

Does Value-Based Leadership Effect EFQM Excellence Model in Public Hospitals? The Role of Strategic Planning Awareness

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Abstract

Aim: The aim of the study is to determine the interaction between value-based leadership and the EFQM (European Foundation for Quality Management) excellence model in public hospitals. It is also aimed to reveal the role of strategic planning awareness in this effect.

Method: A quantitative questionnaire was used to gather data from 236 health care professionals working in public hospitals in Kocaeli (Türkiye). SPSS (Statistical Package for the Social Sciences) for Windows 25.0 and AMOS (Analysis of Moment Structures) 23.0 were used to examine the data. Confirmatory factor analysis was conducted in addition to reliability analysis to evaluate the scales' construct validity. The path analysis and mediator role analysis were used to test the model developed in accordance with the hypotheses.

Results: Value-based leadership was found to have a significant and positive effect on the EFQM model ($\beta=0.740$, $p<0.05$). Strategic planning awareness was found to be a partial mediator in this effect ($\beta=0.603$, $p<0.05$). The current study supports that value-based leadership is a factor that promotes EFQM and can improve outcomes in hospitals. Furthermore, by highlighting the need for strategic planning awareness, it further clarifies the connection between EFQM and value-based leadership.

Conclusion: Value-based leadership should be considered as an important premise for the EFQM model due to its sensitivity to interact with all stakeholders and inform them about the organization's strategy, values and direction. Furthermore, ensuring awareness of strategic planning among healthcare professionals should be at the top of leaders' agendas to increase the interaction between value-based leadership and the EFQM model.

Keywords: EFQM, value-based leadership, strategic planning awareness, public hospitals.

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ETHICAL STATEMENT: The research was approved by Kocaeli City Hospital Scientific Research Ethics Committee with protocol number 3 on 14.03.2024. Data were collected between 25.03.2024 and 25.05.2024.

Kamu Hastanelerinde Değer Temelli Liderlik EFQM Mükemmellik Modelini Etkiler Mi? Stratejik Planlama Farkındalığının Rolü

Öz

Amaç: Araştırmanın amacı kamu hastanelerinde değer temelli liderlik ile EFQM (Avrupa Kalite Yönetim Vakfı) mükemmellik modeli arasındaki etkileşimi belirleyerek; bu etkide stratejik planlama farkındalığının rolünü ortaya koymaktır.

Yöntem: Veriler Kocaeli ilinde faaliyet gösteren kamu hastanelerinde görev yapan 236 sağlık çalışanına anket uygulanarak toplanmıştır. Veriler SPSS 25.0 ve AMOS 23.0 programları aracılığıyla analiz edilmiştir. Ölçeklerin yapı geçerliliğini değerlendirmek için güvenilirlik analizine ek olarak doğrulayıcı faktör analizi yapılmıştır. Hipotezler doğrultusunda geliştirilen modeli test etmek için yol analizi ve aracı rol analizi kullanılmıştır.

Bulgular: Değer temelli liderliğin EFQM modeli üzerinde anlamlı ve pozitif bir etkiye sahip olduğu bulunmuştur ($\beta=0.740$; $p<0.05$). Ayrıca stratejik planlama farkındalığının bu etkide kısmi aracı rolü olduğu saptanmıştır ($\beta=0.603$; $p<0.05$). Mevcut çalışma, değer temelli liderliğin EFQM modelini destekleyen ve hastanelerde sonuçları iyileştirebilen bir faktör olduğunu desteklemektedir. Ayrıca, stratejik planlama farkındalığının gerekliliğini vurgulayarak, EFQM ile değer temelli liderlik arasındaki bağlantıya katkı sağlamaktadır.

Sonuç: Değer temelli liderlik, tüm paydaşlarla etkileşime girme ve onları kuruluşun stratejisi, değerleri ve yönü hakkında bilgilendirme konusundaki hassasiyeti nedeniyle EFQM modeli için önemli bir öncül olarak düşünülmelidir. Ayrıca değer temelli liderlik ile EFQM modeli arasındaki etkileşimin artırılması için sağlık profesyonelleri arasında stratejik planlama konusunda farkındalığın sağlanması liderlerin gündeminin başında olmalıdır.

Anahtar Sözcükler: EFQM, değer temelli liderlik, stratejik planlama farkındalığı, kamu hastaneleri.

