



Available online at : <http://ejournal.stikesprimanusantara.ac.id/>

Jurnal Kesehatan

| ISSN (Print) 2085-7098 | ISSN (Online) 2657-1366 |



The Implementation of The JKN Mobile Application as an Effort to Improve the Quality of Health Services in Indonesia: Literature Review

Hanifah Nabilah¹, Putri Permatasari², Ashfiya Vi'aqila El-Tsana³, Ratu Puanurani Anggitya Abdillah⁴, Afifah Rohadatul 'Aisy⁵

¹⁻⁵ Bachelor program of Public Health, Faculty of Health Science, Universitas Pembangunan Nasional Veteran Jakarta

ARTICLE INFORMATION

Received: 15 October 2024
 Revised: 30 October 2024
 Accepted: 20 November 2024
 Available online: 30 November 2024

KEYWORDS

Health Services; Mobile JKN;

CORRESPONDING AUTHOR

Putri Permatasari

E-mail:

putripermatasari@upnvj.ac.id

ABSTRACT

Background: Management Information System (MIS) plays a crucial role in developing and improving the quality of health services. The Mobile JKN application is one example of the development of information systems and a form of digital transformation in the health sector.

Purpose: to understand the extent to which the Mobile JKN application has succeeded in improving access to health services for the community and identify inhibiting factors in its use.

Methods: This study used Literature Review design. Articles were searched from Google Scholar, PubMed and Science Direct using relevant keywords, then selected according to the criteria and objectives of the study.

Results: showed that limitations in the Mobile JKN application that have the potential to be the reason for people not using the Mobile JKN application. The use of the Mobile JKN application contributed positively to improving service quality .

Conclusion: although there are still some obstacles, the Mobile JKN application is can improving access to health services and proven to be effective in increasing public satisfaction with health services, as well as helping to overcome the deficit of health workers and infrastructure.

INTRODUCTION

Management information systems are an important component of the health service system. Implementation of a management information system can increase effectiveness by reducing time and improving the quality of health services [1]. Information technology that is implemented well can support the management process to be effective and efficient. Along with technological developments, the application of information technology in the health service system can improve the quality of health services. The existence of a management information system will provide extraordinary benefits for all components in the hospital, including patients, doctors, nurses, all other human resources, management, hospital partners and stakeholders [2]. The JKN Mobile Application is an example of information system development and is the biggest innovation launched by BPJS Health to support the National Health Insurance Program (JKN) in Indonesia. This program is based on Law Number 40 of 2004 concerning the National Social Security System (SJSN) and aims to

provide equal health insurance for all Indonesian citizens regardless of economic background. As part of the government's commitment to improving access and quality of health services, the Mobile JKN application was developed to make it easier for the public to access BPJS Health services, whether for registering new participants, checking membership status, or accessing health facilities. Before the presence of this application, people had to go to BPJS offices or health facilities for various administrative needs, but with Mobile JKN, most services can now be accessed digitally, increasing efficiency and reducing the bureaucratic burden that they have been complaining about [3].

Since its launch in 2017, the Mobile JKN application has shown significant growth in terms of the number of users. Based on 2022 data, it is recorded that more than 24.17 million JKN participants have used this application to make it easier to access their health services. This shows that the Mobile JKN application is a relevant solution in the era of digitalization. However, even though the number of users is increasing, the scope of use of this application is still not optimal compared to the total JKN participants which reached almost 250 million people in January 2023. In addition, the government's target to reach 98% of application users by 2024 shows the ambition to expand digital access in health sector [4].

The JKN Mobile Application offers various features designed to make it easier for JKN participants to manage their health services. Some of the superior features of this application include information about the JKN program, location of the nearest health facility, history of health services, adding family members, and an online queue feature [5].

This online queue feature is very important because it can reduce physical queues at health facilities, which are often a source of public complaints. Apart from that, this application also allows participants to consult doctors online, so that people can consult regarding health conditions without having to come directly to a health facility. This feature is very relevant nowadays, especially after the COVID-19 pandemic which has limited physical interaction in health facilities. The implementation of the JKN mobile application is not only for the benefit of an agency or to improve service quality, but the emergence of various mobile applications now makes it easier for people to carry out their activities and reduces the time that is wasted due to very long queues [6]. Through this application, BPJS Health seeks to provide a comprehensive solution to facilitate access and improve participants' health service experience [7].

