

# Analysis of Patient Satisfaction With The Use of The Jkn Mobile Application At Godong Community Health Center

Isnaini Qoriatul Fadhilah<sup>1\*</sup>, Siti Masrochah<sup>2</sup>, Sri Lestari<sup>3</sup>, Eko Teguh Kusdianto<sup>4</sup>

<sup>1,2,3</sup>Medical Records & Health Information, Semarang Ministry of Health Polytechnic, Central Java, Indonesia

<sup>4</sup>Godong Community Health Center, Central Java, Indonesia

Correspondence author: [isnainiqoriatul@poltekkes-smg.ac.id](mailto:isnainiqoriatul@poltekkes-smg.ac.id)

**Abstract.** BPJS Health implements a digital transformation in the form of the JKN mobile application. The JKN mobile application is expected to provide easy access and more optimal service for participants. The JKN Mobile Application is expected to simplify the registration process and improve the quality of health services [1]. A preliminary survey at the Godong 1 Health Center registration regarding the use of the Mobile JKN application was carried out in February 2023 on 10 BPJS Health patients, 5 patients said they were satisfied and 5 other patients said they were dissatisfied, 5 patients said they were dissatisfied due to user complaints, including: The application sometimes cannot be used if it is not updated immediately. This study aims to determine patient satisfaction with the quality of online registration for the JKN mobile application based on the dimensions of content, accuracy, format, ease of use, timeliness at Godong Community Health Center. The type of research used is quantitative descriptive research. The data collection method uses a questionnaire. The instrument used was a questionnaire. The population and sample in this study were all BPJS Health participants who used the JKN mobile application, namely 226 participants and a sample of 70 respondents. The research results showed that the majority of respondents were satisfied with the quality of registration via the Mobile JKN application. Aspects of ease of use and speed of the registration process receive high ratings from patients [2]. Research shows that from the dimensions of content, 77.1% were satisfied and 18.6% were very satisfied, accuracy was 81.4% satisfied and 14.3% very satisfied, format was 84.3% satisfied and 11.4% very satisfied, ease of use expressed satisfaction 81.4 and very satisfied 14.3%, timeliness expressed satisfaction 80% and very satisfied 15.7%.

**Keywords:** Patient Satisfaction, Registration Quality, JKN Mobile application, Godong 1 Community Health Center, Digitalization of Health Services

## I. BACKGROUND

Digital transformation in health services in Indonesia has experienced rapid progress, one of which is through the implementation of the National Health Insurance (JKN) mobile application developed by the Health Social Security Administration (BPJS). This application is designed to facilitate public access to health services, such as registration, checking membership status and managing claims. On March 15 2017 BPJS inaugurated the "Mobile JKN" application [1].

Since the launch of Mobile JKN, the total number of Mobile JKN downloading customers has increased from year to year. Mobile JKN must reduce and improve long queues at BPJS Health offices. According to BPJS Health, the JKN Mobile App is an application that can be used on smartphones. BPJS's latest success is an application that facilitates online registration as well as access to membership information, access to membership fees, first-level health facilities and advanced health facilities, receiving suggestions and complaints [1]. Mobile JKN is part of the management of medical records and health information services so that it has an impact on quality health services for the community. BPJS Health membership data in March 2023 there were 25,047 participants at the Godong Community Health Center. Current technological developments, BPJS opens registration in several ways, including directly at the office, registering online via the website and using the JKN mobile application [1].

The research results showed that the majority (73%) of respondents were satisfied with BPJS Health online registration on the Mobile JKN application during the Covid-19 pandemic [3]. The 2021 BPJS participant satisfaction index is 87.6% (BPJS, 2021).

Conceptual measurement of customer satisfaction, knowledge about the level of customer satisfaction through customer satisfaction surveys. First of all, expectation match is the similarity of customer expectations with the reality experienced by customers. Second, Revision Intention is the customer's desire to revisit. Third, the willingness to recommend the product to other people [4].

The End User Computing Satisfaction (EUCS) model is a method for measuring user satisfaction of an application by comparing expectations and reality. This method has been extensively tested for reliability by other researchers and there are no significant differences in results even though this instrument has been translated into different languages. With the EUCS model, it aims to analyze the quality of system services according to customer satisfaction with the use of the Mobile JKN application based on five factors designed by Dolli and Torkzadeh: content, accuracy, format, usability and timeliness [5].

