

Transformational leadership and quality management in health reforms in Kosovo

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Abstract

Introduction: Healthcare reform in transitional systems requires effective leadership and robust quality-management frameworks to improve service quality and patient outcomes. Kosovo's healthcare sector still faces organisational challenges requiring evidence-based strategies to strengthen institutional performance and patient-centred care.

Aim of the research: This study examines the influence of transformational leadership on quality management processes within the healthcare reforms in Kosovo. The research evaluates whether leadership behaviours facilitate improvements in patient satisfaction, service quality, and institutional efficiency through SERVQUAL and Six Sigma models/methods.

Methods: A mixed-method research design was applied. Quantitative data were collected through structured SERVQUAL and Multifactor Leadership Questionnaire (MLQ) instruments from 300 healthcare professionals across 10 hospitals (6 public, 4 private). Qualitative insights were gathered through semi-structured interviews with senior managers. Statistical analysis included descriptive indicators, correlation analysis, and multiple regression using SPSS. Qualitative data were subjected to thematic analysis. Based on national law the Ethical approval was not needed as the study did not include biochemical analyses, whereas all participants gave informed consent.

Results: Transformational leadership significantly predicted improved service quality ($R^2 = 0.64, p < 0.001$). Inspirational motivation ($\beta = 0.34$), idealised influence ($\beta = 0.28$) and intellectual stimulation ($\beta = 0.21$) were the strongest predictors of perceived service quality. SERVQUAL analysis revealed the largest gaps in responsiveness (-0.6) and empathy (-0.6). Implementation of Six Sigma DMAIC in one pilot hospital reduced waiting times by 23% and increased patient satisfaction scores by 17%.

Conclusions: Transformational leadership fosters a culture of excellence and accountability, enabling effective implementation of quality management tools. Integrated leadership and Six Sigma/SERVQUAL frameworks are essential for advancing health reforms in Kosovo and aligning them with European quality standards.

Introduction

Healthcare reforms in transitional economies such as Kosovo require strong governance mechanisms, effective leadership and robust quality-control frameworks. Since 2010, Kosovo has undertaken a series of reforms aimed at improving efficiency, transparency, and patient-centred care, as well as aligning the health system with European Union standards. Despite these initiatives, the system still faces challenges, including resource constraints, variability in management capacities and insufficient implementation of quality management practices.

Transformational leadership, as conceptualised by Burns and later developed by Bass and Avolio, is characterised by idealised influence, inspirational motivation, intellectual stimulation and individualised consideration. These dimensions are particularly important in environments undergoing rapid reform, where leaders must mobilise staff, promote innovation and sustain organisational commitment.

In parallel, quality management tools such as Total Quality Management, SERVQUAL and Six Sigma provide structured approaches to assessing service gaps, analysing processes and reducing variability in service delivery. The integration of leadership approaches with evidence-based quality tools has the potential to accelerate health system improvements.

However, in the Western Balkans empirical evidence on the interaction between leadership and quality management in health care remains limited. This study addresses this gap by examining the role of transformational leadership in supporting quality management during health reforms in Kosovo.

Aim of the research

The study aims to:

- 1) assess the relationship between transformational leadership and service quality in healthcare institutions in Kosovo;

- 2) evaluate how SERVQUAL and Six Sigma tools contribute to quality improvement during health reforms;
- 3) identify leadership-driven practices that support patient satisfaction and organisational efficiency.

Methods

Study design

A mixed-method cross-sectional design was applied, which integrates quantitative and qualitative data. The quantitative component consisted of a survey incorporating SERVQUAL and transformational leadership scales. The qualitative component consisted of semi-structured interviews with senior hospital managers to explore contextual factors related to leadership and quality management.

Setting and sample

The study was carried out in 10 hospitals across Kosovo, including six public and four private institutions. A stratified sampling strategy was used to ensure representation of physicians, nurses and administrative staff. In total, 300 healthcare professionals participated in the survey. Inclusion criteria were: at least one year of work experience in the current institution and direct involvement in patient care or service delivery.

Research instruments

Service quality was measured using the SERVQUAL scale, which assesses expectations and perceptions across five dimensions: tangibility, reliability, responsiveness, assurance and empathy. Transformational leadership was measured using the Multifactor Leadership Questionnaire (MLQ), covering idealised influence, inspirational motivation, intellectual stimulation and individualised consideration. Six Sigma implementation was assessed using standard DMAIC (Define, Measure, Analyse, Improve, Control) indicators, focusing on waiting times and error reduction in a pilot hospital.

