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The Role of Healthcare Communication Skills and Their Impact on Outpatient Satisfaction at a Public Hospital in Bogor Regency

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Abstract

This study examines the relationship between healthcare communication and patient satisfaction empirically. A hypothetical model was developed based on social interaction theory. Data were collected from 254 outpatient respondents at General Hospitals in Bogor Regency through a questionnaire administered in June 2024. The structural equation model (SEM) was implemented using SmartPLS for data analysis. The findings reveal that healthcare communication skills—problem-solving, respect, and nonverbal closeness—significantly influence patient satisfaction, as Ministerial Regulation No. 17 of 2017. These dimensions affect key satisfaction indicators, including implementer behavior, service procedures, and service time. The study has practical implications for public hospitals, particularly those seeking to enhance their performance by improving communication skills in problem-solving, respect, and nonverbal immediacy. Healthcare organizations can improve the overall patient experience by focusing on these communication aspects. This research contributes to the literature on quality management by highlighting the importance of communication skills and their impact on patient satisfaction, offering valuable insights for healthcare providers and policy-makers aiming to optimize service quality.

1. Introduction

Human resources play a crucial role in sustainable development. A well-developed, high-quality workforce enhances productivity, supports stable economic growth, and fosters long-term sustainability. Indonesia, with a population exceeding 270 million, has significant human resource potential and is composed mainly of individuals of a productive age. Health is a key outcome of human resource development and serves as a fundamental capital for further progress. According to Susenas data, there has been a notable decrease in health complaints nationwide, particularly in 2023. Approximately 26 out of 100 Indonesians reported experiencing health complaints in the past month, a reduction compared to 2021 and 2022.

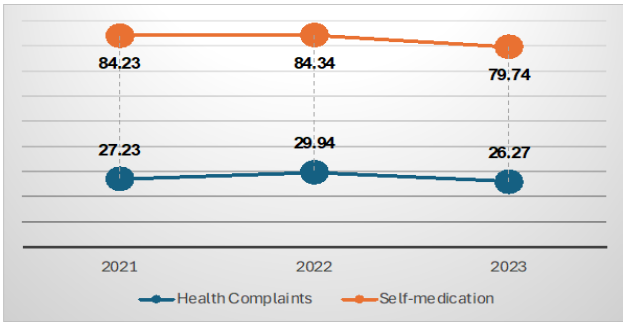

Figure 1. Percentage of Population Having Health Complaints in the Last Month and self-medication on 2021-2023

In addition, self-medication activities declined from 84.34% to 79.74% during the same period (see Figure 1). Health insurance coverage has also shown a positive

trend. In 2021, 68.36% of the population was covered by health insurance, rising to 69.62% in 2022 and further increasing to 72.38% in 2023. These trends indicate a gradual improvement in health conditions and access to health services, essential components of human resource development. (Direktorat Statistik Kesejahteraan Rakyat, 2023).

Communication is the most important aspect of human interaction in all contexts, but in the hospital setting, its primary function is clearly transmitting information between healthcare providers and patients (Hartanto et al., 2021; Pelletier et al., 2019). Patients who are ill or injured are in a vulnerable position and must receive education from healthcare professionals on both pharmacologic and non-pharmacologic care. These professionals must provide this essential guidance to ensure patients receive comprehensive support for their health (Diette & Rand, 2007). They depend on the expertise of healthcare providers to understand their symptoms, condition, prognosis, and treatment (Finefrock et al., 2018). They are likely to be highly interested in this information, grateful to those who provide it, and dissatisfied when it is unavailable. Previous research has shown a close relationship between communication and satisfaction. Healthcare communication can affect patient satisfaction with the hospital (Wanzer et al., 2004). Social interaction and effective communication with doctors increase patient satisfaction (Ouschan et al., 2006).

Furthermore, Khaleghi & Mohammadi (2024) mentioned that quality communication between patients and nurses can provide satisfaction to both parties and foster effect (Lown, 2014). Effective communication can improve patient satisfaction (Kurniyanti et al., 2024; Wicks & Chin, 2008). Even online communication (telemedicine) affects patient satisfaction (Henry et al., 2024). The quality of health services is not evenly distributed between public and private hospitals. The quality of services provided by private hospitals is superior to that of public hospitals (Owusu Kwateng et al., 2019; Tengilimoglu et al., 1999). Patients seeking care at private hospitals were more satisfied than those at public hospitals in all categories (Mutiarasari et al., 2021). The different factors of trust and patient care, patient attention, level of explanation and commitment of medical staff (Barnea et al., 2022).