Introduction

Leadership is the driving force behind Total Quality Management (TQM)¹. Therefore, leadership types continue to be studied not only in relation to organizational performance but also in relation to TQM². In this context, value-based leadership has gained prominence because organizational values are the core of a strong quality culture³⁻⁵. By prioritizing collective goals over individual interests, this leadership style aligns organizational systems with excellence and creates sustainable value for all stakeholders^{6,7}. Crucially, a lack of leadership commitment remains a primary barrier to achieving hospital excellence. At the same time, research highlights that quality indicators remain low across the healthcare sector⁸⁻¹⁰. Moreover, achieving TQM success requires integrating quality ideals into strategic planning, supported by effective leadership. Since excellence in TQM depends on aligning hospital operations with their mission and future goals, this integration is essential for bridging the sector's performance gap¹¹. While leadership must ensure that strategy aligns with the values and stakeholder expectations, successful implementation ultimately depends on the strategic planning awareness of healthcare professionals^{3,11}. Consequently, this study investigates the interaction between the EFQM model and value-based leadership, alongside the role of strategic planning awareness. Using a convenience sampling method, data was

collected from three public hospitals in Kocaeli (City Hospital, Education and Research Hospital, State Hospital) to represent different administrative structures.

Theoretical Framework

Value-Based Leadership and EFQM

The EFQM Excellence Model, created by the European Foundation for Quality Management (EFQM), establishes a superior system for performance management. It provides the framework for achieving excellent results using leadership, policy and strategy, staff, procedures, partnerships, and resources^{12,13}. Approximately 80% of Europe's over 30,000 public and commercial businesses are known to utilize the EFQM Excellence Model for self-assessment to monitor performance and formulate strategies¹⁴. However, research on the link between leadership styles and EFQM suggests that the right leadership style is critical to the implementation of TQM^{2,15,16}. In the health industry in particular, leadership is thought to be crucial to maintaining and ensuring advances in patient safety and service quality¹³. While quality and excellence models often focus on leadership styles such as transformational, authentic, or ethical leadership, value-based leadership offers a unique approach that directly addresses the need for self-regulation and ethical consistency in the EFQM's leadership criteria, structurally integrating strategy and values. Unlike transformational leadership, which emphasizes motivation toward a shared vision, value-based leadership prioritizes the moral principles guiding change. Without this ethical foundation, transformational efforts risk losing their effectiveness^{7,17}. Authentic leadership also emphasizes self-consistency, whereas value-based leadership ensures that a leader's inner essence serves a broader moral purpose and the needs of their followers¹⁸. Ethical leadership is driven by external rewards and rules, whereas value-based leadership embeds ethics into the organization's core purpose. The most unique aspect that conceptually distinguishes value-based leadership is its impact on organizational structure. Shared values function as a natural internal control mechanism, reducing the need for rigid hierarchy and strict formalization, thus enabling leadership to act as a structural lever supporting decentralization^{7,19}. Since it aligns with the ideals and concepts of quality management and fosters employee engagement to accomplish improvements and boost performance, value-based leadership is a leadership style that may be linked to EFQM². Indeed, Grant²⁰ reported in the Harvard Business Review that the most important factor in fostering excellence and quality inside organizations is the role of values. Employee creativity and diversity are essential for excellence and quality improvement, and they are fostered in organizations with clearly stated values. To create a quality culture, personnel must comprehend the "why" behind their work practices in addition to the "what" and "how"²¹. Given that value-based leadership traits match well with the organizational setting where business excellence is expected, Hypothesis 1 is proposed:

H1: Value-based leadership has a direct and positive impact on EFQM.

Value-Based Leadership and Strategic Planning Awareness

Strategic planning serves as a leadership instrument that directs an organization from its mission to its vision²². Moreover, strategic planning integrates operational objectives with organizational values, creating a mutual influence between the two. Fairholm²³ stated that the relationship between strategic planning and values means that strategic thinking is related to leadership. Accordingly, value-based leaders behave with awareness that the primary objective is to stay consistent to the values. By basing their vision on follower needs, value-based leaders create a shared purpose that invites contribution and fosters diverse ideas. The following briefly describes the traits of a value-based leader⁷:

Integrity: Value-based leaders lead with integrity, never compromising their core objectives. For them, fulfilling follower goals is the primary indicator of both leadership success and a consistent life purpose.

Vision: The core duty of value-based leadership is crafting a vision rooted in follower needs. This ensures the leader's goals eventually align with and become the followers' own vision.

Listening: Value-based leaders listen to their followers and encourage different ideas in the organization.

Respect for followers: Believes in the dignity of those they lead and acts accordingly. Acts with the awareness that all employees have certain rights, primarily to be respected.

