THE MEDIATING ROLE OF PERCEIVED VALUE: LINKING CUSTOMER EXPECTATION AND EXPERIENCE TO SATISFACTION WITH BPJS KESEHATAN DENTAL SERVICES IN BANDUNG HOSPITALS

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Abstract

Despite the high prevalence of dental health problems, utilization of BPJS Kesehatan dental services in Bandung City (Indonesia) shows a downward trend. This study investigates this phenomenon by analyzing the influence of customer expectation and customer experience on customer satisfaction, with perceived value as a mediating variable. Using a quantitative approach with verificative methods, data were collected from 83 BPJS Kesehatan dental patients at a Bandung hospitals selected through purposive sampling. The study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) for data analysis. The findings indicate that customer experience is the dominant determinant of satisfaction (β=0.894), whereas customer expectation exerts no substantial direct influence. Furthermore, perceived value failed to mediate the relationship between expectations and experience with satisfaction. These results indicate that BPJS Kesehatan patients tend to bypass complex value-for-money evaluations and form satisfaction almost exclusively based on the reality of the actual service delivery. Therefore, healthcare providers are advised to shift their strategic focus from managing expectations to concrete improvements at experience touchpoints.

Keywords: *BPJS Kesehatan, Customer Expectation, Customer Experience, Perceived Value, Customer Satisfaction.*

A. INTRODUCTION

Public health is a vital foundation for a country's social stability and economic growth, and equitable access to healthcare is a global priority. In Indonesia, this commitment is realized through the National Health Insurance managed by BPJS Kesehatan, which now serves over 280 million people (BPJS Kesehatan, 2025). Although this scheme was designed to reduce financial barriers and create equity in healthcare services, implementation challenges remain very real. The dramatically increased accessibility has not been fully matched by consistent service quality, often leading to complaints about long queues, complicated bureaucracy, and variability in the quality of medical care between health facilities (Putri & Berlianto, 2025).

One crucial yet often overlooked sector in public health discourse is oral health. Data from the 2023 Indonesian Health Survey shows a high prevalence of oral health problems, reaching 56.9% in the population aged three years and older (Ministry of Health of the Republic of Indonesia, 2024).

However, a paradox occurs in the city of Bandung. Despite the availability of infrastructure with 23 affiliated hospitals and major clinics, trend data from January 2024 to April 2025 shows a significant decline in BPJS dental patient visits, both outpatient and inpatient (BPJS Kesehatan, 2025). This decline in service utilization amidst high medical needs indicates a fundamental non-clinical issue: how patients perceive the services they receive.

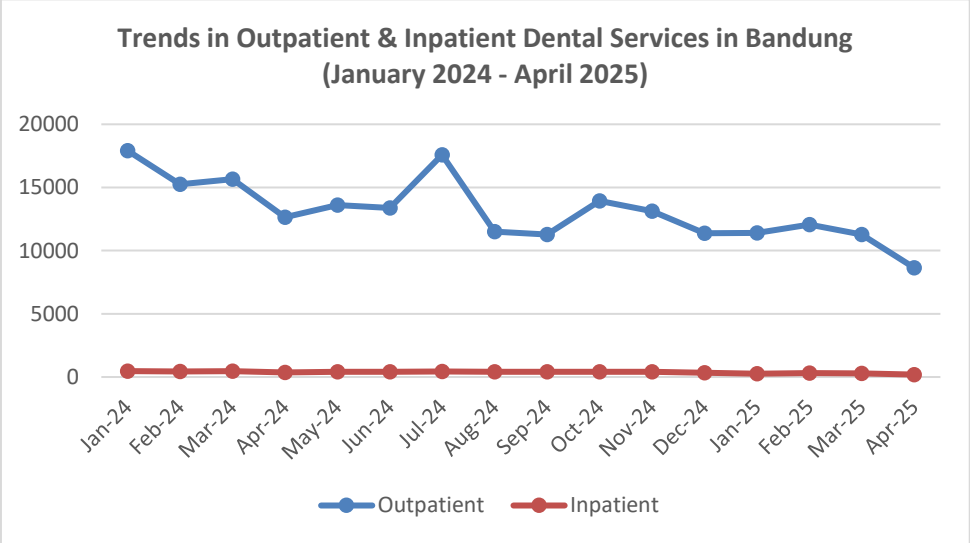

Figure 1 Trends in Outpatient and Inpatient Dental Services in Bandung (January 2024 - April 2025)
Source: BPJS Kesehatan, 2025

