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The Use Of The Balanced Scorecard In Improving The Performance Of Healthcare Organizations: A Systematic Literature Review

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Abstract

The balanced scorecard (BSC) is important for institutions as it allows for the monitoring and control of strategy, aiding in management and timely alignment for the achievement of strategic objectives. It is also useful for measuring the fulfillment of daily activities, ensuring the attainment of both short-term and long-term objectives. This research paper conducts a comprehensive literature review and employs data mining (QDA Miner) for analysis. Our findings determine that the BSC provides a comprehensive approach to measuring and evaluating the performance of healthcare organizations from various perspectives, including financial, customer, internal, and learning and growth. This framework allows for the evaluation of financial outcomes and facilitates the communication of strategy within the organization.

Keywords: *balanced scorecard, organizations, health, performance.*

Introduction

Every organization, regardless of its purposes, aims to meet the objectives and goals that direct its actions. To achieve this task, it is important to comprehensively understand the strategic direction of the organization, as well as the resources it has to execute these lines. (Arrieta Jiménez et al., 2021; Harvey & Sotardi, 2018).

To ensure the achievement of organizational objectives there are various instruments that allow to constantly measure the milestones that help to understand the progress of the goals, within these instruments is the Balanced Score Card of Kaplan and Norton (1996), or Balanced Scorecard (Faraji et al., 2022; Guix & Font, 2020). This tool can be defined as a framework that helps senior management select a set of measures that provide a coherent view of an organization by assigning a list of measurable items in four different perspectives: Financial, Customer, Internal Business Processes, and Learning and Development. (Juiz et al., 2018; Propa et al., 2015).

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As explained by Rivero and Galarza (2017), the balanced scorecard is important for institutions, since it allows the monitoring and control of the strategy, which helps the management and timely direction for the fulfillment of strategic objectives. It is also useful for measuring compliance with daily activities, ensuring the achievement of both short-term and long-term objectives. (Elbanna et al., 2022; Suárez-Gargallo & Zaragoza-Sáez, 2023). On the other hand, organizations have realized that by working with the WCC they can create critical management processes: redirecting strategy; disseminate, link and set strategic objectives and indicators; plan; Directing and providing feedback on strategic initiatives (Tawse & Tabesh, 2023; Zoltowski, 2022).

The balanced scorecard allows organizations to have a tool that together with the management carried out improves communicational aspects, facilitating feedback and the empowerment of learning in organizations, as long as there is the predisposition of the operational, administrative and managerial members that will guarantee its execution (Esther Akinbowale et al., 2022; Fatima & Elbanna, 2020).

In that order of ideas Vega-Falcón and Lluglla, (2019), state that the introduction of the Balanced Scorecard in organizations generates a progression of strategic learning, favoring the creation of effective communication, improvements in the individual participation of each of the employees and helps the alignment of strategic objectives related to financial aspects, quality, performance and organization.

In the field of management of health organizations, the constant search to improve the performance and quality of services has become a priority. In this sense, the Balanced Scorecard (CMI) has emerged as an effective tool to measure and evaluate strategic performance in different sectors, including health care. (Li et al., 2021). In order to examine the efficacy and benefits of WCC in the field of health organizations, a systematic review of the existing scientific literature has been conducted.

The health sector is an area in constant evolution and change, due to the continuous advances in technology and the growing demand for health services by the population. Healthcare organizations face numerous challenges in ensuring the quality and efficiency of their services, while reducing costs and improving patient satisfaction. (Rojas et al., 2020).

This article focused on critically analyzing the results of different scientific studies that explored the use of WCC in improving the performance of health organizations. The review was based on the compilation and exhaustive analysis of the findings found in the specialized literature, addressing the characteristics and application of the CMI, the results of its implementation and the key factors for successful implementation.

The characteristics and application of the WCC in health organizations were examined, including its structure and main components, as well as its evolution over time.

The importance of the WCC's four main perspectives (financial, client, internal, and learning and

growth) in measuring and evaluating organizational performance in health was highlighted.