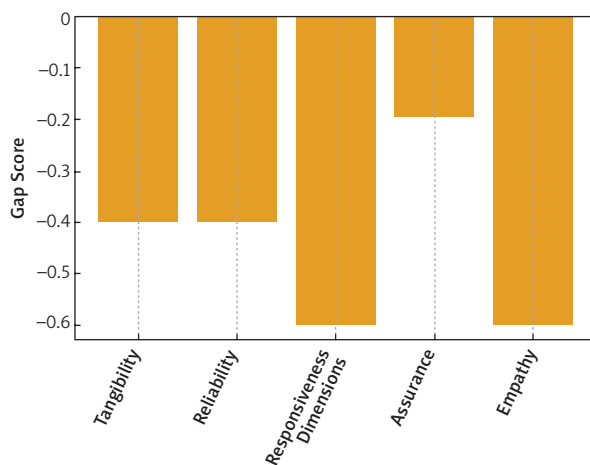


Figure 1. SERVQUAL Gap Analysis (P-E Differences)

Data collection

Data were collected between January and June 2024. Questionnaires were administered in paper and electronic form. Interviews with senior managers were conducted face-to-face, audio-recorded with consent and transcribed verbatim.

Data analysis

Quantitative data were analysed using SPSS version 28. Descriptive statistics were used to characterise the sample. Correlation analysis and multiple linear regression were applied to examine the relationship between leadership dimensions and perceived service quality. SERVQUAL gaps were calculated as the difference between perception and expectation scores. Qualitative data were analysed using thematic analysis to identify recurrent themes related to leadership, culture and quality improvement.

Results

Descriptive characteristics of the sample

A total of 300 healthcare professionals participated in the study, of whom 58% were female and 42% male. Public-sector employees represented 65% of the sample, while 35% were employed in private institutions. Most respondents (70%) reported more than five years of clinical or administrative experience, suggesting adequate exposure to organisational leadership and service-quality dynamics.

SERVQUAL Gap Analysis

SERVQUAL scores were calculated by subtracting perception (P) ratings from expectation (E) ratings in five dimensions of service quality. Negative values indicate service gaps requiring organisational intervention.

Responsiveness (-0.6) and empathy (-0.6) demonstrated the most substantial deficits, reflecting patients' perceptions of slow service delivery and insufficient personalised attention. Both tangibility and reliability showed moderate gaps (-0.4), while assurance recorded the smallest discrepancy (-0.2).

These patterns demonstrate structural and behavioural constraints in frontline service processes.

The SERVQUAL analysis (Figure 1) shows responsiveness and empathy as the dimensions with the largest gaps. Table 1 presents the SERVQUAL gap scores across the five service-quality dimensions.

Correlation and regression analysis

Correlation tests revealed significant positive associations between transformational leadership dimensions and perceived service quality ($p < 0.001$). Multiple linear regression was conducted to identify the relative contribution of the four MLQ transformational leadership components.

Table 1. SERVQUAL gap analysis in Kosovo hospitals

Dimension	Expectation (E)	Perception (P)	Gap (P–E)
Tangibility	4.5	4.1	–0.4
Reliability	4.6	4.2	–0.4
Responsiveness	4.4	3.8	–0.6
Assurance	4.5	4.3	–0.2
Empathy	4.6	4.0	–0.6

Inspirational motivation demonstrated the strongest predictive effect ($\beta = 0.34$), followed by idealised influence ($\beta = 0.28$), intellectual stimulation ($\beta = 0.21$), and individualised consideration ($\beta = 0.18$). (Table 2, Figure 2).

The overall model accounted for 64% of the variance in service quality ($R^2 = 0.64$; $p < 0.001$), indicating a robust predictive relationship.

The largest negative gaps were observed in responsiveness and empathy, indicating that patients perceived delays and insufficient individual attention compared to their expectations (Figure 1, Table 1).

Six Sigma DMAIC performance improvements

A pilot Six Sigma intervention implemented in one participating hospital resulted in a 23% reduction in average outpatient waiting time and a 17% improvement in patient satisfaction. These metrics were derived from baseline and post-intervention measurements using DMAIC (Define–Measure–Analyse–Improve–Control) indicators.

