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STUDY OF LEADERSHIP QUALITIES AMONG MANAGERS OF A MEDICAL ORGANIZATION

Abstract. Introduction: Leadership in healthcare is essential for driving reform, improving service quality, and ensuring organizational adaptability. In Kazakhstan, while leadership development is gaining attention, many healthcare managers still lack formal training.

Aim: To assess leadership and managerial qualities among healthcare managers in Kazakhstan and identify potential demographic predictors of leadership traits.

Materials and Methods: A cross-sectional study was conducted with 100 managers from the Research Institute of Cardiology and Internal Diseases and Atlas Dental clinics. Participants completed the MBA. SU "Leader or Manager?" test. Data were analyzed using SPSS v26 with chi-square tests and logistic regression.

Results: Most participants exhibited ambiguous personality traits, followed by managerial, with leadership types being least common ($\chi^2 = 13.571$, $p = 0.001$). Female managers and those with postgraduate education were more likely to show leadership qualities, though not statistically significant.

Discussion: The dominance of ambiguous types reflects a transitional leadership landscape. Limited representation of leadership traits may hinder reform efforts. Trends suggest gender and education could influence leadership development.

Conclusion: There is a need for structured leadership training to strengthen healthcare management in Kazakhstan and support ongoing reforms.

Key words: healthcare management, leadership, Managerial skills.

Introduction

Effective leadership in medical organizations plays a critical role in ensuring the delivery of high-quality healthcare services, optimizing organizational performance, and driving strategic transformation within health systems. Leadership competencies among healthcare managers are increasingly recognized as essential in adapting to the dynamic demands of the sector, particularly in the context of global health reforms and emerging challenges such as pandemics, workforce shortages, and technological advancement.

Continuous professional development is crucial for healthcare managers to effectively respond to evolving challenges. Research indicates that while top-tier managers are required to have certain qualifications, middle-tier managers often lack opportunities for skill enhancement. This disparity hampers the execution of decisions and the overall efficiency of healthcare organizations [1].

A substantial portion of healthcare leaders in Kazakhstan lack formal management education. Re-

cent policy documents from the Ministry of Healthcare of the Republic of Kazakhstan underscore the importance of strengthening managerial capacity as a strategic priority [2]. According to the Ministry of Healthcare, approximately 60% of medical organization heads possess only medical degrees without professional management training, and merely 13.5% hold a master's degree. This gap underscores the necessity for structured leadership development programs to equip managers with essential skills. Furthermore, initiatives such as the introduction of master's degree programs in healthcare management and leadership development courses at institutions like Al-Farabi Kazakh National University [3] and Nazarbayev University School of Medicine [4] indicate a growing commitment to cultivating leadership at various levels of the healthcare system.

Despite these positive developments, studies indicate that a substantial number of healthcare managers in Kazakhstan still lack formal training in management and leadership. This gap hinders the effective implementation of reforms and limits the capacity of organizations to respond adaptively to

evolving healthcare needs [5]. Additionally, international collaborations have highlighted the need for comprehensive leadership training tailored to the national context, addressing both systemic and individual-level challenges [6].

Understanding the distinction between management and leadership is crucial in this context. While managers are responsible for planning, organizing, and coordinating tasks to achieve specific objectives, leaders focus on setting a vision, inspiring and motivating teams, and driving change. Managers tend to maintain stability and control, whereas leaders embrace innovation and adaptability. In healthcare

settings, both roles are essential; however, the dynamic nature of the sector increasingly demands that managers also possess strong leadership qualities to effectively guide their organizations through transformation and uncertainty [7]. Without competent management, even a well-defined vision may fail to materialize; conversely, inadequate leadership results in a lack of direction or purpose. Leadership involves establishing a clear path, motivating others, and overseeing transformation, while management focuses on efficiently allocating resources and preserving operational stability [8,9]. These differences are summarized in Table 1.

