

The Pathway to Achieving Competitive Advantage in Banking: Development and Testing of a Five-Layer Hierarchical Model

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ABSTRACT

The objective of this study was to develop and empirically test a five-layer hierarchical model explaining the sequential pathway through which banks achieve sustainable competitive advantage. This applied research adopted a descriptive–correlational design with an organizational level of analysis. The statistical population consisted of senior and middle managers of public and private banks, from which a sample of 400 managers was selected using simple random sampling. Data were collected using a researcher-developed questionnaire including 25 items representing 5 latent constructs, with 5 items per construct, measured on a 5-point Likert scale. Content validity was confirmed through expert evaluation, and reliability was assessed using Cronbach's alpha, composite reliability, and average variance extracted, all exceeding recommended thresholds. Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM), and bank ownership type (public vs. private) was included as a control variable in the structural model. The results showed that organizational structure and systems had a significant positive effect on human capital and organizational culture ($\beta = 0.79$, $p < 0.01$) and on stakeholder quality and management ($\beta = 0.46$, $p < 0.01$), but no significant effect on ethical and adaptive leadership ($p > 0.05$). Human capital and organizational culture had a strong positive effect on ethical and adaptive leadership ($\beta = 0.84$, $p < 0.01$), which in turn significantly influenced stakeholder quality and management ($\beta = 0.49$, $p < 0.01$). Stakeholder quality and management exerted a very strong effect on strategic growth and competitive advantage ($\beta = 0.89$, $p < 0.01$). The coefficients of determination ranged from $R^2 = 0.63$ to $R^2 = 0.78$, indicating high explanatory power. The findings confirm that competitive advantage in banking is achieved through a structured, multi-layer process in which organizational structure, human capital, leadership, and stakeholder management interact sequentially to drive strategic growth.

Keywords: Competitive advantage; Banking industry; Organizational structure; Ethical and adaptive leadership; Stakeholder management

Introduction

The banking industry has entered a period of profound structural transformation driven by technological change, intensifying competition, regulatory pressures, and evolving stakeholder expectations. Traditional sources of competitive advantage in banking, such as scale, branch networks, and interest rate spreads, are increasingly insufficient in an environment characterized by digital disruption, financial innovation, and heightened customer



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awareness. As a result, banks are compelled to rethink how competitive advantage is created, sustained, and renewed through complex interactions among organizational resources, leadership systems, institutional structures, and stakeholder relationships. Recent research emphasizes that competitive advantage in banking can no longer be explained through isolated factors, but rather through multilayered and interdependent mechanisms that operate across strategic, organizational, and behavioral domains (1, 2).

From a theoretical perspective, the foundations of competitive advantage have been extensively discussed within strategic management literature. The resource-based view argues that firms achieve sustained competitive advantage by possessing valuable, rare, inimitable, and non-substitutable resources (3). In the banking context, these resources extend beyond tangible assets to include human capital, organizational culture, governance structures, and relational capabilities. However, static resource endowments are no longer sufficient in volatile financial markets. The dynamic capabilities framework highlights the ability of organizations to integrate, build, and reconfigure internal and external competencies in response to rapidly changing environments (4). Banking institutions, facing continuous technological shifts and regulatory reforms, increasingly rely on such dynamic capabilities to maintain competitiveness and strategic relevance.

Empirical evidence suggests that organizational structure and internal systems play a pivotal role in shaping banks' strategic outcomes. Formal structures, decision-making systems, and coordination mechanisms influence how effectively resources are mobilized and aligned with strategic objectives. Balanced and strategically aligned performance management systems have been shown to translate abstract strategies into operational outcomes, particularly in complex service organizations such as banks (5). Inefficient or rigid organizational systems, by contrast, may hinder innovation, weaken accountability, and reduce strategic responsiveness, thereby constraining competitive performance.

Human capital and organizational culture represent another critical layer in the competitive advantage architecture of banks. Skilled employees, shared values, and a learning-oriented culture enable banks to innovate, adapt, and deliver superior value to customers. Studies in banking and financial services consistently demonstrate that investments in human resource practices enhance competitive positioning by improving service quality, innovation capability, and operational efficiency (6). Moreover, organizational culture shapes knowledge-sharing behaviors and collaborative norms, which are essential for sustaining innovation and responsiveness in knowledge-intensive financial institutions (7, 8).

