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Service Quality and Client Satisfaction in Beijing Public Hospitals: An Application of the Donabedian Model

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ABSTRACT

This study examined the service quality and client satisfaction of public hospitals in Beijing using the Donabedian Structure–Process–Outcome (SPO) Model as the guiding framework and the SERVQUAL dimensions as operational indicators. A quantitative descriptive–correlational design was employed, with patients from selected public hospitals serving as respondents. Results revealed that structural aspects of service quality were rated high, reflecting the success of hospital modernization and technological investments. However, process dimensions such as responsiveness and empathy scored only moderate, indicating challenges in interpersonal communication, waiting time management, and patient-centered care. Outcome measures showed moderate to high satisfaction, especially in communication and trust, but highlighted weaknesses in coordination and shared decision-making. Overall, findings confirm that while Beijing's public hospitals have achieved strong structural modernization, process optimization remains incomplete. The study concludes that aligning structure, process, and outcome dimensions is essential to achieve sustainable service excellence and improve patient-centered outcomes.

KEYWORDS

Donabedian Model; SERVQUAL; Service quality; Patient satisfaction; Public hospitals

1. INTRODUCTION

Service quality in healthcare is increasingly recognized as a critical determinant of public trust and institutional performance, particularly in rapidly developing health systems like Beijing's public hospitals. China's healthcare reforms have sought to improve access, affordability, and efficiency, yet patient experience and perceived service quality remain central to evaluating hospital effectiveness [1]. As Beijing continues to modernize its hospital infrastructure, policymakers and administrators face the challenge of ensuring that technological and organizational improvements translate into better patient satisfaction and health outcomes.

The Donabedian Model provides a robust analytical framework for understanding and assessing healthcare quality across three interconnected dimensions: structure, process, and outcome [2]. The structure refers to the tangible and organizational resources that support service delivery, such as facilities, medical technology, and human capital. The process represents the interactions between patients and healthcare professionals, encompassing responsiveness, assurance, and empathy in service delivery. The outcome reflects the end results of these interactions, including levels of patient satisfaction, trust, and perceived improvement in health status [3].

Building upon this framework, service quality can be conceptualized through the five SERVQUAL dimensions: tangibles, reliability, responsiveness, assurance, and empathy, developed by Parasuraman, Zeithaml, and Berry (1988). These dimensions have been widely adopted in healthcare

research as indicators of perceived quality from the patient's perspective [4]. Tangibles and reliability correspond closely with Donabedian's structural aspects, while responsiveness, assurance, and empathy reflect the process of care that shapes patient satisfaction.

Empirical research in China has demonstrated that patients' perceptions of service quality strongly influence satisfaction and trust in healthcare institutions [5-6]. Despite significant investments in medical technology and hospital infrastructure, gaps persist in communication, empathy, and coordination among healthcare providers, process deficiencies that undermine perceived service quality [7]. As Jiang (2020) [8] emphasized, effective communication and relational trust are essential for translating technical care quality into positive patient experiences.

Patient satisfaction serves as both a key outcome measure and a feedback mechanism for continuous quality improvement. Studies show that high satisfaction levels enhance compliance, loyalty, and willingness to recommend healthcare facilities [8]. Conversely, dissatisfaction, often stemming from poor responsiveness or inadequate emotional support, can erode public confidence in the healthcare system [9]. Therefore, examining how specific dimensions of service quality contribute to patient satisfaction offers valuable insight for policymakers and administrators seeking sustainable quality improvement.

In the context of Beijing public hospitals, the interplay of structure, process, and outcome is especially salient. Structural reforms have enhanced medical facilities and workforce capacity, yet process-related challenges, such as limited interpersonal communication and insufficient patient-centered practices, remain barriers to achieving optimal outcomes [10-11]. Applying Donabedian's model provides a systematic lens to evaluate how structural and procedural elements collectively determine satisfaction outcomes.

Accordingly, this study aims to:

Assess the level of service quality of Beijing public hospitals along the SERVQUAL dimensions of tangibles, reliability, responsiveness, assurance, and empathy;

Evaluate the level of client satisfaction in terms of communication, coordination, trust and respect, shared goals, leadership support, and patient-centered outcomes; and

Identify problems encountered by Beijing public hospitals.

2. METHODOLOGY

2.1. Research Design

This study employed a quantitative descriptive–correlational research design anchored on the Donabedian Structure–Process–Outcome (SPO) Model. The design was selected to systematically describe the current level of service quality and client satisfaction among public hospitals in Beijing, and to determine whether a significant relationship exists between the two variables.