Table 1 – Distinction between leadership and managerial qualities in medical organizations (adapted from Northeastern University Bouvé College of Health Sciences, 2023)

Leadership	Management
Visionary Thinking Leaders anticipate future challenges and opportunities, guiding organizations toward long-term goals.	Planning and Organizing Managers develop and implement operational plans to meet healthcare objectives.
Inspiration and Motivation Effective leaders inspire healthcare professionals to achieve excellence and embrace change.	Process Orientation They establish procedures and protocols to maintain quality and safety standards.
Innovation Leaders encourage the adoption of new technologies and practices to enhance patient outcomes.	Control and Problem-Solving Managers monitor performance metrics and address operational issues promptly.
People-Centric Approach They prioritize team development, collaboration, and stakeholder engagement.	Short-Term Focus They concentrate on immediate tasks and resource management to ensure daily operations run smoothly.

Given this backdrop, the present study seeks to examine the leadership qualities among managers of medical organizations in Kazakhstan. Addressing this gap, the present study aims to investigate the leadership qualities of managers within a medical organization in Kazakhstan, utilizing a validated assessment tool to differentiate between managerial and leadership traits. Enhancing managerial leadership within medical institutions is a crucial step toward achieving the overarching goals of healthcare reform and improving health outcomes nationwide.

Methodology

Study Design and Participants

A cross-sectional study was conducted to assess leadership and management qualities among healthcare managers in Kazakhstan. Participants were selected from JSC “Research Institute of Cardiology and Internal Diseases” and “Atlas Dental” network of dental clinics. Inclusion criteria encompassed individuals holding managerial positions with at least one year of

experience in healthcare management. A total of 100 managers participated in the study. All procedures adhered to ethical standards for research involving human participants, in line with the Declaration of Helsinki.

Study instrument

The primary instrument utilized was the “Leader or Manager?” competency test developed by Zhavoronkova and published on the web-site of MBA.SU, accessible at https://www.mba.su/manager_or_leader/. This questionnaire is designed to differentiate between managerial and leadership competencies by evaluating responses across various scenarios and statements. The number of responses marked as [A] and [B] selected by each respondent was counted. The total number of responses was 14. Personality types were classified as follows:

1. Managerial type (characterized by a focus on structuring, adherence to procedures, reduction of uncertainty, and regulation-based management) was identified when the number of [A] responses predominated (more than 8).

2. Leadership type (marked by a drive for change, emotional engagement, and the ability to inspire others) was determined when [B] responses predominated (more than 8).

3. Ambiguous type (demonstrating flexibility and adaptability without a strong inclination toward either extreme) was diagnosed when the number of [A] and [B] responses was approximately equal (e.g., 6:8 or 7:7).

Data Collection Procedure

Participants were invited to complete the questionnaire electronically via a secure online platform between October 2024 and January 2025. Prior to participation, informed consent was obtained, ensuring confidentiality and anonymity. Demographic data, including age, gender, educational background, and years of managerial experience, were also collected to contextualize the findings.

Data Analysis

Responses were scored according to the guidelines provided by MBA.SU. Participants' scores were categorized to reflect predominant managerial or leadership tendencies. Statistical analyses were performed using SPSS software, version 26.0. Descriptive statistics summarized demographic variables and overall scores. Inferential statistics, including chi-square test + Cramér's V and logistic regression (ENTER method), were employed to examine differences in groups. A significance level of $p < 0.05$ was set for all analyses.

Results and discussion

The study involved 100 respondents of both genders, with two-thirds being female and one-third male. Participants ranged in age from 24 to 55 years.

The largest proportion of respondents (13%) had worked in a managerial position for two years. Between 9% and 11% of participants had one (9%), three (10%), six (9%), seven (11%), or ten (10%) years of experience. Only five respondents had over 16 years of managerial experience (up to 30 years), with one individual representing each of those years.

In terms of education, 26% of respondents had a university degree, and 74% held postgraduate qualifications.

The chart below (Figure 1) shows the overall distribution of manager personality types of the responders (managerial, ambiguous, leadership) by number of respondents. The most common type was the ambiguous personality, which may indicate complexity in respondents' traits or suggest that this type is the most prevalent among those surveyed. The managerial type ranked second, reflecting a moderate prevalence of organizational and administrative qualities. The leadership type was the least common, possibly due to the more specific traits associated with leadership or a smaller number of individuals identifying themselves as leaders.