Leadership has emerged as a central driver linking organizational systems and human capital to strategic outcomes. In contemporary banking environments, leadership effectiveness is no longer limited to transactional efficiency but increasingly encompasses ethical orientation, adaptability, and digital competence. Ethical and adaptive leadership fosters trust, reduces agency problems, and enhances organizational resilience, particularly under conditions of uncertainty and technological disruption (9). Digital and transformational leadership styles have also been associated with improved employee engagement, organizational agility, and successful digital transformation initiatives in banks (10, 11). These leadership attributes serve as critical enablers for translating internal capabilities into sustainable competitive outcomes.

Beyond internal organizational factors, stakeholder quality and management constitute an increasingly influential dimension of competitive advantage in banking. Banks operate within dense networks of stakeholders, including customers, regulators, investors, employees, and technology partners. Effective stakeholder management enhances reputation, customer loyalty, regulatory compliance, and long-term value creation. Research indicates

that banks that proactively manage stakeholder relationships are better positioned to mitigate risk, improve service quality, and achieve strategic growth (12). In an era of heightened transparency and digital interaction, stakeholder perceptions and trust have become decisive elements of competitive positioning.

The competitive landscape of banking is further complicated by intensifying market competition and financial innovation. Increased competition has ambiguous effects on bank performance and stability, simultaneously driving efficiency and innovation while potentially increasing risk-taking behavior (13, 14). Digital finance and FinTech developments have lowered entry barriers, reshaped customer expectations, and challenged traditional banking models (1, 2). Consequently, banks must strategically integrate digital transformation with organizational capabilities to avoid erosion of competitive advantage (15, 16).

Recent studies increasingly highlight the importance of organizational agility and resilience as mediating mechanisms through which leadership and digital transformation affect competitive advantage in banking. Organizational agility enables banks to respond rapidly to market changes, technological innovations, and regulatory shifts, while resilience supports long-term sustainability under systemic shocks (11, 17). These findings suggest that competitive advantage in banking emerges from layered interactions among structure, people, leadership, stakeholder management, and strategic capabilities rather than from isolated initiatives.

In emerging and developing banking systems, including those operating under unique regulatory and institutional constraints, the challenge of achieving sustainable competitive advantage is particularly pronounced. Empirical evidence from different banking systems shows that governance structures, ownership forms, and regulatory environments significantly influence how competitive strategies are formulated and implemented (18, 19). Studies focusing on Iranian and regional banking contexts further confirm that sustainable competitive advantage is shaped by an integrated set of organizational, cultural, and strategic factors rather than by financial performance indicators alone (20, 21).

Despite the growing body of research on competitive advantage in banking, several gaps remain. First, much of the existing literature examines competitive factors in isolation, without explicitly modeling their hierarchical and interdependent relationships. Second, there is limited empirical work that integrates classical strategic management theories with contemporary banking challenges such as digital transformation, ethical leadership, and stakeholder governance. Third, few studies have proposed and empirically tested comprehensive, multi-layer models that explain how internal organizational mechanisms collectively drive strategic growth and competitive advantage in banking institutions (22).

Addressing these gaps requires a holistic analytical framework that captures the layered nature of competitive advantage formation in banking. A hierarchical perspective allows for the examination of how foundational organizational structures influence human capital and leadership, how leadership shapes stakeholder management, and how these interactions ultimately translate into strategic growth and competitive advantage. Such an approach aligns with contemporary views of banking as a complex adaptive system in which competitive outcomes emerge from dynamic interactions across multiple organizational levels.

Accordingly, the present study aims to develop and empirically test a five-layer hierarchical model explaining the pathway to achieving competitive advantage in the banking sector.

Methods and Materials

This study adopts an applied research orientation in terms of purpose and employs a descriptive–correlational design in terms of methodology. The analytical level of the research is organizational, and the unit of analysis is the bank as an institution rather than individual respondents. Although data were collected from senior and middle managers, the questionnaire items were designed to capture organizational attributes, internal mechanisms, and strategic capabilities of banks. Accordingly, the level of analysis is not considered individual, but organizational, as the responses are treated as aggregated representations of bank-level phenomena rather than personal attitudes or behaviors. The statistical population consisted of senior and middle-level managers working in public and private banks across the country. A total sample of 400 managers was selected using a simple random sampling method to ensure adequate representation and to reduce systematic sampling bias. The sample was deliberately balanced to include managers from both ownership structures, with equal representation of public and private banks, thereby enabling meaningful comparison and control for ownership-related contextual effects. Data collection was carried out across ten major banks, with an equal allocation of questionnaires to each bank to maintain proportionality and comparability at the institutional level.

