

## EVALUATING THE ROLE OF THE BALANCED SCORECARD IN ENHANCING HEALTHCARE ORGANIZATIONAL PERFORMANCE: A SYSTEMATIC REVIEW

**Mohammad Raffy Yusmar<sup>1</sup>**

1) Master of Hospital Administration Program, Faculty of Medicine, University of Muhammadiyah Surabaya

INFORMATION	ABSTRACT
<p><b>Correspondence:</b> raffyyusmar@gmail.com</p> <p><b>Keywords:</b> Balanced Score Card, Healthcare performance, sustainability, stakeholder engagement, crisis management</p>	<p><i>Objective: The publication explores the use of the Balanced Scorecard (BSC) in healthcare, focusing on its benefits, challenges, and recent adaptations for sustainability, community engagement, and crisis management. It aims to provide recommendations to help healthcare organizations effectively use the BSC to improve their performance and service quality</i></p> <p><i>Methods: This study conducts a systematic review of scientific publications on the Balanced Scorecard within the healthcare sector using the PubMed database. The search strategy employed the following keywords: ("Balanced Scorecard"[Title/Abstract] OR "Balanced Scorecard"[MeSH Terms]) AND ("Healthcare"[Title/Abstract] OR "Health Care"[MeSH Terms] OR "Hospitals"[MeSH Terms]) AND ("Effect"[Title/Abstract] OR "Impact"[Title/Abstract] OR "Outcome"[Title/Abstract] OR "Evaluation"[Title/Abstract]). The search was limited to articles published within the last 10 years</i></p> <p><i>Results: The initial search yielded 30 studies, of which 15 met the inclusion criteria after screening and were included in this systematic review. These studies span diverse healthcare settings such as hospitals, emergency departments, healthcare centers, and public health organizations, highlighting the global relevance of the Balanced Scorecard in healthcare.</i></p> <p><i>Conclusion: This study shows that the Balanced Scorecard (BSC) is widely used across global</i></p>

*healthcare settings and effectively integrates financial and non-financial measures to improve performance, engagement, and decision-making. Its adaptability makes it a valuable tool for ongoing healthcare improvement and sustainable delivery worldwide*

## INTRODUCTION

Performance measurement in healthcare assesses how effectively services are delivered, ensuring alignment with organizational goals to improve patient care and efficiency. The Balanced Scorecard (BSC), developed by Kaplan and Norton, evaluates performance from four perspectives—financial, customer, internal processes, and learning—to help healthcare organizations meet both short- and long-term strategic objectives (Abu Jaber & Nashwan, 2022; Pierce, 2022). Healthcare performance measurement uses key indicators like clinical effectiveness, patient satisfaction, efficiency, and financial health to evaluate care quality and operations. The COVID-19 pandemic underscored the need for strong, adaptable systems with reliable KPIs to guide swift, high-quality responses during crises (Betto et al., 2022). The review of Balanced Scorecard (BSC) in healthcare is important as it adapts a business tool to improve healthcare performance, quality, and patient satisfaction. This systematic review compiles studies on BSC's impact on healthcare worker and patient satisfaction, and financial outcomes, highlighting the need to understand its benefits and challenges in healthcare settings (Bohm et al., 2021).

Performance measurement in healthcare evaluates organizational efficiency and effectiveness. The Balanced Scorecard (BSC), adapted from business, is widely used in healthcare to improve strategic management by monitoring key indicators like healthcare worker satisfaction, patient satisfaction, and financial outcomes, enhancing overall organizational performance (Amer, Hammoud, Onchonga, et al., 2022). The literature reveals significant gaps in understanding the Balanced Scorecard (BSC) in healthcare, particularly in its design, implementation, and outcomes. Despite widespread use, there is a lack of rigorous studies evaluating its impact in healthcare organizations. This review addresses these gaps by examining BSC development and use, identifying barriers and enablers of

implementation, and providing insights into its effectiveness across healthcare settings (Amer, Hammoud, Khatatbeh, et al., 2022). This comprehensive approach not only advances academic knowledge but also delivers practical guidance for healthcare leaders and policymakers. It equips them with the insights needed to optimize performance measurement and strategic management, ultimately improving healthcare delivery and organizational effectiveness (Amer, Hammoud, Khatatbeh, et al., 2022).

The Balanced Scorecard (BSC) has gained widespread acceptance across many industries, including healthcare, where it has proven to be a highly effective framework for enhancing service delivery and overall organizational performance. Within healthcare environments, the BSC plays a crucial role in connecting strategic goals with measurable performance indicators. This linkage enables healthcare organizations to continuously track their progress and make well-informed decisions aimed at improving patient care and operational efficiency. One of the key strengths of the BSC is its flexibility, allowing it to be customized to fit the unique needs of different organizations, whether in the public or private sector. This adaptability makes the BSC a versatile and valuable tool for managing performance across diverse healthcare settings. According to numerous studies and practical implementations worldwide, the BSC has demonstrated its relevance and effectiveness in driving meaningful performance improvements in healthcare organizations, underscoring its importance as a performance measurement tool in this critical sector (Abu Jaber & Nashwan, 2022).