A preliminary study at the Godong Health Center registration regarding the use of the Mobile JKN application was carried out in February 2023 on 10 BPJS Health patients, there were 5 patients who said they were satisfied and 5 other patients said they were dissatisfied, 5 patients said they were dissatisfied due to user complaints, including: The application sometimes doesn't work. can be used if it is not updated immediately. The JKN Mobile Application does not have live chat. Participants who use the Mobile JKN application experience problems filling in data in the application with information that it cannot be continued for a while and try again if the user thinks the Mobile JKN application has been completed. For users aged 40 years it is considered difficult and more complicated. If you enter incorrect information, the user will feel dissatisfied with the service of this application. Based on the background, the author wants to research with the title "Analysis of patient satisfaction levels regarding the use of the JKN mobile application at the Godong Community Health Center".

## II. METHOD

The type of research used is descriptive quantitative research. The data collection method used was a questionnaire. The population in this study were all BPJS Health patients who used the Mobile JKN application at the Godong 1 Community Health Center, Grobogan Regency. In March 2023, the number of patients who used the JKN mobile application was 226 patients. So the number of samples in this study was 70 people.

## III. RESULTS AND DISCUSSION

### A. Patient Satisfaction With The Use of The Jkn Mobile Application Based on Content Dimensions

In 2020, the start of the year showed relatively high visitation numbers, but there was a sharp decline from April to May. This decrease was most likely caused by the initial impact of the COVID-19 pandemic, where there was a reduction in activities in the community to deal with the spike in cases, such as PSBB (Large-Scale Social Restrictions) which had an impact on health center visits. In May 2020 there was the Idul Fitri holiday and there was an increase in community activity, so that starting June 2020 the number of visits increased again due to an increase in COVID-19 cases.

Based on the results of this research, it is known that as many as 13 people (18.6%) and 54 respondents (77.1%) expressed satisfaction with the use of the JKN mobile application based on content dimensions. In contrast, only 3 respondents (4.3%) said they were dissatisfied. These findings show that the majority of users feel that the content presented by the JKN mobile application has met their information needs, such as information related to health services, features for accessing health facilities, and updates regarding JKN membership status.

These results are in line with previous research which shows that content quality is one of the main factors influencing user satisfaction with mobile health applications. For example, a study by Alotaibi and Federico shows that complete and accurate content on mobile health applications greatly influences user satisfaction levels, because it makes it easier for them to access the information they need quickly and efficiently.

Other research also emphasizes the importance of content quality in mobile applications, where they found that relevant and useful content can increase user satisfaction levels and encourage continued application use [6]. These findings strengthen the results of this research, where the majority of respondents were satisfied with the content presented by the JKN mobile application.

However, it is also important to pay attention to the small group that expresses dissatisfaction. A total of 3 respondents (4.3%) expressed dissatisfaction with the content dimensions of this application. Although this number is relatively small, further analysis is needed to understand the reasons for this dissatisfaction, such as whether it is related to incomplete information, difficulties in navigation, or other problems. Identifying and improving these aspects, app developers can improve the quality of content and ultimately increase the overall level of user satisfaction. Overall, this research confirms the importance of content dimensions in influencing user satisfaction of mobile health applications, especially the JKN mobile

application. This finding is consistent with the results of previous research which shows that content quality is one of the main determinants of health application user satisfaction and retention.

#### **B. Patient Satisfaction With The Use of The Jkn Mobile Application Based on Accuracy Dimensions (Accuracy)**

The research results showed that 10 respondents (14.3%) stated they were very satisfied, and 57 respondents (81.4%) stated they were satisfied with the use of the JKN mobile application based on the accuracy dimension. In contrast, only 3 respondents (4.3%) said they were dissatisfied. These findings indicate that the majority of users feel that the JKN mobile application provides accurate and timely information, which supports their trust and satisfaction in using this application.

The research results found that information accuracy is one of the key factors influencing user satisfaction with health applications. The study showed that users who felt the information provided by the app was accurate and reliable were more likely to trust and use the app regularly. In addition, research by [8] confirmed that the accuracy of information delivered via the JKN mobile application plays an important role in increasing user satisfaction, especially in the context of appropriate health data management and access to health services [7].

