



The Use of JKN Mobile Application in Improving Patient Satisfaction in Registration Services at Kauman Baru Health Center, Ponorogo Regency

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Abstract. Digital transformation in healthcare services encourages technology-based innovations, one of which is the Mobile JKN application. This application is expected to improve service efficiency and patient satisfaction, especially in the registration process at healthcare facilities. However, the extent to which this application positively impacts patient satisfaction still needs further investigation. This study aims to determine the relationship between the use of the Mobile JKN application and patient satisfaction, as well as to identify influencing factors and usage barriers at Puskesmas Kauman Baru, Ponorogo Regency. This research is a descriptive quantitative study involving 50 respondents selected using purposive sampling. Data collection was conducted through questionnaires, observation, and interviews. Data were analyzed descriptively and using Spearman correlation tests with the assistance of SPSS software. The results showed a significant relationship between the use of Mobile JKN and patient satisfaction ($\rho = 0.318$; $p = 0.025$). The use of the Mobile JKN application contributed positively to satisfaction, mainly due to ease of access, time efficiency, and the majority of respondents being in the productive age range (20-40 years). The main barriers in using the Mobile JKN application included difficulties faced by the elderly, technical issues, and limited network access. Education and technical support are needed to ensure more optimal implementation across all age groups.

Keywords: Community Health Center; Health Application; Mobile JKN; Patient Satisfaction; Registration.

1. BACKGROUND

Digital transformation in health services encourages the use of the Mobile JKN application as a solution to improve efficiency, especially in the patient registration process. Puskesmas, as a first-level health care facility, is required to provide fast and quality services, one of which is through the implementation of Minimum Service Standards (MSS), including a maximum waiting time standard of 60 minutes.

To support this, BPJS Kesehatan launched the Mobile JKN application in 2017, which allows participants to register online, access membership information, and get queue numbers digitally. In East Java Province, including at UPT Puskesmas Kauman Baru, this application has been implemented to speed up services and reduce queues.

However, the results of the preliminary study at Puskesmas Kauman Baru show that the utilization of this application is still not optimal. Most patients still register directly, mainly due to limited understanding of technology, especially among the elderly. Registration officers also play an active role in providing education so that patients better understand and get used to using the Mobile JKN application.

Seeing this phenomenon, researchers are interested in further research on the use of the Mobile JKN application in increasing patient satisfaction in registration services at the Kauman Baru Health Center, Ponorogo Regency.

2. THEORETICAL STUDY

Mobile JKN is a digital application launched by BPJS Kesehatan to facilitate participants in accessing health services without having to come directly to BPJS facilities or offices. This application provides online registration features, membership information, digital cards, and service complaints (Wulanadary et al., 2019).

Based on Permenkes No. 129/Menkes/SK/II/2008, waiting time is the duration from the time a patient registers to being served by a health worker, and is an important indicator of service quality. National standards stipulate a maximum outpatient waiting time of 60 minutes. Prompt and appropriate service procedures will increase efficiency, comfort, and patient satisfaction with health facilities (Ministry of Health, 2021; Taborat, 2020).

Patient satisfaction is an assessment of the services received, reflecting feelings of satisfaction or disappointment according to expectations. According to Tjiptono (2015), satisfaction is influenced by product quality, service quality, perceived value, and previous experience. Services that are efficient and as expected will increase patient satisfaction.

Research by Isabella Suhena et al. (2024), Evi Puspita Sari et al. (2024), and Sri Mulyanti et al. (2024) both highlight the use of Mobile JKN at the Puskesmas. The results show that this application is able to improve service efficiency, but is still constrained by networks, infrastructure, and low digital literacy. These findings suggest that although Mobile JKN is effective, its success depends on the readiness of facilities and users.

3. RESEARCH METHODS

This study used a quantitative descriptive approach to determine the use of the Mobile JKN application in improving patient satisfaction in registration services at the Kauman Baru Health Center, Ponorogo. The study was conducted in February-April 2025. The study population was all patients who registered using the Mobile JKN application, with a sample of 50 respondents selected using purposive sampling technique.

Data were collected through a Likert scale-based questionnaire, observation, and unstructured interviews. The questionnaire instrument was prepared based on indicators of customer satisfaction according to Tjiptono (2015), namely product quality, service quality, price (perceived value), and previous experience. Data analysis was carried out descriptively

(frequency and percentage) and Spearman correlation test to determine the relationship between application use and patient satisfaction level, with the help of SPSS software.

4. RESULTS

The relationship between the use of the Mobile JKN application and the level of patient satisfaction in registration services at the Kauman Baru Ponorogo Health Center.

To determine the relationship between the use of the Mobile JKN application and the level of patient satisfaction, the Spearman correlation test was conducted. The results of the analysis are presented in Table 1:

Table 1. Spearman Correlation Test Results.

Variable		ρ (rho)	Significance (p-value)	N	Description
X	Y				
JKN Mobile Application Usage	Patient Satisfaction	0,318	0,025	50	Positive correlation with moderate strength

The analysis showed a correlation coefficient of $\rho = 0.318$ with a significance of $p = 0.025$, indicating a positive and significant relationship between the two variables. This correlation indicates that the better the patient's perception of the ease, speed, and benefits of using the Mobile JKN application, the higher the level of satisfaction with registration services. This application provides convenience in self-registration, reduces waiting time, and improves service efficiency, both for patients and staff.

