

EFFECTIVENESS OF USING THE JKN MOBILE APPLICATION IN IMPROVING HEALTH SERVICES AT THE MELAI COMMUNITY HEALTH CENTER

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ARTICLE INFORMATION

Received: 8 April 2026
Revised : 6 May 2026
Accepted: 12 June 2026
DOI:

KEYWORDS

Mobile JKN, Effectiveness, Health Services,
Perception of Convenience, Perception of *Benefits*

*Mobile JKN, Effectiveness, Health Services,
Perceived Ease of Use, Perceived Usefulness*

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A B S T R A C T

The JKN mobile application is a concrete example of the application of technology in the health sector. The JKN Mobile Application was introduced with the increasing development of everything based on increasingly advanced information technology, where the JKN Mobile Application exists with the aim of facilitating BPJS participants in accessing services. This application offers various features, including participant registration, searching for health facilities, scheduling services, and digital claims management. The use of mobile technology is expected to overcome several challenges faced by traditional health systems, such as long queues, limited access to health information and complex bureaucracy. This study aims to analyze the effectiveness of the JKN Mobile application in improving health services at the Melai Community Health Center. The focus of the study was directed at three main aspects, namely the perception of ease of use (Perceived Ease of Use), perception of benefits (Perceived Usefulness), and user behavioral intentions (Behavioral Intention). The research method used is a qualitative approach with data collection techniques through in-depth interviews, observation, and documentation review. The results of the study indicate that the JKN Mobile application provides convenience in registration, accessing information, and managing services, although there are still technical obstacles such as unstable internet connections. In terms of benefits, this application can improve service efficiency, speed up administrative processes, and minimize queues at healthcare facilities. Meanwhile, in terms of behavioral intentions, the majority of users expressed a positive attitude towards continuing to use this application to access healthcare services. In conclusion, the use of the Mobile JKN application has proven effective in supporting improvements in the quality of healthcare services at the Melai Community Health Center, although network infrastructure strengthening and broader outreach to the community are still needed.

INTRODUCTION

Regulation of the Minister of Health of the Republic of Indonesia No. 19 of 2024, Health Service Facilities are places and/or tools used to provide health services to individuals or communities with a *promotive*, *preventive*, *curative*, *rehabilitative*, and/or *palliative approach* carried out by the central government, regional governments, and/or the community. Community Health Centers hereinafter referred to as Puskesmas are first-level Health Service Facilities that organize and coordinate *promotive, preventive, curative, rehabilitative, and/or palliative health services* in their working areas (Regulation of the Minister of Health of the Republic of Indonesia No. 19 of 2024).

Providing public services not only creates customer satisfaction but also builds long-term relationships. Service quality plays a crucial role in the success of excellent public services. Service quality can be measured by various factors, such as reliability, speed, effective communication, responsiveness, and attentiveness to customer needs and requests. Quality service can build a positive image for service providers, thereby attracting new customers, building trust, and adding value to the public's perception of the public services provided. Therefore, improving service quality is not only an investment in customer satisfaction but can also be a strategy for achieving competitive advantage and sustainability (Putri et al., 2024).

The National Health Insurance (JKN) program is part of the National Social Security System (SJSN) which is organized through a social insurance mechanism that aims to protect all Indonesian people in the insurance system so that they can meet their basic health needs. This protection is provided to everyone who has paid contributions or whose contributions are paid by the government (Kesehatan,

2017). The JKN *mobile* application is a digital-based, face-to-face service channel to facilitate participants in obtaining information and administrative services related to the National Health Insurance program with information technology in the form of applications via Android-based smartphones *that* can be downloaded through the Google *Playstore* or *Apps Store* . With this application, it can make it easier for the public/participants to get services, reduce the number of queues so that people do not have to queue for a long time at the BPJS Kesehatan Office and can directly access various health information from the JKN *mobile application* (Syamsuar & Syekar, 2022)

People who already use sophisticated Android *mobile devices* . The use of increasingly fast and precise media requires adaptive, easy and efficient media according to the needs of the community itself. In the era of globalization, many companies and government agencies are introducing innovations to improve products such as BPJS Kesehatan which published the JKN *Mobile mobile application* on November 15, 2017 in Jakarta, to make it easier for participants to use health insurance benefits (Nurmalasari et al, 2020). The JKN *Mobile application* is an innovation developed by JKN BPJS Kesehatan to facilitate prospective participants and JKN-KIS participants. Activities with the JKN *Mobile Application* , administrative procedures are usually carried out at BPJS Kesehatan Branches and can occur anywhere and at any time (Bahri et al 2022). According to (Adolph, 2016) in his journal article, the definition of effectiveness is related to the degree of success of an operation in the public sector so that an activity is said to be effective if the activity has a major influence on the ability to provide public services which are predetermined targets.

