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The Influence of Service Quality of the Mobile JKN Application on the Satisfaction of BPJS Kesehatan Participants

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Abstract

This study aims to analyze the effect of service quality and system quality on user satisfaction with the Mobile JKN application. The study employs a quantitative approach using primary data collected through questionnaires distributed to 100 Mobile JKN users. The sampling technique applied is purposive sampling. Data analysis is conducted using Partial Least Squares–Structural Equation Modeling (PLS-SEM) with the assistance of SmartPLS. The results indicate that service quality has a positive and significant effect on user satisfaction. In addition, system quality also has a positive and significant effect on user satisfaction. However, system quality does not have a significant effect on service quality. These findings suggest that user satisfaction with the Mobile JKN application is influenced by both perceived service quality and system quality. Therefore, continuous improvement of service quality and system quality is necessary to enhance user satisfaction with the Mobile JKN application.

Keywords: *service quality, system quality, user satisfaction, Mobile JKN*

I. INTRODUCTION

Digital transformation in public services, particularly in the healthcare sector, has become an essential strategy to improve service efficiency and quality for the community. BPJS Kesehatan, as the administrator of the National Health Insurance (JKN) program, introduced the **Mobile JKN** application as a technology-based service innovation that enables participants to independently access various services, such as registration, data updates, healthcare facility queues, and membership information without the need to visit BPJS Kesehatan offices directly. The implementation of this digital service is expected to enhance accessibility and increase participant satisfaction with BPJS Kesehatan services (Khusna et al., 2021; Komala & Firdaus, 2020).

the implementation of the Mobile JKN application still faces several challenges. Previous studies have identified limitations in application features, such as system errors, restricted access to doctor consultation services, and discrepancies between service schedules displayed in the application and actual healthcare facility conditions. In addition, user ratings on application platforms indicate that participant satisfaction with Mobile JKN remains moderate, suggesting that the quality of application services has not fully met user expectations (Khusna et al., 2021; Komala & Firdaus, 2020).

The quality of the Mobile JKN application services is a key factor in determining BPJS Kesehatan participant satisfaction. Digital service quality can be measured through several dimensions, including efficiency, fulfillment, system availability, privacy, responsiveness, compensation, and contact. Previous research shows that most of these service quality dimensions have a significant effect on user satisfaction with the Mobile JKN application, although some dimensions have not yet demonstrated optimal influence on participant satisfaction (Komala & Firdaus, 2020; Khotimah, 2022).

Participant satisfaction reflects the extent to which the services provided meet users' expectations and needs. If the quality of the Mobile JKN application services is perceived as low, a gap will arise between expected and actual service performance. This condition may lead to reduced intention to use the application continuously and decreased public trust in BPJS Kesehatan's digital services. Therefore, improving the quality of the Mobile JKN application services is a crucial aspect of supporting the success of digital transformation in national healthcare services (Khusna et al., 2021; Komala & Firdaus, 2020).

Based on the above explanation, the research problem can be formulated as follows: does the quality of the Mobile JKN application services affect BPJS Kesehatan participant satisfaction? This study aims to analyze the effect of Mobile JKN application service quality on BPJS Kesehatan participant satisfaction, and it is expected to provide evaluation materials and recommendations for BPJS Kesehatan in improving the quality of its digital services to the public (Komala & Firdaus, 2020; Khotimah, 2022).

II. RESEARCH METHODOLOGY

A. Research Design and Approach

This study employs a quantitative research design with an explanatory approach. The quantitative approach is used because the study aims to measure and analyze the relationships among variables objectively through numerical data. The explanatory approach is intended to explain the effects of independent variables on the dependent variable based on the formulated research hypotheses. This study is designed to examine the effects of service quality and system quality on user satisfaction with the Mobile JKN application.

B. Type and Source of Data

The type of data used in this study is primary data. Primary data were collected directly from respondents through the distribution of questionnaires to BPJS Kesehatan participants who use the Mobile JKN application. The questionnaire was developed based on the research variables and measured **using a Likert scale to capture** respondents' perceptions of service quality, system quality, and satisfaction with the Mobile JKN application

C. Research Variables

This study involves three main variables: service quality (X1) and system quality (X2) as independent variables, and satisfaction (Y) as the dependent variable. Service quality represents respondents' perceptions of the quality of services provided through the Mobile JKN application, while system quality reflects respondents' assessments of the technical performance of the application, such as ease of use and system reliability. Satisfaction represents users' evaluative responses after using the Mobile JKN application based on their perceived experiences.

D. Population and Sample

The population of this study consists of all BPJS Kesehatan participants who use the Mobile JKN application. Given that the population is very large and widely distributed, and considering the limitations of time and research resources, a purposive sampling technique was employed. The sampling criterion was BPJS Kesehatan participants who had used the Mobile JKN application at least once. The sample size in this study was 100 respondents.

E. Data Analysis Technique

The data analysis technique used in this study is Partial Least Squares–Structural Equation Modeling (PLS-SEM), assisted by the SmartPLS software. PLS-SEM was chosen because it allows simultaneous analysis of relationships among latent variables and does not require the data to be normally distributed. The analysis was conducted in two stages: evaluation of the measurement model (outer model) to test the validity and reliability of the instruments, and evaluation of the structural model (inner model) to test the relationships among variables and the research hypotheses.

