

Research on the Comprehensive Evaluation Model of Hospital Talents from the Four-Dimensional Perspective of Medical, Teaching, Scientific Research, and Management

Xinwei He

Guangxi Medical University Cancer Hospital, Nanning, Guangxi, China

mona91914@gmail.com

Keywords: Hospital Talent Evaluation; Four-Dimensional Perspective; Evaluation System; Optimization Strategy

Abstract: With the rapid development of China's medical industry, the construction of a comprehensive talent evaluation system in hospitals has emerged as a pivotal issue. This paper primarily delves into a multidimensional model for comprehensive talent evaluation in hospitals, encompassing the perspectives of medical practice, education, research, and management. The model encompasses the determination of evaluation indicators, the selection of evaluation methods, implementation and feedback processes, as well as sentiment and attitude analysis. The conclusions drawn from this study propose strategies and pathways to optimize the evaluation system, aiming to enhance the objectivity and accuracy of evaluations, integrate evaluations across multiple dimensions, ensure the timeliness and adaptability of the evaluation system, and reinforce humanistic care within the framework.

1. Introduction

The evaluation of hospital talents is one of the primary responsibilities of hospital management and an integral part of human resource management. It can be categorized into basic talent evaluation and comprehensive talent evaluation, with the former conducted internally by hospitals and the latter often carried out by external professional institutions. To elevate the quality of medical services, hospitals also entrust third-party entities to oversee and assess talent evaluations. Since the reform and opening-up era, the evaluation of hospital talents has become a crucial aspect of the healthcare industry, with comprehensive evaluation emerging as a significant benchmark. Contrasting with traditional single-dimensional evaluations, comprehensive talent evaluation places greater emphasis on the integration of four dimensions: medical practice, education, research, and management. Consequently, the proposition of constructing a comprehensive evaluation model arises, and the four-dimensional perspective offers a novel research pathway for hospital talent evaluation.

The evaluation of hospital talents stems from a management philosophy centered on people, with its evaluation system embodying the requirements of comprehensive development and serving as a vital tool for enhancing the quality of medical services. From the perspective of the evaluation system's structure, hospitals strive for the all-round development of talents by integrating internal and external evaluations to modernize talent management. However, these are merely theoretical discussions. Today, China's hospital talent evaluation has forged a unique path in line with national conditions. The promotion of comprehensive evaluation not only reshapes the standards of talent evaluation, embodying the people-oriented philosophy but also alters the landscape of hospital management, exerting profound influences on the quality of medical services. Therefore, discussions on hospital talent evaluation must possess a strategic vision and a holistic perspective. Consequently, under the backdrop of the new era, the research proposition of a comprehensive evaluation model is put forward.

In conclusion, a comprehensive evaluation system for hospital talents serves as a crucial condition and guarantee for achieving high-quality development in the medical industry. From current practices, while progress has been made in hospital talent evaluation in China, there are still shortcomings. The

evaluation system has yet to fully identify an effective path that aligns with the requirements of the new era and continues to strive forward. Therefore, the evaluation of hospital talents necessitates continuous improvement, which is not only essential for enhancing the quality of medical services but also pivotal in driving the development of the medical industry. Based on the above background analysis, this paper proposes a comprehensive evaluation model for hospital talents from a four-dimensional perspective encompassing medical practice, education, research, and management. This model aims to establish a comprehensive, objective, and scientific evaluation system that addresses the issues within the evaluation system through systematic analysis and empirical research. Its primary components include the determination of evaluation indicators, the selection and application of evaluation methods, and the implementation and feedback of the evaluation system. It effectively mitigates the risks associated with talent evaluation and holds practical significance in promoting high-quality development in the medical industry.

2. The Basic Construction of a Comprehensive Evaluation System for Hospital Talents

2.1 Determination of Evaluation Indicators and Weight Allocation

The comprehensive evaluation system for hospital talents serves as a crucial benchmark for assessing the quality of hospital personnel and a comprehensive representation of the professional capabilities of medical staff.[1] The four-dimensional perspective encompassing medical practice, education, research, and management delineates distinct definitions of hospital talent evaluation from various angles. Some scholars also contend that talent evaluation involves an assessment of the degree of professional competence or a comprehensive appraisal of the abilities of medical personnel.[2] Because talent evaluation possesses a degree of objectivity and scientific rigor, it falls precisely within the realm of management science aimed at enhancing the quality of medical services. The history of hospital talent evaluation can be traced back to the early stages of the medical industry's development, with its primary activities encompassing the assessment of medical staff's professional skills and service levels.[3] The concepts and methodologies of the evaluation system are closely intertwined with the evolution of the medical industry. Through the determination of evaluation indicators and the allocation of their respective weights, hospital talent evaluation has emerged as a vital responsibility in hospital management. Across different eras of medical industry development, the primary contribution of talent evaluation theory lies in the continuous refinement of evaluation methods and the enhancement of evaluation accuracy. Consequently, the initial concept of hospital talent evaluation was primarily focused on a comprehensive measurement based on the attributes inherent to medical industry standards.