Participation: Value-based leadership gives all followers a chance to contribute to the organization.

In this respect, value-based leadership is compatible with the ideas of strategic planning, which requires creating and implementing policies based on medium and long-term goals, focusing on ultimate results^{7,24}. As a result Hypothesis 2 is proposed:

H2: Value-based leadership has a direct and positive impact on strategic planning awareness.

Strategic Planning Awareness and EFQM

Strategic effectiveness is directly correlated with organizational excellence²⁵⁻²⁷. Successful strategies reduce costs and optimize efficiency while enhancing patient experience and innovation. Ultimately, these improvements bolster long-term performance and drive the hospital toward sustained excellence²⁸⁻³⁰. Achieving this synergy depends on a strategy formulation process that balances actual performance results with stakeholder requirements within the EFQM framework²⁷. Reflecting this approach, public sector reforms have formalized these strategic inputs. Consequently, strategic planning in Turkish public administration is driven primarily by²⁴: Streamlining organizational policy implementation, improving financial management

and strategic decision-making by reducing budget implementation inefficiencies, aligning planning, programming, and budgeting at the organizational level, enhancing capacity for target-based policy development and implementation, implementation of transparency and accountability, fostering a culture of engagement.

However, successful strategic planning requires employees to fully understand and implement the process. Excellence is achieved only when the workforce embraces the mission and is motivated to meet organizational targets. Therefore, Hypothesis 3 is proposed:

H3: Strategic planning awareness has a direct and positive impact on EFQM.

The Role of Strategic Planning Awareness in the Impact of Value-Based Leadership on EFQM

Literature confirms that leadership significantly impacts performance in both hospitals and other sectors³¹⁻³⁴. However, developing balanced performance evaluation systems is challenging, as these systems must be centered on strategies derived from mission, vision, and values¹⁴. At this point, value-based leadership encourages participation in decision-making by creating strategies that make work more meaningful for employees^{35,36}. Engagement is particularly vital in strategic decision-making, as employees are more committed to implementing decisions they helped create. This approach enhances performance by decentralizing collaborative decision-making across the organization³⁷. Indeed, the resource-based view, within the framework of a strategic management approach, argues that an organization's sustainable competitive advantage stems from its internal, valuable, rare, inimitable, and irreplaceable resources and capabilities. Accordingly, it focuses not only on external market positioning but also on the utilization of internal assets (tangible or intangible) to achieve superior performance. Intangible resources are generally those that enable a company to maintain its competitive advantage (people, knowledge, culture). Values, by shaping the organizational culture—the most important of these internal resources—provide a competitive advantage. This insight closely aligns with the value-based leadership style, which maximizes the values and potential of employees, creating a “rare” and “inimitable” culture within the organization^{38,39}.

Furthermore, McKinsey's 7S model focusing on ideal organizational design, also emphasizes the integration of seven main components: shared values, structure, strategy, style, skills, staff, and systems. In this model, “style” refers to the leadership approach and management style. According to this model, structure, strategy, and systems are classified as Hard S's, while style, skills, staff, and shared values are considered Soft S's. This model emphasizes focusing not only on Hard S's but also Soft S's for change management and performance optimization, ensuring the integration of the 7S's, and eliminating inconsistencies. Therefore, any change in strategy affects other sub-elements, and these also need to be consistent. In particular, the behavior and management style of leaders shape the implementation of the organization's strategy through other elements⁴⁰. Moreover, the central element of the model, shared values,

when considered within the framework of value-based leadership, ensures the cultural and operational alignment required for sustainable change and high performance. At this point, value-based leadership enhances organizational performance by making work meaningful and transforming service delivery into tangible value^{35,36}.

Consequently, leadership—as a prerequisite for achieving goals in the EFQM excellence model—gains its true meaning through the decisive support and commitment of senior management^{12,41}. Organizations successfully using EFQM derive their strategic goals from the model's key success factors, ensuring their activities and enablers are structurally linked within their strategic plans¹⁴. Complementing this structural link, strategic planning also requires a high level of employee awareness fostered by committed leadership⁴²⁻⁴⁴. Based on this background Hypothesis 4 is proposed:

H4: The strategic planning awareness plays a mediating role in the impact of value-based leadership on EFQM.

Material and Methods

Population and Sample

The population of the research consists of 4378 health professionals working in three public hospitals (City Hospital, Education and Research Hospital, and State Hospital) in Kocaeli province of Türkiye. Following ethics committee approval, institutional permissions were obtained from these hospitals. These three hospitals were selected using a convenience sampling method due to the high workload intensity of healthcare professionals and the need to obtain high-quality data by collecting voluntary responses within a specific timeframe. While Kocaeli was chosen for its accessibility to researchers, these three hospital types represent the fundamental sub-organizational structures of public healthcare services and provide a robust environment for observing the interaction of research variables.