Based on initial observations on February 18, it was found that the Melai Community Health Center had been using the JKN *mobile application* since 2024 with a recapitulation of registered participants as of December, amounting to 4,483 participants. It was also found that several impacts of using the JKN *mobile application* on BPJS services were that participants could obtain convenience in terms of accessing JKN services without having to come to the BPJS office, saving service time, and reducing service queues. However, although the JKN *mobile application* offers convenience in accessing various health services, such as registration and examinations, many users have not fully utilized it optimally. Therefore, researchers are important to evaluate the effectiveness of the use of the JKN *mobile application* in improving health services, as well as the factors that... factors that influence user acceptance of the application.

METHOD

The research method used in this study is descriptive qualitative, the subjects used were patients who used the Mobile JKN application as many as 35 patients and the object used was the effectiveness of using the Mobile JKN application using the TAM method. The research location was located at the Melai Health Center, and the research time was carried out from May to June 2025. Data collection techniques were by interview and observation. The research instruments used were interview guidelines, observation checklists, and stationery. Data analysis used were data collection, data reduction and data presentation.

RESULTS & DISCUSSION

The effectiveness of using the JKN mobile application in improving health services is reviewed from the perspective of perceived usefulness by users (*Perceived Usefulness*).

Most informants stated that the Mobile JKN application was quite easy to use, especially in terms of service registration, searching for health facilities, and online queuing.

Table 1. Observation Results of the Aspect of *Perceived Usefulness by Users*

Observed Aspects	Indicator	Yes	No	Note
Use of the application during registration	Patients use mobile JKN to register for services	√		
Electronic queue	Patients get a queue number from the application.	√		

Primary data source 2025

Based on research conducted at the Melai Community Health Center, this study shows that although the Mobile JKN feature is generally considered easy, limitations in digital literacy and a less-than-intuitive interface design remain barriers. These findings align with research by Nugroho et al. (2023), which states that health app interfaces must be tailored to the local user context and age.

However, usage frequency remains uneven, particularly among older patients, those less familiar with technology, or those without access to smartphones. These groups generally continue to register manually on-site. This phenomenon indicates a digital literacy gap that impacts the overall effectiveness of app implementation.

The second indicator shows that the majority of patients who registered via the app were automatically assigned a queue number. This indicates that the synchronization system between the Mobile JKN app and the Puskesmas' internal queue system is functioning effectively across most services.

Patients who have received a queue number from the app appear more at ease, as they simply wait in line without having to scramble or arrive too early. Besides increasing comfort, this system also reduces the potential for patient congestion in the waiting area, thus supporting more efficient and orderly service protocols.

Mobile JKN is considered to improve service efficiency, particularly in terms of queue registration, participant verification, and reduced waiting times. This demonstrates a positive perception of the app's usefulness in improving healthcare services. However, this convenience still depends on users' digital literacy and prior experience with healthcare apps. Therefore, interface development and user education are key to improving the app's overall effectiveness.

These findings support the TAM theory, which states that ease of use directly influences user attitudes and acceptance of new technology. This finding is reinforced by Sari & Wulandari (2021), who found that the easier an application is to use, the higher its user acceptance in the context of digital healthcare services.

The effectiveness of using the JKN mobile application in improving health services is reviewed based on the perceived ease of use of the user (*Perceived Ease of Use*).

JKN Mobile Application Launched by BPJS Kesehatan as a digital solution to simplify access to healthcare services for JKN-KIS participants, its effectiveness depends heavily on user perception and intention to use it.

Table 2. Observation Results of the Aspect of *Perceived Usefulness by Users*

Observed Aspects	indicator	Yes	No	Note
Ease of use	the patient appears to understand how to use the application	√		
speed of service after registration via mobile JKN	The service process is faster for application users	√		
Officer assistance in using the application	Officers provide assistance to patients who are experiencing difficulties	√		

Primary data source 2025

Based on research conducted at the Melai Community Health Center, most informants stated that the app interface was quite intuitive, especially for basic functions like online queuing and checking participant status. However, some older informants or those with minimal digital experience reported difficulty with initial navigation, such as creating an account or changing healthcare facilities.

Observations showed that most patients using the Mobile JKN app understood the basic features, such as online queue registration and checking their membership status. This was demonstrated by the minimal questions or confusion seen when patients presented their registration receipts from the app to the registration staff.

However, certain groups of patients—particularly the elderly or those with low digital literacy—still appear confused when opening the app, even requiring assistance from family or staff simply to log in or access their queue number. Some patients are also unaware that they can use the app's features to change healthcare facilities or file complaints.

The second indicator shows that patients who register through the Mobile JKN app receive faster service than those who register in person. Patients using the app typically arrive within the designated queue time, show their digital queue number, and are called immediately without having to go through the manual re-registration process.

The third indicator shows that during the observation process, registration staff appeared quite responsive in assisting patients experiencing difficulties using the app, particularly elderly patients or those using Mobile JKN for the first time. Staff promptly assisted patients in logging in, selecting a healthcare facility, and providing online queue numbers.