The differences in distribution were statistically significant, with a one-sample chi-square test result of $\chi^2 = 13.571$, $p = 0.001$.

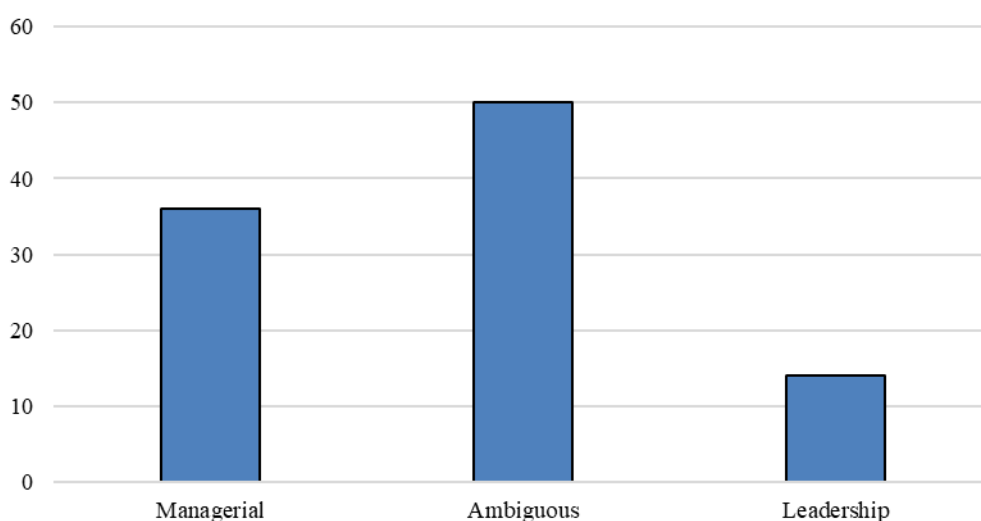


Figure 1 – Personality types

Logistic regression analysis was also applied.

The target outcome (dependent variable) was the presence of leadership qualities, while the predictors included gender, age, work experience, and level of education of the managers.

The results indicate that female employees at the “Research Institute of Cardiology and Internal Diseases” and “Atlas Dental” potentially exhibit more

pronounced leadership qualities: they were 2.354 times more likely to demonstrate the target outcome compared to their male counterparts.

Additionally, managers with postgraduate education had slightly higher odds of exhibiting leadership qualities, with an Exp(B) value of 1.336.

The regression analysis statistics are presented below (Table 2).

Table 2 – Main results of regression analysis statistics

Variable	B	Root Mean Square Error	Wald	df	Significance	Exp (B)
Gender	0.856	0.875	0.957	1	0.328	2.354
Age	0.005	0.078	0.005	1	0.945	1.005
Work experience	-0.074	0.107	0.472	1	0.492	0.929
Level of education	0.290	0.809	0.128	1	0.720	1.336
Constant	-3.337	2.700	1.528	1	0.216	0.036

It should be noted that although none of the variables demonstrated a statistically significant relationship with the dependent variable, their influence can be considered as a trend that requires further investigation.

Discussion

The present study aimed to assess the prevalence of leadership and managerial qualities among healthcare managers at the JSC “Research Institute of Cardiology and Internal Diseases” and “Atlas Dental” network of dental clinics. The results reveal a predominant presence of “ambiguous” personality types among respondents, followed by managerial types, with leadership-oriented individuals comprising the smallest group. This distribution aligns with findings in existing literature suggesting that healthcare systems, particularly in post-Soviet contexts, often emphasize administrative efficiency and stability over transformational leadership capabilities.

The predominance of ambiguous traits may reflect the transitional nature of Kazakhstan’s healthcare leadership landscape, where many managers simultaneously exhibit features of both management and leadership without fully embodying either. This hybridization could result from evolving institutional expectations and a lack of formal leadership development frameworks tailored to the national context. It may also signify internal role conflicts or insufficient clarity between administrative and visionary func-

tions in healthcare management roles.