## **METHOD**

This study undertakes a comprehensive systematic review aimed at synthesizing scientific literature related to the application and effects of the Balanced Scorecard specifically within the healthcare sector. The literature search was conducted exclusively using the PubMed database, a widely recognized and authoritative source for biomedical and health-related research publications. The rationale for selecting PubMed lies in its extensive coverage of peer-reviewed journals and indexed articles relevant to healthcare management and clinical outcomes. The keywords used included "Balanced Scorecard" as a central concept, ensuring that

studies focused on this particular performance management framework were identified. To specifically target the healthcare domain, additional terms such as "Healthcare," "Health Care," and "Hospitals" were incorporated into the search to encompass a broad array of healthcare settings and organizational contexts. Moreover, the search included terms related to the impact and evaluation of the Balanced Scorecard, such as "Effect," "Impact," "Outcome," and "Evaluation," which allowed the review to focus on studies reporting measurable results or assessments of the framework's implementation and outcomes. By combining these terms in the PubMed advanced search interface, the search was refined to yield relevant articles that addressed both the performance framework and its influence or results within healthcare organizations. To maintain relevance and capture the most recent developments, the search was limited to studies published within the last 10 years. This temporal filter ensured that the review encompasses contemporary applications and evaluations of the Balanced Scorecard, reflecting current trends and evidence-based practices in healthcare management. The inclusion criteria for this review prioritized studies that explicitly examined the Balanced Scorecard in healthcare settings, including hospitals, clinics, and other health-related organizations. Eligible publications were required to present empirical data, evaluations, or discussions on the application, impact, outcomes, or effectiveness of the Balanced Scorecard framework in healthcare contexts. Both qualitative and quantitative study designs were considered to provide a comprehensive understanding of the framework's utility and results. Conversely, studies were excluded if the Balanced Scorecard was not applied within the healthcare sector or if the focus was on other industries or generalized business settings without healthcare relevance. Additionally, publications not available in English or those lacking sufficient detail to assess their relevance to healthcare performance were omitted from the review.

## RESULTS

### Study Selection

The initial search strategy identified a total of 30 studies. After applying the exclusion criteria, 15 studies remained and were further screened based on their titles to ensure they met the inclusion criteria. Ultimately, 15 studies were selected and included in this systematic review

### Countries and Settings of Place

The studies covered in the table are conducted across diverse countries reflecting a wide geographical scope, including Palestina (West Bank and Jerusalem), Romania (South-West Oltenia region), South Africa (Free State Province), Iran (Tehran province and public hospitals), Ethiopia (public primary hospitals), Japan (Tokyo), Switzerland (University Hospital in Lausanne), China (Guangxi Province), Canada (urban non-teaching facility), Spain (primary health care centers in Seville), Taiwan (community hospital), among others. This wide regional distribution underscores the global interest and applicability of the Balanced Scorecard in healthcare settings ranging from hospitals, emergency departments, healthcare centers, to public health organizations.

Table 1. Characteristics of the Analyzed Articles

Journal Title / Author/ Year of publication	Country	Design of study	Setting	BSc Role in HCO
<b>The Impact of Integrated Health Management in Hospital Administration: A Systematic Literature Review Applying the ProKnow-C Methodology (Avila &amp; Gil, 2025)</b>	n.a	The study employed a systematic literature review design using the Constructivist Knowledge Development Process (ProKnow-C) framework	The setting pertains to hospital environments as the study focuses on integrated health management in hospitals. It is not specific to one hospital or location but reviews literature related to hospital settings in general.	The Balanced Scorecard (BSC) is identified as one of the management tools used to improve service delivery efficiency in hospitals. Specifically, it is part of the first principal approach to integrated hospital management. The BSC helps by providing performance indicators that assist hospital administration in enhancing operational performance and aligning strategic goals with measurable outcomes, thus playing a critical role in boosting organizational performance in healthcare settings

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<b>Practice of balanced scorecard implementation and its contributing factors among public primary hospital professionals in Central Gondar zone, Northwest Ethiopia (Yeshaw et al., 2025)</b>	Ethiopia	From late May to late June 2022, researchers conducted a mixed methods study designed to thoroughly explore the implementation of the Balanced Scorecard. They collected quantitative data using a systematic random sampling technique to ensure broad, representative insights. Alongside, they gathered qualitative data through purposive sampling, selecting participants who provided rich, detailed information. This combined design enabled the team to quantify the level of Balanced Scorecard use while also capturing deeper contextual understanding through participants' experiences and perspectives	The study focused on public primary hospitals, which are frontline health facilities responsible for serving local communities' healthcare needs. This setting highlights the practical challenges and opportunities for applying strategic performance tools like the BSC in such organizations	The Balanced Scorecard is a powerful strategic management tool designed to systematically measure and enhance organizational performance. Within Ethiopian public primary hospitals, the BSC plays a vital role by helping these institutions identify the healthcare needs of their communities, improve the delivery of health services, and strengthen teamwork, communication, and infrastructure support. These efforts ultimately lead to increased productivity and better health outcomes for the population they serve. The study revealed that the implementation of the BSC in these hospitals was moderate, achieving an implementation rate of 48.5%. Key factors that helped improve the adoption of the BSC included strong teamwork, effective communication within the organization, and sufficient infrastructure. However, challenges such as a lack of commitment among staff, limited resources, and poor communication hindered its full success.
<b>Reimagining hospital management: the balanced scorecard as a catalyst for employee retention and organizational excellence (Guo et al., 2024)</b>	Japan	The research employed a single case study design analyzing the implementation and effects of the Balanced Scorecard (BSC) in a hospital setting	The study took place at Bethlehem Garden Hospital, a 96-bed long-term care hospital located in Kiyose City, Tokyo, Japan	The Balanced Scorecard was used as a strategic communication tool to address and reduce employee turnover. Its implementation correlated with a significant decrease in turnover rates (from 23.6% in 2015 to 3.4% in 2023) and an improvement in employee engagement scores (from 72.1% to 87.9% over the same period). The BSC helped improve organizational alignment, trust, and employee engagement, which collectively enhanced the hospital's overall performance