This phenomenon demands an in-depth evaluation of healthcare consumer behavior, particularly regarding customer satisfaction. Patient satisfaction in social insurance schemes is not only influenced by medical outcomes but also by the accumulation of psychological evaluations of customer expectations and customer experience (Rao et al., 2025). Previous literature has shown mixed results regarding this relationship. Expectation Confirmation Theory traditionally states that unmet high expectations will lead to disappointment (Ashraf et al., 2025; Ismail, 2023). However, recent empirical findings in a hospital context conducted by Rao et al. (2025) revealed a counterintuitive finding, where customer expectations have a direct positive influence on satisfaction. This inconsistency presents an important research gap that requires further investigation in the specific context of BPJS dental services.

On the other hand, customer experience plays a crucial role as the reality of the service faced by patients. The shift in the modern marketing paradigm positions customer experience not merely as a service transaction, but as a holistic internal and subjective response (cognitive, affective, and physical aspects) to all interactions with service providers (Brun et al., 2017). In the healthcare context, patient experience is often a key differentiator. While technical medical quality is considered difficult for lay patients to assess, functional aspects such as empathy from medical personnel, ease of access, and comfort of facilities become dominant determinants (Singh et al., 2025). This is particularly relevant for BPJS services, where friction at administrative touchpoints often has the potential to distort perceptions of overall service quality.

Furthermore, patient evaluations do not stop at direct experience but also involve an assessment of perceived value. In subsidized BPJS services, the "cost" patients incur is often not monetary, but rather time, effort, and the emotional burden of the administrative process. Perceived value is defined as a consumer's overall assessment of the balance between benefits received and sacrifices made (Chen et al., 2025). This variable is strongly suspected to act as a mediator, bridging the gap between initial expectations and actual experiences, ultimately leading to patient satisfaction (Tukiran et al., 2021). When patients perceive that the non-monetary effort they expend is commensurate with the service received, their satisfaction tends to increase.

This research seeks to bridge the void identified in previous studies, which has focused primarily on general medical services, by specifically analyzing the dynamics of dental healthcare services. Specifically, this study investigates the impact of customer expectation and customer experience on customer satisfaction through the mediating role of perceived value among BPJS Kesehatan patients in Bandung City. A comprehensive understanding of these variables is expected to provide strategic insights for healthcare providers to not only improve clinical quality, but also manage patient experience and value perceptions to

increase trust and sustainability of public healthcare services.

B. METHODOLOGY

This study employed a quantitative method with a verificative approach. The population consisted of all patients who were active participants in the BPJS Kesehatan program and had utilized dental and oral health services at hospitals in Bandung. From this population, a sample of 83 respondents was selected using a purposive sampling technique with the criteria of having received treatment in the last six months. An online questionnaire was utilized to collect the necessary data. Subsequently, the data processing was carried out using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS to evaluate the measurement model and test the significance of the structural hypothesis.

C. RESULT AND DISCUSSION

Result

Outer Model Testing

The purpose of external model testing is to assess the validity and reliability of the model. This analysis focuses on evaluating the following aspects:

1. **Loading Factor**

   Individual validity testing was conducted by examining factor loading values. The analysis results showed that all indicator items for the variables customer expectation, customer experience, perceived value, and customer satisfaction had loading values ranging from 0.725 to 0.895.