Interestingly, the relatively low proportion of leadership-oriented individuals in the study sample may point to systemic gaps in the cultivation of leadership within medical organizations. Leadership competencies – such as strategic thinking, emotional intelligence, and innovation – are critical for navigating complex health challenges and driving reform. Their limited presence in the managerial cohort could hinder the sector’s adaptability and resilience in the face of ongoing health system transformation.

Logistic regression analysis, although not yielding statistically significant predictors, provided insight into potential demographic trends associated with leadership tendencies. Female managers were found to be 2.354 times more likely to exhibit leadership qualities than their male counterparts, suggesting that women in healthcare management may possess or develop more pronounced transformational or participative leadership styles. This aligns with global findings that women often excel in collaborative leadership, especially in healthcare and education sectors. Particularly, Gipson et al. (2017) [10] highlighted that women managers in academia are tend to be more task-focused, what make their leadership more favorable in the context of reforming and crisis. Accordingly, Shaked, Glanz, and Gross (2018) [11] noted that women generally exhibit transformational leadership more frequently than men, particularly in general and educational management settings. They were more likely to employ participative, democrat-

ic, and task-oriented leadership approaches compared to their male peers. According to Isnaini et al. (2023) [12] women leaders often adopt a participatory leadership style, encouraging collaboration and inclusive decision-making. This approach can lead to increased trust and cooperation within teams, contributing to improved organizational outcomes.

Managers with postgraduate qualifications also showed slightly higher odds of exhibiting leadership qualities. While the association was not statistically significant, this trend supports the notion that advanced education may enhance strategic and reflective thinking – key components of effective leadership. Nonetheless, neither age nor work experience showed a meaningful predictive value, which may indicate that leadership development is less a function of tenure and more influenced by personality, training, and organizational culture.

We suppose that healthcare managers with postgraduate qualifications often exhibit enhanced leadership qualities due to the comprehensive training and development during their studies. Postgraduate education equips managers with advanced competencies in strategic thinking, emotional intelligence, and evidence-based decision-making, which are crucial for effective leadership in complex healthcare environments. A study conducted in public health institutions in Addis Ababa in 2020, Ethiopia, found that managers with master's degrees or higher were significantly more effective in leadership roles compared to those with only diplomas. This effectiveness was linked to better vision creation, implementation, and the development of followership [13]. A systematic review by Sultan et al. (2019) [14] emphasized that postgraduate leadership education contributes to the development of key management competencies, including strategic planning, resource management, and change leadership, which are essential for navigating the complexities of healthcare systems. The latest research from Australia (2024) [15] demonstrated that healthcare professionals who completed a 12-month postgraduate leadership program reported sustained improvements in self-awareness, interpersonal relationships, and organizational culture. These enhancements translated into more effective leadership practices within clinical settings.

The study's findings underscore the need for targeted interventions to foster leadership capabilities in Kazakhstan's medical management system. This includes developing structured leadership development programs, incorporating leadership training into postgraduate medical and management curricula, and cultivating an institutional culture that values innovation, accountability, and people-oriented governance.

Limitations of the study include its modest sample size, which may limit generalizability. Moreover, the logistic regression model did not identify any statistically significant predictors of leadership qualities among the variables tested. This suggests that other factors not included in the model may play a more substantial role in determining leadership characteristics. Additionally, the "Leader or Manager?" questionnaire used, while practical and widely available, may have limitations in psychometric robustness for academic research. Future studies should consider using validated tools, larger sample sizes, and longitudinal designs to better understand how leadership qualities develop and manifest over time.

Conclusion

Based on the results of the conducted study, several key conclusions can be drawn:

- The majority of managers at the "Research Institute of Cardiology and Internal Diseases" and "Atlas Dental" exhibit an ambiguous personality type, indicating the complexity of their personal characteristics and a moderate prevalence of managerial qualities.

- The leadership type is less common which may be due to the specific and narrow set of requirements for leadership traits in this particular environment.

- Gender, age, work experience, and level of education do not show a statistically significant association with the presence of leadership qualities. However, there is a tendency for female managers and those with postgraduate education to have higher odds of demonstrating leadership traits.

Conflict of interest

Authors declare no conflict of interest.

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