The sample size of the study was determined as 354 with a 95% confidence interval and a 5% margin of error⁴⁵. The number of employees constituting the population was divided into strata based on their institutions and the stratum weight was found by dividing the number of personnel in each stratum by the number of personnel in the population. Thus, the stratum weights were multiplied by the total number of personnel to be sampled and the number of personnel required to be sampled from each stratum was calculated⁴⁶ (Table 1).

Table 1. Calculation of the number of personnel to be included in the sample

Stratum number	Hospital	Total personnel	Stratum weight	Personnel required to the sample	Personnel included in the sample	Response rate
1	City Hospital	2621	$2621/4378=0.60$	$0.60 \times 354 = 212$	140	66%
2	Education and Research Hospital	1167	$1167/4378=0.27$	$0.27 \times 354 = 94$	48	%51
3	State Hospital	590	$590/4378=0.13$	$0.13 \times 354 = 48$	48	%100
Total		4378	1.00	354	236	%67

In case the questionnaires distributed to the employees were filled out incompletely or incorrectly, a 20% loss margin was added to the number of 354 and a total of 425 questionnaires were distributed. A total response rate of 67% was obtained and 236 employees participated in the research voluntarily (Table 1).

Measures

In the study, a survey was used as a quantitative method. The questionnaires consist of demographic and occupational variables, Strategic Planning Awareness Scale, EFQM Excellence Model Scale and Value-Based Leadership Scale.

Strategic Planning Awareness (SPA) Scale: The study utilized the strategic planning awareness scale developed by Yakut and Korkmazurek⁴³. The scale was reviewed by the researchers and made suitable for use in hospitals.

EFQM Excellence Model: The EFQM scale, which was adapted into Turkish by Tutuncu and Kucukusta⁴⁷ was used in the study. The validity and reliability analyses conducted by Tutuncu and Kucukusta⁴⁷ revealed that the “Results” criterion was perceived as a single dimension instead of independent groups as in the original model. The authors explained this situation with the pragmatic approach of the Turkish society and stated that the model has this limitation for Türkiye.

Value-Based Leadership (VBL) Scale: The value-based leadership scale developed by Garg and Krishnan⁷ was used in the study. The scale was translated into Turkish by the researchers, and the statements were made suitable for use in hospitals.

Ethical Statement

The research was approved by Kocaeli City Hospital Scientific Research Ethics Committee with protocol number 3 on 14.03.2024. Data were collected between 25.03.2024 and 25.05.2024.

Results

Data analysis was done using SPSS for Windows 25.0 and AMOS 23.0 programs.

Table 2. Respondents' characteristics

Variables	Frequency	%
Profession		
Doctor	11	4.7
Nurse	83	35.2
Assistant Health Personnel	28	11.9
Support Services Personnel	75	31.8
Administrative Personnel	39	16.5
Gender		
Female	176	74.6
Male	60	25.4
Age ranges ($\bar{X} \pm SS$, 37.31 ± 8.02)		
37 and below	123	52.1
Over 37	113	47.9
Work Unit		
Clinical Unit	135	57.2
Administrative Unit	101	42.8
Total	236	100.0

Table 2 provides the participants' demographic information. It is seen that 4.7% of the participants are doctors, 35.2% are nurses, 11.9% are assistant health personnel, 31.8% are support services personnel and 16.5% are administrative personnel (Table 2).

Validity and reliability

The AMOS program was utilized to conduct Confirmatory Factor Analysis (CFA) to assess the construct validity of the scales. Cronbach's Alpha was applied to assess the scales' reliability. The scales are considered reliable provided this value is higher than 0.70⁴⁸.

Table 3. Confirmatory factor analysis of the VBL scale

Item No	Factor Loading	Standard Error	t-value	Significance
1	0.901	-	-	
2	0.809	0.046	17.422	*
3	0.864	0.048	20.086	*
4	0.871	0.047	20.476	*
5	0.903	0.046	22.453	*
6	0.919	0.045	23.538	*
7	0.914	0.048	23.213	*
8	0.932	0.045	24.515	*

9	0.886	0.046	21.377	*
10	0.866	0.050	20.197	*
11	0.923	0.044	23.854	*
12	0.875	0.046	20.718	*
13	0.884	0.048	21.262	*
14	0.905	0.043	22.593	*
15	0.920	0.046	23.613	*
16	0.777	0.048	16.150	*
17	0.882	0.045	21.104	*
18	0.937	0.042	24.905	*
19	0.883	0.047	21.186	*
20	0.893	0.046	21.799	*
Total $\alpha=0.987$				

Note(s): * $p<0.05$; α =Cronbach Alpha

All correlations are significant and the factor loadings of the VBL scale items are over 0.40 (Table 3). These demonstrate a convergent validity level that is satisfactory⁴⁹.