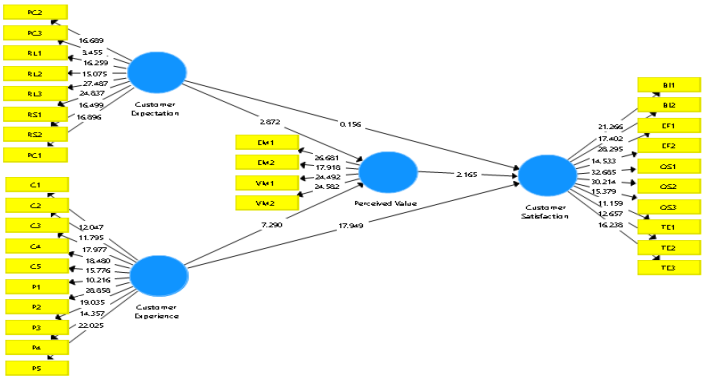

Figure 2 Outer Model Algorithm Results

Source: Data Analysis, 2025

All of these values are above the required threshold of 0.70. This confirms that each indicator validly reflects the latent variable it measures.

2. **Average Variance Extracted (AVE)**

   Convergent validity was established by examining the Average Variance Extracted (AVE). Data processing results showed that all latent variables had AVE values ranging from 0.619 to 0.728. This value is above the threshold of 0.50, with the perceived value variable recording the highest value (0.728).

Table 1 AVE Output

	Average Variance Extracted (AVE)
Customer Expectation	0.683
Customer Experience	0.619
Customer Satisfaction	0.662
Perceived Value	0.728

Source: Data Analysis, 2025

This result indicates that each construct is able to explain on average more than half of the variance of its constituent indicators, so that the convergent validity requirements are met.

3. Discriminant Validity

The Fornell-Larcker criterion was employed to evaluate discriminant validity. The analysis results in Table 2 show that the square root of the AVE (diagonal) values ranged from 0.787 to 0.853. This value was consistently greater than the correlation values between latent variables (off-diagonal) in the same row and column. This demonstrates that each variable has a clear and statistically unique distinction.

Table 2 Fornell-Larcker

	Customer Expectation	Customer Experience	Customer Satisfaction	Perceived Value
Customer Expectation	0.826			
Customer Experience	0.739	0.787		
Customer Satisfaction	0.729	0.769	0.814	
Perceived Value	0.676	0.785	0.793	0.853

Source: Data Analysis, 2025

4. Reliability Test

Cronbach's alpha and composite reliability were utilized to evaluate the model's internal consistency reliability.

Table 3 Cronbach's Alpha and Composite Reliability

	Cronbach's Alpha	Composite Reliability
Customer Expectation	0.933	0.945
Customer Experience	0.931	0.942
Customer Satisfaction	0.943	0.951
Perceived Value	0.875	0.914

Source: Data Analysis, 2025

The test results show that all research variables have values well above the 0.70 threshold. Cronbach's Alpha values ranged from 0.875 to 0.943, while Composite Reliability values ranged from 0.914 to 0.951. Considering that all these values are close to 1.00, this confirms that the research instrument has a very high level of reliability and consistency in measuring the intended construct.

Inner Model Testing

1. Value of R-Square

The R^2 values for this study are as follows:

Table 4 R Square Model

	R Square	R Square Adjusted
Customer Satisfaction	0.941	0.939
Perceived Value	0.636	0.627

Source: Data Analysis, 2025

The analysis results show an R^2 value for customer satisfaction of 0.941, indicating that this model is very strong in explaining 94.1% of the variance in patient satisfaction. Meanwhile, the perceived value variable has an R^2 value of 0.636, indicating that 63.6% of patient value perception can be explained by variability in customer expectations and experiences.

