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Evaluating patient satisfaction with medical examination services in a first-level public hospital: A case study of Bach Mai Hospital

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Abstract: Ensuring patient satisfaction with health care services is a fundamental objective of any health system. This study aims to assess the level of patient satisfaction with medical examination services provided by the Department of Medical Examination at Bach Mai Hospital. Data were collected from a total of 244 patients who accessed these services in 2022. The research identifies four principal factors that significantly influence patient satisfaction within the department. The study underscores the critical role of hospital fees in ensuring the delivery of high-quality services and proposes recommendations for hospitals nationwide to enhance the quality of medical examination and treatment services across all domains, thereby improving overall patient satisfaction.

Keywords: Patient satisfaction, medical examination, public hospital, Bach Mai Hospital.

1. Introduction

Nowadays, the development of the economy and improvements in living standards have increased the demand for healthcare services, leading to the establishment of hospitals and healthcare centers (Ministry of Health, 2020). Private hospitals and clinics, supported by international organizations, have invested in modern medical facilities and equipment, and have recruited a substantial number of highly qualified medical professionals. Although examination costs in private hospitals are higher than in public hospitals, many patients still choose private hospitals without considering the quality of medical examination. As patients become more aware about their standards and personal health, competition between public and private hospitals has intensified.

The Vietnamese healthcare system includes 47 central hospitals, 419 provincial hospitals, 684 district hospitals, and 182 private hospitals.

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Although the number of hospitals has progressively increased, overcrowding still frequently occurs, especially in first-level hospitals. In addition to hospital overload, the attitude and morality of healthcare staff have also been a matter of concern, with frequent complaints about unprofessional behaviors and lack of respect toward patients. It is noteworthy that the practice of giving informal payments (envelope giving) still persists in many healthcare facilities across the country. Given these existing issues, an important question arises: Are patients satisfied with the medical examination services provided in public hospitals?

To address these issues, the Vietnamese government has issued several circulars aimed at ensuring quality and evaluating patient satisfaction in healthcare facilities. In particular, Circular 07/2014/TT-BYT, issued by the Ministry of Health, introduced a code of conduct for civil servants, public employees, and workers in the health sector. This circular aims to strengthen the responsibilities and professional roles of healthcare staff, meets the requirements of medical examinations, and aims to improve the quality of public health and administrative procedures. However, in the current context of hospital overcrowding, improving patient satisfaction remains a major challenge, as service quality is often negatively impacted.

Patient satisfaction is not only a key factor in improving the quality of healthcare services but also plays an important role in meeting patients' growing expectations. It carries dual implications for both public and private hospitals: when patient are satisfied, it helps enhance the hospital's reputation and attracts more patients; however, if patient satisfaction is neglected, it can harm the hospital's image and reduce patient numbers. In the context of increasing competition between public and private healthcare providers, medical facilities must give priority to patient satisfaction. Although many studies have investigated this topic, several influencing factors remain underexplored. Therefore, the objective of this research is to assess and include additional variables that may affect patient satisfaction during the examination process at Bach Mai Hospital.

Overall, certain theoretical issues related to patient satisfaction need to be clarified and further developed. In this study, the authors use a conceptual framework to describe patient satisfaction and explore additional factors affecting it within the Department of Medical Examination of Bach Mai Hospital. Moreover, these factors will be analyzed and evaluated with the aim of providing practical recommendations to the hospital, thereby contributing to improvement of medical examination services in hospitals and health facilities nationwide.

2. Conceptual framework and hypothesis

2.1. Conceptual framework

The SERVQUAL service quality model (Parasuraman, 1985) and SERVPERF (Cronin & Taylor, 1992) are widely accepted in patient satisfaction research, particularly in the context of developing countries where healthcare costs are subsidized by the government.