Descriptive statistics were used to summarize respondents' evaluations of the SERVQUAL dimensions and satisfaction indicators. Correlational analysis was then applied to test the hypothesized relationships. This design aligns with previous healthcare quality studies (Alrubaiee & Alkaa'ida, 2011; Fan et al., 2017; Fatima et al., 2019) that assess the influence of service process and structure on patient outcomes.

2.2. Locale of the Study

The study was conducted in selected public hospitals in Beijing, China, including tertiary (Level III) and secondary (Level II) facilities. Beijing's public hospitals were chosen because they represent the

country's most advanced and densely utilized healthcare network, serving both local residents and migrant populations.

2.3. Population and Sampling

The respondents of the study were hospital clients/patients who had received outpatient or inpatient services within the last six months. The target population included adult patients (aged 18 and above) who were capable of understanding and responding to a questionnaire.

A stratified random sampling technique was employed to ensure representation across different hospital levels and departments. Using the Cochran formula for proportionate populations and a 95 % confidence level, a sample of 385 respondents was deemed sufficient to represent the larger population of Beijing public-hospital clients.

3. RESULTS AND DISCUSSION

3.1. Level of Service Quality of Beijing Public Hospitals

Using the SERVQUAL framework [9] integrated into the Donabedian Model, the study assessed the level of service quality across five dimensions—tangibles, reliability, responsiveness, assurance, and empathy. Results revealed that respondents generally rated the tangible aspects of Beijing public hospitals as highly satisfactory, reflecting visible improvements in physical facilities, medical equipment, and environmental cleanliness. Modern diagnostic technologies, comfortable waiting areas, and well-organized wards were recognized as major contributors to the perception of structural quality. This finding supports Fan et al. (2017) and Guo (2022), who observed that government-led hospital modernization projects have significantly improved the visible and material components of healthcare delivery. Within Donabedian's framework, these tangible features function as structural enablers that underpin effective medical processes.

Similarly, reliability, defined as the hospital's ability to provide dependable and accurate services, was also rated high, though moderate variability existed across departments. Patients expressed confidence in the consistency of medical procedures and the professional competence of physicians, particularly in tertiary-level institutions. Nevertheless, some respondents noted inconsistencies in laboratory turnaround times and appointment scheduling. These results echo Fatima et al. (2019), who found that reliability often depends on system efficiency and standardization. Structurally, hospitals appear well equipped, yet their process implementation sometimes lags behind.

By contrast, responsiveness which the willingness of staff to help patients promptly, received only a moderate rating. Long waiting times, limited staff availability during peak hours, and slow administrative procedures were among the main concerns raised by respondents. As Wang, Loban, and Dionne (2019) noted, dissatisfaction in Chinese public hospitals often arises from overburdened staff and rigid workflows rather than clinical incompetence. Within Donabedian's model, this points to a process deficiency: despite adequate structure, inefficiencies in care delivery reduce perceived service quality.

The assurance dimension, which reflects trust, competence, and courtesy, was rated high overall. Patients perceived doctors and nurses as knowledgeable and professional, particularly in their explanations of medical conditions and treatment options. However, the sense of assurance was sometimes undermined by hurried consultations in overcrowded facilities. Miao et al. (2020) confirmed that professional assurance remains one of the strongest predictors of patient satisfaction and loyalty among Chinese healthcare consumers.

Finally, empathy, or the degree of individualized attention and understanding shown by healthcare providers, was rated moderately, signaling a critical area for improvement. While patients appreciated

polite and respectful interactions, they also reported limited emotional care and a lack of personal concern from staff. The absence of continuity in physician–patient relationships and the heavy patient load restricted opportunities for meaningful connection. This observation aligns with Jiang (2020), who emphasized that relational trust and effective communication are essential for transforming technical care into genuine satisfaction. Within the Donabedian framework, empathy represents a process-level interpersonal quality that directly influences patient-centered outcomes.

Overall, the findings indicate that the structural dimensions of service quality are strong and supported by state investment and infrastructure reform, while process dimensions such as responsiveness and empathy remain weaker. Hence, further improvement in Beijing's public hospitals depends not merely on additional resources but on cultivating a more humanized, responsive, and empathetic service culture.