2.2 Selection and Application of Evaluation Methods

Compared to traditional single-dimensional evaluation methods, the comprehensive evaluation system for hospital talents places greater emphasis on the interrelationship between evaluation indicators and evaluation methods, exhibiting systematic and scientific characteristics. While some scholars have questioned whether there is a direct correlation between evaluation methods and evaluation results,[4] the majority of scholars advocate that comprehensive evaluation methods can provide a rational assessment of hospital talents.[5] Some scholars have proposed a classic evaluation model encompassing medical practice, education, research, and management as the four essential elements,[6] which has since become a typical tool for hospital talent evaluation, thereby evolving into the concept of comprehensive evaluation. These scholars argue that comprehensive evaluation possesses objectivity and is a "science of evaluation," with accurate and reliable evaluation results arising only when the evaluation indicators and methods are scientific and reasonable.[7] As such, comprehensive evaluation is regarded as the outcome of the evaluation process. Some scholars also summarize evaluation methods into two models: an evaluation model based on quantitative data and an evaluation model based on qualitative analysis.[8] The former focuses on data analysis, while the latter emphasizes expert assessment, thereby integrating both subjective and objective evaluations. Despite some practical failures encountered in comprehensive evaluation, from the perspective of

enhancing medical service quality, its ability to comprehensively assess talents has led to the gradual consensus in hospital talent research and practice on the concept of comprehensive evaluation.

2.3 Implementation and Feedback of Evaluation System

The essence of implementing and obtaining feedback from the comprehensive evaluation system for hospital talents centers on enhancing the quality of medical services and the professional competence of medical staff. Implementation represents the application of management thinking within the medical industry as a new alternative model – the comprehensive evaluation framework – emerges into the research landscape, aimed at overcoming the shortcomings of traditional evaluation systems. The fundamental philosophy of this framework is that the evaluation system should ensure the effective integration of the four dimensions of medical practice, education, research, and management; establish professional standards for talent output; "capture" the work performance of medical staff through techniques such as questionnaires; and employ statistical analysis methods to measure evaluation outcomes. The comprehensive evaluation framework reconstructs the implementation process of hospital talent evaluation, emphasizing the enhancement of objectivity, fairness, scientific rigor, and rationality within the evaluation system. By implementing comprehensive evaluation, hospitals are better equipped to understand the strengths and weaknesses of their talents, providing effective feedback and guidance for talent development. Concurrently, medical staff can leverage the evaluation results for self-improvement and enhancement, thereby raising the quality of medical services and patient satisfaction. The implementation and feedback of the comprehensive evaluation system carry significant implications for hospital talent management, facilitating the achievement of high-quality development and continuous improvement within hospitals.

3. Emotional and Attitude Analysis of Comprehensive Evaluation of Hospital Talents

3.1 Satisfaction and Loyalty of Medical Personnel: The Emotional Basis of Evaluation System

From the perspective of the emotional and attitudinal analysis dimension of the comprehensive evaluation of hospital talents, the satisfaction and loyalty of medical staff serve as the foundational links of the emotional basis of the evaluation system and are also the core manifestations of hospital culture and management efficiency. Therefore, the primary logic underlying the evaluation of hospital talents revolves around enhancing the job satisfaction and loyalty of medical staff. Medical staff are not only the primary providers of medical services but also the core entities driving hospital operations. At the current stage, hospitals strengthen emotional attitude control from the perspective of humanized management primarily through three forms: Firstly, clarifying the emotional balance that medical staff should achieve between medical services and hospital management; Secondly, it achieves standardized control of satisfaction and loyalty by establishing and publicizing service quality standards and workplace environmental standards for medical staff. Thirdly, internal process reengineering within hospitals has become a recent focus, as many hospitals aim to improve medical service quality by enhancing job satisfaction and loyalty among medical staff. Nevertheless, compared to theoretical expectations, the level of emotional attitude control within current hospital talent evaluation systems still requires further enhancement.