F. Conseptual Framework

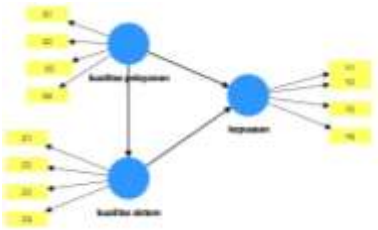

Figure 1. Conceptual Framework

Research Hypotheses:

H1: Service quality (X1) has a positive and significant effect on satisfaction (Y).
H2: System quality (X2) has a positive and significant effect on satisfaction (Y).

III. RESULTS AND DISCUSSION

A. Result

Table 1. Respondent Characteristics by Gender

No	Gender	Number of Respondents	Proportion (%)
1	Male	38	38%
2	Female	62	62%
	Total	100	100%

The characteristics of the respondents in this study were analyzed based on gender, occupation, and educational level. Based on gender, the majority of respondents were female, accounting for 62% of the total respondents, while male respondents represented 38%. This indicates that female participants were more dominant among users of the Mobile JKN application in this study.

Table 2. Respondent Characteristics by Occupation

NO	Occupation	Number of Respondents	Proportion (%)
1	Student	28	28%
2	Private Sector Employee	34	34%
3	Civil Servant	12	12%
4	Entrepreneur	16	16%
5	Others	10	10%
TOTAL		100	100%

In terms of occupation, most respondents were private sector employees, comprising 34% of the total sample. This was followed by students at 28%, entrepreneurs at 16%, and civil servants at 12%. The remaining 10% of respondents were categorized under other occupations. This distribution shows that the use of the Mobile JKN application spans various occupational backgrounds, with private sector employees forming the largest group.

Table 3. Respondent Characteristics by Education Level

No.	Education Level	Number of Respondents	Proportion (%)
1	Senior High School	30	30%
2	Diploma (D3)	14	14%
3	Bachelor's Degree (S1)	46	46%
4	Postgraduate (S2/S3)	10	10%
TOTAL		100	100%

Regarding educational level, respondents were predominantly individuals with a bachelor's degree (S1), accounting for 46% of the total respondents. Participants with a senior high school education constituted 30%, while those holding a diploma (D3) represented 14%. Respondents with postgraduate education (S2/S3) made up 10% of the sample. This indicates that the majority of respondents had a relatively high level of education, which may influence their ability to utilize digital health applications effectively.

Table 4. Construct Reability and Validity Test Result

Variabel	Cronbach's alpha	rho_c	AVE
kepuasan	0.885	0.921	0.745
kualitas pelayanan	0.875	0.915	0.729
kualitas sistem	0.894	0.927	0.760

Construct reliability and validity tests were conducted to ensure the robustness of the research instrument. The results indicate that all variables have Cronbach's Alpha values above the recommended threshold of 0.70, namely satisfaction (0.885), service quality (0.875), and system quality (0.894), demonstrating strong internal consistency among the indicators. In addition, the Composite Reliability values for all constructs exceed 0.70, with values of 0.921 for satisfaction, 0.915 for service quality, and 0.927 for system quality, confirming that the constructs are highly reliable.

Convergent validity was assessed using the Average Variance Extracted (AVE). The AVE values for satisfaction (0.745), service quality (0.729), and system quality (0.760) are all above the recommended threshold of 0.50, indicating that the indicators explain more than 50% of the variance of their respective constructs. Therefore, all constructs in this study are considered reliable and valid and are suitable for further analysis.

2. Outer Loadings

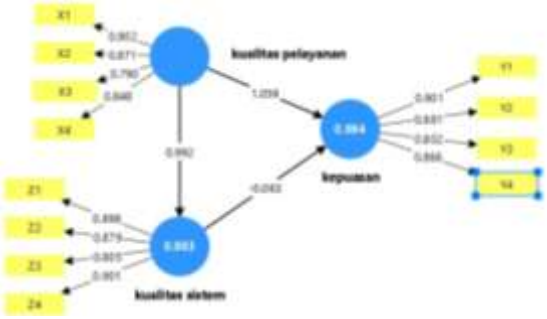

Figure 2. Outer Loadings

Table 5. Outer Loadings

	kepuasan	kualitas pelayanan	kualitas sistem
X1		0.902	
X2		0.871	
X3		0.790	
X4		0.848	
Y1	0.901		
Y2	0.881		
Y3	0.802		
Y4	0.866		
Z1			0.898
Z2			0.879
Z3			0.805
Z4			0.901

Indicator validity was evaluated using outer loading values to assess how well each indicator represents its respective construct. An indicator is considered valid if it has an outer loading value of 0.70 or higher.

The results indicate that all indicators for each variable have outer loading values above 0.70. For the satisfaction construct, indicators X1 (0.902), X2 (0.871), X3 (0.790), and X4 (0.848) show strong contributions in reflecting the satisfaction construct.