Data were collected using a structured questionnaire specifically developed to operationalize the five-layer hierarchical model of competitive advantage in banking. The instrument consisted of 25 items measuring five core constructs, with each construct represented by five indicators. All items were measured using a five-point Likert scale ranging from strongly disagree to strongly agree, allowing for sufficient variance and sensitivity in responses. The constructs were conceptualized to reflect internal organizational capabilities and strategic dimensions rather than individual-level perceptions. Content validity of the questionnaire was established through expert review, involving academics in strategic management and banking as well as experienced banking professionals, who assessed the clarity, relevance, and comprehensiveness of the items. Reliability was evaluated using Cronbach's alpha coefficients and composite reliability indices, both of which exceeded acceptable threshold values, indicating satisfactory internal consistency. The design of the instrument ensured alignment between theoretical definitions of the constructs and their empirical indicators, thereby supporting construct validity within the proposed hierarchical framework.

Data analysis was conducted using partial least squares structural equation modeling (PLS-SEM), which was selected due to its suitability for theory development, hierarchical model testing, and complex models with multiple latent constructs. All constructs in the model were specified as reflective, consistent with the assumption that the observed indicators are manifestations of underlying latent variables. The analysis followed a two-stage approach, beginning with the assessment of the measurement model to evaluate indicator reliability, internal consistency, and convergent validity, followed by the evaluation of the structural model to test hypothesized relationships among the layers of the hierarchical competitive advantage model. Bank ownership type, categorized as public or private, was incorporated into the model as a contextual control variable to account for structural and governance differences that could influence competitive dynamics. The use of PLS-SEM was particularly appropriate given the exploratory–confirmatory nature of the study, the emphasis on prediction and explained variance, and the absence of strict normality assumptions. Model estimation and hypothesis testing were performed using specialized PLS software, and significance levels were assessed through bootstrapping procedures to ensure robustness of the results.

Findings and Results

Table 1 presents the descriptive statistical characteristics of the main latent variables included in the proposed five-layer hierarchical model of competitive advantage in banking.

Table 1. Descriptive statistics for the main latent variables

Statistic	Strategic Growth and Competitive Advantage	Organizational Structure and Systems	Human Capital and Organizational Culture	Ethical and Adaptive Leadership	Stakeholder Quality and Management
N	400	400	400	400	400
Mean	19.06	18.24	17.77	18.36	18.64
Standard deviation	4.25	3.40	4.09	4.10	4.08
Skewness	-0.413	-0.239	-0.521	-0.375	-0.446
Kurtosis	-0.507	-0.029	-0.068	-0.488	-0.464
Minimum score	7	10	6	8	8
Maximum score	25	25	25	25	25

As shown in Table 1, all five latent variables were measured for the full sample of 400 respondents, indicating complete data coverage. The skewness values for all variables are negative but remain well within acceptable thresholds, implying slight left-skewed distributions and a tendency toward higher scores. Similarly, kurtosis values are close to zero and negative, suggesting relatively flat distributions without problematic peakedness. The observed minimum and maximum scores demonstrate that respondents utilized the full or near-full range of the measurement scale for all constructs.

