research question: What are the critical success factors for collaborative competition in the healthcare sector? For this part, the statistical population includes experts from the health sector

in the cities of Kashan and Aran and Bidgol. A purposive sampling method was used. In total, the interviews lasted 12 hours and 4 minutes. Thematic analysis was employed to analyze the interview data.

To address the second and third research questions regarding the modeling and scenario analysis of the critical success factors for collaborative competition, a fuzzy cognitive mapping method was utilized. The statistical population in this phase was similar to that of the first phase, following the same purposive sampling method, with a sample size of 15 participants. In this stage, two categories of scenarios are designed: backward and forward-facing scenarios.

Results and Discussion

To identify the key success factors for collaborative competition, semi-structured interviews were conducted and coded. A manual method was employed to extract themes from the data. The text was thoroughly reviewed in two stages: first, to extract basic themes, and then to identify organizing themes. In this research, a total of 74 key success factors were identified, categorized into 15 overarching categories.

Table 1: Results of first Phase

Organizer themes	Basic themes	Organizer themes	Basic themes
Appropriate culture	Cultivation	Human resource management	Motivate human resources
	Eliminate jealousy		Incentive scheme for manpower
	The priority should be the health of the patient, not the competition		Compliance with administrative justice
	Strong organizational culture		Coordination with the officials of the units
Training managers	Holding regular meetings for managers	Intelligent monitoring and evaluation	Power financing
	Training managers		Monitoring and evaluation
	Taking advantage of successful experiences		Compliance with the rules
	Continuous training of managers and holding in-service courses		Follow up problems
	Exchange experience	Ability to participate in identifying weaknesses	
	Organizing meetings between hospital units for getting to know each other	Fix the defect	
	Education	The ability to detect and	Identify non-conformities
	brainstorming		Management of inconsistencies

Organizer themes	Basic themes	Organizer themes	Basic themes
Intelligent service	Checking the patient's history	resolve inconsistencies	Avoid opportunism
	Follow-up in obtaining history	Information management	Maintaining trustworthiness
	Accuracy in service		Maintain confidentiality
commitment	Information exchange		
Positive manager	The desire of the head of the collection		Joint meetings
	good manners	Clarification	
	Appropriate treatment	Being multi-source	multi-source
Management of contracts	Simplify the rules	Work environment design	Update processes
	Facilitating inter-hospital contracts		Work environment design
	The existence of rules and regulations		Reduction of administrative bureaucracy
	Appropriate contracts		Delegation of authority
	Strengthening and support is for providing raw materials to perform services		Division of duties
Management of inter-organizational relations	Constructive interaction	optional	Experienced human manager
	Responsibility of the parties		Continuous financial management
	Inter-organizational support		Using managers with experience and familiar with affairs
	Understanding the wishes of the parties		Employing capable people
	Understanding the red line		Meritism in managers
	Intimate relationships		Skilled and efficient manpower
	Honesty		Experienced manpower
	keeping the promise	The degree of dependence and similarity	Similar organizational culture
	mutual respect		Supplementary resources
	understanding		Joint goal setting
	Equality of rights	Group work	team building
	trust		teamwork
	Healthy advertising		Multi-specialty teams

In the second part of the research, a fuzzy cognitive mapping method was used to illustrate the model of key success factors for collaborative competition in the healthcare sector. According to the output from the fuzzy cognitive map, “Manager

Training” and “Contract Management” are identified as driving factors, while “Smart Service Delivery” acts as a receiving factor. Other key success factors are deemed to have a moderate influence.

The analysis reveals that the highest degrees of dependency are associated with “Management of Inter-Organizational Relationships” and “Intelligent Monitoring and Evaluation.” The most impactful factors are identified as “Selection and Recruitment” and “Skill in Identifying and Addressing Incompatibilities.” Furthermore, the factors with the highest degrees of centrality are “Management of Inter-Organizational Relationships” and “Skill in Identifying and Addressing Incompatibilities.”

The overlap in backward scenarios indicates the special significance of “Intelligent Monitoring and Evaluation,” “Contract Management,” and “Appropriate Cultural Development.” Additionally, the overlap in forward scenarios highlights the importance of “Selection and Recruitment” and “Manager Training.”

Conclusions

Based on the research findings and the emphasis of the collaborative competition scenario in the healthcare sector on the two key factors of "selection" and "manager training," and considering the importance of these two elements for the success of the competitive collaboration strategy in healthcare, the following recommendations are suggested:

1. Developing a Competency Framework and Selection Based on It.
2. Special Attention to Health Management Expertise.
3. Training Managers Based on Key Competencies.
4. Strengthening Organizational Culture in Human Resources.
5. Strengthening Collaboration Contracts and Legal Oversight.
2. Developing Information Infrastructure and Appropriate Information Sharing.
3. Continuous Monitoring and Evaluation of Performance.
4. Creating Learning Networks for Managers and Employees.
5. Anticipating Future Trends and Preparing for Changes.

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