Journal Title / Author/ Year of publication	Country	Design of study	Setting	BSc Role in HCO
<b>Digital transformation of an academic hospital department: A case study on strategic planning using the balanced scorecard (Hügler &amp; Grek, 2023)</b>	Switzerland	The study follows a monocentric, observational design focusing on strategic planning within the hospital department. It was conducted over several years (2017–2023) and included consideration of digital developments and restrictions during the SARS-Cov2 pandemic. Data was gathered from multiple sources such as retreats, working and focus groups, semi-structured interviews with stakeholders, and a review of literature and social media	The setting is the University Hospital in Lausanne (CHUV), Switzerland, specifically in the rheumatology department. This context is important because it reflects a specialized healthcare environment undergoing digital transformation in clinical care	The Balanced Scorecard (BSC) applied in this research was tailored to assess and forecast the effectiveness of digital solutions through four primary perspectives: financial, customer (patient), internal processes, and learning and growth. This framework was instrumental in tracking and enhancing real-time performance, enabling operational adjustments, and supporting the rollout of new strategies. Specifically adapted for hospital environments, it emphasized clinical results, the quality of patient care, innovation, and relevant key performance indicators (KPIs). This strategic customization aligned the digital transformation initiatives with the hospital's mission and vision, promoting a connected care approach and boosting the institution's overall organizational performance
<b>Implementing an intervention to improve leadership/management of public healthcare services in the Free State Province, South Africa: lessons learned (Malakoane et al., 2023)</b>	South Africa	The study describes the implementation of the Health Systems Governance and Accountability (HSGA) intervention, using a systems approach and the World Health Organization's health systems strengthening framework. It is an intervention study aiming to improve leadership/management and service integration within the public health system.	The study setting is the public healthcare system in the Free State Province, South Africa. This area includes a large, socioeconomically disadvantaged population (more than 80% relying on public services), with a high burden of disease and limited resources	The Balanced Scorecard (BSC) was used as a performance-monitoring tool to track and evaluate the integration of health services and improvements in health outcomes. The BSC focused particularly on leadership/management perspectives and demonstrated medium to large improvements in leadership goals from year one to year two of the intervention, illustrating its role in reinforcing management effectiveness and contributing to improved organizational performance.

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<b>Engaging physicians and nurses in balanced scorecard evaluation—An implication at Palestinian hospitals and recommendations for policy makers (Amer et al., 2023)</b>	Palestina	A cross-sectional study design was employed. This means data were collected at a single point in time to assess the viewpoints of healthcare workers regarding the Balanced Scorecard application in their hospitals. The study included the development and use of a survey tool called BSC-HCW1, which was specifically designed and validated to capture data aligned with BSC dimensions, from the perspective of healthcare workers	The study is set in the Occupied Palestinian Territories (OPT), covering healthcare settings in eastern Jerusalem, and various regions of the West Bank such as northern, middle, and southern areas. Importantly, Gaza Strip was excluded due to specific contextual challenges. The healthcare workers involved were primarily physicians and nurses working in hospitals within these territories. This regional focus highlights particular healthcare system challenges under political and resource constraints	The Balanced Scorecard (BSC) is a comprehensive evaluation framework that incorporates four key areas of performance: financial efficiency, patient satisfaction, internal healthcare processes, and staff development. In this study, the BSC was innovatively applied by involving healthcare workers directly rather than focusing solely on management-level metrics. The goals were to enhance overall hospital performance, gain insight into healthcare workers' satisfaction with their work environment, shape effective local health policies, and emphasize the critical role of management in driving positive change. The findings revealed that while the BSC can greatly improve patient satisfaction, its effect on healthcare workers' satisfaction is more modest. Importantly, managers' experience was found to play a crucial role in knowledge sharing, workload balancing, quality of care, and employee well-being.
<b>Engaging patients in balanced scorecard evaluation - An implication at Palestinian hospitals and recommendations for policy makers (Amer, Neiroukh, et al., 2022)</b>	Palestina	The research adopted a cross-sectional multisite design, meaning that data were collected at one point in time but from multiple hospital sites. This design facilitated the understanding of patient experiences across different hospital settings within the same timeframe	Data collection took place in 21 hospitals: 18 located in the West Bank and 3 in Jerusalem. These hospitals varied in administration (public, private) and location, ensuring that the findings were not limited to a particular kind of healthcare environment but rather reflected a broad hospital performance panorama in the OPT	The Balanced Scorecard was used as a multi-dimensional framework that goes beyond financial metrics to include customer perspectives (patient experiences), internal processes, external factors, learning and improvement (knowledge and growth), and managerial capabilities. The study specifically explored how patients' experiences related to these perspectives and how such experiences predict attitudes toward hospital performance using the BSC framework. The research highlighted the importance of patient feedback in evaluating and improving organizational performance