In addition, the quality of services offered by private hospitals where the service is felt like a "hotel service" (Camilleri & O'Callaghan, 1998). Therefore, this study's research objective is to analyze the influence of healthcare communication quality on outpatient satisfaction in general hospitals. To address the research gap and meet the stated objectives, this study used the social interaction model of health communication as a theoretical basis to examine patient perceptions of health care communication in the outpatient setting. This study contributes to the literature on communication recommendations in the health care context.

2. Materials and Methods

2.1. Survey design and data collection

This cross-sectional study was conducted at a public Hospital in Bogor Regency. The research is quantitative research. To test the model given in Fig. 2, a survey was designed using validated scales from the previous literature related to Health care communication. We collect survey data using Google Forms and conduct a survey directly to the outpatients who visited the hospital in June 2024. The questionnaire was prepared in Indonesian. In data coding and cleaning, invalid or incomplete responses were removed, resulting in a total of 254 responses in the final analysis (see Table 1 for sample characteristics).

We operationalized several constructs based on existing research. Health Care Communication Skills were measured using statements based on the provider-patient interaction items from Gremigni et al. (2008) using the 13-item Health Care Communication Questionnaire (HCCQ) with a 5-point Likert scale response format to measure how well patients feel they are listened to by the hospital staff they interact with ranging from not at all = 1 to always = 5. The dimensions of these variables include problem-solving, respect, nonverbal immediacy and lack of hospitality. Using four answer level scales, the satisfaction index variable was measured using nine items based on community satisfaction from the ministerial regulation Number 17 (2014) about Guidelines for Compiling Public Satisfaction Surveys for Public Service Provider Units.

2.2. Data analysis

The structural equality modelling (SEM) method's partial least squares (PLS) approach was used to analyze the data performed using SmartPLS software (Ringle et al., 2022). Reasons for using SEM-PLS is a powerful and flexible statistical analysis technique widely used in various fields of research. It allows testing complex models with multiple endogenous and exogenous variables, either latent constructs or manifest indicators. SEM-PLS is particularly useful for prediction and exploration in complex models with relaxed expectations of data, making it suitable for theory development (Jayawinangun et al., 2021). The PLS-SEM was run in two parts. First, the reliability and validity of the constructs are assessed, also referred to as measurement model testing (Hair, 2017a). The investigation traditionally assessed internal consistency through Cronbach's alpha; however, composite reliability is considered a more robust measure of reliability for PLS-SEM and was thus utilized in this study. Item loadings act as an indicator for assessing the reliability of items. The assessment of convergent validity utilizes average variance extracted (AVE), whereas the loading

factor acts as an indicator for evaluating discriminant validity (Hair et al., 2019). The next stage analyzes the relationship between the constructs and was examined using Path coefficients (β). The coefficient of determination (R2), *t-statistics*, and *p-values* were also calculated. This step is referred to as structural model testing. For these steps, we followed the guidelines provided by Refs (Hair et al., 2019). The hypotheses in this study include:

H1: Problem-solving is positively related to healthcare communication

H2: Respect is positively related to healthcare communication

H3: Nonverbal immediacy is positively related to healthcare communication

H4: A lack of hospitality is positively related to healthcare communication

H5: A health care communication is positively related to satisfaction with patients

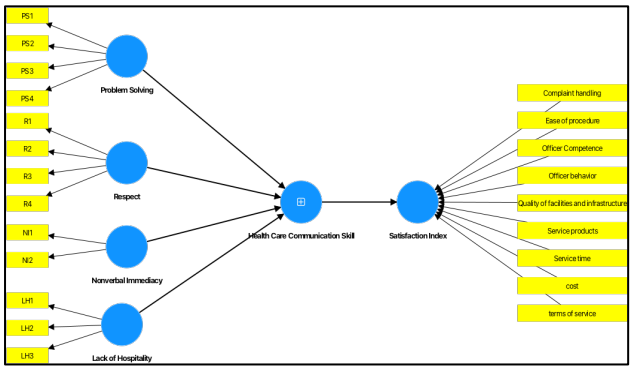

Figure 2. Research Framework

3. Results

The study involved 254 participants, revealing interesting patterns in their demographic characteristics. Table 1 shows that in terms of gender composition, women comprised a slightly larger portion of the participants, with 142 female respondents (55.9%) compared to 112 male respondents (44.1%). Age distribution among the participants showed a mature population trend. Most participants were older adults, with those above 50 years comprising 27.2% of the sample. Middle-aged groups were well-represented, with 24.8% falling between 40 and 50 years and 24% between 30 and 40. Young adults between 20-30 years comprised 19.7% of participants, while those below 20 represented only a small fraction at 4.3%.