According to Jain and Gupta (2004), the SERVQUAL model is widely used to measure overall customer satisfaction and has been highly evaluated across various fields due to its validation through numerous studies. However, the model has certain limitations, when applied to healthcare services, where its general characteristics do not fully capture the complexity of the sector. The SERVQUAL process can also be cumbersome, as healthcare services are intangible, inconsistent, inseparable, and non-storable. Moreover, service quality assessments in health care are often influenced by individual perceptions and psychological states. To overcome these limitations, Cronin and Taylor (1992) introduced the SERVPERF model, which focuses solely on perceived service performance to evaluate five key dimensions: reliability, responsiveness, assurance, empathy, and tangibles.

Thus, the authors propose using the SERVPERF scale as a modified version of the SERVQUAL scale to address its limitations, by focusing solely on perceived value performance rather than including expectations and perceptions as in previous researches.

The authors have incorporated selected theories with the SERVPERF model of Cronin & Taylor (1992) to assess patient satisfaction. Their proposed model reveals that two categories - access and reliability, encompass aspects that have not been fully addressed in previous research. Specifically, the authors discover elements such as waiting time, duration of medical examination, and transparency and compliance with Ministry of Health regulations regarding medical examination fees. These factors have not yet been thoroughly assessed in terms of their influence on patient satisfaction.

A long waiting time causes weariness, impatience, and reluctance to continue waiting, especially among severely ill patients, who may become less optimistic about treatment outcomes. Additionally, unclear communication regarding costs may generate skepticism and mistrust toward the hospital and its staff. According to Morgan's (1994) Commitment-Trust Theory, establishing long-term trust is essential for building service confidence. As hospitals increasingly operate within a market-oriented healthcare system, maintaining reputation and trust is crucial to ensuring patient return for follow-up visits and adherence to medical advice.

In addition, medical examination fees have a pronounced impact on the decision to use healthcare services. This factor aligns with the concept of price discussed by Kotler et al (2008), who outlined four key aspects of pricing: affordability, price compatibility with product quality, price compatibility with benefits, and priced according to price capability or competitiveness.

Firstly, the affordability refers to whether the price set by the company is within the customer's financial capability. Most brands have several types of products with varying prices from the cheapest to the most expensive. Customers tend to buy the product that best fits with their budget.

Secondly, price is often used as an indicator of quality, customers often choose the higher-price option, because it associates with better quality. When the price is higher, customers think that the product offers a better value.

Thirdly, the suitability of price influences buying decisions. Customers are more likely to buy a product if they believe the benefits they receive are equal or greater than the amount they paid. Conversely, if customers see benefits are lower than the cost, they may view the product as expensive and hesitate to make repeat purchases.

Lastly, price according to capability or price competitiveness reflects how customers compare the price of one product with similar products offered by other brands. Customers often consider alternative options and assess whether the price of a product is reasonable in comparison to its market competitors before making a buying decision.

2.2. Hypothesis

This study employs a customer satisfaction assessment model that incorporates a range of characteristics that have been validated in prior research to elucidate customer satisfaction with medical examination services in Bach Mai Hospital. Five hypotheses are formulated regarding the stated model.

Responsiveness: This is used to measure positively the possible responsiveness to all requests and to effectively address and resolve any issues that arise promptly and in a timely manner throughout the service delivery and utilization process. In this study, responsiveness is measured through waiting time and medical examination duration.

The duration of waiting and medical examination comprises two phases: waiting time (from registration to consultation) and examination time (when physicians diagnose and provide medical guidance).

Waiting time is a critical determinant of patient satisfaction, with prior studies (Levesque et al., 2000; Nguyen, 2016) indicating that prolonged waiting increases dissatisfaction. Other research (Dang, 2013) further corroborates its significance. Similarly, Medway (2015) emphasizes that the time allocated to patient consultations and the clarity of medical explanations are strong predictors of satisfaction. Reduced waiting times and efficient service delivery are associated with higher overall patient contentment. Accordingly, the research team formulated the following hypothesis.

H_1: Waiting time and medical examination duration has an opposite influence on patient satisfaction.

Tangible elements: refer to customers' initial perceptions of healthcare service quality, shaped by first impressions of the facility's appearance, organized transaction areas, and modern equipment. In this study, they include health facilities—ranging from clinics to large hospitals—and medical devices, encompassing instruments, software, and tools for diagnosis and treatment.