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<b>An Empirical Framework for Assessing the Balanced Scorecard Impact on Sustainable Development in Healthcare Performance Measurement (Vărzaru, 2022)</b>	Romania	The research adopted a survey approach, focusing specifically on employees involved in healthcare management. Its main aim was to evaluate how digital transformation, the use of accounting information systems, and strategic human resource management affect organizational performance, with this performance being assessed through the Balanced Scorecard (BSC) framework. Information was gathered by administering a structured questionnaire that gathered demographic details as well as queries related to digital transformation, various aspects of the Balanced Scorecard, and the organization's progress toward sustainable development	Healthcare sector in the South-West Oltenia region of Romania	The Balanced Scorecard (BSC) is explored as a tool for measuring performance that integrates both financial and non-financial aspects. The study emphasizes the importance of the BSC in promoting sustainable development within healthcare organizations. It shows that the different dimensions of the BSC act as crucial links, demonstrating how digital transformation and human resource management influence overall organizational performance. Ultimately, the research finds that by adopting the BSC, organizations can more effectively address sustainability challenges by maintaining a balance between financial success and other key performance indicators

<b>Journal Title / Author/ Year of publication</b>	<b>Country</b>	<b>Design of study</b>	<b>Setting</b>	<b>BSc Role in HCO</b>
<b>The balanced scorecard as a strategic management tool in hospital pharmacies: an experimental study (Alipour et al., 2022)</b>	Iran	It is an experimental study carried out over the period from 2015 to 2018.	The study was conducted in a 300-bed hospital and regional healthcare centers affiliated with the Petroleum Industry Health Organization in Tehran province, Iran	The Balanced Scorecard (BSC) was used as a strategic management tool in the pharmacy department. Through the BSC framework, the study identified strategic objectives and measures from multiple perspectives (finance, patient satisfaction, internal processes, and learning/growth) and implemented interventions. The use of BSC resulted in increased patient satisfaction, improved operational management, optimal resource utilization, significant cost savings through measures such as protocols for expensive medications, and the safe return of unused medicines. Overall, the BSC framework enhanced the pharmacy department's efficiency and performance, demonstrating its value both in public healthcare centers and potentially in private settings
<b>Relationship between human resources strategies and organizational performance based on the balanced scorecard in a public hospital in Iran: a cross-sectional study (Nafari &amp; Rezaei, 2022)</b>	Iran	The design was cross-sectional, meaning data were collected at a single point in time. The study used structured questionnaires to gather data related to human resources strategies and organizational performance metrics	Conducted in a public hospital environment, which reflects real-world healthcare organizational settings in Iran. The hospital setting allowed the investigation of practical human resource strategies impacting organizational outcomes	The balanced scorecard serves as a thorough framework for evaluating organizational performance by looking at it from four essential angles: financial results, customer satisfaction, internal business processes, and opportunities for learning and growth. This study emphasized that human resources strategies—particularly those involving staff training, pay, and hiring—have a meaningful impact on how an organization performs, especially in areas that go beyond just financial outcomes as tracked by the balanced scorecard. Consequently, the balanced scorecard offers a broad and integrated perspective on organizational success, extending far past traditional financial measurements

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<b>Exploration on the gap of single- and double-loop learning of balanced scorecard and organizational performance in a health organization (Li et al., 2021)</b>	Taiwan	The study employed a qualitative research approach to gain deep insights. It specifically used grounded theory as its framework for gathering and examining the data. Researchers conducted comprehensive interviews with 34 individuals who were actively involved in the Balanced Scorecard (BSC) process. These participants included nurse managers, middle-level managers from different departments, and administrative managers. The main objective of this approach was to explore and understand how learning unfolds within the implementation of the BSC in the organization	The research was conducted within the environment of a community hospital. This hospital, equipped with 290 beds, had been embracing the Balanced Scorecard (BSC) approach since 2012. Its selection for the study was based on its notable performance in applying learning metrics and successfully completing projects associated with the BSC, making it an ideal site to explore the integration of BSC in healthcare practice	The Balanced Scorecard (BSC) functions as a strategic management framework that connects the overarching goals of an organization with the specific action plans of its various departments and units. It ensures that the organization's vision, the objectives of different departments, and the individual tasks of employees are all harmonized. The BSC supports two types of learning: single-loop learning, which involves making adjustments within the current set of goals and frameworks, and double-loop learning, which goes deeper by challenging and modifying the fundamental assumptions and goals themselves. By fostering a supportive learning environment, the BSC allows for open discussions and necessary modifications of key performance indicators (KPIs), which promotes ongoing learning and continuous improvement in organizational performance. The study emphasizes that the BSC is more than just a measurement tool; it acts as a powerful driver for promoting organizational learning and enhancing overall performance