However, there were 3 respondents (4.3%) who expressed dissatisfaction that needed further attention. This dissatisfaction can be caused by various factors, such as technical errors, differences in user expectations, or inaccurate information provided in certain situations. Therefore, it is important for application developers to continuously monitor and improve aspects that are still lacking, in order to ensure higher levels of satisfaction in the future. Overall, the results of this study confirm that the dimension of accuracy is one of the main factors influencing user satisfaction with the JKN mobile application in Indonesia. These findings are consistent with previous research which also shows the importance of information accuracy in supporting the trust and satisfaction of health application users in Indonesia.

#### **C. Patient Satisfaction With The Use of The Jkn Mobile Application Based on Format Dimensions.**

The research results showed that 8 respondents (11.4%) stated they were very satisfied, and 59 respondents (84.3%) stated they were satisfied with the use of the JKN mobile application based on the format dimension. Only 3 respondents (4.3%) said they were dissatisfied. This data shows that the majority of users feel that the JKN mobile application format meets their expectations, both in terms of visual appearance, ease of navigation, and information layout.

The research results support these findings, where they found that good interface format or design in health applications can increase user satisfaction. This study shows that applications with an intuitive and user-friendly format are preferred by users because it makes it easier for them to access the information and services they need [11]. In addition, research by Susanto et al. also highlights the importance of visual aspects and ease of use in health applications, where a well-designed format can speed up the user's adaptation process and increase their level of satisfaction.

However, the presence of 3 respondents (4.3%) who expressed dissatisfaction shows that there is still room for improvement in the dimensions of this application format. Factors such as personal preference, device used, or specific technical issues may influence their perception of the application format. App developers need to consider feedback from these dissatisfied users to continually improve the app format to meet the needs of all users. Overall, the results of this study show that the JKN mobile application format has met most user expectations, and this is in line with previous research in Indonesia which shows the importance of interface design in increasing health application user satisfaction.

#### **D. Patient Satisfaction With The Use of The Jkn Mobile Application Based on The Ease Of Use Dimension**

The research results showed that 10 respondents (14.3%) stated they were very satisfied, and 57 respondents (81.4%) stated they were satisfied with the use of the JKN mobile application based on the ease of use dimension. Meanwhile, only 3 respondents (4.3%) said they were dissatisfied. This shows that the majority of users feel that the JKN mobile application is easy to use, both in terms of navigation, feature access, and overall comfort.

The results of research [9] support where it was found that ease of use is one of the main factors influencing user satisfaction with health applications. The research shows that applications designed with simple, easy-to-understand interfaces tend to increase user satisfaction because they can quickly access the information and services they need. In addition, research results [10] confirm that ease of use is a crucial aspect in the adoption of health technology in Indonesia. Responsive and user-friendly applications enable users from various backgrounds to use them more efficiently, ultimately increasing their satisfaction.

However, there were 3 respondents (4.3%) who said they were not satisfied. This dissatisfaction may be due to factors such as differences in digital literacy levels, specifications of the devices used, or individual expectations of certain features in the application. Although the number of dissatisfied respondents is relatively small, it is important for application developers to continue to evaluate and improve the ease of use of applications in order to meet the needs of all users, including those who may have difficulty adapting to technology. Overall, the results of this study show that the ease of use dimension is one of the aspects most appreciated by JKN mobile application users in Indonesia, which is also in line with previous research which emphasizes the importance of ease in influencing health application user satisfaction.

#### **E. Patient Satisfaction With The Use of The Jkn Mobile Application Based on The Timeliness Dimension**

The research results showed that 11 respondents (15.7%) stated they were very satisfied, and 56 respondents (80%) stated they were satisfied with the use of the JKN mobile application based on the timeliness dimension. Only 3 respondents (4.3%) said they were dissatisfied. These findings indicate that the majority of users feel that the JKN mobile application provides timely information and services, which is very important in the health care context.

Previous research shows that timeliness in the delivery of information and services via health applications is one of the factors that most influences user satisfaction. This study found that users are more likely to be satisfied if the application can provide notifications, information updates, and access services quickly and according to their needs [13]. In addition, research conducted also strengthens these findings, where timeliness in access and response from health applications is considered an important indicator in increasing user trust and comfort [14].

Even so, there were 3 respondents (4.3%) who said they were not satisfied. This may be caused by several obstacles such as delays in receiving notifications, technical problems that prevent fast access, or time mismatches with user expectations. Application developers need to pay attention to this feedback to continuously improve application performance, especially in terms of responsiveness and timeliness, in order to meet the expectations of all users.

