

# The Relationship between the Use of Mobile JKN Application and Health Services at Majene Hospital, West Sulawesi, Indonesia

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## ABSTRACT

**Background:** This study is motivated by the digital transformation of BPJS Kesehatan services through the Mobile JKN application to improve the accessibility and efficiency of health services. The purpose of this study is to determine the relationship between the use of the Mobile JKN application and health services at the Majene Regency Hospital.

**Subjects and Method:** This study is a cross sectional study design using a quantitative approach and data collection through a questionnaire conducted at the Majene Regency Hospital, in August-September 2024. The total sample is 100 respondents with a sampling technique, namely purposive sampling. The study subjects were patients who used the JKN mobile application. The independent variable is health services. The intermediate variable is the Mobile JKN application. The dependent variable is satisfaction. The data was analyzed using the Wilcoxon test to see the difference in the level of satisfaction and service quality before and after the use of the Mobile JKN application.

**Results:** The results of the study showed that 91.6% of respondents used the Mobile JKN application, with a significant increase in satisfaction with health services, from an average score of 3,010 to 3,972 after using the application. The use of applications also has an impact on time efficiency and ease of access to health services. The average score of health services (Queue) was higher after the use of the Mobile JKN Application (Mean=4,209; SD=0.645) compared to before (Mean=3.484; SD=0.688), and this result is statistically significant ( $p=0.000$ ). The health service satisfaction score was higher after using the JKN mobile application (Mean=3,972; SD=0.524) compared to before (Mean=3.010 ; SD=0.522), and this result was statistically significant ( $p=0.000$ ).

**Conclusion:** There is a positive relationship between the use of the Mobile JKN application and the improvement of the quality and satisfaction of health services at the Majene Regency Hospital.

**Keywords:** digital transformation, health services, insurance, patient satisfaction

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## BACKGROUND

The development of technology in the world has developed rapidly in a short time. The use of technology in the health sector itself, disseminated through the internet or other social media, is able to provide a variety of information about diseases, therapies, treatments, treatments, and prevention. Therefore, the JKN program is present in health services issued by the government and regulates legislation which contains objectives, principles, actors, and system governance. In a single system for the implementation of social security programs, namely the National Social Security System (Narmansyah, 2022).

The National Health Insurance (JKN) is a guarantee in the form of health protection so that participants get health maintenance benefits and protection in meeting basic health needs given to everyone who has paid contributions. The benefits guaranteed by the JKN program are in the form of comprehensive individual health services, including health improvement services (promotive), disease prevention (preventive), treatment (curative) and recovery (rehabilitative) including drugs and medical materials. The provision of these benefits uses quality and cost controlled service techniques (managed care) (National Social Security Council, 2014).

The Social Security Administration Agency (BPJS) Kesehatan noted that the number of participants in the National Health Insurance (JKN) reached 267,311-,566 participants as of December 31, 2023. (source: JKN Data). In Majene Regency, the number of people who are JKN users is 180,047 people, and those who are not registered as JKN users are 18,105 people (source: West Sulawesi Editorial). The increase in JKN program participants has resulted in an increase in queue density at

branch offices. So that the National Health Insurance Agency launched the Mobile JKN application driven by the trend of information technology that leads to the use of mobile applications (Suhadi, 2022).

The JKN mobile application is an application that can be accessed through a smartphone which is the latest innovation in the form of national health insurance services in the form of digital transformation of the BPJS Kesehatan business model, in order to make it easier for the public to get services and be able to access information quickly in the palm of your hand, which was originally in the form of administrative activities at branch offices, now transformed into an application that can be used to Make it easier for participants anywhere, anytime without time limitations (Annisa et al., 2020).

This application is a new breakthrough of BPJS Kesehatan to make it easier to get information on family participant data, easy to see the cost of paying participant contributions, ease of getting FKTP (First Level Health Facility) and FKTL (Advanced Level Referral Facility) services and easy for the public if they want to submit suggestions or complaints. Not only that, the JKN mobile application can make it easier when you forget to bring your card, just click on the application, then the JKN card can be directly shown to the officer and in this application it is registered on a per-family card rather than an individual (Wulanadary et al., 2019).

Therefore, based on the above explanation and the facts obtained, the researcher wishes to conduct a study on "The Relationship between the Use of Mobile JKN Application and Health Services at Majene Regency Hospital".