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<b>S-MEDUTA: Combining Balanced Scorecard with Simulation and MCDA Techniques for the Evaluation of the Strategic Performance of an Emergency Department (Manolitzas et al., 2020)</b>	n.a	This study proposes a new integrated methodology combining the Balanced Scorecard (BSC), simulation modeling, and a Multi-Criteria Decision Analysis (MCDA) algorithm (UTASTAR) to evaluate strategic performance. The method allows stakeholders to simulate decision impacts on key performance indicators (KPIs), facilitating strategic evaluation and revision. The design is essentially a methodological framework combining quantitative simulation and multi-criteria evaluation techniques	The study is set in an Emergency Department (ED) within a healthcare organization. The simulation model and strategic evaluation framework are tailored specifically to the operational and strategic context of this ED to optimize its performance	The Balanced Scorecard plays a central role as a strategic performance measurement tool. It helps to define and monitor critical KPIs important for the organization's success. In this integrated methodology, BSC provides the structure of performance dimensions that the simulation evaluates. Through BSC, the organization can comprehensively assess the execution and impact of its strategy across various perspectives, supporting informed decision-making and continuous strategic improvement.
<b>Balanced scorecard-based performance evaluation of Chinese county hospitals in underdeveloped areas (Gao et al., 2018)</b>	China	The study aimed to develop a performance evaluation indicator system for county hospitals in Guangxi, grounded in the theory of the Balanced Scorecard (BSC). Using the Delphi method, experts refined the indicators. The performance of five county hospitals, selected randomly from reform pilots in 2015, was evaluated with the new indicator system combined with the Topsis method (a multi-criteria decision-making technique). The goal was to generate actionable insights for hospital improvement and policymaking	The research setting is Guangxi Province, characterized by poor economic conditions, education, living environments, and limited access to urban facilities. These factors make it a typical underdeveloped region in China, providing a significant context for evaluating healthcare performance under challenging circumstances	The Balanced Scorecard (BSC) serves a vital function as both a framework for managing performance and a tool for strategic planning. It breaks down an organization's objectives into four key areas: learning and growth, financial performance, customer perspective, and internal business processes. This framework was leveraged in the study to create clear, actionable performance indicators across these domains. The BSC assists organizations like hospitals in syncing their strategic goals with precise measures of achievement, offering a fuller view of performance that goes beyond just financial results. Its global adoption across various industries, including healthcare, underscores its proven effectiveness at enhancing organizational performance

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Utilidad del presupuesto y del cuadro de mando integral en la gestión de centros de atención primaria. Impacto sobre la motivación del personal (Ramón-Jerónimo et al., 2018)	Spain	The research employed a qualitative design based on grounded theory methodology. It was a case-based qualitative study carried out from January to June 2014, aiming to gather in-depth insights from healthcare management personnel about the use of management tools like the Balanced Scorecard and budgeting	The units investigated were clinical management units within primary health care centers (UGCAP) in the metropolitan area of Seville, Spain. These centers face the challenge of balancing cost savings pressures with the need to maintain or improve healthcare quality	The Balanced Scorecard (BSC) is viewed as a more adaptable and responsive tool compared to traditional budget approaches. It provides two-way feedback that assists in diagnosing both financial challenges and issues related to welfare within the organization. However, despite these benefits, its practical use falls short because of stringent budget rules that significantly restrict the independence of primary care centers. Mainly, the BSC serves as a tool for assessing performance, but its framework does not completely fulfill the dual purpose of aiding managerial decision-making and aligning the efforts and priorities of healthcare staff. On the other hand, budgets tend to be regarded more as rigid, top-down measures aimed at cost-cutting, rather than tools that support management in operations, which creates a gap between financial limitations and actual work realities. Additionally, the policies for incentivizing staff based on performance are insufficient, leading to a lack of motivation among personnel. The study concludes that the conflicts stemming from budget restrictions have diminished the autonomy of the healthcare units and highlights the urgent need for effective incentives and empowered decision-making to encourage commitment and enhance the quality of healthcare services

Journal Title / Author/ Year of publication	Country	Design of study	Setting	BSc Role in HCO
<b>Designing and evaluating a balanced scorecard for a health information management department in a Canadian urban non-teaching hospital (Nippak et al., 2016)</b>	Canada	The study involved designing and evaluating a balanced scorecard specifically for the HIM department. This involved multiple stages—planning, development, implementation, and evaluation—over a 6-month period. The design process included aligning the scorecard with the hospital's corporate strategy by developing a strategy map consistent with overarching hospital goals	The hospital was an urban non-teaching facility serving a broad community, with statistics such as 28,000 inpatient visits, over 200,000 outpatient visits, and more than 5,000 births annually, indicating a complex and demanding healthcare environment	The balanced scorecard was essential in enhancing organizational performance by ensuring that the department's performance measures were closely aligned with the hospital's overarching strategic objectives. It served as an effective tool for reporting performance, enabling clear and transparent communication of vital performance indicators. Additionally, it functioned as a management resource that empowered Health Information Management (HIM) leaders and staff to monitor, evaluate, and improve the department's efficiency and effectiveness. Furthermore, it facilitated strategic analysis and informed decision-making processes within the HIM department by delivering pertinent performance data. The evaluation of the study revealed that most HIM personnel regarded the balanced scorecard as valuable for both reporting and managing performance, highlighting its significant positive influence on improving organizational effectiveness in healthcare management