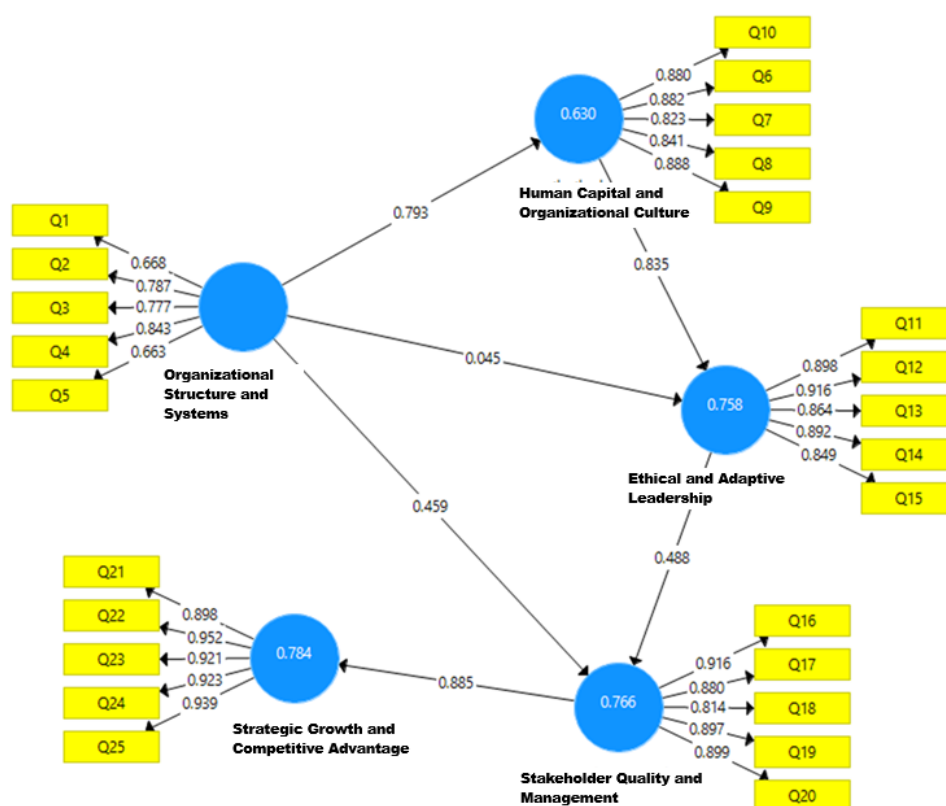


Figure 1. Relationships between Independent and Dependent Variables

The above model illustrates the direct effects of the independent variables on the dependent variables. The coefficient of determination (R^2) for the variable *Human Capital and Organizational Culture* is 0.630, for *Ethical and Adaptive Leadership* it is 0.758, for *Stakeholder Quality and Management* it is 0.766, and for *Strategic Growth and Competitive Advantage* it is 0.784. Given that the R^2 values for all these variables are at a strong level, it can be concluded that a substantial proportion of the variance in the dependent variables is explained by the independent variables.

Table 2. Path Analysis Results

Relationships between Variables	Beta Coefficient	f^2	Significance Level (P-value)
Effect of Organizational Structure and Systems on Human Capital and Organizational Culture	0.793	1.700	0.000
Effect of Organizational Structure and Systems on Ethical and Adaptive Leadership	0.045	0.003	0.373
Effect of Organizational Structure and Systems on Stakeholder Quality and Management	0.459	0.450	0.000
Effect of Human Capital and Organizational Culture on Ethical and Adaptive Leadership	0.835	1.069	0.000
Effect of Ethical and Adaptive Leadership on Stakeholder Quality and Management	0.488	0.508	0.000
Effect of Stakeholder Quality and Management on Strategic Growth and Competitive Advantage	0.885	3.623	0.000

Based on Table 2, the beta coefficient (Beta = 0.793) and effect size f^2 ($f^2 = 1.700$) for the effect of *Organizational Structure and Systems on Human Capital and Organizational Culture* are significant at an error level below 0.01 (P-value = 0.000). Similarly, the beta coefficient (Beta = 0.459) and f^2 ($f^2 = 0.450$) for the effect of *Organizational Structure and Systems on Stakeholder Quality and Management* are significant at an error level below 0.01 (P-value = 0.000). The beta coefficient (Beta = 0.835) and f^2 ($f^2 = 1.069$) for the effect of *Human Capital and Organizational Culture on Ethical and Adaptive Leadership* are also significant at an error level below 0.01 (P-value = 0.000). In addition, the beta coefficient (Beta = 0.488) and f^2 ($f^2 = 0.508$) for the effect of *Ethical and Adaptive Leadership on Stakeholder Quality and Management* are significant at an error level below 0.01 (P-value = 0.000). Finally, the beta coefficient (Beta = 0.885) and f^2 ($f^2 = 3.623$) for the effect of *Stakeholder Quality and Management on Strategic Growth and Competitive Advantage* are significant at an error level below 0.01 (P-value = 0.000).