3.2 Support and Participation of Hospital Management: Organizational Guarantee of Evaluation System

From the perspective of organizational guarantees for the comprehensive evaluation of hospital talents, traditional evaluation systems fail to accurately provide the comprehensive information required by management. While hospital management primarily evaluates medical staff based on satisfaction, this system lacks relevant information and feedback mechanisms concerning management support and engagement, with the core issue potentially being information asymmetry. In hospital management, management support is often described as the "organizational backbone," and its engagement in the evaluation system directly reflects the hospital's culture and efficiency.

However, the existing data predominantly focus on information such as medical staff performance, with a scarcity of insights into management attitudes. Typically, the true level of management support is difficult to obtain or measure. Information asymmetry and the inadequacy of feedback mechanisms directly hinder the effective operation of the evaluation system.

3.3 Patient and Social Recognition: External Feedback from the Evaluation System

From the external feedback perspective of comprehensive evaluation of hospital talents, the recognition of patients and society has long constrained the professional capabilities of medical staff. In the 21st century, hospitals that integrate medical treatment, teaching, scientific research, and management into a single entity have reshaped the image of the medical industry through technological innovation and service optimization. Nevertheless, the drawbacks of traditional evaluation systems continue to hinder the overall development of hospitals. This is not only due to the rapid advancement of medical technology but also the evolving expectations of patients and societal attitudes, necessitating the further improvement of the hospital talent evaluation system. Under the premise of enhancing the quality of medical services, patient satisfaction is regarded as a direct means of evaluating the competence of medical staff. However, the actual impact of a patient satisfaction-centered evaluation system on the professional abilities of medical personnel remains to be deliberated. Furthermore, due to difficulties in information acquisition and processing, the evaluation system lacks comprehensiveness and objectivity. Consequently, patient satisfaction evaluations do not always seem to achieve the goal of improving medical service quality. Evidently, the evaluation of hospital personnel is not only a technical challenge but also confronts issues related to patient and societal recognition.

4. The Causes and Challenges of the Comprehensive Evaluation System for Hospital Talents

The causes and challenges of the comprehensive evaluation system for hospital talents are shown in Figure 1.



Figure 1 Basic Characteristics of the Causes and Challenges of the Comprehensive Evaluation System for Hospital Talents

4.1 The Impact of the Characteristics of the Medical Industry on the Evaluation System

The unique characteristics of the medical industry serve as vital criteria for the construction of a comprehensive evaluation system for hospital personnel, offering a holistic representation of the professional competencies of medical staff. These characteristics articulate diverse definitions of hospital talent evaluation from the perspectives of medical services, teaching and training, scientific research, and innovation, as well as management efficiency. Some scholars further contend that talent evaluation involves assessing the degree of professionalism or the overall capabilities of medical

personnel. Precisely because the characteristics of the medical industry are inherently complex and dynamic, it falls under the realm of management science aimed at enhancing the quality of medical services. The influence of the unique characteristics of the medical industry can be traced back to the early stages of its development, where the primary activities encompassed the assessment of medical staff's professional skills and service levels. The concepts and methodologies of hospital talent evaluation are intimately tied to the evolving nature of these industry characteristics. Through the analysis of these characteristics, hospital talent evaluation emerges as a crucial responsibility in hospital management. Across different eras of medical industry development, the primary contribution of talent evaluation theories lies in continually refining evaluation methods and enhancing their accuracy. Consequently, the initial conception of hospital talent evaluation primarily focused on comprehensive measurement based on the attribute-specific standards of the medical industry.

4.2 The Challenges of Teaching and Research Needs to the Evaluation System

Compared to singular evaluations focused solely on medical practice or management, the comprehensive evaluation system for hospital talent places greater emphasis on the interrelationship between teaching, research needs, and the capabilities of medical personnel, exhibiting interdisciplinary and dynamic characteristics. While some scholars have questioned whether teaching and research capabilities necessarily correlate directly with the quality of medical services, the majority argue that comprehensive evaluation enables a holistic and rational assessment of hospital talent. Some scholars have proposed integrated evaluation models that encompass elements such as teaching effectiveness and research achievements, which have subsequently become typical tools for hospital talent evaluation, thereby fostering the concept of comprehensive evaluation. These scholars assert that comprehensive evaluation embodies scientific rigor and constitutes "the art of evaluation," suggesting that the accuracy and reliability of evaluation outcomes are contingent upon the scientific soundness of the evaluation indicators and methods. Consequently, comprehensive evaluation is regarded as the culmination of the evaluation process. Other scholars summarize the evaluation system as encompassing both quantitative and qualitative models: the former being data-driven and the latter relying on expert opinions. The quantitative model emphasizes data analysis, while the qualitative model focuses on professional assessment, which together constitute comprehensive evaluation. Despite encountering practical challenges, comprehensive evaluation has emerged as a consensus in hospital talent research and practice, owing to its ability to comprehensively assess talent and thereby enhance the overall level of hospitals.