However, despite the various benefits offered, implementing the Mobile JKN application still faces a number of challenges. The use of this application is not yet fully understood by the community/participants and do not comprehend how to use it. Some people still believe that the conventional system is the easiest and most practical [8]. Apart from that, one of the main problems often experienced by participants is difficulty in registering or logging into the application. For example, duplicating telephone number or email data often results in participants being unable to create a new account, which forces them to come directly to the BPJS Health office to resolve the problem. Apart from that, obstacles in changing health facilities are also another problem that users often complain about. Even though this application is designed to provide convenience, some features still require manual handling which requires participants to contact the service center or come directly to the BPJS office [7].

When compared between the number of JKN participants and the number of Mobile JKN application users, there is certainly a significant gap. Therefore, this study was conducted to determine the limitations in the Mobile JKN application that have the potential to be the reason for people not using the Mobile JKN application. The other research not already explain about the

effectivity of the Mobile JKN application. Considering these challenges, this research was conducted to evaluate the effectiveness of implementing the Mobile JKN application as an effort to improve the quality of health services in Indonesia. The aim of this research is to understand the extent to which the Mobile JKN application has succeeded in increasing access to health services for the community and identify inhibiting factors in its use.

METHODS

The type of research used is a literature review. Search for international journals via PubMed using the keywords "(Quality) AND (JKN Mobile) AND (Health Service)". Searching national journals via Google Scholar used the keywords "(Quality) AND (Mobile JKN) AND (Health Services)" and the search year was limited to 2015-2024. The focus of this article discusses the effectiveness of the Mobile JKN application in facilitating public access to health services, the implementation of the Mobile JKN application in an effort to increase user satisfaction and its impact on the quality of health services as well as obstacles or challenges in implementing the Mobile JKN application. As a result of the literature extraction search, 8 articles were found, then related sources were selected. Initial selection was carried out based on the abstract and title of the article. Next, relevant studies were downloaded for further selection based on inclusion criteria. The inclusion criteria is the article that related about access to health service by using the JKN Mobile Application. The exclusion criteria is the literature about health service quality not especially for JKN members. Irrelevant studies will be excluded in this study. If agreement is difficult to reach, a top vote will be held to get the final decision.

RESULT AND DISCUSSION

The extraction results from the 8 journals obtained with the specified keywords and topics can be seen in table 1.

Table 1. Literature Extraction

No	Title	Author(Year)	Method	Result
1.	"Analysis of the Quality of Health Services of the National Health Insurance Program"	M. Dwi Setiawan, dkk., 2022	Descriptive Qualitative	The research results show satisfaction for JKN participating patients or general patients with health services. The ability of health workers to provide responsive care and services greatly influences patient satisfaction, thereby improving the overall quality of service.
2.	"Study of the Effectiveness of the JKN Mobile Application for Jambi City National Health Insurance (JKN) Participants"	Rizalia Wardiah, dkk., 2022	Descriptive Quantitative	The research results show that the number of JKN Mobile Application users in Jambi Province is 76,272 people. It was found that the satisfaction of the people of Jambi City with the use of the Mobile JKN application was 66.8% (success)

No	Title	Author(Year)	Method	Result
				and the quality of service was 69.12% (success). This percentage was obtained from research involving 400 samples. The assessment of success is in the value range or effectiveness ratio of 61-80%, meaning success.
3.	"Analysis of the Effectiveness of Using the JKN Mobile Application as Part of Public Services at BPJS Health in Bekasi City"	Hakim, dkk., 2024	This research uses qualitative methods. Data collection was carried out through interviews, observation and literature study	The research results show that the use of the JKN mobile application has a positive impact on increasing operational and administrative efficiency at BPJS Health Bekasi City. Participants feel more satisfied because of easy access to information, faster administration processes, and time and cost efficiency. This innovation is considered effective in improving public services, although there is still room for further development regarding application features.
4.	"Public Service Innovation on the JKN Mobile Application in Improving the Quality of Public Services in Tangerang City"	Sulistiyawan dkk., 2023	The research uses a descriptive qualitative approach with data collection techniques through observation and interviews.	The research results show that the efforts made by BPJS through the JKN mobile application are quite good, although some users still experience problems in understanding and using this application. The use of the JKN mobile application is still hampered by the process of transferring health facilities which takes up to three months, autodebit obligations which are difficult to access for some people without an ATM or mobile banking account, even though there have been efforts to make payments easier via Vidpay and merchants. BPJS has taken various steps to increase awareness and ease of use.
5.	"Effectiveness of Implementing the JKN Program at the Adisma	Pertiwi, dkk (2023)	Descriptive Qualitative	The research results show that the use of BPJS at the Adisma Husada Clinic to increase effectiveness has been running