Subsequently, the results of the implementation of the WCC in the performance of health organizations were analyzed, focusing on the improvement of operational efficiency and the impact on the effectiveness and quality of health services. The benefits observed in terms of strategic alignment, optimization of financial resources, continuous process improvement and patient satisfaction were highlighted.

Finally, the key factors for successful implementation of the WCC in health organizations were addressed, emphasizing the commitment and leadership of senior management, as well as the availability and quality of data for measurement and monitoring in the WCC.

The objective of the present research is to provide a comprehensive and up-to-date overview of the use of the balanced scorecard (BSC) in enhancing the performance of healthcare organizations.

Methodology

Information was collected from scientific articles published in Scopus that addressed the theme of Balanced Scorecard (CMI) and its application in health institutions. To delimit the time, the search was carried out using the scientific database of ScienceDirect, using a period of 6 years (2018-2023) and selecting open files.

The analysis of the information was carried out using the QDA miner software in its version 6, where through the creation of an interpretative table of three categories and six subcategories, the base of 9 preselected articles was codified.

Table 1 Codification of bibliographic information

Category	Subcategory	Code
Characteristics and application of the Balanced Scorecard (CMI) in health organizations	Structure and components of the Balanced Scorecard	Code 1.1
	Adapting and personalizing the WCC in the health context	Code 1.2
Results of the implementation of the Balanced Scorecard in the performance of health organizations	Improvement in the operational efficiency of health services	Code 2.1
	Impact on the effectiveness and quality of health services	Code 2.2
Key factors for the successful implementation of the Balanced Scorecard in health organizations	Commitment and leadership of senior management in the implementation of the WCC	Code 3.1
	Availability and quality of data for measurement and monitoring in the WCC	Code 3.2

Note: Coding base generated by the author for the understanding and analysis of the articles.

Once the process of coding the information was completed, a series of tables and figures were generated that helped to carry out the subjective analysis and triangulation for justification.

Results and Discussion

Below are the results of the analysis performed:

Table 2 Base of articles used for analysis

Art	Title	Appointment
BSC Art 1	The Evolution of Balanced Scorecard in Healthcare: A Systematic Review of Its Design, Implementation, Use, and Review	(Betto et al., 2022)
BSC Art 2	Exploration on the gap of single- and double-loop learning of balanced scorecard and organizational performance in a health organization	(Li et al., 2021)
BSC Art 3	Primary care-specific dashboards as a management tool	(Bartolomé Benito et al., 2019)
BSC Art 4	THE BALANCED SCORECARD IN HEALTH MANAGEMENT	(Loaiza, 2021)
BSC Art 5	Usefulness of the budget and the balanced scorecard in the management of primary care centers. Impact on staff motivation	(Ramón-Jerónimo et al., 2018)
BSC Art 6	Scoping review of balanced scorecards for use in healthcare settings: development and implementation	(Bohm et al., 2021)
BSC Art 7	The dynamic use of a balanced scorecard in an Italian public hospital	(Bassani et al., 2022)
BSC Art 8	The Impact for implementing Balanced Scorecard in Health Care Organizations: A Systematic Review	(Faten Amer et al., 2021)
BSC Art 9	The Use of Balanced Scorecards in Mental Health Services: an Integrative Review and Thematic Analysis	(Brimelow et al., 2023)

Note: Open articles of Scopus from the period 2018-2023 that address the variables BSC and health institutions

After the analysis, the following distribution of words per article analyzed was obtained:

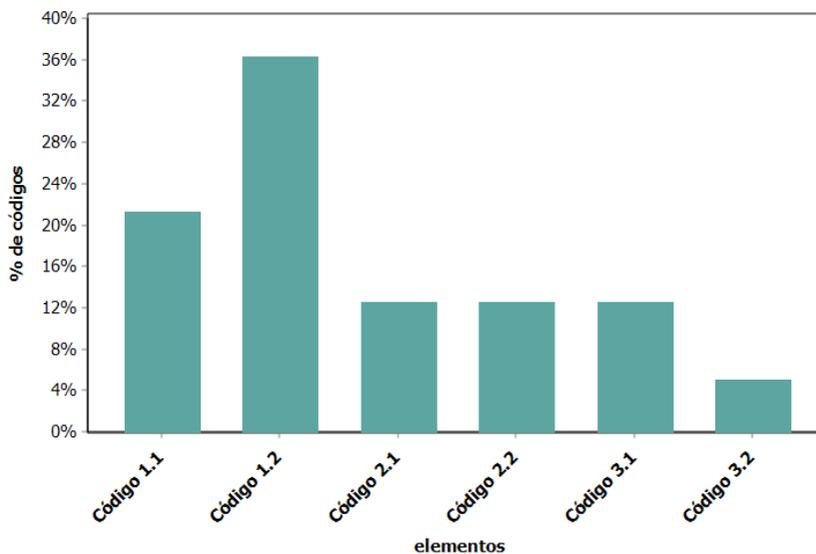


Figure 1 Distribution by keywords of the bibliography in reference to the Balanced Scorecard

Source: Own elaboration, based on the analysis of the information with QDA miner version 6

Results after comparative analysis of the information coded in each category

Characteristics and application of the Balanced Scorecard (CMI) in health organizations***Structure and components of the Balanced Scorecard***

The Balanced Scorecard (CMI), also known as the Balanced Scorecard (BSC), is an organizational management tool developed by Kaplan and Norton. According to Brimelow et al. (2023), the WCC tracks performance measures that reflect an organization's strategic objectives and can be thought of as a tool for performance measurement, strategy evaluation and communication.

Originally developed by Kaplan and Norton, the WCC tracks metrics and indicators that align with the organization's strategic objectives across four perspectives: financial, customer, internal, and learning and growth (Brimelow et al., 2023). According to Li et al. (2021), the WCC is a successful tool for performance evaluation and has become a strategic management system. Gallo et al. (2018) also highlight the use as a strategic management tool in the tourism sector.

The WCC has evolved over time, with three major iterations or 'generations' described in the literature (Brimelow et al., 2023). The first generation focused on the multidimensional measurement of business performance across the four perspectives with a focus on stakeholder satisfaction. The second generation included the notion that causal relationships between objectives could be identified with the introduction of strategy maps. The third generation moved towards a strategic linkage model focused on results and activities, moving away from the four traditional perspectives.

Regarding the perspectives of the CMI, according to Loaiza (2021), the financial perspective refers to the final link of the objectives of each business unit with the organizational strategy. The customer perspective focuses on strategic objectives related to customers and the market. The internal processes perspective refers to the objectives related to the internal processes and activities of the organization. The learning, growth and innovation perspective covers aspects such as human capital, information capital and organizational capital (Loaiza, 2021). The WCC is a strategic management tool used in health organizations to measure and evaluate performance from different perspectives. It allows the monitoring of strategic objectives, the communication of the strategy and the decision making based on key performance indicators.

Adapting and personalizing WCC in the context of health

The Balanced Scorecard has been extensively studied and adapted in the context of health. Brimelow et al. (2023) note that BSCs typically include measures of customer satisfaction, learning and growth, internal processes, and financial management. Li et al. (2021) explore a health organization's learning about WCC to integrate organizational goals and visions, promoting performance at both organizational and subunit levels. Mehralian et al. (2017) use it as a measurement tool to evaluate the performance of pharmaceutical companies.

The BSC has been defended and justified by Kaplan and Norton, the authors of the concept, in terms of their financial perspectives, customers, internal processes and learning and growth

(Bartolomé Benito et al., 2019). Loaiza (2021) highlights the importance of implementing the WCC in health centers to measure and improve clinical performance, as well as to establish performance indicators in hospitals.

In the context of the adaptation of the WCC to health, Ramón-Jerónimo et al. (2018) mention that, although health peculiarities require adapting this tool to clinical needs, this tool has shown sufficient adaptability, especially in the hospital system. Bohm et al. (2021) emphasize the importance of scorecard design, indicator selection, and linkage to organizational strategy.