3.2. Level of Client Satisfaction

Client satisfaction was examined through six indicators representing the outcome component of the Donabedian model: communication, coordination, trust and respect, shared goals, leadership support, and patient-centered outcomes. The analysis showed that communication between healthcare providers and patients was rated moderate to high. Most physicians were described as clear and informative, yet communication barriers occasionally occurred due to rushed consultations and limited time for patient questions. Jiang (2020) emphasized that satisfaction increases when physicians combine verbal explanations with nonverbal cues that convey empathy and attentiveness.

In contrast, coordination among hospital departments emerged as a consistent weakness. Respondents cited delays in transferring medical records and confusion surrounding post-consultation procedures, which reflect systemic fragmentation and weak process continuity. This finding supports Guo (2022), who identified coordination lapses as a primary deterrent to patient satisfaction in Chinese outpatient settings.

Regarding trust and respect, patients generally expressed high trust in the competence of physicians and nurses, consistent with Miao et al. (2020), who demonstrated that trust is a central mediator between perceived quality and satisfaction. However, some participants felt that respect was compromised by impersonal or hurried interactions, suggesting that emotional respect often lags technical trust.

The sense of shared goals was rated moderate. Many patients reported deferring treatment decisions to their physicians, reflecting the traditional hierarchical structure of Chinese healthcare (Fan et al., 2017). Encouraging participatory decision-making and goal-sharing could enhance patient empowerment and satisfaction.

Perceptions of leadership support were variable. While patients acknowledged administrative innovations such as digital registration systems and online appointment platforms, they were less aware of leadership initiatives aimed at improving communication and feedback. Donabedian's outcome layer suggests that leadership exerts its influence indirectly by shaping the overall culture of quality governance.

Finally, patient-centered outcomes, including perceived recovery and overall satisfaction, were rated moderate to high. Respondents were generally confident in the clinical effectiveness of treatments but desired greater continuity of care and personalized follow-up. This aligns with Wang et al. (2018), who demonstrated that improvements in patient outcomes depend not only on technical competence but also on consistent adherence to quality improvement protocols by hospital personnel.

Overall, while patients appreciate the technical competence and facility quality of Beijing's public hospitals, gaps remain in interpersonal communication and cross-departmental coordination. Within Donabedian's outcome layer, satisfaction outcomes thus reflect the cumulative effect of strong structural systems but inconsistent process performance.

3.3. Problems Encountered by Beijing Public Hospitals

Survey responses and qualitative feedback revealed several recurring challenges that can be categorized according to Donabedian's structure, process, and outcome dimensions. Structurally, respondents observed an uneven distribution of resources among hospitals, which contributes to overcrowding in tertiary institutions. A shortage of trained nursing staff and limited physical space in outpatient departments were also cited as structural constraints, especially in densely populated districts.

At the process level, major problems included long waiting times, inefficient patient flow management, and low responsiveness to patient inquiries or complaints. Respondents also mentioned communication barriers and a general lack of empathy and individualized care stemming from heavy workloads. These process gaps weaken the delivery of patient-centered services and contribute to moderate satisfaction levels.

From the outcome perspective, patients reported moderate satisfaction despite visible structural improvements. They also identified low participation in shared decision-making and underdeveloped feedback systems as major challenges. Many hospitals lacked systematic mechanisms for collecting and acting on patient feedback, limiting opportunities for continuous improvement.

Overall, these findings reinforce previous research indicating that while China's healthcare reforms have succeeded in achieving structural modernization, they have yet to fully realize process optimization (Wang et al., 2019; Miao et al., 2020). To address these challenges, hospitals must balance tangible investments with soft-skill development, digital coordination, and managerial strategies that promote empathy, responsiveness, and participatory care. In essence, the path toward sustained quality improvement lies not only in upgrading infrastructure but in transforming organizational processes to support patient-centered outcomes.

4. CONCLUSION AND RECOMMENDATIONS

4.1. Conclusion

This study assessed the service quality and client satisfaction of Beijing public hospitals using the Donabedian Structure–Process–Outcome (SPO) Model and SERVQUAL dimensions. Findings revealed strong structural performance, particularly in tangibles and reliability, reflecting the government's investment in modern facilities, technology, and professional staff. However, process dimensions such as responsiveness and empathy remain weaker, with issues like long waiting times, limited personal attention, and inconsistent coordination affecting patient experience. While medical competence is high, the emotional and relational aspects of care are less developed. Outcome results showed moderate to high satisfaction in communication and trust but highlighted gaps in coordination and shared decision-making.