Geographic distribution revealed a strong concentration in the Bogor area. Most participants, 211 people (83.1%), resided in the Bogor regency, while 35 (13.8%) lived in Bogor city. Only a small number of participants, 8 people (3.1%), came from other areas.

Regarding educational background, nearly half of the participants (47.6%) had completed senior high school, representing 121 individuals. The basic education segment showed significant numbers, with 41 participants (16.1%) having elementary school education and 47 (18.5%) having junior high school education. Higher education attainment was less common, with 39 participants (15.3%) holding diploma or bachelor's degrees and only 6 (2.4%) having postgraduate qualifications.

This demographic profile paints a picture of a predominantly suburban/rural community with a balanced gender mix, skewing toward mature age groups and primarily educated at the secondary level. The strong geographical concentration in the Bogor regency suggests that the findings are particularly representative of this specific area's population.

Table 1. Result of Demography Profile of Respondents

Demography	Category	Freq.	Percentage
Gender	Male	112	44,1
	Female	142	55,9
Age	Below 20 years	11	4.3
	20 – 30 years	50	19.7
	> 30 – 40 years	61	24.0
	> 40 – 50 years	63	24.8
	Above 50 years	69	27.2
Domicile	Bogor regency	211	83,1
	Bogor city	35	13,8
	Others	8	3,1
Education	Elementary School	41	16,1
	Junior high School	47	18,5
	Senior high School	121	47,6
	Diploma and Bachelor	39	15,3
	Postgraduate	6	2,4

Table 2 reveals a nuanced landscape of healthcare service quality, highlighting strengths and areas requiring attention. Patient perceptions of staff hospitality and respect are particularly positive, with average scores surpassing 4.4 out of 5. This indicates that healthcare providers excel in interpersonal interactions, demonstrating high levels of courtesy, empathy, and respect towards patients. The strong performance in problem-solving and other communication-related metrics, with scores above 4.0, further underscores the effectiveness of direct patient interactions. These findings suggest that healthcare staff are adept at addressing patient concerns and maintaining clear, respectful communication throughout the care process, contributing significantly to a positive patient experience.

However, the data also uncovers significant challenges in service delivery aspects, particularly in overall satisfaction and service time. The satisfaction metrics, with an average score of around 3.37, lag considerably behind other categories, indicating a disconnect between the quality of interpersonal

interactions and overall patient experience. This discrepancy suggests the presence of systemic issues affecting patient satisfaction beyond staff communication. The most pressing area for improvement is service time, which received the lowest score of 2.85, indicating that long wait times or service delays are a major source of patient dissatisfaction.

Additionally, the higher variability in responses related to the lack of hospitality items points to inconsistencies in staff performance or training, suggesting a need for standardization in service delivery. While nonverbal immediacy scores are good, their slightly lower ratings than other communication aspects highlight an opportunity to enhance body language and non-verbal cues during patient interactions, which could further improve the overall patient experience.

Table 2. Descriptive statistics for study variables (N = 254).

Variable/items	Mean	SD
Health Care Communication Skill	4.35	0.51
Problem Solving		
PS1: solve the patient problem	4.23	0.90
PS2: manage the difficulties	4.20	0.94
PS3: keep calm	4.25	0.89
PS4: consideration of patients' privacy	4.46	0.80
Respect		
R1: Respect of patient needs	4.43	0.80
R2: clear request	4.46	0.74
R3: clear information	4.44	0.76
R4: courtesy	4.51	0.69
Nonverbal Immediacy		
NI1: Eye contact	3.91	1.09
NI2: Smiling	4.15	0.94
Lack of Hospitality		
LH1: Aggressive request*	4.57	1.05
LH2: Aggressive answers*	4.13	1.23
LH3: Rush approach*	4.77	0.82
Satisfaction Index	3.38	0.40
Terms of service	3.46	0.59
Ease of procedure	3.43	0.70
Service time	2.85	0.88
Service Cost	3.56	0.67
Service products	3.49	0.59
Officer Competence	3.42	0.67
Officer behavior	3.60	0.58
Quality of facilities and infrastructure	3.38	0.67
Complaint handling	3.27	0.78

Note: * is reverse score

3.1. Measurement Model

As part of the measurement model study, several measures of validity and reliability were investigated (Hair, 2017a). This research is used to measure convergent validity using outer loading value and AVE. The first is to measure the outer loading value, the outer loading in convergent must be 0.7 or higher can be acceptable, the AVE in convergent validity must be ≥ 0.5 (Hair, 2017a).