Bassani et al. (2022) note that BSC has been widely used in public and private health organizations to monitor hospital performance. They stress the importance of adapting the BSC to new needs and external changes, as well as periodically reviewing the objectives and measures adopted. Betto et al. (2022) mention the different phases of BSC adoption, including design, implementation, use and review, and emphasize the importance of adapting BSC to the organization's strategy and updating measures and objectives.

The scientific articles analyzed reveal that the Balanced Scorecard has been applied and adapted in health organizations to improve clinical performance, integrate organizational goals and visions, and promote strategic management in the health sector. Proper selection of indicators and adaptation of the BSC framework are key elements for successful implementation of the tool in the health context.

Results of the implementation of the Balanced Scorecard in the performance of health organizations

Improvement in the operational efficiency of health services

The implementation of the Balanced Scorecard in health services has been shown to improve operational efficiency and performance in different aspects. Several authors have researched and analysed the benefits and application of WCC in this context.

Brimelow et al. (2023) conducted an integrative review of BSCs implemented in the mental health sector, with the aim of informing the future development of a more comprehensive benchmarking tool. They highlighted the importance as a tool for communication and evaluation of strategies, in addition to performance management.

Bartolomé Benito et al. (2019) defined the concept of strategic management supported by the WCC in the context of primary health care in the Community of Madrid. The study highlighted how the WCC, called eSOAP, allowed attention to be focused on and visibly tracked on achievable goals.

Loaiza (2021) mentioned the strategies and benefits of WCC in health care. He highlighted that it promotes the cascading flow of strategy throughout the organization, facilitating employee engagement, efficiency, productivity and strategic communication.

Ramón-Jerónimo et al. (2018) pointed out that the WCC optimizes the use of financial resources

in the delivery of health services and provides information on the fulfillment of strategic objectives. They also mentioned that meeting the objectives of the tool can be rewarded with financial incentives for healthcare professionals and directors.

Bohm et al. (2021) reported on the efficacy and outcomes of BSC implementation in health and the health system. Although it was not the primary objective of their review, they identified improvements in performance measures after BSC implementation, as well as strategies and lessons learned for successful implementation.

Bassani et al. (2022) found that the use of BSC in health services evolves from setting and communicating priorities to becoming a monitoring and support system for legitimization purposes.

Faten Amer et al. (2021) highlighted that the implementation of BSC in health has had both positive and negative impacts. They mentioned that employee satisfaction with the relationship with patients and satisfaction with professional fulfillment increased, but a decrease in satisfaction with relationships with colleagues was also observed.

The scientific articles analyzed highlight the value of the WCC in improving the operational efficiency of health organizations. The successful implementation of the WCC requires the clear definition of management indicators, the adequate communication of the strategy and the commitment of all members of the organization. Despite some considerations, the WCC has proven to be an effective tool in strategic management and in achieving health goals.

Impact on the effectiveness and quality of health services

The implementation of the Balanced Scorecard (CMI) in health services has proven to have a significant impact in different aspects and dimensions. The authors who have analyzed and interpreted this impact are listed below:

Brimelow et al. (2023) noted that healthcare institutions use BSC to measure organizational performance and the effectiveness of care provided. They highlighted its usefulness in integrated healthcare facilities, where there are multiple goals, stakeholders and strategies for success. Studies have shown that BSC provides performance benchmarking and stimulates a new dialogue about the organization's vision and strategy.

Li et al. (2021) found that BSC key performance indicators (KPIs) have an important influence on the financial dimension of medical institutions. Their study also showed that the application of the tool in public non-profit sector organizations differs from private organizations, and its use has shown good performance in hospitals evaluated by the BSC.

Loaiza (2021) mentioned a study conducted in Brazil, which investigated the implementation of management indicators under the perspective of BSC in a network of philanthropic hospital entities. Indicators were identified in various perspectives of the CMI model, such as financial, customers and internal processes, and competitive criteria such as quality, flexibility, cost and

innovation capacity were evaluated. Bohm et al. (2021) highlighted that BSC has been extensively reviewed in healthcare, and its implementation has proven effective in different healthcare settings. They mentioned studies that have used BSC in low-income settings and found benefits in benchmarking, performance monitoring and quality improvement.