## SUBJECTS AND METHOD

### 1. Study Design

The study used a cross-sectional study design using a quantitative approach, and data collection through questionnaires was carried out at the Majene Regency Hospital, in August-September 2024. The study subjects were patients who used the JKN mobile application.

### 2. Population and Sample

The number of samples was selected using the slovin formula, the population was 9,846 so that the number of samples needed in this study was 100 samples. In this study, the questionnaire was given to the respondents directly, with the number of respondents willing to fill out the questionnaire as many as 131 respondents.

### 3. Study Variables

In this study, the independent variable is health services, the intermediate variable is the mobile JKN application, and the dependent variable is satisfaction.

### 4. Operational Definition

**User satisfaction** level is a feeling in the user about what has been obtained and felt ethically using the mobile JKN application.

**Health Services** is the health service in question is service registration (Queue).

**Mobile JKN** application is A digital platform provided by BPJS Kesehatan to make it easier for JKN participants to access health services, administration, and information related to the National Health Insurance program.

### 5. Instrument

The level of user satisfaction and the level of satisfaction with health services were measured using a questionnaire containing 26 question items that were answered by respondents honestly and in accordance with experience.

### 6. Data Analysis

The data was analyzed using the Wilcoxon test to see the difference in the level of satisfaction and service quality before and after the use of the Mobile JKN application.

### 7. Research Ethics

This study has been approved by the Study Ethics Committee (KEP) of the Muslim University of Indonesia with number 494/A.1/KEP-UMI/IX/2024 in July 2024. All respondents received information about the study before answering the questionnaire. Respondents were given the opportunity to ask questions about.

## RESULTS

This research was carried out in August until September 2024 at Majene Regency Hospital. This research was conducted on 131 respondents.

### 1. Sample characteristics

Table 1 explains that information was obtained that at age, respondents aged <20 years were 1 person (0.8%), 20-35 years old were 96 people (73.3%) and >35 years old were 34 people (26%). In terms of gender, 57 respondents (43.5%) were male and 74 (56.5%) were female. In the last education, respondents with high school/vocational education were 33 people (25.2%), diplomas as many as 6 people (4.6%), S1 as many as 63 people (48.1%) and S2 as many as 29 people (22.1%). At work, respondents who worked as honorary employees were 5 people (3.8%), IRT as many as 1 person (0.8%), fishermen as many as 1 person (0.8%), private employees as many as 11 people (8.4%), students as many as 36 people (27.5%), civil servants as many as 59 people (45%), police as many as 1 person (0.8%) and self-employed as many as 17 people (13%).

**Table 1. Results of Frequency Distribution of Respondent Characteristics**

Characteristics	Category	Frequency	Percentage(%)
<b>Age</b>	<20 Years	1	0.8
	20-35 Years	96	73.3
	>35 Years	34	26
<b>Gender</b>	Man	57	43.5
	Woman	74	56.5
<b>Last Education</b>	High School/Vocational School	33	25.2
	Diploma	6	4.6
	Bachelor	63	48.1
	Master Degree	29	22.1
<b>Job</b>	Honorary	5	3.8
	IRT	1	0.8
	Fisherman	1	0.8
	Private Employees	11	8.4
	Students/Students	36	27.5
	Civil servants	59	45
	POLICE	1	0.8
	Self employed	17	13

## 2. Bivariate Analysis

Tables 2 indicate a significant increase in satisfaction levels related to both health service use and the JKN Mobile application. Satisfaction with health services improved

from a mean score of 3.48 (SD= 0.69) before intervention to 4.21 (SD= 0.65) after using the JKN Mobile application, with  $p < 0.001$ , indicating statistical significance (Table 2).

**Table 2. Wilcoxon Test Results on Health Services and Satisfaction in Using the JKN Mobile Application**

Variable	Measurement Time	Mean	(SD)	p
<b>Health Services</b>	Before	3.48	0.69	<0.001
	After	4.21	0.65	
<b>Satisfaction in Using the App</b>	Before	3.01	0.52	<0.001
	After	3.97	0.52	

Likewise, satisfaction with the JKN Mobile application itself also showed a substantial increase, from a mean of 3.01 (SD= 0.52) before usage to 3.97 (SD= 0.52) after usage, also with  $p < 0.001$  (Table 2). These results suggest that the use of the JKN Mobile application is associated with improved

access to health services and greater user satisfaction. The findings support the idea that digital health tools can enhance the experience and utilization of national health insurance services, particularly by improving convenience, information access, and service transparency for users.