Table 4. Model fit indices of the VBL scale

Model Fit Indices	Reported Values	Appropriate Values and References
CMIN/DF	4.041	≤ 5 ⁵⁰
RMSEA	0.098	≤ 0.10 ⁵¹
CFI	0.930	≥ 0.80 ⁵²
TLI	0.919	≥ 0.80 ⁵³
IFI	0.930	≥ 0.80 ⁵⁴
RFI	0.896	≥ 0.80 ⁵⁵
NFI	0.909	≥ 0.80 ⁵⁶

As the reliability analysis result are given in Table 3, the internal consistency of the scale is high⁴⁸. Moreover, the fit indices provided acceptable values (Table 4).

Table 5. Confirmatory factor analysis of the SPA scale

Item No	Factor Loading	Standard Error	t-value	Significance
Knowledge ($\alpha=0.943$)				
1	0.614	-	-	-
2	0.704	0.090	13.844	*
3	0.841	0.140	10.432	*
4	0.872	0.144	10.690	*
5	0.866	0.152	10.644	*
6	0.850	0.153	10.508	*
7	0.804	0.141	10.115	*
8	0.876	0.148	10.723	*

9	0.737	0.142	9.501	*
10	0.898	0.148	10.900	*
11	0.425	0.129	6.032	*
Perception ($\alpha=0.964$)				
12	0.626	-	-	-
13	0.804	0.122	10.414	*
14	0.866	0.115	10.989	*
15	0.869	0.111	11.016	*
16	0.916	0.114	11.429	*
17	0.937	0.110	11.605	*
18	0.918	0.109	11.445	*
19	0.837	0.106	10.729	*
20	0.899	0.111	11.285	*
21	0.870	0.113	11.029	-
Process ($\alpha=0.889$)				
22	0.568	-	-	*
23	0.535	0.128	6.849	
24	0.768	0.158	8.758	*
25	0.860	0.176	9.334	*
26	0.801	0.167	8.973	*
27	0.741	0.170	8.560	*
28	0.773	0.164	8.793	*
Total $\alpha=0.964$				

Note(s): * $p < 0.05$; α =Cronbach Alpha.

All correlations are significant and the factor loadings of the SPA scale items are over 0.40 (Table 5). These demonstrate convergent validity which is at a satisfactory level⁴⁹.

Table 6. Model fit indices of the SPA scale

Model Fit Indices	Reported Values	Appropriate Values
CMIN/ DF	2.870	≤ 5
RMSEA	0.089	≤ 0.10
CFI	0.902	≥ 0.80
TLI	0.892	≥ 0.80
IFI	0.902	≥ 0.80
RFI	0.843	≥ 0.80
NFI	0.857	≥ 0.80

As the reliability analysis results are given in table 5, the internal consistency of the scale is high⁴⁸. Moreover, the fit indices provided acceptable values (Table 6).

Table 7. Confirmatory factor analysis of the EFQM

Item No	Factor Loading	Standard Error	t-value	Significance
Leadership ($\alpha=0.919$)				
1	0.657	-	-	-
2	0.723	0.110	10.004	*
3	0.707	0.099	9.806	*
4	0.901	0.112	11.977	*
5	0.870	0.126	11.659	*
6	0.927	0.119	12.243	*
Policy and Strategy ($\alpha=0.944$)				
7	0.837	-	-	-
8	0.837	0.064	16.184	*
9	0.947	0.056	20.222	*
10	0.896	0.057	18.219	*
11	0.883	0.061	17.741	*
People ($\alpha=0.955$)				
12	0.873	-	-	-
13	0.929	0.050	21.811	*
14	0.909	0.054	20.755	*
15	0.847	0.055	17.865	*
16	0.892	0.053	19.884	*
17	0.863	0.061	18.544	*
Partnerships and Resources ($\alpha=0.919$)				
18	0.780	-	-	-
19	0.793	0.081	13.345	*
20	0.877	0.072	15.199	*
21	0.866	0.077	14.940	*
22	0.856	0.077	14.729	*
Processes ($\alpha=0.935$)				
23	0.765	-	-	-
24	0.764	0.032	31.130	*
25	0.948	0.075	16.525	*
26	0.959	0.078	16.768	*
Results ($\alpha=0.956$)				
27	0.806	-	-	-
28	0.821	0.068	14.832	*
29	0.824	0.068	14.896	*
30	0.860	0.076	15.878	*
31	0.826	0.079	14.951	*
32	0.898	0.067	16.950	*
33	0.868	0.067	16.101	*
34	0.827	0.065	14.982	*
35	0.838	0.065	15.274	*
Total $\alpha=0.983$				