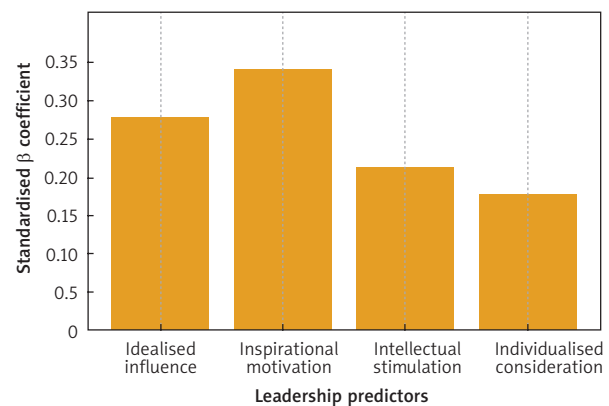
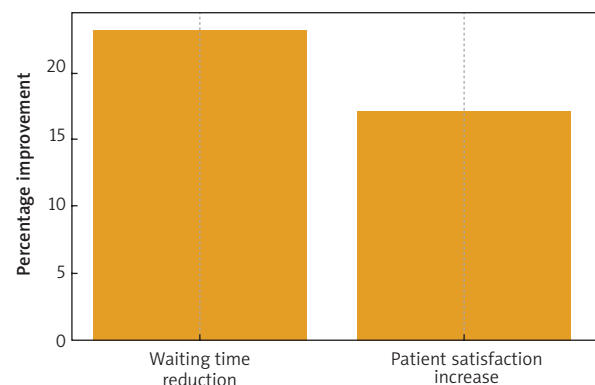
This evidence supports the feasibility and impact of structured process-optimisation tools within Kosovo's health system when combined with leadership engagement and staff participation (Figure 3).

Six Sigma reduced waiting times by 23% and increased patient satisfaction by 17%.

Implementation of the Six Sigma DMAIC cycle in one pilot hospital led to a 23% reduction in mean waiting time at outpatient clinics and a 17% increase in overall patient satisfaction scores.

Discussion

This study provides empirical evidence that transformational leadership significantly influences ser-

**Figure 2.** Regression coefficients predicting service quality**Figure 3.** Six Sigma DMAIC performance improvements

vice quality and organisational performance within Kosovo's healthcare institutions. The findings support the theoretical premise of Bass and Avolio, suggesting that leaders who articulate a compelling vision, foster intellectual stimulation, and provide individualised

Table 2. Multiple regression of transformational leadership dimensions on service quality

Predictor	β coefficient	t -value	P -value
Idealised influence	0.28	4.10	< 0.001
Inspirational motivation	0.34	5.21	< 0.001
Intellectual stimulation	0.21	3.08	0.002
Individualised consideration	0.18	2.67	0.008

support create organisational environments conducive to quality improvement.

The SERVQUAL results indicate persistent deficits in responsiveness and empathy – dimensions closely linked to staff behaviour, workload distribution, and communication quality. These findings are consistent with previous international literature, which positions responsiveness and interpersonal care as critical determinants of patient satisfaction in resource-constrained healthcare systems. The alignment between SERVQUAL gaps and qualitative interview findings reinforces the need for targeted behavioural and organisational reforms.

Regression results confirmed that transformational leadership predicts service quality, with inspirational motivation emerging as the strongest predictor. This suggests that staff morale, shared purpose, and emotional engagement represent core mechanisms through which leadership influences perceived care delivery. The predictive strength of idealised influence and intellectual stimulation further underscores the role of ethical modelling and innovation in shaping service performance.

The Six Sigma DMAIC pilot demonstrated tangible improvements in operational efficiency, reducing waiting times and increasing patient satisfaction. This aligns with global evidence on Lean and Six Sigma methodologies in improving throughput and standardising care processes. Importantly, qualitative insights indicated that leadership commitment was essential for sustaining adherence to DMAIC phases and promoting staff ownership of improvement initiatives.

In general, the integration of transformational leadership with evidence-based quality tools strengthens institutional capacity for continuous improvement and supports the broader objectives of Kosovo's health reforms. These findings contribute to the regional literature by offering a combined leadership–quality management model suitable for transitional health systems.

Conclusions

Transformational leadership emerges as a foundational driver of service quality across Kosovo's hospitals, shaping organisational culture, staff engagement, and the capacity to implement evidence-based improvement initiatives. The SERVQUAL findings highlight responsiveness and empathy as priority domains for managerial intervention, indicating the need for targeted strategies that strengthen patient-centred communication, workflow coordination, and continuity of care. The application of Six Sigma methodologies demonstrates substantial potential for enhancing operational performance, particularly when leadership provides clear vision, resource support, and sustained commitment to data-driven decision-making. Embedding leadership development within a structured quality-management architecture is critical for the long-term success of health reforms in

Kosovo, enabling institutions to align with European standards, promote accountability, and ensure consistent improvement in patient outcomes.

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Ethical approval

The study was conducted in accordance with the Helsinki Declaration (1989). In accordance with national legislation, approval from the Kosovo National Bioethical Committee was not required because the study did not involve biochemical analyses, biological specimen collection, or other invasive biomedical procedures. Participation was voluntary and written informed consent was obtained from all participants. No personal identifiers were collected and no patient photographs or personal data are presented.

Conflict of interest

The author declares no conflict of interest.

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