2. Hypothesis Testing

The evaluation of hypotheses relies on the analysis of T-statistics and P-values, where a hypothesis is supported if the T-statistic exceeds 1.96 and the P-value is below 0.05. Based on table 5, the following are the results of the hypothesis testing:

Table 5 Path Cofficients

	Original Sample (O)	T Statistics (|O/STDEV|)	P Values
Customer Expectation -> Customer Satisfaction	0.012	0.201	0.841
Customer Expectation -> Perceived Value	0.211	2.825	0.005
Customer Experience -> Customer Satisfaction	0.894	17.843	0
Customer Experience -> Perceived Value	0.629	6.771	0
Perceived Value -> Customer Satisfaction	0.084	2.236	0.026
Customer Expectation -> Perceived Value -> Customer Satisfaction	0.018	1.693	0.091
Customer Experience -> Perceived Value -> Customer Satisfaction	0.053	1.934	0.054

Source: Data Analysis, 2025

Direct Effects

The analysis results show that customer experience has the most dominant influence on customer satisfaction, with a path coefficient (β) of 0.894 (T-Stat = 17.843; P-Val = 0.000). This confirms that patients' positive experiences during treatment are a key determinant of their satisfaction. Furthermore, customer experience also significantly influenced perceived value (β = 0.629).

Conversely, customer expectation was shown to have no significant effect on customer satisfaction (β = 0.012; P-Val = 0.841). This means that the level of patients' initial expectations does not directly impact their satisfaction after receiving the service. However, customer expectation still had a positive and significant effect on perceived value (β = 0.211; P-Val = 0.005). Finally, perceived value has a significant positive influence on customer satisfaction, but with a relatively small strength of influence (β = 0.084; P-Val = 0.026).

Indirect Effects

An interesting finding emerged in the indirect effect test, where perceived value was proven unable to act as a significant bridge connecting the predictor and outcome variables. Specifically, the mediating role of perceived value in the relationship between customer expectation and customer satisfaction was found to be insignificant with a P-value of 0.091 (>0.05). A similar pattern was also seen in the relationship between customer experience and customer satisfaction, where the mediating role of perceived value was insignificant although at the marginal limit, indicated by a P-value of 0.054 (>0.05) and a T-Statistic of 1.934 (<1.96).

Discussion

Satisfaction The most significant finding in this study is the dominant influence of customer experience on customer satisfaction with the highest path coefficient (β = 0.894). This indicates that in the context of subsidized dental health services, patient satisfaction is almost entirely determined by the reality of the service they experience on the ground (such as interactions with staff, the comfort of the facility, and the clarity of medical communication) rather than by initial perceptions or cost-benefit calculations. This finding aligns with Rao et al. (2025) who found that patient experience has a very strong impact on satisfaction in hospitals. Furthermore, these results support the argument of Boakye et al. (2021) that service experience directly mediates perceptions of professionalism on satisfaction, confirming that the emotional and procedural aspects during treatment are moments of truth for patients.

Contrary to Expectation Confirmation Theory (ECT), this study found that customer expectations did not significantly influence patient satisfaction. This phenomenon can be explained by the characteristics of BPJS patients who tend to have realistic or moderate expectations due to the subsidized or free nature of the service. Patients may not have high expectations before visiting, so their satisfaction is purely shaped by the actual performance of the service, not by meeting initial expectations. These results support the findings of Phonthanukitithaworn *et al.* (2020) in Thailand, which also demonstrated that meeting expectations does not

always directly correlate with patient satisfaction with medical services, as satisfaction is more influenced by direct experiences.

Another interesting finding is the failure of perceived value to mediate the relationship between expectations and experiences with satisfaction. Although perceived value had a significant direct effect on satisfaction, the magnitude of the effect was very small (β = 0.084). This suggests a cognitive shortcut among BPJS patients. Because the financial costs incurred are very low or zero, patients tend not to make in-depth calculations regarding the value for money. Instead, they directly translate good service experiences into emotional satisfaction. This phenomenon of the weak role of value aligns with a study by Yuliati et al. (2024), which found that in certain demographic groups, perceived value is not always a significant predictor of satisfaction, especially when experience or core service quality factors are more prominent.