### Study Design

Across the reviewed studies, a range of methodological approaches was employed to investigate the application and impact of the Balanced Scorecard (BSC) in healthcare settings. Predominantly, cross-sectional multi-site designs were utilized, enabling researchers to capture and compare performance perceptions across several institutions at a single point in time. This approach facilitated a broad understanding of BSC's effectiveness across diverse organizational contexts. Additionally, survey methodologies, often coupled with mixed methods that integrate both quantitative and qualitative data, were commonly adopted. Such designs provided a richer and more nuanced insight into how BSC



influences various performance dimensions and stakeholder experiences. Experimental and intervention studies further contributed by actively assessing the real-time effectiveness of BSC implementation, allowing for evaluations of cause-effect relationships and practical outcomes. Systematic literature reviews played a crucial role in consolidating existing knowledge, synthesizing findings from multiple sources to provide comprehensive overviews of BSC applications. Other studies innovatively combined BSC frameworks with simulation techniques and multi-criteria decision analysis, refining the tools available for performance measurement and strategic decision-making. Finally, qualitative studies grounded in theoretical frameworks explored the processes of organizational learning and feedback within healthcare settings, highlighting how BSC supports continuous improvement and knowledge sharing. The diversity of these research designs strengthens the overall validity of conclusions by triangulating evidence drawn from multiple methodological angles and contextual environment.

## **DISCUSSIONS**

### **Implementation of BSc**

The implementation of the Balanced Scorecard (BSC) in healthcare organizations marks a significant advancement in strategic management and performance evaluation, moving beyond traditional financial metrics to embrace a multidimensional approach. The findings presented in this study confirm that the BSC serves as an essential framework for aligning diverse organizational objectives with measurable performance indicators, thus enhancing the capacity of healthcare institutions to meet both strategic goals and patient-centered outcomes. One of the core strengths of the BSC, as demonstrated across varied healthcare settings including Japan, Switzerland, Palestine, and Romania, is its holistic nature. The integration of perspectives such as patient satisfaction, internal processes, learning and growth, alongside financial performance, ensures that healthcare organizations maintain a balanced focus in organizational development. This multidimensional approach is necessary due to the complex and often competing demands placed on health services, ranging from the need to provide high-quality clinical care to managing limited resources and sustaining workforce

engagement. The case from Guo et al (2024) in Japan highlights the BSC's role in reducing employee turnover and boosting engagement, underscoring the importance of strategic communication and trust-building in organizational culture. This aligns with existing literature emphasizing human resources as a pivotal element in healthcare performance. The substantial decrease in turnover rates—from 23.6% to 3.4%—and the corresponding rise in engagement scores demonstrate the BSC's effectiveness in addressing workforce challenges, which are often a barrier to sustained service quality. Moreover, study from Hügler & Grek (2023) in Swiss study underscores the adaptability of the BSC in addressing technological integration and digital transformations within specialized clinical departments. The tailored BSC framework in this context facilitated real-time performance tracking and strategic adjustments, proving its utility in environments that face rapid changes such as the COVID-19 pandemic. This adaptability is critical for hospitals navigating continuous innovation and the evolving landscape of healthcare delivery. The multidimensional use of the BSC in Palestine by Amer et al (2022), encompassing external factors, patient experiences, and managerial capabilities, further validates the framework's comprehensive capacity. Patient-centered metrics are crucial for performance evaluation, given the growing emphasis on patient satisfaction as a key determinant of health system success. This inclusive approach supports decision-making processes that unify clinical outcomes with service quality and operational efficiency. From a governance perspective, the BSC also enhances accountability and leadership effectiveness, particularly in resource-constrained settings. Monitoring leadership goals and management practices helps healthcare organizations promote transparency and sustained improvement. The Romanian findings reinforce this, linking digital transformation and strategic human resource management to improved organizational outcomes through the BSC framework.

### **Agreement and disagreement between studies**

The implementation of the Balanced Scorecard (BSC) within healthcare contexts has been shown to deliver a variety of organizational benefits across multiple international settings. Guo et al. (2024) in Japan reported a significant reduction in employee turnover alongside enhanced staff engagement, underscoring the