Note(s): * $p < 0.05$; α =Cronbach Alpha

All correlations are significant and the factor loadings of the EFQM scale items are over 0.40 (Table 7). These reveal a convergent validity level that is satisfactory⁴⁹.

Table 8. Model fit indices of the EFQM

Model Fit Indices	Reported Values	Appropriate Values
CMIN/DF	3.061	≤5
RMSEA	0.094	≤0.10
CFI	0.890	≥0.80
TLI	0.879	≥0.80
IFI	0.890	≥0.80
RFI	0.830	≥0.80
NFI	0.845	≥0.80

As the reliability analysis results are given in table 7, the internal consistency of the scale is high⁴⁸. Moreover, the fit indices provided acceptable values (Table 8).

Table 9. Normality analysis

Variables	Skewness	Kurtosis	Results
VBL	-0.739	-0.199	Normal
SPA	-0.706	0.549	Normal
EFQM	-0.487	-0.194	Normal

Table 9 presents the findings of the scales' normality examination. The data has a normal distribution, as indicated by the skewness and kurtosis values being within ± 3 ⁵⁷.

Common Method Bias

Harman's single-factor test was conducted to assess common method bias that might arise from collecting data from a single source and within the same time period. Items for all latent variables in the study were subjected to exploratory factor analysis, with the number of factors fixed at one. The analysis revealed that the single factor explained 44% of the total variance. Since this value is below the widely accepted 50% threshold⁵⁸, it was concluded that the risk of common method variance is low and the findings are not significantly affected by methodological bias. Therefore, these results confirm that the variance is not concentrated in a single factor, further supporting that the latent variables are empirically distinct and that multicollinearity does not undermine the structural relationships within the model.

Convergent and Discriminant Validity Values (AVE, CR, Fornell-Larcker and HTMT)

The convergent validity of the measurement model was tested using Average Variance Extracted (AVE) and Composite Reliability (CR) values, while its discriminant validity was tested through the Fornell-Larcker criterion and the Heterotrait-Monotrait Ratio (HTMT).

Table 10. Results of convergent and discriminant validity

Variables	CR	AVE	VBL	SPA	EFQM
VBL	0.987	0.790	0.889*		
SPA	0.976	0.587	0.656	0.766*	
EFQM	0.985	0.701	0.718	0.850	0.837*

Note(s): *The bold values on the diagonal represent the square root of the AVE value of the relevant variable. The values below the diagonal represent the Pearson correlation coefficients between the variables.

Table 10 shows that all latent variables have CR values above the threshold of 0.70 and AVE values above the threshold of 0.50⁵⁹. This demonstrates that the items share a high level of common variance with the latent variable they represent, and that convergent validity is achieved. To satisfy the requirement for discriminant validity based on the Fornell-Larcker criterion, the square root of the AVE of each latent variable should exceed the correlation coefficients between that variable and all other variables in the model⁵⁹. Table 10 reveals that this requirement is satisfied for VBL (0.889 > 0.656 and 0.718) and EFQM (0.837 > 0.718). On the other hand, the high correlation between SPA and EFQM ($r=0.850$) is notably close to the square root of the AVE for EFQM (0.837). Therefore, to evaluate discriminant validity, the HTMT criterion proposed by Henseler et al.⁶⁰ was employed alongside the Fornell-Larcker criterion.

Table 11. Results of discriminant validity via HTMT

Variable Pairs	HTMT	Results
VBL - EFQM	0.782	Strong Discriminant Validity (<0.85)
VBL - SPA	0.724	Strong Discriminant Validity (<0.85)
SPA - EFQM	0.884	Acceptable Discriminant Validity (<0.90)

Table 11 shows that for all latent variable pair, the HTMT values remained below the conservative threshold of 0.85 or the more flexible threshold of 0.90⁶⁰. Specifically for the SPA-EFQM pair, the HTMT value of 0.884 confirms discriminant validity, revealing that despite their high correlation, these two latent variables represent different structures. Consequently, these two structures are closely related—as theoretically expected—yet can still be accepted as independent latent variables.