Table 3. Outer Loading Value Testing

Construct	Items/construct	Loadings	AVE
Problem Solving	PS1	0.814	0.648
	PS2	Reduction	
	PS3	0.802	
	PS4	0.798	
Respect	R1	0.786	0.603
	R2	0.792	
	R3	0.730	
	R4	0.796	
Nonverbal Immediacy	NI1	0.802	0.652
	NI2	0.812	
Lack of Hospitality	LH1	Reduction	0.621
	LH2	0.830	
	LH3	0.744	
Satisfaction Index	Terms of service	0.766	0.617
	Ease of procedure	0.790	
	Service time	Reduction	
	Service Cost	Reduction	
	Service products	Reduction	
	Officer Competence	Reduction	
	Officer behavior	0.801	
	Quality of facilities and infrastructure	Reduction	
	Complaint handling	Reduction	
Health Care Communication Skill			0.361

Table 3 displays the results of the testing conducted by researchers to measure the outer loading value. It was found that there were two indicators, PS2 and LH1. In the satisfaction index variable, it is known that there are 6 constructs whose value is lower than 0.7 so that they are eliminated from the model, namely service time, service cost, service product, officer competence, quality of facilities & infrastructure and complaint handling. Finally, calculating convergent validity using outer loading and AVE showed that the other loading value of the four variables with each indicator is > 0.70. The AVE value also shows results greater than 0.50, so that this research can meet convergent validity requirements.

Discriminant validity is determined using the cross-loading value and the Fornell-Larcker criteria. The Fornell-Larcker criteria assess the square root of the AVE in each variable. The square root of each AVE must be larger than the correlation with the other latent components. The findings collected show that the validity criteria are considered valid based on the correlation value from the second testing in Table 4. All indicators had a greater cross-loading value than the remaining latent variables in this study. The findings obtained using the Fornell-Larcker standards reveal that the validity requirements are regarded valid with the correlation value.

Table 4. Fornell–Larcker Criterion for Discriminant Validity

Variable	HCCS	LH	NI	PS	R	SI
HCCS	1.00					
LH	0.48	1.00				
NI	0.76	0.16	1.00			

Variable	HCCS	LH	NI	PS	R	SI
PS	0.86	0.25	0.63	1.00		
R	0.82	0.16	0.57	0.68	1.00	
SI	0.61	0.17	0.53	0.56	0.55	1.00

Note: HCCS: Health Care Communication Skill; LH: Lack of Hospitality; NI: Nonverbal Immediacy; PS: Problem Solving; R: Respect; SI: Satisfaction Index

A reliability test determines if a variable can be measured repeatedly. In reflective constructs, the composite reliability of all the constructs was above the threshold of 0.7. Most variables had more composite reliability (CR) than the recommended 0.7 (Table 5). The Cronbach alpha value was obtained by 2 variables that had a value greater than 0.7, namely Problem Solving and Respect while the Satisfaction index variables were included in acceptable (Van Griethuijsen et al., 2015) and lack of hospitality and nonverbal immediacy variables were included in the sufficient category (Taber, 2018).

Table 5. Result of Construct Reliability

Construct	Cronbach's alpha	Composite Reliability
Problem Solving	0.729	0.847
Respect	0.781	0.859
Nonverbal Immediacy	0.565	0.789
Lack of Hospitality	0.493	0.766
Satisfaction Index	0.695	0.829

3.2. Structural Model

The structural model was estimated using the bias-corrected and accelerated bootstrapping procedure with 5,000 resamples. The structural model results are displayed in Fig. 3. The evaluation of the structural model has three criteria (Hair et al., 2019): (1) The R Square (R^2) values of 0.67, 0.33, and 0.19 indicate that the model is classified as good, moderate, and weak, respectively. (2) The values of F Square *(f2)* are interpreted as follows: 0.02 indicates a weak influence, 0.15 a medium influence, and 0.35 a large influence (Cohen, 1988) (3) The relevance of predictions is assessed through the value of Q^2; a Q^2 value greater than zero signifies that the model possesses predictive relevance, while a Q^2 value less than or equal to zero indicates a lack of predictive relevance.

Table 6. Measurement of Structural Model: R^2, f^2, Q^2

Variable	R-Square	*f*-Square	*Q*-Square
Satisfaction Index	0.374		0.212
Health Care Communication Skill	0.966	0.596	0.952
Problem Solving		1.692	
Respect		2.063	
Nonverbal Immediacy		1.151	
Lack of Hospitality		2.178	

Table 6 shows the dependent variables explained 37% variance in satisfaction index (R^2 values) with indicators of officer behavior, ease of procedure and service time. This shows that the influence of healthcare communication skills variables is included in the medium category. The $f2$ value is included in the high category, and the Q2 value is more than zero. This shows that the fit model.