For the service quality construct, indicators Y1 (0.901), Y2 (0.881), Y3 (0.802), and Y4 (0.866) also demonstrate high outer loading values and are therefore considered valid.

For the system quality construct, indicators Z1 (0.898), Z2 (0.879), Z3 (0.805), and Z4 (0.901) meet the established validity criteria. Thus, all indicators in this study are valid and suitable for further analysis.

3. Hypothesis Testing Result

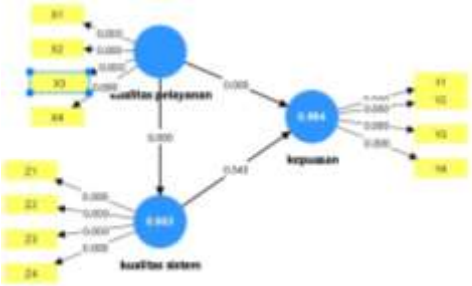

Figure 3. Hypothesis Testing Result

Table 6. Hypothesis Testing Result

Variabel	Original sample (O)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
kepuasan	1.059	0.102	10.387	0.000
kualitas pelayanan	0.992	0.002	617.863	0.000
kualitas sistem	-0.063	0.103	0.609	0.543

Hypothesis testing was conducted to examine the relationships among the variables in the research model by evaluating the Original Sample (O), T-statistics, and P-values. A hypothesis is considered supported if the t-statistics value exceeds 1.96 and the p-value is less than 0.05.

The results indicate that service quality has a positive and significant effect on satisfaction, with a path coefficient of 0.992, a t-statistics value of 617.863, and a p-value of 0.000. This finding suggests that improvements in service quality significantly increase user satisfaction.

Similarly, system quality has a positive and significant effect on satisfaction, as indicated by a path coefficient of 1.059, a t-statistics value of 10.387, and a p-value of 0.000. This result demonstrates that higher system quality contributes significantly to increased satisfaction.

In contrast, the effect of system quality on service quality shows a negative path coefficient of −0.063, with a t-statistics value of 0.609 and a p-value of 0.543. Since this relationship does not meet the criteria for statistical significance, the corresponding hypothesis is not supported, indicating that system quality does not have a significant effect on service quality.

B. Discussion

This study aims to analyze the effect of service quality and system quality on user satisfaction with the Mobile JKN application. The results show that service quality has a positive and significant effect on user satisfaction. This finding indicates that accessible, informative, and responsive services are able to meet user expectations, thereby increasing satisfaction levels. These results are consistent with the Expectation–Confirmation Theory, which states that satisfaction is formed when service performance meets or exceeds user expectations.

The findings reveal that system quality has a positive and significant effect on user satisfaction. This suggests that technical aspects of the application, such as system reliability, ease of use, and application stability, play an important role in enhancing user satisfaction. This finding supports the Information System Success Model, which emphasizes that system quality is a key factor in shaping user satisfaction with information systems.

The results indicate that system quality does not have a significant effect on service quality, as reflected by a p-value of 0.543. This finding implies that users' perceptions of service quality are not solely influenced by technical system aspects, but also by non-technical factors such as service policies, administrative procedures, and users' interaction experiences with BPJS Kesehatan services.

This study confirms that user satisfaction with the Mobile JKN application is significantly influenced by service quality and system quality, while system quality does not directly affect service quality. Therefore, efforts to improve user satisfaction should

focus on simultaneous enhancements in both service quality and system quality to ensure that BPJS Kesehatan's digital services optimally meet user expectations.

IV. CONCLUSION

Based on the results of the analysis and discussion, it can be concluded that service quality and system quality have a positive and significant effect on user satisfaction with the Mobile JKN application. High service quality enhances user satisfaction by meeting users' expectations in accessing BPJS Kesehatan services digitally. In addition, a reliable, user-friendly, and stable system also plays an important role in shaping user satisfaction with the Mobile JKN application.

The findings indicate that system quality does not have a significant effect on service quality. This suggests that users' perceptions of service quality are not solely determined by technical system aspects, but are also influenced by non-technical factors such as service policies, administrative procedures, and users' experiences in interacting with BPJS Kesehatan services.

This study confirms that improving user satisfaction with the Mobile JKN application requires simultaneous enhancements in both service quality and system quality, so that BPJS Kesehatan's digital services can optimally meet users' expectations and needs.

V. RECOMMENDATION

Based on the research findings, BPJS Kesehatan is recommended to improve the service quality of the Mobile JKN application by enhancing information clarity, accelerating service responsiveness, and simplifying digital service procedures to make them easier for users to understand. Improving service quality is expected to directly increase user satisfaction with the Mobile JKN application.

In addition, BPJS Kesehatan should continue to enhance the system quality of the Mobile JKN application, particularly in terms of system stability, application reliability, and ease of use. Improvements in these technical aspects will help users access services more comfortably and efficiently, thereby positively affecting user satisfaction.

For future researchers, it is recommended to include additional variables that may influence user satisfaction, such as information quality, user trust, or user experience, as well as to use larger and more diverse samples. This is expected to provide a more comprehensive understanding of the factors influencing user satisfaction with digital healthcare services.

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