Hypothesis Testing and Statistical Power Analysis

Path and mediation analyses were conducted in line with the established model. When the effect of VBL (independent variable) on EFQM (dependent variable) is examined, it is seen that it has a significant and positive effect ($\beta=0.740$, $p<0.05$) (Table 12). Therefore, the possibility of a mediating role in this effect could be investigated. The findings indicated that there was a mediator role in the model since the values in the 95% confidence interval did not include 0 (zero) (0.495-0.721). Moreover, the role of SPA in the effect of VBL on EFQM in hospitals was found to be significant (Table 12). Since it was concluded that there was a mediator, the significance of the direct effect was examined for determining type of mediation. Consequently, it was seen that the effect of VBL on EFQM was significant, but the coefficient decreased ($\beta=0.603$, $p<0.05$). Therefore, a partial mediation decision was made (Table 12).

The adequacy of the sample size ($N=236$) was evaluated by conducting a post-hoc power analysis based on the RMSEA method⁶¹. With an observed RMSEA of 0.072 and 252 degrees of freedom (df) at an alpha level of 0.05, the statistical power was calculated as 0.999. This result exceeds the recommended threshold of 0.80⁶², confirming that the study has sufficient statistical power to provide reliable estimates for the structural model (Table 12).

Table 12. The mediating role of SPA in the impact of VBL on EFQM

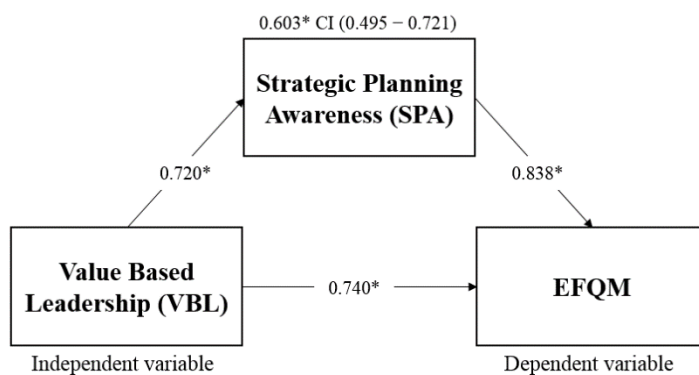
Effect		β	SE	t-value	Sig	Results
VBL → EFQM		0.740	0.051	9.199	*	H1:accepted
SPA → EFQM		0.838	0.155	6.737	*	H2:accepted
VBL → SPA		0.720	0.048	7.695	*	H3:accepted
VBL→SPA→EFQM	Direct Effect	0.135	0.034	2.587	*	H4:accepted
	Indirect Effect	0.603	Confidence Interval (0.495 - 0.721)			*
Model Fit Indices		Reported Values		Appropriate Values		
CMIN/DF		2.222		≤5		
RMSEA		0.072		≤0.10		
CFI		0.846		≥0.80		
TLI		0.841		≥0.80		
IFI		0.846		≥0.80		
RFI		0.816		≥0.80		

NFI	0.807	≥ 0.80
Statistical Power	0.999	≥ 0.80

Note(s): * $p < 0.05$; Sig=Significance; β = Coefficient; SE=Standard Error; Statistical power was calculated based on the RMSEA method for $N=236$ and $df=252$ at an alpha level of 0.05.

The model results predicting the mediating role of strategic planning awareness in the interaction between value-based leadership and EFQM are summarized in Figure 1.

Figure 1. Results on the conceptual model.



Note(s): * $p < 0.05$; CI=Confidence interval

Discussion

The current study found that EFQM was positively affected by value-based leadership. In parallel with this finding, the study conducted by Snyder et al.⁶ shows that sustainable quality improvement requires the development of value-based leadership. Similarly, the study conducted by Suarez et al.¹¹ reveals that the commitment of leaders is an important component in the success of excellence models. The responsibility of leaders is to uphold the core values of the organization and encourage the components to function for excellence⁶³ however, many leaders make the mistake of utilizing short-termism and fast successes to expedite change⁶⁴. Therefore, the only way to bring real change on the path to excellence is to adopt new ways of thinking driven by the understanding of value creation. Otherwise, improvement efforts will go no further than momentary "sugar highs" that disappear⁶⁵.