D. CONCLUSION

This study concludes that customer experience is the primary determinant directly influencing BPJS dental patient satisfaction, while customer expectation has no significant impact, indicating that satisfaction is more determined by the reality of the service on the ground than by initial expectations. Although perceived value has a positive effect, this variable fails to mediate the relationship between expectations and experience with satisfaction, implying that patients in subsidized service schemes tend to bypass cost-benefit evaluations and directly respond emotionally to the quality of the experience. Therefore, the managerial implications of this study suggest that service providers shift their strategic focus from managing expectations to concrete improvements at experience touchpoints, although the generalizability of these findings needs to be strengthened through further research with a wider sample and geographic coverage.

REFERENCES

1. Ashraf, M. A., Amir, T., & Osman, A. Z. M. R. (2025). Consumer satisfaction in branchless Islamic banking and financial inclusion: case for Islami Bank Bangladesh Limited (IBBL). *Journal of Islamic Accounting and Business Research*. https://doi.org/10.1108/JIABR-03-2023-0111

2. Boakye, K. G., Qin, H., Blankson, C., Hanna, M. D., & Prybutok, V. R. (2021). Operations-oriented strategies and patient satisfaction: the mediating effect of service experience. *International Journal of Quality and Service Sciences*, *13*(3), 395–416. https://doi.org/10.1108/IJQSS-11-2020-0186

3. Brun, I., Rajaobelina, L., Ricard, L., & Berthiaume, B. (2017). Impact of customer experience on loyalty: a multichannel examination. *Service Industries Journal*, *37*(5–6), 317–340. https://doi.org/10.1080/02642069.2017.1322959

4. Chen, Y. C., Tsui, P. L., Lan, B. K., Lee, C. S., Chiang, M. C., Tsai, M. Y., & Lin, Y. H. (2025). The role of perceived value in shaping consumer intentions: a longitudinal study on green agricultural foods. *British Food Journal*, *127*(4), 1343–1360. https://doi.org/10.1108/BFJ-10-2024-0987

5. Ismail, I. J. (2023). When love leads the way! Conceptualizing triangular theory of love and expectations-confirmation theory in Islamic banking. *Journal of Islamic Marketing*, *14*(11), 2887–2906. https://doi.org/10.1108/JIMA-03-2022-0089

6. Phonthanukitithaworn, C., Naruetharadhol, P., Gebsombut, N., Chanavirut, R., Onsa-ard, W., Joomwanta, P., Chanyuan, Z., & Ketkaew, C. (2020). An Investigation of the Relationship Among Medical Center's Image, Service Quality, and Patient Loyalty. *SAGE Open*, *10*(4). https://doi.org/10.1177/2158244020982304

7. Putri, N., & Berlianto, M. (2025). The Influence of Service Quality Dimensions, Insurance System, and Sincerity on BPJS Patient Satisfaction, Trust, and Loyalty in Indonesian Hospitals. *Dinasti International Journal of Economics, Finance & Accounting*, *5*(6). https://doi.org/https://doi.org/10.38035/dijefa

8. Rao, X., Luo, L., Xiang, J., & Wang, X. (2025). The impact of perceived value, customer expectations, and patient experience on the satisfaction of contracted patients in hospitals. *BMC Health Services Research*, *25*(1). https://doi.org/10.1186/s12913-024-12118-1

9. Singh, A., Patil, N., A.K, R., & Yeravdekar, R. (2025). Mapping maternity care journeys: a qualitative comparison of patient experiences in private and government hospitals in India. *International Journal of Pharmaceutical and Healthcare Marketing*. https://doi.org/10.1108/IJPHM-08-2024-0091

10. Tukiran, M., Tan, P. H. P., & Sunaryo, W. (2021). Obtaining customer satisfaction by managing customer expectation, customer perceived quality and perceived value. *Uncertain Supply Chain Management*, *9*(2), 481–488. https://doi.org/10.5267/j.uscm.2021.1.003

11. Yuliati, L. N., Taryana, A., & Anggraini, Z. D. (2024). The Influence of Perceived Quality, Value, Satisfaction, Trust, Commitment on Loyalty and Strategies to Increase Loyalty. *Jurnal Aplikasi Manajemen*, *22*(3), 749–766. https://doi.org/10.21776/ub.jam.2024.022.03.10