Table 7. Result of Hypothesis Testing

Path Analysis	β	t-stat	Sig.
Problem Solving -> Health Care Communication Skill	0.368	13.926	0.000
Respect -> Health Care Communication Skill	0.376	15.729	0.000
Nonverbal immediacy -> Health Care Communication Skill	0.266	13.801	0.000
Lack of Hospitality -> Health Care Communication Skill	0.283	9.131	0.000
Health Care Communication Skill -> Satisfaction Index	0.611	12.619	0.000

Table 7 displays the significant relationships between various factors and Health Care Communication Skills and their impact on the Satisfaction Index. Health Care Communication Skill strongly influences the Satisfaction Index ($\beta = 0.611$, $p < 0.001$), suggesting that effective communication in healthcare settings substantially contributes to patient satisfaction. This underscores the importance of developing and maintaining strong communication skills among healthcare professionals to enhance patient experience and satisfaction. This finding aligns with existing research on the crucial role of effective communication in healthcare settings.

Healthcare providers who excel in communication skills are likely to understand patient concerns better, explain medical information clearly, and foster a sense of trust and rapport. Moreover, enhanced communication may improve patient adherence to treatment plans and better health outcomes, further contributing to overall satisfaction with healthcare services. While effective communication in healthcare settings is often associated with improved patient satisfaction, it is important to consider potential drawbacks. Excessive focus on communication skills may lead to neglect of other critical aspects of healthcare, such as technical expertise and efficient resource allocation. Additionally, some patients may prioritize quick, straightforward interactions over lengthy discussions, particularly in emergencies or when dealing with routine medical issues.

Several factors are shown to influence Health Care Communication Skills positively. Respect ($\beta = 0.376$, $p < 0.001$) and Problem Solving ($\beta = 0.368$, $p < 0.001$) exhibit moderate to strong positive effects, indicating that healthcare providers who demonstrate respect and possess effective problem-solving abilities are likely to have better communication skills. Interestingly, Lack of Hospitality also shows a moderate positive effect ($\beta =$

0.283, $p < 0.001$), suggesting that addressing hospitality issues could improve communication. Nonverbal immediacy ($\beta = 0.266$, $p < 0.001$) has a moderate positive impact, highlighting the importance of non-verbal cues in healthcare communication. These findings emphasize the multifaceted nature of effective healthcare communication and provide insights into potential areas for improvement in healthcare settings. These results underscore the importance of creating a welcoming and hospitable environment in healthcare settings to enhance communication effectiveness. Additionally, the findings highlight the need for healthcare professionals to be mindful of their nonverbal behaviors, such as eye contact, facial expressions, and body language, as these can significantly influence patient-provider interactions. Future research could explore specific interventions targeting hospitality and nonverbal immediacy to improve overall communication quality in healthcare contexts.

4. Discussions

This study found that the factors influencing healthcare communication skills are problem solving, respect, non-verbal communication, and hospitality. Improved communication skills affect patient satisfaction with the hospital. Overall, the study results are consistent with previous studies, which reveal a positive influence between communication toward hospital satisfaction (Adhikary et al., 2018; Lown, 2014; Wanzer et al., 2004)

This shows that effective problem-solving communication is critical in enhancing patient satisfaction within healthcare settings. Multiple studies have demonstrated the significant impact of communication on various aspects of patient care and outcomes. The literature review highlighted that nurse practitioners who utilized patient-centered communication significantly increased patient satisfaction and health outcomes, suggesting that the communication style of providers is a crucial factor in patient-provider interactions, particularly during discharge teaching (Alberti & Nannini, 2013). Effective communication fosters trust, enhancing patient self-reported health outcomes and adherence to treatment plans (Wei et al., 2020).

The impact of effective communication extends beyond immediate patient satisfaction, encompassing long-term health outcomes, treatment adherence, and overall quality of care (Schoenthaler et al., 2014). Healthcare providers demonstrating communication skills are better positioned to establish trust, address patient concerns, and promote a collaborative approach to medical decision-making. Furthermore, adept communication can contribute to reducing medical errors, enhancing patient safety, and ultimately fostering a more efficient and patient-centered healthcare system. Numerous studies have demonstrated that the quality of communication between healthcare providers and patients significantly influences patient experiences and satisfaction levels.

Effective communication between healthcare providers and patients is crucial in influencing patient satisfaction. The behavior of healthcare providers, including their communication skills, is a significant determinant of patient satisfaction, especially in primary care settings (Gao et al., 2022; Manzoor et al., 2019). In the context of healthcare behavior, the way healthcare professionals interact with patients can significantly influence their satisfaction levels. Studies have demonstrated that the quality of physician consultations and the ability to address patients' medical concerns effectively are crucial for enhancing patient satisfaction (Gao et al., 2022).