According to Davis (1989), *perceived usefulness* is the degree to which a person believes that using technology will improve their performance. In this context, *Mobile JKN* is perceived to improve the administrative processes of healthcare services for patients. This is further supported by research by Saputri et al. (2022), which concluded that perceived usefulness has the greatest influence on user satisfaction with the *Mobile JKN* application, particularly in terms of time efficiency and information clarity.

Perceived usefulness relates to the extent to which users feel the *JKN mobile application* can improve the quality of healthcare they receive. In interviews, many respondents stated that the application provides faster and more efficient access to health information.

The effectiveness of using the JKN mobile application in improving health services is reviewed from the intention to use.

The effectiveness of the *Mobile JKN* application in improving health services at community health centers (Puskesmas) is closely related to users' intention to actively utilize the application. Based on observations and patient feedback, intention to use the application is generally influenced by two main factors: perceived usefulness and perceived ease of use.

Table 3. Observation results from the Intention to Use aspect

Observed Aspects	Indicator	Yes	No	Note
Ease of use	the patient appears to understand how to use the application	√		
speed of service after registration via mobile JKN	The service process is faster for application users	√		

Primary data source 2025

Research conducted at the Melai Community Health Center (Puskesmas) showed that both perceived ease of use and perceived usefulness positively influenced intention to use. Respondents who perceived the app as easy to use and useful tended to have a higher intention to continue using the app.

Most patients showed a strong intention to continue using the *JKN Mobile* application as a means of accessing health services. This finding supports the concept of "Intention to Use" in the TAM framework, which states that the intention to continue using the system is a strong predictor of successful adoption of information technology (Davis, 1989). In the context of health services, this intention is usually influenced by two main factors: perceived usefulness and perceived ease of use, which were previously also seen positively from the interview results. The second indicator shows that patients who successfully use the application appear to be more satisfied than patients who still use the manual route. Although the majority of responses are positive, technical challenges and digital literacy remain minor obstacles that need to be addressed through ongoing education.

In the extended TAM model, *intention to use* is directly influenced by perceived usefulness and perceived ease of use. Davis (1989) states that "*behavioral intention to use is a function of attitude toward using and perceived usefulness.*"

Research by Putra & Yulianti (2020) shows that in the context of digital public service applications, intention to use is greatly influenced by positive initial user experiences, as well as support from the surrounding environment (family or health workers).

Most patients showed a strong intention to continue using the *JKN Mobile* application as a means of accessing health services. This finding supports the concept of "Intention to Use" in the TAM framework, which states that the intention to continue using the system is a strong predictor of the success of information technology adoption (Davis, 1989).

Ajzen's (1991) theory of *Planned Behavior* explains that the intention to use technology is influenced by the user's attitudes and perceptions. In this case, positive experiences gained from the ease and benefits of the *JKN* application contribute to the user's intention to continue using it. Thus, intention to use is an important indicator in assessing the effectiveness of the *JKN mobile application* in improving health services at community health centers.

However, intention to use can weaken if the app is perceived as error-prone, heavy, or requires a large amount of internet data. Furthermore, negative experiences, such as system failures during login, can reduce users' motivation to return to the app.

This means that the continuation of the intention to use is closely related to the initial experience and the technical support available when the user experiences problems.

CLOSING

Based on the results of research conducted on 19 informants who were users of the Mobile JKN application in the Melai Community Health Center environment, several main conclusions were obtained which refer to three dimensions within the Technology Acceptance Model (TAM) framework, namely Perceived Ease of Use, Perceived Usefulness, and Intention to Use.

Ease of Use (Perceived Ease of Use)

Most informants stated that the Mobile JKN app has a fairly accessible interface, especially for users with adequate digital experience. However, this ease of use has not been fully experienced by groups with low digital literacy, such as the elderly or new users. Thus, perceptions of ease of use remain limited and influenced by factors such as age, education, and prior technology experience.

perceived usefulness

Mobile JKN is generally considered to provide tangible benefits in improving the efficiency of healthcare services. This application simplifies the administrative process, speeds up registration queues, and improves access to participant information and service status. It reduces waiting times and provides better access to participant information.

Intention to use

A high intention to continue using Mobile JKN was found among informants who felt technically comfortable and had experienced the benefits of the application. Intention to use tended to increase with increased understanding and positive experiences during use. However, the sustainability of this intention still depends on supporting factors such as system stability, responsive technical service, and trust in the application.

THANK-YOU NOTE

With deep gratitude, the author would like to express his deepest gratitude to the first and second supervisors for all their valuable guidance, direction, and input during the process of compiling this journal. He would also like to thank the Melai Community Health Center for its support in the form of facilities and data that greatly assisted in the implementation of this research, as well as his family and friends who have provided support in the process of compiling this journal.

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