Health facilities must be adequate, hygienic, and well-maintained to build patient trust. Nguyen (2015) emphasized their role in detecting pathogens and preventing disease transmission. Ultimately, both facilities and medical devices influence patient satisfaction and hospital choice.

H_2: Health facilities and medical devices have a positive impact on patient satisfaction regarding the quality of medical examination service.

Empathy: This is reflected in the attentive and caring approach of staff towards customers, consistently treating them as valued individuals to always ensure a warm welcome in all places. In the healthcare sector, empathy is demonstrated through healthcare staff's interactions and care.

Healthcare staff encompasses all professionals at medical facilities who assist patients during examinations and treatments. According to Shortell et al. (2007), patients often feel passive in decision-making and rely on nurses or physicians for treatment choices. Thus, the "interaction and care provided by medical personnel" significantly impacts patient

satisfaction, with hospitals striving to ensure high-quality service from doctors and nurses. Based on this, the researchers propose the following hypothesis.

H_3: Healthcare staff's interaction and care have positive effects on patient satisfaction with the standard of medical examination services.

Service Competence refers to the trust patients have in healthcare staff, based on their attitude, work style, knowledge, experience, and communication skills. The professionalism and attitude of doctors are crucial to patient satisfaction (Tang, 2011; Chakraborty & Majumdar, 2011). Competence involves a doctor's ability to address patient needs, manage complex medical situations, minimize risks, and improve treatment outcomes (Grisso & Appelbaum, 1998). Experienced and highly skilled doctors often communicate effectively, helping patients understand their condition and treatment plan, fostering trust and satisfaction. When patients feel informed and secure, their confidence in the treatment process grows.

H_4: Professional competence and attitude of doctors have positive effects on patient satisfaction with the quality of medical examination services.

Hospital fees refer to the charges incurred by patients for undergoing medical examinations at a hospital. For a positive perspective, price in the service field is treated as an important signal of quality. At a higher price, consumers judge this product/service to be of greater quality (Zeithaml, 1988). Meanwhile, satisfaction is an external indicator of quality. Dodds, Monroe and Grewal (1991) argued that when consumers purchased intangible services with expensive fees, low purchase frequency and complex decision-making processes, the use of price as an indicator of quality is stronger, such as the case of medical care in hospitals.

Based on transaction-cost economics theory, price represents a sacrifice that negatively impacts satisfaction (Dodds, Monroe & Grewal, 1991). Consumers compare this sacrifice to a reference price they find reasonable before deciding (Pedrajaiglesias & Guillén, 2000). They accept prices within their range but reject those outside it. While health insurance generally ensures timely payments, cumbersome procedures can cause delays. If a patient lacks insurance at admission, payment requests may be denied, leading to negative experiences that affect psychological well-being. Thus, the study proposes the following hypothesis:

H_5: Hospital fees have a negative impact on patient satisfaction with the quality of medical examination services

3. Method

3.1. Survey implementation

Primary data was collected from 244 patients at the Department of Medical Examination at Bach Mai Hospital using random convenience sampling. All participants were in stable health and provided informed consent. The survey, conducted over one month, employed direct interviews with a semi-structured questionnaire, allowing observation of respondents' attitudes.

3.2. Questionnaire

The authors reviewed prior studies, incorporated diverse perspectives, and developed novel research concepts to design an appropriate questionnaire. The first part of the questionnaire collects respondents' personal information and the frequency of their medical visits to Bach Mai Hospital. Using a five-point Likert scale, the study evaluates various aspects of the hospital's medical examination services. The questionnaires follows a retrospective sequence - from registration to receipt of results – assessing factors such as waiting times, staff professionalism, equipment quality, and examination duration. Additionally, the survey examines patients' perceptions of hospital fees, both with and without health insurance, to understand their awareness of benefits and support services. Finally, overall patient satisfaction is assessed based on examination outcomes.