Moreover, the emotional and physical comfort provided during interactions and the perceived competency of healthcare professionals are vital components that shape patients' experiences (Kumar, 2023). This indicates that positive healthcare behavior characterized by empathy and responsiveness can improve patient satisfaction. The ease of the procedures also plays a critical role in patient satisfaction. Patients often evaluate their healthcare experiences based on the efficiency and clarity of the processes they encounter from admission to discharge. For instance, when patients are well informed about what to expect during their care journey, their anxiety levels decrease, leading to a more positive perception of the healthcare service (Hussain et al., 2019) and linked to higher satisfaction rates (Naidu, 2009). The speed of service is another crucial factor that influences patient satisfaction. Delays in service delivery can result in patient frustration and dissatisfaction irrespective of the quality of care provided.

Research has demonstrated that patients' perceptions of service efficiency, including waiting times for consultations and treatments, strongly correlate with their overall satisfaction. Effective service delivery enhances the patient experience and engenders a sense of respect and value for the patient's time, which is increasingly recognized as a crucial component of high-quality healthcare (Bakan et al., 2014). The complex relationship between service quality, speed of care delivery, and patient satisfaction highlights the importance of implementing a comprehensive and multifaceted strategy to improve overall patient satisfaction, particularly in public hospitals. These three interrelated factors play a critical role in shaping patient perceptions and outcomes in the healthcare environment. High-quality service encompasses not only clinical expertise, but also empathetic communication, mutual respect, attention to detail, and personalized care.

At the same time, speed of care delivery, including reduced wait times and streamlined processes,

significantly impacts patient satisfaction and health outcomes. The synergy between these elements underscores the need for healthcare organizations to adopt a holistic approach that addresses all aspects of patient care. This approach should include streamlining operational processes, investing in staff training and development, leveraging technology to improve efficiency, and fostering a patient-centered culture. By focusing on these interrelated elements, healthcare providers can create more positive, efficient, and satisfying patient experiences, ultimately leading to improved health outcomes, increased patient loyalty, and an enhanced reputation within the healthcare community. Adopting a holistic approach to healthcare delivery, combining high-quality care with efficiency can revolutionize patient experiences and outcomes.

This innovative strategy encompasses all aspects of healthcare delivery, from clinical practice to administrative processes, and aims to create a seamless and effective healthcare ecosystem. By addressing clinical excellence and operational efficiency, healthcare organizations can significantly improve patient satisfaction, enhance health outcomes, and strengthen their position in the competitive healthcare landscape. The synergy between clinical excellence and operational efficiency creates a powerful framework for delivering superior healthcare. Patients benefit from shorter wait times, more personalized care, and better communication with healthcare providers. This leads to increased patient engagement, better adherence to care plans, and better health outcomes. Additionally, increased efficiency allows healthcare organizations to serve more patients without sacrificing quality, thereby increasing accessibility to healthcare. This comprehensive strategy not only benefits patients, but also contributes to the advancement of healthcare quality and accessibility overall.

Organizations that adopt this approach can inspire improvement and innovation across the industry by setting a new standard for healthcare delivery. The ripple effects of these advances can lead to broader positive changes in population health, reduced healthcare disparities, and a more sustainable healthcare system. Furthermore, a holistic approach fosters a culture of continuous improvement within healthcare organizations. These institutions remain at the forefront of healthcare innovation by regularly evaluating and refining clinical and operational aspects.

This commitment to excellence attracts top talent, drives R&D, and ultimately moves the healthcare sector forward. In short, the interplay between healthcare communication, patient satisfaction, healthcare behaviors, ease of procedures, and speed of service time is complex but critical. Effective communication improves the quality of interactions, impacting patient perceptions of care. Simplifying procedures and minimizing wait times further contribute to positive patient experiences, ultimately leading to higher satisfaction levels. Therefore, healthcare providers must prioritize these elements to improve patient outcomes and foster a patient-centered care environment.

5. Conclusions

This study aimed to analyze the healthcare communication and satisfaction factors included in the HCCQ questionnaire to understand the relationship between these two constructs better. The findings identified a four-item communication factor: respect, problem-solving, nonverbal immediacy, and hospitality. Structural equation modeling (SEM) analysis revealed that satisfaction was influenced by factors such as ease of procedure, officer behavior, and service terms. These results highlight the critical role of healthcare communication in shaping patient experiences and public hospital service satisfaction.

While this research provides valuable insights into the importance of effective communication in patient satisfaction, it does not establish that healthcare communication alone can fully account for overall satisfaction as measured by the community satisfaction index. Future research could explore other factors influencing community satisfaction, such as resource allocation, staff training, and technological advancements. Additionally, while the communication and satisfaction factors identified offer a framework for improving patient interactions, implementing these changes may face challenges due to systemic limitations, resource constraints, or resistance to change within healthcare institutions.