Bassani et al. (2022) indicated that BSC monitors aspects such as waiting times and patient problems during hospitalization, which influences the quality perceived by patients. They highlighted that the tool promotes a shared language and increases the accountability behavior of senior managers, which contributes to communication and performance evaluation in the organization.

Faten Amer et al. (2021) mentioned that the application of BSC has had a positive impact on patient satisfaction and financial performance in studies conducted in high-income countries.

The implementation of the Balanced Scorecard in health organizations has been shown to have a positive impact on the effectiveness and quality of health services. It provides performance benchmarking, aligns healthcare with organizational goals, and fosters accountability. In addition, the WCC promotes continuous process improvement, cost management and patient satisfaction. Although more research and systematic evaluation is required, existing results support the strategic value of WCC in the area of business administration in the health sector.

Key factors for the successful implementation of the Balanced Scorecard in health organizations

Commitment and leadership of senior management in the implementation of the WCC

The commitment and leadership of senior management play a crucial role in the implementation of the Balanced Scorecard (CMI). The authors who have analyzed and interpreted this theme are listed below:

Brimelow et al. (2023) highlighted that the development of an effective WCC relies on staff involvement in developing the organization's strategy and priorities. It was emphasized that adhering to the strategy is the responsibility of all employees, not just senior managers, and that buy-in at all levels of the organization is critical. The importance of the mission statement and a clear strategic map for the success of the implementation of the tool were mentioned.

Li et al. (2021) mentioned that WCC learning represents a source of progress for companies to acquire new knowledge and improve their performance. They highlighted that learning outcomes represent improved performance through employees internalizing organizational goals. The resistance to learning that can arise during the acquisition of new concepts was also mentioned.

Loaiza (2021) highlighted that clinical performance is closely related to management processes, and it is important that the professionals involved understand this connection. The need to set objectives and targets, allocate resources and evaluate outcomes to promote properly valued clinical

performance was emphasized.

Bohm et al. (2021) mentioned that stakeholder engagement, including leadership, is critical in WCC implementation. They highlighted aspects such as trust, transparency, acceptance, communication, leadership support and responsibility. The importance of establishing a shared approach and ensuring optimal participation of team members was highlighted.

Bassani et al. (2022) noted that in voluntary implementation of the WCC, it helped senior managers to set and communicate their priorities, keeping the focus on critical areas. The importance of leadership support in strategic alignment was mentioned.

Betto et al. (2022) highlighted that more research is required on the drivers of WCC implementation, including patient participation in CMI reporting and strategies that go beyond client satisfaction questionnaires. The importance of involving patients in patient- and family-centered care was mentioned.

Availability and quality of data for measurement and monitoring in the WCC

The availability and quality of data for measurement and monitoring in the Balanced Scorecard (CMI) are fundamental aspects for its effectiveness. The authors who have analyzed and interpreted this theme are listed below:

Brimelow et al. (2023) mentioned that in the healthcare industry, the use of WCC focuses on improving the quality of healthcare and meeting national benchmarks affecting funding. The importance of specific health care indicators that are relevant and reflect key objectives was highlighted. The need to adapt traditional WCC perspectives to capture external and internal changes, such as the adoption of telehealth and digital health solutions during the COVID-19 pandemic, was highlighted.

Li et al. (2021) noted that the performance evaluation of hospital medical staff is often broad and vague, making it difficult to accurately measure the actual employment situation of employees. In this sense, the WCC is presented as an appropriate tool to measure performance in health care organizations. Mention was made of a study that used the tool to measure the performance of a public hospital, where weaknesses in the learning and growth perspective were identified. The importance of using WCC outcomes as drivers of organizational change was emphasized.

Bassani et al. (2022) mentioned that the WCC has often been used to manage and monitor short-term performance, adapting objectives to key performance indicators (KPIs) required at the regional level. However, it was noted that this can result in a lack of attention to important organizational goals, such as teaching, research, and quality of patient care. The importance of fostering internal collaboration and communication through the WCC was also mentioned.