Table 1: Indicators for evaluating patient satisfaction

Waiting time and medical examination duration (Nguyen, 2016)	
WMED1	I did not spend a long time registering for the medical examination.
WMED2	I found that it did not take long to wait for my turn
WMED3	The upcoming examination was acceptable
WMED4	Medical examination did not take my time for long
WMED5	Examination and consultation time for each patient was appropriate.
WMED6	Total medical examination time was appropriate.
Health facilities and medical devices (Parasuraman et al, 1988; Nguyen, 2016)	
HFMD1	Fans/air conditioners in the examination rooms and waiting lobby work well.
HFMD2	The clinic is clean and has all essential equipment.

HFMD3	The department is furnished with a complete set of equipment and machinery necessary for medical examinations.
HFMD4	Restrooms in the department are consistently kept clean and well-ventilated.
HFMD5	Ample seating is provided for patients awaiting examinations and test results.
HFMD6	The waiting area is consistently kept clean and well-ventilated during summer and properly insulated during winter.
Healthcare staff's interaction and care (Nguyen, 2015; Parasuraman et al, 1988; Tang, 2011)	
HSIC1	The attitude of healthcare staff at the reception desk is welcoming and attentive.
HSIC2	The attitude of healthcare staff at the registration counter is friendly and attentive.
HSIC3	The attitude of healthcare staff at the examination table is warm and attentive.
HSIC4	Healthcare staff work in an orderly manner, treating all patients fairly.
HSIC5	Healthcare staff patiently answer my questions and concerns.
HSIC6	Healthcare staff do not discriminate in their treatment of patients, whether they are using health insurance or facing challenging circumstances.
HSIC7	I receive thorough explanations and guidance from healthcare staff before any medical procedures are carried out.
Professional competence and attitude of doctors (Nguyen, 2015)	
PCAD1	The doctor's procedures and communication skills during the examination are very professional and of high quality.
PCAD2	The doctor treats me with respect, fairness, care, and assistance.
PCAD3	The medical team gently and enthusiastically explains my medical condition clearly.
PCAD4	The doctor always calmly listens and understands my thoughts and concerns about my illness and provides clear and thorough guidance.
PCAD5	The doctor communicates examination results in an easy-to-understand, accurate, clear manner.
PCAD6	The doctor enthusiastically advises and instructs me on treatment options in an easy-to-understand manner.
Hospital fees (Tang, 2011)	
HF1	The hospital clearly lists any extra costs beyond the regulated prices set by the Ministry of Health.
HF2	Insurance-related expenses are always promptly and clearly paid.
HF3	Hospital fees are collected according to the insurance regime that the patient is entitled to.
HF4	Medical service costs are fixed according to the predetermined framework set by the Ministry of Health.
HF5	Significant expenses are always announced to me in advance by hospital staff for my decision on whether to use them or not.
Examination result (Tang, 2011; Nguyen, 2015)	
ER1	I am satisfied with the examination service in the medical examination department – Bach Mai Hospital
ER2	I have been informed about my health condition after the examination.
ER3	I feel mentally comfortable and relaxed after receiving advice from the doctor.
ER4	I have been instructed by healthcare staff and doctors on home care.
ER5	I will prioritize returning to the medical examination Department at Bach Mai Hospital for further examinations.

Source: Compiled by authors.

4. Results and discussion

4.1. The feature of research sample

Based on the descriptive statistics result, people in the 18 to 30-years-old and over 30-years-old demographic tended to be hospitalized for treatment. Both groups took the majority of the sample with 43.3% and 48.4%, respectively. Otherwise, only 8.2% of teenagers and children went to see a doctor. Besides, the rate of women, taking part in the survey, was higher than that of men. Those things point out that mature women are more likely to contract a disease than their counterparts.

The occupations and education of the respondents were diverse in many segments. However, as the survey was organized at a facility located in the center of Hanoi city, the proportion of examined people was almost all people living and working in Hanoi city or surrounding places. Only a few of them come from central provinces because of their local doctor's prescription.