4.2. Recommendations

Based on the findings of the study, several strategic recommendations are proposed to enhance the overall service quality and patient satisfaction in Beijing's public hospitals. At the structural level, hospital administrators should focus on strengthening human and physical resources. Increasing the number of trained nursing and administrative staff is essential to alleviate heavy workloads and reduce long patient waiting times. Likewise, continuous facility upgrades and equitable allocation of resources between tertiary and secondary hospitals are necessary to prevent overcrowding and ensure fair access to quality care across all service levels. The adoption of advanced digital infrastructure should also be prioritized to streamline administrative processes, facilitate interdepartmental coordination, and reduce delays in laboratory and record management.

At the process level, reforms should emphasize the human dimension of healthcare delivery. Hospitals are encouraged to institutionalize regular training programs on empathy, communication, and patient-centered care to strengthen the interpersonal skills of healthcare providers. These soft skills are essential for transforming the clinical environment into a more compassionate and responsive space. Additionally, patient flow optimization systems should be implemented to minimize congestion and improve service efficiency. The use of digital scheduling tools and queue management platforms can significantly reduce patient waiting times and increase satisfaction. Moreover, hospitals should enhance cross-departmental coordination through multidisciplinary care teams and internal communication protocols to ensure that patients experience seamless care transitions. Establishing responsive feedback mechanisms—such as real-time patient satisfaction surveys or digital complaint channels—will further allow hospital management to identify and address service issues promptly.

At the outcome level, hospitals must integrate patient satisfaction and trust indicators into their regular performance evaluation systems to ensure that patient perspectives are central to continuous quality improvement. Encouraging shared decision-making between physicians and patients will help foster transparency, collaboration, and a sense of empowerment, all of which contribute to higher satisfaction and treatment compliance. Leadership also plays a crucial role in improving outcomes; thus, hospital administrators should increase their visibility through regular rounds, open dialogues with patients, and participation in satisfaction review sessions. Finally, a comprehensive Continuous Quality Improvement (CQI) framework should be institutionalized, aligning structure, process, and outcome measures into one integrated monitoring system. Through this systematic and patient-centered approach, Beijing's public hospitals can achieve a higher standard of healthcare service that not only meets but exceeds public expectations.

REFERENCES

[1] Alrubaiee, L., & Alkaa'ida, F. (2011). The mediating effect of patient satisfaction in the patients' perceptions of healthcare quality–patient trust relationship. International Journal of Marketing Studies, 3(1), 103–127.

[2] Donabedian, A. (1988). The quality of care: How can it be assessed? JAMA, 260(12), 1743–1748.

[3] Duggirala, M., Rajendran, C., & Anantharaman, R. N. (2008). Patient-perceived dimensions of total quality service in healthcare. Benchmarking: An International Journal, 15(5), 560–583.

[4] Fan, L. H., Gao, L., Liu, X., Zhao, S. H., Mu, H. T., Li, Z., … & Lou, F. G. (2017). Patients' perceptions of service quality in China: An investigation using the SERVQUAL model. PLOS ONE, 12(12), e0190123.

[5] Fatima, I., Humayun, A., Iqbal, U., & Shafiq, M. (2019). Dimensions of service quality in healthcare: A systematic review of literature. International Journal for Quality in Health Care, 31(1), 11–29.

[6] Guo, X. (2022). Evaluation of outpatient service quality using SERVQUAL model: A case study of a Chinese public hospital (Master's thesis, ISCTE-Instituto Universitario de Lisboa [Portugal]).

[7] Jiang, S. (2020). The relationship between face-to-face and online patient–provider communication: Examining the moderating roles of patient trust and patient satisfaction. Health Communication.

[8] Miao, R., Zhang, H., Wu, Q., Zhang, J., & Jiang, Z. (2020). Using structural equation modeling to analyze patient value, satisfaction, and loyalty: A case study of healthcare in China. International Journal of Production Research, 58(2), 577–596.

[9] Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. Journal of Retailing, 64(1), 12–40.

[10] Wang, W., Loban, E., & Dionne, E. (2019). Public hospitals in China: Is there a variation in patient experience with inpatient care? International Journal of Environmental Research and Public Health, 16(2), 193.

[11] Wang, Y., Li, Z., Zhao, X., Wang, C., Wang, X., Wang, D., … & GOLDEN BRIDGE—AIS Investigators. (2018). Effect of a multifaceted quality improvement intervention on hospital personnel adherence to performance measures in patients with acute ischemic stroke in China: A randomized clinical trial. JAMA, 320(3), 245–254.