The cited authors highlight the importance of having available and quality data for measurement and monitoring in the WCC. This involves using relevant indicators and adapting them to

contextual changes, as well as using WCC outcomes as drivers of organizational change. In addition, the need to consider broader organizational objectives and encourage internal collaboration and communication was mentioned.

The process of analysis of scientific articles reveals significant results in each of the categories related to the Balanced Scorecard in health organizations.

In terms of the characteristics and application of the WCC, its structure and components stand out, based on four main perspectives: financial, client, internal and learning and growth. These perspectives allow both financial and non-financial results to be assessed, and the WCC has evolved over time to adapt to the needs of health organizations. In addition, it is recognized that the WCC is not only a performance measurement tool, but also a strategic management system that facilitates decision-making and the implementation of organizational strategy. In the research conducted by (Benítez-Estévez et al., 2019) it was identified that in health organizations the CMI allows to evaluate different indicators helping to improve the quality of care, controlling mainly the perspectives of the client, finances and processes. On the other hand in the investigation of (Taufik et al., 2019) It is found that the application of the tool allows the measurement of performance in all perspectives, which allows the growth of hospital admissions.

On the other hand, the results of the implementation of the WCC in the performance of health organizations, improvements are observed both in operational efficiency and in the effectiveness and quality of health services. This tool helps align strategies and objectives, optimize financial resources, improve employee satisfaction and promote cost management. Another similar study shows that BSC in health institutions allows the integration of the goals and vision of the institution in action plans from the departmental level to the guidelines (Broccardo, 2015). In the study of (F Amer et al., 2022), it was also determined that with the implementation of the BSC, in addition to organizational and financial indicators, the quality of care is improved, substantially improving patient satisfaction.

It was also recognized that the key factors for the successful implementation of the WCC, the commitment and leadership of senior management are highlighted as fundamental elements. It is crucial that senior managers involve all staff in developing the organization's strategy and priorities, and promoting employee learning and growth. Likewise, the availability and quality of data are critical aspects for the success of the WCC, adapting the indicators to the strategic objectives and using the results as drivers of organizational change. In the research of (Li et al., 2021) During the BSC work sessions, executive leaders and unit managers collaborated on translating the hospital's mission, core values and vision into strategic objectives and operational measures. CS assigned responsibilities to the relevant departments and charged them with taking actions and implementing the necessary measures to achieve the established objectives

The analysis of scientific articles highlights the value and benefits of WCC in health organizations. This tool provides a comprehensive view of organizational performance, improves operational

efficiency, positively impacts the quality of health services and requires a solid commitment from senior management and adequate data management. Its successful implementation involves considering these key factors and tailoring the WCC to the specific needs and objectives of each organization. As mentioned in the study of (Jaber & Nashwan, 2022) which focused on developing and validating a hospital performance framework based on the WCC, recognizing that the original four perspectives plus the quality of care factor as an additional perspective in the hospital WCC allows for more complete measurement and effective improvement of performance in hospitals.

Conclusion

The WCC provides a comprehensive approach to measuring and evaluating the performance of healthcare organizations from different perspectives, including financial, client, internal, and learning and growth. This structure allows to evaluate both financial and non-financial results and facilitates the communication of the strategy within the organization.

Successful implementation of the WCC requires the commitment and leadership of senior management. It is critical that senior managers involve all staff in developing the organization's strategy and priorities, promoting employee learning and growth. The involvement of health service users is also crucial to drive innovation and improve the quality of care.

Data availability and quality are key factors in the successful implementation of the WCC. It is necessary to adapt the indicators to the strategic objectives of health organizations and to use the results of the WCC as drivers of organizational change. It is also important to have effective data collection and management systems to ensure accurate and reliable measurement.

The implementation of the WCC in health organizations has been shown to have a positive impact on the operational efficiency and quality of health services. Contributes to the alignment of healthcare with organizational objectives, promotes continuous process improvement and cost management, and fosters patient and employee satisfaction.

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