The current study found that EFQM was positively affected by healthcare professionals' awareness of strategic planning. Similarly, Alpkan and Dogan³⁷ found a positive relationship between strategic planning and quality performance. In addition, the study conducted by Zapletalová⁶⁶ determined that EFQM plays a critical role in the success of the strategic planning process. Moreover, the study by Suarez et al.¹¹ reveals that the management of EFQM enablers differs according to the degree of excellence of the

strategic planning process. Therefore, quality performance is greatly affected by the participation of all employees in activities related to gathering information during the strategic decision-making phase as well as preparing and revising plans. As a supporting example, the research conducted by Bocoya-Maline et al.⁶⁷ revealed that the success of the EFQM excellence model was due to the facilitation of knowledge and experience transfer throughout internal stakeholders.

The current study confirmed the mediating role of strategic planning awareness in the effect of value-based leadership on EFQM in hospitals. This finding aligns with the EFQM's people enablers, which emphasize the importance of how employees perform, develop, and reach their greatest potential. The research conducted by Nalci Aribas⁶⁸ supported that it is easier to adopt and implement a strategic plan prepared in a participatory manner. However, in the study conducted by Bagdigen and Avci⁶⁹ in public institutions, it was revealed that the principle of participation was not fully complied with in the strategic planning process. Allowing employees to fully engage in the strategic planning process would improve service effectiveness, create a feeling of belonging within the organization, and ensure that the strategic plan is implemented effectively.

Conclusions

This research analyzes the interaction between value-based leadership and the EFQM excellence model in public hospitals, and the critical role of strategic planning awareness in this relationship. The findings reveal that value-based leadership has a significant and positive effect on the EFQM model, and that strategic planning awareness plays a partial mediating role in this effect. Considering these empirical results, the study offers significant theoretical contributions to the literature. Firstly, while excellence models like EFQM are generally examined in the context of technical processes or transformational leadership in the current management literature, this study expands the theoretical framework by demonstrating that value-based leadership is a fundamental prerequisite for the model. The ability of value-based leaders to align the institution's vision and strategy with stakeholder needs is identified as a key driving force enabling the successful implementation of EFQM's input factors. Secondly, and most importantly, the study answers the "how" question in the relationship between leadership and excellence, introducing strategic planning awareness as a mediating mechanism explaining this interaction to the literature. This goes beyond previous research by demonstrating that leadership behaviors are transformed into excellence not through a direct reflection of organizational outcomes, but through healthcare professionals' cognitive internalization of strategic goals and their participation in these processes. Finally, a holistic model is presented on how, in organizations with high workloads and complex structures such as public hospitals, reducing strategy awareness beyond the top management level to the employee level mobilizes EFQM enablers. In conclusion, value-based leadership, with its sensitivity to engaging with all stakeholders and informing them about the organization's direction, provides an indispensable foundation for the EFQM model; while increasing awareness of strategic planning should be considered a key lever that maximizes the impact of this leadership style on excellence.

Managerial Implications

The implementation of TQM and excellence models demands collective engagement and substantial strategic effort, reflecting the transformative impact these initiatives exert on hospital operational structures. Success will be inevitable if leaders prioritize this and build a team aware of the necessity of its integration with strategic planning. While there are many alternative forms of leadership practice, a leadership style focused on human relations and values is more likely to lead to increased staff and patient satisfaction, quality of care, and improved performance outcomes. Furthermore, to achieve these outcomes, leadership should not be considered independently of policy, strategy, and process elements, as seen in EFQM. This is because the successful implementation of policies and strategies in hospitals depends on viewing these elements as an integral part of leadership's core responsibilities. The current study helps administrators identify which type of leadership can be effective in improving hospital operating outcomes and to recognize that healthcare professionals are a strategic asset using resources. Value-based leadership not only ensures internal and external communication but also gives all employees the opportunity to contribute to the hospital. This leadership style should be considered a key prerequisite for the EFQM model due to its sensitivity in engaging with and informing all stakeholders about the organization's policy, strategy, values, and direction. A key finding of the present study is that awareness of strategic planning mediates the relationship between value-based leadership and the EFQM excellence model. Consequently, a hospital's ability to achieve excellence depends not only on leadership but also on the strategic planning awareness of its healthcare professionals. Therefore, raising awareness of strategic planning among healthcare professionals should be at the top of hospital administrators' agendas.

Research Limitations

The limitation of this study is the use of a convenience sampling method within a single province (Kocaeli). While this approach allows for the collection of useful data from healthcare professionals, the findings may not be fully generalizable to different geographic regions. Future research should utilize random sampling techniques in larger populations to further validate the interactions between the research variables.

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