Table 2: Descriptive statistics of demographics and health insurance

Age	Number of interviewees	Percentage (%)	Academic level	Number of interviewees	Percentage (%)
Under 18 years old	20	8.2	Primary school	7	2.9
18-to 30-years-old	106	43.4	Secondary school	36	14.8
Over 30 years old	118	48.4	High school	86	35.2
Gender			University	74	30.3
Female	166	68.0	Post-graduate	41	16.8
Male	78	32.0	Region		
Career			Hanoi's urban	101	41.4
Officer	53	21.7	Hanoi's rural	82	33.6
Businessman	11	4.5	Provinces in North of Vietnam	49	20.1
Worker	52	21.3	Provinces in middle of Vietnam	12	4.9
Retiree	26	10.7	Health Insurance		
Other	102	41.8	Valid	142	58.2
			Expired	96	39.3
			Do not use	6	2.5

Source: Calculated from survey data by authors.

Health insurance was used by 142 (or 58.2%) of the 244 respondents who participated in the survey when examining patients at the Department of Medical Examination, Bach Mai Hospital; 96 (or 39.3%) of the respondents had health insurance. However, it had already expired before the patient examinations at the Department of Medical Examination, Bach Mai Hospital. Additionally, six individuals (representing 2.5% of the population) do not have health insurance. Having insurance but not using it reveals numerous shortcomings of social security and gives rise to numerous research questions.

4.2. Cronbach's Alpha analysis

The components possess a Cronbach's Alpha coefficient that surpasses 0.6. This demonstrates the strong correlation between the variables inside the same component concept. The overall correlation coefficient of the variables exceeds 0.3, ranging from 0.422 to 0.807, indicating that all variables are deemed acceptable. The variables will be incorporated into the exploratory factor analysis (EFA).

Based on the results of the Cronbach's Alpha test, 30 observable variables fulfilled the criteria for further conducting EFA. A KMO value greater than 0.5 indicates that the factors are suitable. A significance level of less than 0.05 (Sig < 0.05) in the Bartlett test confirms that the test is statistically significant and that the observed variables are correlated with each other in the sample.

After the initial and subsequent EFA, the variables decreased to 21. Based on the Eigenvalue criterion (> 1), six components condensed the data, explaining 73.4% of the variance. Meanwhile, HSIC7 showed a weak correlation with factor 2 (< 0.05) but a strong link with factor 3 (0.787 > 0.5), justifying its inclusion in factor 3. The results confirm that the six identified factors meet the evaluation criteria.

In comparison to the initial model consisting of 5 independent variables, the authors recognized the need to incorporate the variable of medical examination time. Consequently, we modified the model by separating into two additional independent variables, namely medical examination time and waiting time.

Under the revised research framework, the research hypotheses are modified in the following manner:

H_1: Professional competence and attitude of doctors have positive effects on patient satisfaction with the quality of medical examination services.

H_2: Health facilities and medical devices have an opposite influence on patient satisfaction regarding the quality of medical examination service.

H_3: Healthcare staff's interaction and care have positive effects on patients' satisfaction with the standard of medical examination services.

H_4: A period of waiting has an opposite influence on patient satisfaction.

H_5: A period of medical examination has a positive impact on patient satisfaction with the quality of medical examination services.

H_6: Hospital fees have a positive impact on patient satisfaction with the quality of medical examination services.

The author finds that the correlations between the independent variables are all less than 0.7, and the VIF test also yields acceptable coefficients as shown in Table 3, confirming that multicollinearity does not occur.

4.3. Multiple linear regression model

An ANOVA analysis was conducted, yielding a Sig. value of 0.000 (< 0.05), confirming the statistical significance and reliability of the regression model. The R value of 0.765 exceeds the threshold of 0.5, indicating that the model is acceptable. The adjusted R^2 value of 0.639 indicates that the independent variables account for 63.9% of the variation in the dependent variable, with the remaining 36.1% attributed to external factors and random errors. The Durbin-Watson value of 1.711 falls within the acceptable range (1.5-2.5), indicating no violation of the first-order autocorrelation assumption.