According to Table 2, the significance level of the effect of *Organizational Structure and Systems on Ethical and Adaptive Leadership* (P-value = 0.373) is higher than 0.05. Therefore, it can be concluded that organizational structure and systems do not have a statistically significant effect on ethical and adaptive leadership.

The total Q^2 values for *Human Capital and Organizational Culture* (0.438), *Ethical and Adaptive Leadership* (0.553), *Stakeholder Quality and Management* (0.556), and *Strategic Growth and Competitive Advantage* (0.629) are all positive. The positivity of these values indicates adequate predictive relevance for these constructs. Furthermore, considering that the factor loadings of the indicators for all five variables in the model—*Organizational Structure and Systems*, *Human Capital and Organizational Culture*, *Ethical and Adaptive Leadership*, *Stakeholder Quality and Management*, and *Strategic Growth and Competitive Advantage*—are higher than 0.40, it can be concluded that the indicators of each latent variable demonstrate acceptable convergent validity.

Other structural model fit indices, including average variance extracted (AVE), composite reliability, and Cronbach's alpha coefficient, as reported in Table 3, further confirm the adequacy of the structural model fit in the present study.

Table 3. Reliability and Convergent Validity Assessment

Variables	Cronbach's Alpha (≥ 0.70)	Composite Reliability (≥ 0.70)	Average Variance Extracted (AVE ≥ 0.50)
Organizational Structure and Systems	0.811	0.865	0.564
Human Capital and Organizational Culture	0.814	0.836	0.745
Ethical and Adaptive Leadership	0.830	0.847	0.782
Stakeholder Quality and Management	0.828	0.846	0.778
Strategic Growth and Competitive Advantage	0.859	0.868	0.859

Discussion and Conclusion

The findings of the present study provide strong empirical support for the proposed five-layer hierarchical model explaining the pathway to achieving competitive advantage in banking. Overall, the results demonstrate that competitive advantage in banks is not the outcome of isolated organizational factors, but rather emerges through a structured sequence of interrelated mechanisms that begin with organizational structure and systems and culminate in strategic growth and competitive advantage. The high explanatory power of the model, as reflected in substantial R^2 values for all endogenous constructs, confirms that the selected variables jointly account for a large proportion of variance in key strategic outcomes. This finding aligns with contemporary views that emphasize the systemic and multilevel nature of competitive advantage in complex service industries such as banking (3, 4).

At the foundational level of the model, the results indicate a strong and statistically significant effect of organizational structure and systems on human capital and organizational culture. This finding suggests that formal structures, governance mechanisms, and internal systems play a decisive role in shaping employee capabilities, shared values, and behavioral norms within banks. Well-designed organizational systems appear to facilitate skill development, coordination, and cultural alignment, thereby enhancing the quality of human capital as a strategic resource. This result is consistent with prior research emphasizing that organizational infrastructure provides the context within which human capital can be effectively developed and leveraged for competitive purposes (5, 6). It also supports empirical evidence from banking studies showing that supportive structures enhance knowledge sharing, innovation, and cultural cohesion (7, 8).

In contrast, the direct effect of organizational structure and systems on ethical and adaptive leadership was not statistically significant. This finding suggests that leadership qualities in banking may not be mechanically determined by formal structures alone, but rather emerge through more complex social, behavioral, and experiential processes. Ethical and adaptive leadership appears to be shaped more strongly by human capital attributes and organizational culture than by structural arrangements per se. This result resonates with recent literature arguing that leadership effectiveness in the digital and financial context is deeply embedded in values, competencies, and relational dynamics rather than formal hierarchies (9, 10). The absence of a direct structural effect highlights the importance of intermediate layers in the hierarchical model and reinforces the theoretical logic of treating leadership as a higher-order outcome of human and cultural foundations.

The strong positive effect of organizational structure and systems on stakeholder quality and management indicates that internal arrangements significantly influence how banks interact with and manage their external stakeholders. Effective systems for coordination, transparency, and accountability appear to enhance banks' capacity to respond to stakeholder expectations, manage relationships, and deliver consistent value. This finding aligns with studies emphasizing that internal governance mechanisms are critical for managing complex

stakeholder networks in highly regulated and competitive environments such as banking (12, 18). It also supports the argument that stakeholder management capabilities are rooted in organizational design rather than being purely relational or market-driven phenomena.