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References

Adhikary, G., Shawon, Md. S. R., Ali, Md. W., Shamsuzzaman, Md., Ahmed, S., Shackelford, K. A., Woldeab, A., Alam, N., Lim, S. S., Levine, A., Gakidou, E., & Uddin, Md. J. (2018). Factors influencing patients' satisfaction at different levels of health facilities in Bangladesh: Results from patient exit interviews. *PLOS ONE*, *13*(5), e0196643. https://doi.org/10.1371/journal.pone.0196643

Alberti, T. L., & Nannini, A. (2013). Patient comprehension of discharge instructions from the emergency department: A literature review. *Journal of the American Academy of Nurse Practitioners*, *25*(4), 186–194. https://doi.org/10.1111/j.1745-7599.2012.00767.x

Bakan, I., Buyukbese, T., & Ersahan, B. (2014). The impact of total quality service (TQS) on healthcare and patient satisfaction: An empirical study of Turkish private and public hospitals. *The International Journal of Health Planning and Management*, *29*(3), 292–315. https://doi.org/10.1002/hpm.2169

Barnea, R., Tur-Sinai, A., Levtzion-Korach, O., Weiss, Y., & Tal, O. (2022). Patient preferences and choices as a reflection of trust—A cluster analysis comparing postsurgical perceptions in a private and a public hospital. *Health Expectations*, *25*(5), 2340–2354. https://doi.org/10.1111/hex.13487

Camilleri, D., & O'Callaghan, M. (1998). Comparing public and private hospital care service quality. *International Journal of Health Care Quality Assurance*, *11*(4), 127–133. https://doi.org/10.1108/09526869810216052

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed). L. Erlbaum Associates.

Diette, G. B., & Rand, C. (2007). The Contributing Role of Healthcare Communication to Health Disparities for Minority Patients With Asthma. *Chest*, *132*(5), 802S-809S.

Direktorat Statistik Kesejahteraan Rakyat. (2023). *Profil Statistik Kesehatan 2023* (Vol. 7). Badan Pusat Statistik.

Finefrock, D., Patel, S., Zodda, D., Nyirenda, T., Nierenberg, R., Feldman, J., & Ogedegbe, C. (2018). Patient-Centered Communication Behaviors That Correlate With Higher Patient Satisfaction Scores. *Journal of Patient Experience*, *5*(3), 231–235. https://doi.org/10.1177/2374373517750414

Gao, Q., Liu, M., Peng, L., Zhang, Y., Shi, Y., Teuwen, D. E., & Yi, H. (2022). Patient satisfaction and its health provider-related determinants in primary health facilities in rural China. *BMC Health Services Research*, *22*(1), 946. https://doi.org/10.1186/s12913-022-08349-9

Gremigni, P., Sommaruga, M., & Peltenburg, M. (2008). Validation of the Health Care Communication Questionnaire (HCCQ) to measure outpatients' experience of communication with hospital staff. *Patient Education and Counseling*, *71*(1), 57–64. https://doi.org/10.1016/j.pec.2007.12.008

Hair, J. F. (Ed.). (2017a). *A primer on partial least squares structural equation modeling (PLS-SEM)* (Second edition). Sage.

Hair, J. F. (Ed.). (2017b). *A primer on partial least squares structural equation modeling (PLS-SEM)* (Second edition). Sage.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Hartanto, B., Sari, S. R., Haryanti, A., & Jayawinangun, R. (2021). ELIS Behaviour for Students Using Internet and Social Networking Sites. *2021 3rd International Symposium on Material and Electrical Engineering Conference (ISMEE)*, 110–114. https://doi.org/10.1109/ISMEE54273.2021.9774076

Henry, J., Lie, A., & Esti, C. (2024). The Effect Of Telemedicine And Service Quality On Switching Intention Through Patient Satisfaction And Patient Trust In Type C Public Hospitals In Banjarmasin, South Kalimantan. *Journal Research of Social Science, Economics, and Management*, *4*(3), 355–367. https://doi.org/10.59141/jrssem.v4i3.726

Hussain, A., Asif, M., Jameel, A., Hwang, J., Sahito, N., & Kanwel, S. (2019). Promoting OPD Patient Satisfaction through Different Healthcare Determinants: A Study of Public Sector Hospitals. *International Journal of Environmental Research and Public Health*, *16*(19), 3719. https://doi.org/10.3390/ijerph16193719