Table 3: Regression analysis results of factors influencing patient satisfaction

Model	Unstandardized coefficients		Standardized coefficients	T	Sig.	Collinearity statistics	
	B	Std. Err	Beta			Tolerance	VIF
Constant	1.403	0.399		3.514	0.001		
Professional competence	0.216	0.063	0.316	3.441	0.001	0.731	1.367
Health facilities	0.150	0.063	0.251	2.382	0.018	0.717	1.395
Healthcare staff interaction	0.316	0.061	0.318	2.265	0.019	0.618	1.618
Waiting time	-0.036	0.091	-0.022	-0.393	0.695	0.885	1.130
Examination duration	0.040	0.078	0.029	0.519	0.604	0.904	1.106
Hospital fees	0.306	0.056	0.456	5.444	0.000	0.673	1.486

Source: Calculated from survey data by authors.

4.4. Discussion

The research findings reveal four key aspects that influence patient satisfaction in the Department of Medical Examination at Bach Mai Hospital: hospital costs, staff interaction, professional competence, and facilities. Among these, facilities, healthcare staff interaction, and hospital fees are found to be statistically significant since their coefficient (Sig.) values hover around 0.01. In contrast, independent variables such as waiting time, examination duration, and the invalidation rate for both account nearly 60% of the variation but do not show a statistically significant effect on the dependent variables (Table 3).

In many previous researches, low and competitive hospital fees along with insurance can reduce the hospital bill making patients much more satisfied (Arista & Idris, 2019; Zhao et al, 2009). In fact, there are many limitations in insurance payments, especially for rehabilitation expenses being expensive and happening over a long term (Zhao et al, 2009). However, in this research, higher hospital fees mean higher patient satisfaction. There are some reasons for these differences; the medical examination fees in public hospitals are significantly lower than that of private hospitals so patients do not mind paying slightly more. Patients are willing to pay more to get a better medical examination such as a more spacious and private room, efficient drugs and other patient benefits. Public hospitals are aware of these demands, so they provide custom medical examinations, in which patients can choose a professional doctor, better treatment and other welfare benefits. Besides, people are also willing to pay for this service because it makes them feel comfortable and safer. Noticeably, the payments are equal or just a little higher than normal services in a private hospital.

5. Recommendation and conclusions

The author suggests implementing modifications to enhance the caliber of medical examination services at the hospital location, as indicated by the research findings:

Healthcare staff interaction and care: The authors recommend that the hospital regularly holds training sessions to improve the communication skills of doctors, nurses, and staff members. Special attention should be given to staff who frequently interact with patients, with a focus on in improving both verbal and non-verbal communication skills, language use, and professional appearance, aiming to create a welcoming and reassuring environment for patients and their families during examination and treatment.

Professional competence and attitude of doctors: Bach Mai Hospital should actively promote and establish an environment that fosters doctors and nurses to pursue further

education and enhance their professional expertise and commitment to their duties. Medical professionals must enhance their patient engagement by actively addressing patients' inquiries during examinations and fostering a stronger emotional connection with them.

Health facilities and medical devices: Bach Mai Hospital should allocate resources to enhance their facilities and medical equipment, ensuring they remain up-to-date and regularly maintained. This includes modernizing treatment equipment, testing facilities, and the hospital premises. For instance, implementing measures such as increasing the number of trees and installing additional benches can create a conducive environment for patients and their families to wait for test results.

Hospital fees: Unlike findings in previous studies, where low hospital fees are typically associated with higher satisfaction, this research shows a contrasting result. Patients in this study are willing to pay higher fees in exchange for better privileges within public hospitals – services that are often only available in private healthcare facilities. This patient-centered service model is uncommon in public hospitals. Therefore, the authors recommend expanding this patient-centered service model not only within Bach Mai Hospital but also to other public hospitals, so that patients can receive better services at reasonable prices. This would ease the burden on public hospitals and help mitigate overcrowding in the future.

References

Dang. H. A. (2013). Research on the influence of factors on patient satisfaction with medical examination and treatment services at Hoan My Hospital, Da Nang city [Master's thesis, Da Nang University].