positive influence of BSC on human resource management and the cultivation of a supportive organizational culture. Complementing these findings, Hügler and Grek (2023) emphasized the comprehensive nature of the BSC framework, which effectively integrates financial, customer, internal process, and learning perspectives, making it particularly suitable for evaluating digital health initiatives within Swiss healthcare institutions. Further reinforcing the strategic utility of the BSC, Li et al. (2021) demonstrated its efficacy in translating overarching strategic objectives into actionable departmental plans, thus facilitating alignment and coherence across organizational levels in Taiwanese healthcare organizations. Similarly, Yeshaw et al. (2025) highlighted the practical benefits of BSC adoption in Ethiopian public hospitals, including improved identification of healthcare needs, enhanced quality of service delivery, strengthened teamwork and communication, as well as better infrastructural support. Increased patient satisfaction, optimized resource utilization, and cost savings have also been documented following BSC implementation in Iran, as reported by Alipour et al. (2022). This perspective is supported by Nafari and Rezaei (2022), who characterize the BSC as a robust, multidimensional performance measurement tool that balances financial and non-financial indicators to provide a comprehensive evaluation of healthcare performance. In Palestine, Amer et al. (2022, 2023) further expanded on the BSC's innovative potential by highlighting its inclusive application, involving frontline healthcare workers alongside management, thus broadening staff engagement. Evidence from South Africa (Malakoane et al., 2023) indicates moderate to strong improvements in leadership goal achievement, while Nippak et al. (2016) in Canada emphasized the critical role of aligning department-level metrics with strategic hospital objectives to enhance overall institutional performance. Gao et al. (2018) similarly underscored the BSC's strategic value in performance management and planning across Chinese healthcare entities.

Nevertheless, despite these encouraging results, certain challenges and divergent perspectives have been noted. Guo et al. (2024) also identified barriers such as limited staff commitment, resource constraints, and suboptimal communication that inhibit the full realization of BSC benefits, suggesting that organizational

culture and resource availability are pivotal determinants of its success. Correspondingly, Ramón-Jerónimo et al. (2018) conducted a qualitative assessment within Spanish primary healthcare centers, revealing that although BSC offers greater adaptability than traditional budgeting systems, it may fall short in fully enabling managerial decision-making and aligning staff efforts, largely due to rigid budgetary rules and insufficient incentives. This critique gestures towards ongoing debates regarding the balance of financial and non-financial metrics within the BSC, with some studies indicating that financial concerns may continue to dominate strategic priorities, thus potentially undermining the framework's integrative ambitions. Moreover, the transferability of the BSC across various healthcare contexts remains contested, as some evidence suggests its application is more effective in hospital settings relative to other healthcare environments. In addition, there are discrepancies in achieving sustained employee engagement and cultural adaptation, with some organizations struggling to maintain staff motivation over time. Collectively, these tensions underscore the complex interplay between the conceptual strengths of the BSC and the pragmatic realities of healthcare organizations. The success of the BSC is contingent upon a confluence of factors, including organizational readiness, leadership commitment, availability of resources, customization to contextual demands, and alignment of incentive mechanisms to foster behavioral change.

## **CONCLUSION**

This systematic review underscores the widespread adoption and diverse application of the Balanced Scorecard (BSC) across global healthcare settings, encompassing various organizational contexts from hospitals to community health centers. The inclusion of 15 rigorously selected studies provides a robust evidence base reflecting both the multidimensional nature and strategic utility of the BSC in enhancing healthcare performance. Methodologically, the use of mixed designs—from cross-sectional surveys to experimental interventions—offers a comprehensive understanding of BSC's impact on organizational outcomes, including workforce engagement, patient satisfaction, process optimization, and leadership accountability. Empirical findings consistently highlight the BSC as a

pivotal framework that balances financial and non-financial metrics, fostering alignment between strategic objectives and operational execution. Moreover, the adaptability of the BSC to different technological, cultural, and resource contexts demonstrates its versatility as a tool for continuous quality improvement and organizational learning in healthcare. Collectively, these insights affirm that BSC implementation not only improves performance measurement but also strengthens governance and decision-making capacity, thereby promoting sustainable healthcare delivery improvements worldwide.

## REFERENCES

- Abu Jaber, A. A., & Nashwan, A. J. (2022). Balanced Scorecard-Based Hospital Performance Measurement Framework: A Performance Construct Development Approach. *Cureus*. <https://doi.org/10.7759/cureus.24866>
- Alipour, F., Jamshidizadeh, S., Bastani, P., & Mehralian, G. (2022). The balanced scorecard as a strategic management tool in hospital pharmacies: an experimental study. *Journal of Health Organization and Management*, 36(6), 767–780. <https://doi.org/10.1108/JHOM-07-2021-0256>
- Amer, F., Hammoud, S., Khatatbeh, H., Lohner, S., Boncz, I., & Endrei, D. (2022). Correction to: The deployment of balanced scorecard in health care organizations: is it beneficial? A systematic review. *BMC Health Services Research*, 22(1), 170. <https://doi.org/10.1186/s12913-022-07555-9>
- Amer, F., Hammoud, S., Onchonga, D., Alkaiyat, A., Nour, A., Endrei, D., & Boncz, I. (2022). Assessing Patient Experience and Attitude: BSC-PATIENT Development, Translation, and Psychometric Evaluation—A Cross-Sectional Study. *International Journal of Environmental Research and Public Health*, 19(12), 7149. <https://doi.org/10.3390/ijerph19127149>
- Amer, F., Kurnianto, A. A., Alkaiyat, A., Endrei, D., & Boncz, I. (2023). Engaging physicians and nurses in balanced scorecard evaluation—An implication at Palestinian hospitals and recommendations for policy makers. *Frontiers in Public Health*, 11. <https://doi.org/10.3389/fpubh.2023.1115403>
- Amer, F., Neiroukh, H., Abuzahra, S., AlHabil, Y., Afifi, M., Shellah, D., Boncz, I., & Endrei, D. (2022). Engaging patients in balanced scorecard evaluation - An implication at Palestinian hospitals and recommendations for policy makers. *Frontiers in Public Health*, 10. <https://doi.org/10.3389/fpubh.2022.1045512>
- Avila, D. E., & Gil, D. N. (2025). The Impact of Integrated Health Management in Hospital Administration: A Systematic Literature Review Applying the ProKnow-C Methodology. *Journal of Evaluation in Clinical Practice*, 31(4). <https://doi.org/10.1111/jep.70125>