4.3 Adaptability of Management Strategies and Evaluation Systems

The essence of the concept of managerial strategies and the adaptability of evaluation systems centers on the practical effectiveness of hospital talent evaluation. Evaluation systems represent the application of modern management thinking in the medical industry, and to address the shortcomings of traditional evaluation systems, a new alternative model – the adaptive evaluation framework – has entered the research arena. The fundamental philosophy of this framework is that evaluation systems should ensure the effective achievement of hospital management goals, establish professional standards for talent outcomes, 'capture' the performance of medical staff through techniques such as surveys, and utilize statistical analysis methods to measure evaluation results. The adaptive evaluation framework reconfigures the hospital talent evaluation system, emphasizing the need to enhance the flexibility, adaptability, accuracy, scientific rigor, and rationality of the evaluation system.

4.4 Prejudices and Misunderstandings in the Evaluation System

Bias and misconceptions within evaluation systems pose significant barriers to hospital talent evaluation, underscoring the subjectivity and uncertainty inherent in the evaluation process. The selection of evaluation indicators and methods directly reflects the cognitive biases and values of hospital management and evaluators. While the foundational elements for the development of hospital talent evaluation are gradually taking shape, and the evaluation system and various management tools are increasingly being recognized, practical implementation remains superficial in some hospitals.

This disconnect from the logical framework and generative mechanisms of the evaluation system gives rise to issues of bias and misinterpretation. The existence of these problems can potentially have adverse effects on the professional development of medical staff and the overall operation of hospitals, necessitating the attention of hospital management and the adoption of effective measures for resolution.

5. Strategies and Paths for Optimizing the Comprehensive Evaluation System of Hospital Talents

5.1 Data-driven Evaluation Methods: Improving the Objectivity and Accuracy of Evaluations

From the standpoint of a comprehensive evaluation system for hospital talent, data-driven evaluation methodologies serve as the foundational element in enhancing the objectivity and accuracy of evaluations while also representing the core manifestation of hospital management efficiency. Consequently, the evaluation system primarily relies on data as its generative logic. Data not only serves as the primary basis for the evaluation system but also constitutes the central entity of the evaluation process. At present, hospitals have strengthened evaluation control from a data management perspective, primarily through three forms: firstly, by ensuring a clear balance between data utilization in medical services and hospital management; secondly, by establishing data collection and analysis standards and making these standards transparent to medical staff, thereby achieving standardized control over evaluations; and thirdly, by reforming the internal data flow within hospitals. In recent years, numerous hospitals have leveraged data-driven approaches to elevate the quality of evaluations and boost management efficiency. Nevertheless, when compared to theoretical expectations, the current level of data-drivenness within hospital talent evaluation systems still necessitates further improvement.

5.2 Multidimensional Evaluation: Integrating Medical, Teaching, Scientific Research, and Management Perspectives

From a multidimensional perspective of comprehensive evaluation of hospital talent, traditional evaluation methods fail to accurately provide the comprehensive information required by hospitals. While hospitals primarily employ satisfaction evaluations for medical staff, the evaluation system lacks relevant information and feedback mechanisms across the four dimensions of medical services: education, research, and management. The crux of this issue may lie in information asymmetry. In multidimensional evaluations, medical staff are often described as "comprehensive talents," and their value to the hospital directly reflects the hospital's culture and efficiency. However, the evaluation information is predominantly focused on the performance of medical staff, with the completeness of the evaluation system remaining inadequate. Typically, the information for the evaluation system is difficult to obtain or measure. The asymmetry and incompleteness of the evaluation system directly lead to evaluation obstacles. Consequently, the multidimensional evaluation system necessitates further refinement to enhance the comprehensiveness and objectivity of evaluations.