Arista, R., & Idris, H. (2019). The relationship of hospital cost, service quality and patient satisfaction. *Journal llmu Kesehatan Masyarakat*, 10(2), 132-138. https://doi.org/10.26553/jikm.2019.10.2.132-138

Chakraborty, S., & Majumdar, A. (2011). The role of technology in enhancing customer satisfaction: A case study of e-commerce in India. *International Journal of Electronic Commerce Studies*, 2(1), 45-58. https://www.tandfonline.com/doi/full/10.1080/23311975.2024.2402510

Cronin Jr, J. J., & Taylor, S. A. (1992). Measuring service quality: A reexamination and extension. *Journal of Marketing*, *56*(3), 55-68. https://journals.sagepub.com/doi/abs/10.1177/002224299205600304

Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of Marketing Research*, *28*(3), 307-319. https://journals.sagepub.com/doi/abs/10.1177/002224379102800305

Grisso, T., & Appelbaum, P. S. (1998). *Assessing Competence to Consent to Treatment: A Guide for Physicians and Other Health Professionals*. Oxford University Press.

Kotler, P., Armstrong, G., Ang, S. H., Leong, S. M., Tan, C. T., & YAU, O. (2008). Principles of marketing: A global perspective. https://ink.library.smu.edu.sg/lkcsb_research/6460/

Jain, S. K., & Gupta, G. (2004). Measuring service quality: SERVQUAL vs. SERVPERF scales. *Vikalpa*, *29*(2), 25-38. https://journals.sagepub.com/doi/abs/10.1177/025609092004020 3 Tang, T. L. (2011). *A study on patient satisfaction with Da Nang General Hospital* [Master's thesis, Da Nang University].

Levesque, J., Bogoch, E. R., Cooney, B., Johnston, B., & Wright, J. G. (2000). Improving patient satisfaction with time spent in an orthopedic outpatient clinic. *Canadian Journal of Surgery*, *43*(6), 431. https://pmc.ncbi.nlm.nih.gov/articles/PMC3695198/

Morgan, R. M., & Hunt, S. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58, 20-38. https://journals.sagepub.com/doi/abs/10.1177/002224299405800302

Medway, A. M., de Riese, W. T., de Riese, C. S., & Cordero, J. (2016). Why patients should arrive late: The impact of arrival time on patient satisfaction in an academic clinic. *Healthcare, 4*(3), 188-191. https://doi.org/10.1016/j.hjdsi.2015.09.002

Nguyen, T. T. (2016). *Customer satisfaction with medical examination and treatment services - The case of Hanoi National University*. [Master's thesis, VNU University of Economics and Business].

Nguyen, N. K. T. (2015). *Measuring Patient Satisfaction with the Quality of Medical Services at Hung Viet Oncology Hospital*. [Master thesis, University of Economics –VNU].

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. https://www.proquest.com/openview/7d007e04d78261295e5524f15bef6837/1?cbl=41988&pq-origsite=gscholar

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). *A conceptual model of service quality and its implications for future research*. *Journal of Marketing*, *49*(4), 41–50. https://doi.org/10.1177/002224298504900403

Pedrajaiglesias, M., & Guillén, M. J. Y. (2000). The role of the internal reference price in the perception of the sales price: An application to the restaurant's services. *Journal of Hospitality & Leisure Marketing*, *7*(3), 3-22. https://doi.org/10.1300/J150v07n03_02

Shortell, S. M., Rundall, T. G., & Hsu, J. (2007). Improving patient care by linking evidence-based medicine and evidence-based management. *Jama*, *298*(6), 673-676. https://jamanetwork.com/journals/jama/article-abstract/208285

Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *Journal of Marketing*, *52*(3), 2-22. https://www.researchgate.net/publication/282671247_Consumer_Perceptions_of_Price_Quality_and_Value_A_Means-End_Model_and_Synthesis_of_Evidence

Zhao, M., Haley, D. R., Nolin, J. M., Dunning, K., Wang, J., & Sun, Q. (2009). Utilization, cost, payment, and patient satisfaction of rehabilitative services in Shandong, China. *Health Policy*, *93*(1), 21-26. https://pubmed.ncbi.nlm.nih.gov/19539394/