- Betto, F., Sardi, A., Garengo, P., & Sorano, E. (2022). The Evolution of Balanced Scorecard in Healthcare: A Systematic Review of Its Design, Implementation, Use, and Review. *International Journal of Environmental Research and Public Health*, 19(16), 10291. <https://doi.org/10.3390/ijerph191610291>
- Bohm, V., Lacaille, D., Spencer, N., & Barber, C. E. (2021). Scoping review of balanced scorecards for use in healthcare settings: development and implementation. *BMJ Open Quality*, 10(3), e001293. <https://doi.org/10.1136/bmjopen-2020-001293>
- Gao, H., Chen, H., Feng, J., Qin, X., Wang, X., Liang, S., Zhao, J., & Feng, Q. (2018). Balanced scorecard-based performance evaluation of Chinese county hospitals in underdeveloped areas. *Journal of International Medical Research*, 46(5), 1947–1962. <https://doi.org/10.1177/0300060518757606>
- Guo, F., Huang, Y. S., & Nemoto, M. (2024a). Reimagining hospital management: the balanced scorecard as a catalyst for employee retention and organizational excellence. *Frontiers in Public Health*, 12. <https://doi.org/10.3389/fpubh.2024.1485683>
- Guo, F., Huang, Y. S., & Nemoto, M. (2024b). Reimagining hospital management: the balanced scorecard as a catalyst for employee retention and organizational excellence. *Frontiers in Public Health*, 12. <https://doi.org/10.3389/fpubh.2024.1485683>
- Hügler, T., & Grek, V. (2023). Digital transformation of an academic hospital department: A case study on strategic planning using the balanced scorecard. *PLOS Digital Health*, 2(11), e0000385. <https://doi.org/10.1371/journal.pdig.0000385>
- Li, C.-H., Yang, W.-G., & Shih, I.-T. (2021). Exploration on the gap of single- and double-loop learning of balanced scorecard and organizational performance in a health organization. *Heliyon*, 7(12), e08553. <https://doi.org/10.1016/j.heliyon.2021.e08553>
- Malakoane, B., Chikobvu, P., Christoffel Heunis, J., Gladys Kigozi, N., & Hendrik Kruger, W. (2023). Implementing an intervention to improve leadership/management of public healthcare services in the Free State Province, South Africa: lessons learned. *African Health Sciences*, 23(1), 469–482. <https://doi.org/10.4314/ahs.v23i1.49>
- Manolitzas, P., Grigoroudis, E., Christodoulou, J., & Matsatsinis, N. (2020). *S-MEDUTA: Combining Balanced Scorecard with Simulation and MCDA Techniques for the Evaluation of the Strategic Performance of an Emergency Department* (pp. 1–22). [https://doi.org/10.1007/978-3-030-32622-7\\_1](https://doi.org/10.1007/978-3-030-32622-7_1)
- Nafari, E., & Rezaei, B. (2022). Relationship between human resources strategies and organizational performance based on the balanced scorecard in a public hospital in Iran: a cross-sectional study. *BMC Health Services Research*, 22(1), 363. <https://doi.org/10.1186/s12913-022-07767-z>



- Nippak, P. M., Veracion, J. I., Muia, M., Ikeda-Douglas, C. J., & Isaac, W. W. (2016). Designing and evaluating a balanced scorecard for a health information management department in a Canadian urban non-teaching hospital. *Health Informatics Journal*, 22(2), 120–139. <https://doi.org/10.1177/1460458214537005>
- Pierce, E. (2022). A Balanced Scorecard for Maximizing Data Performance. *Frontiers in Big Data*, 5. <https://doi.org/10.3389/fdata.2022.821103>
- Ramón-Jerónimo, J. M., Flórez-López, R., & Domínguez-Lario, N. (2018). Utilidad del presupuesto y del cuadro de mando integral en la gestión de centros de atención primaria. Impacto sobre la motivación del personal. *Atención Primaria*, 50(3), 166–175. <https://doi.org/10.1016/j.aprim.2017.02.009>
- Vărzaru, A. A. (2022). An Empirical Framework for Assessing the Balanced Scorecard Impact on Sustainable Development in Healthcare Performance Measurement. *International Journal of Environmental Research and Public Health*, 19(22), 15155. <https://doi.org/10.3390/ijerph192215155>
- Yeshaw, S., Asrade, G., Hagos, A., Chanie, M. G., & Worku, N. (2025). Practice of balanced scorecard implementation and its contributing factors among public primary hospital professionals in Central Gondar zone, Northwest Ethiopia. *Frontiers in Public Health*, 12. <https://doi.org/10.3389/fpubh.2024.1424133>