## DISCUSSION

Satisfaction is the level of state at which a person states the results of a comparison of the performance of the product (service)

received and expected (Fitria, 2021). Meanwhile, the definition of satisfaction according to Philip Kotler in Dewi et al. (2020) is that patients will be fulfilled if the

process of delivering health services to consumers is in accordance with their expectations or perceptions. The fulfillment of patient needs will be able to provide an overview of patient satisfaction, therefore the level of patient satisfaction is highly dependent on their perception or expectations of the service provider.

The JKN mobile application was created to support JKN services in Indonesia. The basis for the provision of this service is to make it easier for users, in this case JKN participants, to take advantage of JKN services without having to get direct service with officers. The benefits of the Mobile JKN application are many, including shortening services, speeding up services, simplifying services, reducing expenses, preventing service queues, and increasing service satisfaction (Nurvita, 2019).

In this study, data related to BPJS KESSAN (Complaints and After Service Messages) at the Majene Regency Hospital showed a rating of 4.6 out of a maximum of 5. This reflects the high level of satisfaction among BPJS service users at the hospital. In addition, many users of the Mobile JKN application have given positive reviews, indicating that they are satisfied with the service provided. The reviews provided generally mention satisfactory service and good service, showing that efforts to improve the quality of health services at Majene Regency Hospital have succeeded in providing a positive experience for patients.

A study on the relationship between the use of the JKN mobile application and health services at the Majene Regency Hospital. The results of the study describe the distribution of the frequency of JKN mobile use. The results were obtained that as many as 11 people (8.4%) did not use the JKN mobile application and as many as 120 people (91.6%) used the JKN mobile application. This is in accordance with the results of a

study from Suhadi, Jumakil, Kamrin, and Irma entitled The Impact of the Use of Mobile JKN Application on BPJS Services. The study explained that technological advances, especially health services such as mobile JKN, have made many people use mobile JKN in BPJS services (Suhadi, 2022).

The use of the JKN application in health services was marked by an increase in the number of respondents who were very satisfied before using the JKN application as many as 27 respondents (20.6%) and after using the JKN application as many as 58 respondents (44.3%). This is in line with a study conducted by Herlinawati (2021) which reported that most people are very satisfied with the use of the JKN application for health services to provide ease of access and responsive services in the health sector. Another study conducted by Saryoko et al. (2021) stated that people are happy or satisfied with the existence of the JKN mobile application which has provided positive or satisfactory values to the health services obtained. Another study that is in line with the results obtained was carried out by Wulandari (2019) who stated that the services and information provided through the application are effective when viewed from the time required in providing services, meticulousness in service delivery and non-discriminatory service delivery styles because they have been systematized with the JKN mobile application (Putri, et al. 2024; Saryoko et al., 2021; Wulandari, 2019).

Table 2 showed the results of the Wilcoxon test related to satisfaction with health services using the JKN mobile application. The results of the study illustrate that there is a relationship between the use of the JKN mobile application and satisfaction in health services with a value of  $p = 0.000$  ( $<0.05$ ). This is in line with a study conducted by Komala (2020) which assesses that most people who use the JKN mobile application



are very satisfied with the health services obtained on the grounds that they are more efficient, do not have to queue and wait for a long time, and can be done anytime and anywhere. In addition, a study conducted by Rusly et al. (2023) stated that the use of the JKN mobile application has a positive influence on the quality of health services, indicating that the level of satisfaction and reliability of the JKN mobile application in providing health services is very high. (Komala and Firdaus, 2020; Rusly et al, 2023).

This study is also supported by a study conducted by Sirajuddin and Atrianingsih (2020). The results of the study show that there is a high level of public trust in the JKN e-mobile application, which means that the application provides satisfaction to the community and is considered beneficial for them. In addition, the level of public trust in the government is high, where the public considers the government serious in providing health insurance services. (Podungge and Aneta, 2020).

#### **AUTHOR CONTRIBUTION**

All authors have made significant contributions to data analysis as well as preparing the final manuscript.

#### **CONFLICT OF INTEREST**

There was no conflict of interest in the study.

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