This result is supported by interviews with registration officers who mentioned that using the app speeds up the process because patient data goes directly into the system. Although the strength of the correlation is moderate, the app still contributes to improving service quality.

This finding is in line with the theory of Duma Konda, Restyandito, and Nugraha (2022), which emphasizes that effectiveness, efficiency, and user satisfaction are the main indicators of the success of health service applications. The successful implementation of Mobile JKN is influenced by IT infrastructure, the ability of the community to use technology, and the role of officers in educating the use of applications. For this reason, optimization of digital services needs to be carried out on an ongoing basis through increasing public digital literacy, training officers, and developing systems that are easily accessible and according to patient needs.

Factors that influence patient satisfaction in using the Mobile JKN application

The following table presents the average respondents' assessment of the factors that influence patient satisfaction in using the Mobile JKN application, based on customer satisfaction indicators according to Tjiptono (2015).

Table 2. Average Patient Satisfaction per Indicator.

No	Statement	Theoretical Indicators (Tjiptono, 2015)	Average
P1	The application is easy to use	Product Quality	3,82
P2	No trouble registering for the queue	Service Quality	4,5
P3	Information is easy to understand	Product Quality	4,6
P4	Saves list time	Price (Perceived Value)	4,54
P5	Waiting time is shorter	Price (Perceived Value)	4,66
P6	No need to come early	Service Quality	4,48
P7	Satisfied with the ease of registration	Previous Experience	4,56
P8	Will continue to use the app	Previous Experience	4,56

Based on descriptive analysis, the highest satisfaction indicator is "Waiting time is shorter" (4.66), followed by ease of registration and desire to continue using the app (4.56 each). This indicates that time efficiency and ease of use are the dominant factors in increasing patient satisfaction with the Mobile JKN application.

This research is in line with the theory of satisfaction according to Kotler and Keller (2016), which states that satisfaction arises if the service meets or exceeds expectations. Patients are satisfied because the application facilitates the registration process without having to queue at the puskesmas. Research by Susanti et al. (2021) also shows that ease of access, clarity of information, and digital queuing systems contribute significantly to the satisfaction of digital health service users.

In addition, the majority of respondents are at productive age (20-40 years old) and have a high school education. Based on TAM theory (Davis, 1989), this group tends to be more accepting of technology because they are used to using digital applications. This age factor and experience also strengthen positive perceptions of the application, resulting in high satisfaction.

Obstacles faced by patients in using the Mobile JKN application.

To find out the obstacles faced by patients in using the JKN Mobile application, researchers distributed questionnaires that allowed respondents to choose more than one answer. The results of the recapitulation of respondents' answers are presented in the following table:

Table 3. Recapitulation of Patient Constraints in Using the JKN Mobile Application.

Constraints	Number (n=50)	Percentage (%)
Difficulty in operating the application	10	20%
Technical problems (error, unable to login, etc.)	28	56%
There is no internet network when you want to register	4	8%
Queue number is not correct when arriving at the health center	0	0%
Health center staff do not understand the use of the application	0	0%

Based on the results of the questionnaire recapitulation, the main obstacle experienced by patients in using the Mobile JKN application is technical problems, such as application errors or not being able to log in (56%). This is the main obstacle in the digital enrollment process. In addition, 20% of respondents expressed difficulty in operating the application, which may be influenced by the level of digital literacy or age of the user. As many as 8% of respondents experienced internet network problems, especially in areas with limited signal access. No obstacles were found related to queue numbers or staff understanding, indicating that the coordination of services and systems at Puskesmas is quite good.

These results indicate that although the Mobile JKN application is designed to facilitate the service process, its implementation still faces challenges from a technical and infrastructure perspective. This is in line with the findings of Susanto and Wulandari (2023), who mentioned that system and infrastructure readiness greatly affects the success of e-health service adoption. Handling obstacles such as providing a stable network, technical guidance, and direct assistance from officers is important to ensure the application can be accessed optimally.

Based on the results from the interviews, the officers said that elderly patients tend to have difficulty using the application and prefer manual registration, while productive-age patients are more enthusiastic because the application is considered fast and efficient. On the other hand, some patients also faced problems during the account creation process, which required officer assistance and coordination with BPJS. These factors indicate that the initial experience of the patient determines the sustainability of the application. Therefore, technical support, user education, and responsive service are important elements in increasing technology adoption and patient satisfaction with digital services.

5. CONCLUSIONS AND SUGGESTIONS

Based on the results of data collection and discussion that has been carried out, it can be concluded that the use of the JKN Mobile application has a significant relationship with the level of patient satisfaction with registration services at the Kauman Baru Health Center, Ponorogo Regency. The better the utilization of the application, the higher the level of patient satisfaction.

The main factors that influence satisfaction include ease of accessing the application, time efficiency, and convenience because patients do not need to come too early to get a queue number. However, there are still some obstacles faced by patients in using the application, such as technical glitches, difficulty in operation, and limited internet network. In addition, elderly patients tend to prefer manual registration due to limitations in using digital devices.

To increase the use of the JKN Mobile Application, it is recommended that Puskesmas continue to improve socialization and education on the use of the JKN Mobile application to patients, especially the elderly or patients who are not familiar with technology. Direct assistance by staff during the registration process as well as providing simple instructions for use would be helpful. In addition, stronger coordination with BPJS Health needs to be done so that technical problems that arise can be followed up immediately.

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