One of the most robust relationships identified in the model is the effect of human capital and organizational culture on ethical and adaptive leadership. This result underscores the central role of people and shared values in shaping leadership behaviors within banks. Leaders operating in environments characterized by strong human capital and supportive cultures are more likely to exhibit ethical conduct, adaptability, and transformational capabilities. This finding is strongly supported by empirical studies highlighting the mediating role of culture and employee competencies in fostering responsible, transformational, and digital leadership in banking organizations (8, 9, 11). It also aligns with the dynamic capabilities perspective, which emphasizes leadership as a critical mechanism for sensing, seizing, and reconfiguring organizational resources (4).

The results further reveal a significant positive effect of ethical and adaptive leadership on stakeholder quality and management. This finding suggests that leadership behaviors directly shape how banks engage with customers, regulators, and other key stakeholders. Ethical leadership enhances trust, legitimacy, and transparency, while adaptive leadership improves responsiveness to changing stakeholder demands. Prior research confirms that leadership style plays a crucial role in strengthening stakeholder relationships and enhancing organizational reputation in banking and financial services (9, 12). In the context of increasing digitalization and regulatory scrutiny, this relationship becomes particularly salient, as stakeholder trust and confidence are critical determinants of long-term competitive positioning (15, 16).

At the final stage of the hierarchical model, stakeholder quality and management exert a very strong and statistically significant effect on strategic growth and competitive advantage. This result confirms that effective stakeholder engagement is not merely a supporting function but a core driver of strategic success in banking. Banks that successfully manage stakeholder relationships are better positioned to expand market share, enhance customer loyalty, innovate services, and sustain competitive advantage over time. This finding is consistent with empirical evidence showing that stakeholder-oriented strategies contribute to superior performance, resilience, and growth in competitive banking markets (17, 20). It also reflects broader insights from competition and financial stability literature, which emphasize the role of trust and relational capital in navigating competitive pressures (13, 14, 19).

Taken together, the results validate the hierarchical logic of the proposed model. Competitive advantage in banking appears to be built sequentially, beginning with foundational organizational structures, progressing through human capital and leadership, and ultimately materializing through effective stakeholder management and strategic growth. This layered configuration offers a more nuanced explanation than linear or single-factor models commonly found in the literature. It integrates classical theories of competitive advantage with contemporary challenges such as digital transformation, leadership ethics, and stakeholder governance, thereby responding to calls for more holistic and context-sensitive models in banking research (1, 2, 22). The findings also align with recent studies emphasizing organizational agility and resilience as emergent outcomes of integrated leadership, culture, and structural capabilities (11).

Despite its contributions, this study is subject to several limitations. First, the cross-sectional design restricts the ability to draw causal inferences about the dynamic relationships among the model variables. Second, data were collected through self-reported questionnaires, which may be subject to common method bias despite procedural

precautions. Third, although the sample included both public and private banks, contextual factors such as regulatory differences and market conditions were not explicitly modeled beyond ownership type. Finally, the study focused on bank-level perceptions aggregated from managers, which may not fully capture customer or regulator perspectives.

Future research could extend the present model by adopting longitudinal designs to examine how competitive advantage evolves over time in response to structural and leadership changes. Incorporating additional contextual variables such as regulatory intensity, digital maturity, or market turbulence may further enrich the explanatory power of the model. Comparative studies across different countries or banking systems could also provide valuable insights into the generalizability of the hierarchical framework. Moreover, integrating qualitative approaches could deepen understanding of the mechanisms through which leadership and culture influence stakeholder management.

From a practical perspective, bank executives and policymakers should view competitive advantage as a systemic outcome rather than the result of isolated initiatives. Investments in organizational structure should be aligned with long-term human capital development and cultural reinforcement. Leadership development programs should prioritize ethical and adaptive competencies alongside technical skills. Finally, banks should institutionalize stakeholder management as a strategic capability, embedding it into decision-making processes to support sustainable growth and competitive positioning.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

All ethical principles were adhered in conducting and writing this article.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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