Overall, the results of this study confirm that timeliness is a very important dimension in determining the level of user satisfaction with the JKN mobile application. These findings are consistent with previous research in Indonesia which shows that fast and precise response times and access greatly influence users' positive perceptions of health applications.

### **IV. CONCLUSIONS AND SUGGESTIONS**

The majority of respondents showed high satisfaction with the JKN mobile application, especially in the aspects of timeliness, ease of use, information accuracy and application format. These results reflect the success of the application in meeting user needs. To increase overall satisfaction, application developers need to continue to perfect responsiveness and improve aspects that are still lacking, so that this application can be more optimal in supporting health services in Indonesia.

### **V. ACKNOWLEDGMENT**

Thanks to Poltekkes Kemenkes Semarang, Godong Community Health Center and the 2024 ISMOHIM committee for organizing international conference activities so that this article can be published.

### **REFERENCES**

- [1] BPJS Health, "2017 Health Social Security Program Management Report and Financial Report," BPJS Health, p. 240, 2017. [Online]. Available: <https://bpjskesehatan.go.id/bpjs/dmdocuments/5b8c446214547b3f6727a710cd62dae7.pdf>
- [2] A. Wulanadary, S. Sudarman, and I. Ikhsan, "BPJS Health Innovation in Providing Services to the Community: JKN Mobile Application," *J. Public Policy*, vol. 5, no. 2, p. 98, 2019. doi: 10.35308/jpp.v5i2.1119
- [3] Herlinawati, L. Banowati, and D. Revilia, "Level of Community Satisfaction with Online Registration on the JKN Mobile Application," *Health Care: Health J.*, vol. 10, no. 1, pp. 78–84, 2021. doi: 10.36763/healthcare.v10i1.114
- [4] F. Tjiptono, *Services Marketing: Principles, Applications, and Research*, Yogyakarta, Indonesia: Andi, 2014.
- [5] W. J. Doll and G. Torkzadeh, "The Measurement of End-User Computing Satisfaction," *MIS Quarterly*, vol. 12, no. 2, 1988.
- [6] H. Wu, H. Li, C. Cheng, and C. Lin, "The effect of healthcare IT on patient outcomes: A meta-analysis," *Health Care Manag. Rev.*, vol. 41, no. 3, pp. 1–11, 2016.

- [7] S. Wibowo, Y. Mahendradhata, and L. Trisnantoro, "Determinants of user satisfaction with a mobile application for health services: A case study of BPJS Health," *Natl. Public Health J.*, vol. 14, no. 3, pp. 105–114, 2020.
- [8] I. P. Sari, R. S. Dewi, and R. D. Sutanto, "Analysis of user satisfaction of the JKN mobile application based on the quality of information services," *J. Health Inf. Syst.*, vol. 6, no. 2, pp. 78–85, 2021.
- [9] N. Widyastuti and M. Ardianto, "Factors influencing the adoption of mobile health technology in Indonesia," *J. Health Technol.*, vol. 14, no. 1, pp. 45–54, 2020.
- [10] I. P. Sari and V. Kurniawati, "The influence of ease of use and quality of information on mobile health application user satisfaction," *J. Inf. Syst. Manag.*, vol. 5, no. 3, pp. 213–220, 2021.
- [11] D. A. Putri, A. Nugroho, and S. Widyaningsih, "The influence of user interface design on user satisfaction of health applications," *J. Inf. Technol. Comput. Sci.*, vol. 7, no. 1, pp. 45–52, 2020.
- [12] T. Susanto, T. Raharjo, and H. Purnomo, "Analysis of user satisfaction with mobile health applications in Indonesia: Case study of the BPJS Health application," *J. Comput. Inf. Sci.*, vol. 14, no. 2, pp. 67–75, 2021.
- [13] A. N. Pratama and A. Nugraha, "Analysis of factors that influence health application user satisfaction in Indonesia," *J. Inf. Syst.*, vol. 12, no. 2, pp. 129–139, 2021.
- [14] P. W. Handayani, A. N. Hidayanto, and I. Budi, "Timeliness as a key factor in user satisfaction with health information systems: Evidence from Indonesia," *J. Inf. Technol. Comput. Sci.*, vol. 7, no. 2, pp. 162–170, 2020.