Jayawinangun, R., Amaliasari, D., Rusfien, I. T., & Bon, A. T. (2021). *Does the Government Cyber Public Relations Influence to Public Attitudes And Intentions Vaccine?* 12. http://ieomsociety.org/proceedings/2021indonesia/668.pdf

Khaleghi, A. A., & Mohammadi, M. (2024). The concept of compassionate care in nursing: A meta-synthesis. *Nursing and Midwifery Studies*, *13*(3). https://doi.org/10.48307/nms.2024.412649.1250

Kumar, N. (2023). A study to determine what characteristics are important for patient's satisfaction in Uttar Pradesh India. *Southeast Asian Journal of Health Professional*, *6*(3), 57–63. https://doi.org/10.18231/j.sajhp.2023.013

Kurniyanti, N., Effendy, I., & Anggraini, I. (2024). Service Quality Affects BPJS Patient Satisfaction at the Pematang Health Center, Serang Regency, Banten in 2024. *PROMOTOR*, *7*(5), 734–738. https://doi.org/10.32832/pro.v7i5.1022

Lown, B. A. (2014). Toward more compassionate healthcare systems Comment on "Enabling compassionate healthcare: Perils, prospects and perspectives." *International Journal of Health Policy and Management*, *2*(4), 199–200. https://doi.org/10.15171/ijhpm.2014.41

Mutiarasari, D., Demak, I. P. K., Bangkele, E. Y., Nur, R., & Setyawati, T. (2021). Patient satisfaction: Public vs. private hospital in Central Sulawesi, Indonesia. *Gaceta Sanitaria*, *35*, S186–S190. https://doi.org/10.1016/j.gaceta.2021.07.012

Naidu, A. (2009). Factors affecting patient satisfaction and healthcare quality. *International Journal of Health Care Quality Assurance*, *22*(4), 366–381. https://doi.org/10.1108/09526860910964834

Ouschan, R., Sweeney, J., & Johnson, L. (2006). Customer empowerment and relationship outcomes in healthcare consultations. *European Journal of Marketing*, *40*(9/10), 1068–1086. https://doi.org/10.1108/03090560610681014

Owusu Kwateng, K., Lumor, R., & Acheampong, F. O. (2019). Service quality in public and private hospitals: A comparative study on patient satisfaction. *International Journal of Healthcare Management*, *12*(4), 251–258. https://doi.org/10.1080/20479700.2017.1390183

Pelletier, D., Green-Demers, I., Collerette, P., & Heberer, M. (2019). Modeling the communication-satisfaction relationship in hospital patients. *SAGE Open Medicine*, *7*, 205031211984792. https://doi.org/10.1177/2050312119847924

Ringle, C. M., Wende, S., & Becker, J.-Michael. (2022). *SmartPLS 4. Boenningstedt: SmartPLS*. SmartPLS. https://www.smartpls.com

Schoenthaler, A., Kalet, A., Nicholson, J., & Lipkin, M. (2014). Does improving patient–practitioner communication improve clinical outcomes in patients with cardiovascular diseases? A systematic review of the evidence. *Patient Education and Counseling*, *96*(1), 3–12. https://doi.org/10.1016/j.pec.2014.04.006

Taber, K. S. (2018). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education*, *48*(6), 1273–1296. https://doi.org/10.1007/s11165-016-9602-2

Tengilimoglu, D., Kisa, A., & Dziegielewski, S. F. (1999). Patient Satisfaction in Turkey: Differences between Public and Private Hospitals. *Journal of Community Health*, *24*(1), 73–91. https://doi.org/10.1023/A:1018769316379

Van Griethuijsen, R. A. L. F., Van Eijck, M. W., Haste, H., Den Brok, P. J., Skinner, N. C., Mansour, N., Savran Gencer, A., & BouJaoude, S. (2015). Global Patterns in Students' Views of Science and Interest in Science. *Research in Science Education*, *45*(4), 581–603. https://doi.org/10.1007/s11165-014-9438-6

Wanzer, M. B., Booth-Butterfield, M., & Gruber, K. (2004). Perceptions of Health Care Providers' Communication: Relationships Between Patient-Centered Communication and Satisfaction. *Health Communication*, *16*(3), 363–384. https://doi.org/10.1207/S15327027HC1603_6

Wei, D., Xu, A., & Wu, X. (2020). The mediating effect of trust on the relationship between doctor–patient communication and patients' risk perception during treatment. *PsyCh Journal*, *9*(3), 383–391. https://doi.org/10.1002/pchj.327

Wicks, A. M., & Chin, W. W. (2008). Measuring the three process segments of a customer's service experience for an outpatient surgery center. *International Journal of Health Care Quality Assurance*, *21*(1), 24–38. https://doi.org/10.1108/09526860810841138