5.3 Continuous Improvement Mechanism: Ensuring the Timeliness and Adaptability of the Evaluation System

From the perspective of the continuous improvement mechanism for comprehensive evaluation of hospital talent, the deficiencies in the evaluation system have long constrained the development capacity of hospitals. Since the 21st century, hospitals that integrate medical services, education, research, and management have reshaped the image of the medical industry through technological innovation and service optimization. However, the drawbacks of traditional evaluation systems still hinder the overall development of hospitals. This is due not only to the rapid advancements in medical technology but also to changes in patient expectations and societal perceptions, necessitating further refinement of the hospital talent evaluation system. While enhancing medical service quality serves as a prerequisite, the continuous improvement mechanism is viewed as a direct approach to optimizing the evaluation system. Nevertheless, the practical impact of this mechanism, which is

predominantly grounded in traditional evaluations, on hospital talent evaluation remains debatable. Additionally, difficulties in information acquisition and processing lead to a lack of comprehensiveness and objectivity in the evaluation system. Consequently, the continuous improvement mechanism does not always achieve its intended goal of enhancing medical service quality. It is evident that hospital talent evaluation is not merely a technical challenge but also confronts issues related to patient and societal recognition.

5.4 The Integration of Culture and Values: Strengthening the Humanistic Care of Evaluation Systems

Indeed, the comprehensive evaluation of hospital talent cannot avoid incorporating "humanistic concern" as a fundamental aspect of the evaluation system in medical services, education, research, and management. Within the evaluation mechanism, evaluation criteria serve as effective management tools that play a pivotal role in hospital operations. This underscores the fact that the evaluation system transcends being merely a technical concept and embodies a deeply humanistic dimension. Consequently, an evaluation system centered on "humanistic concern" becomes an integral humanistic care mechanism within hospital management. The practical evolution of the evaluation system generally follows a gradually formed evaluation pathway rooted in technology, albeit one that incorporates attempts at humanistic concern. From technical evaluation to humanistic concern, the evaluation process is inherently centered around the core values of the hospital. While evaluations should strive for technical improvements to align with modern hospital management requirements, the emphasis on technology has also given rise to a dilemma in the form of evaluation phenomena. Overall, there is still room for improvement in terms of technology and humanistic concerns within the evaluation system, and the evaluation criteria need to be further refined. This represents an important task for the evaluation system.

6. Conclusions

The comprehensive evaluation system for hospital talent has entered a stage of high-quality development, posing new challenges and demands on hospital management. The evaluation system is not only a symbol of "management" within hospitals, a crucial means of enhancing medical service quality, but also an urgent necessity for achieving sustainable hospital development and safeguarding patient rights and interests. Essentially, it embodies the inherent requirements of hospital management. Under the guidance of modern hospital management, the hospital talent evaluation system serves as a theoretical, analytical framework, and practical mechanism for hospital development. In recent years, modern information technologies such as big data have driven transformations in the hospital talent evaluation system. By empowering evaluations with data and enhancing their precision and scientific rigor, its value aligns with the internal logic of hospital development. Consequently, data-driven evaluation methods have provided new pathways for hospital talent evaluation. In summary, the sustainable improvement and development of the hospital talent evaluation system contribute to enhancing medical service quality and facilitating the high-quality development of hospitals.

References

- [1] Osman I H, Berbary L N, Sidani Y, et al. Data envelopment analysis model for the appraisal and relative performance evaluation of nurses at an intensive care unit[J]. *Journal of medical systems*, 2011, 35: 1039-1062.
- [2] Epstein R M, Hundert E M. Defining and assessing professional competence[J]. *Jama*, 2002, 287(2): 226-235.
- [3] Van Der Vleuten C P M, Schuwirth L W T. Assessing professional competence: from methods to programmes[J]. *Medical education*, 2005, 39(3): 309-317.
- [4] André R F, Vuyk H D, Ahmed A, et al. Correlation between subjective and objective evaluation of the nasal airway. A systematic review of the highest level of evidence[J]. *Clinical otolaryngology*,

2009, 34(6): 518-525.

[5] May C. A rational model for assessing and evaluating complex interventions in health care[J]. BMC health services research, 2006, 6: 1-11.

[6] Stufflebeam D. Evaluation models[J]. New directions for evaluation, 2001, 2001(89): 7-98.

[7] Scriven M. Evaluation as a discipline[J]. Studies in educational Evaluation, 1994, 20(1): 147-166.

[8] Stufflebeam D L, Coryn C L S. Evaluation theory, models, and applications[M]. John Wiley & Sons, 2014.