No	Title	Author(Year)	Method	Result
	Husada Clinic, Medan City"			according to the BPJS program. However, there are obstacles where patients who come do not have mobile JKN due to lack of knowledge and public understanding of its operation. This causes long and piled up queues.
6.	"Analysis of the Effectiveness of Using the National Health Insurance Mobile Health Service Application in Indonesia"	Yuliasuti, dkk (2023)	This research uses a qualitative research approach as research requires a deep understanding of the interaction between the use of the JKN Mobile application and effectiveness theory.	The research results show that the JKN Mobile digital-based public health service application satisfies health service users so that it has increased the use of JKN Mobile in the very good category, and it is proven that the effectiveness of users utilizing JKN mobile health services in Indonesia meets the effectiveness in the very good category at the beginning of 2021.
7.	The Effectiveness of the National Health Insurance (JKN) Mobile Digital Service on the Number of Queues for BPJS Health Participants at the Bandar Lampung Branch Office during the COVID-19 Pandemic	Laras, dkk (2022)	This research uses a qualitative approach by combining the results of questionnaires, observations and literature studies.	The research results show that the use of the JKN mobile application in Bandar Lampung has significantly improved service quality. As many as 98.5% of respondents said they were very satisfied with the ease of access and features offered by this application, because it can save people's time and energy.
8.	Innovation and Service Effectiveness through Mobile JKN at BPJS Health in South Jakarta	Meigy, dkk (2021)	This research uses a qualitative descriptive approach with a focus on in-depth explanation of the implementation	The research results show that 77% of Mobile JKN application users feel helped by the various features available, such as online queues and doctor consultations via chat. Apart from that, application users can also search for health facility information, monitor bed availability, and register online easily. This

No	Title	Author(Year)	Method	Result
			of technology-based public service innovation in the use of the JKN mobile application.	reflects increased satisfaction and access to health services.

The Effectiveness of JKN Mobile

The JKN Mobile Application is a digital innovation that allows BPJS Health participants to access various services online. Through this application, participants can carry out various activities such as moving health facilities, checking membership information, and even getting a digital card. This makes it very easy for participants, because they no longer need to physically visit the BPJS office [19]. The effectiveness of the Mobile JKN application in facilitating public access to health services, especially in terms of registration, claims and health information has been the focus of a number of studies. In search conducted by Ririn., et al (2024), the JKN Mobile Application has proven effective in improving accessibility and efficiency of healthcare services for BPJS users in Bandung City with features that facilitate registration, claims, payments, and customer service interaction. The majority of users found it helpful in easily accessing health information and managing claims online, saving time and enhancing convenience. However, issues such as system glitches and limited internet access in remote areas remain challenges. The findings highlight the need for improvements in system speed, information clarity, and strengthening technological infrastructure to enhance the overall user experience [18]. In search conducted by Ana and Hendri (2023), the JKN mobile application by BPJS Health in Pekalongan Regency is effective in helping participants manage JKN-KIS services without the need to visit BPJS offices. The app simplifies various processes, such as registration, check-ups, queue management, payment of fees, and provides a digital card, saving time, costs, and effort. Although most users feel assisted, some technical issues such as app errors, difficulties in registration, and confusion in usage by older participants still pose challenges. Overall, the app proves effective, but it still requires improvements in terms of stability and accessibility [17]. In research conducted by Laras Wulandari., et al (2022), the implementation of the JKN mobile application at the BPJS Health Bandar Lampung Branch office was proven to be very effective in improving the quality of service to the community. The existence of digital services through the JKN mobile application has a significant positive impact on society. As many as 98.5% of respondents stated that they strongly agreed with the existence and benefits of this application through the various features available, making it possible for JKN participants to easily access various information, as well as carry out various administrative matters easily and quickly, without having to queue at the BPJS office. This not only saves people's time and energy, but also increases their productivity. Therefore, the public really appreciates the convenience and efficiency offered by the JKN mobile application, especially in accessing BPJS Health services [14]. In his research, Wulandari (2019) stated several factors that can influence the effectiveness of the services provided. The first is that time, speed, accuracy and thoroughness must be in accordance with the needs of society at that time. Second, namely the

style of providing services to the public, this means being friendly and polite in speaking to provide comfort for Mobile JKN users. These two factors can help increase the effectiveness of the quality of health services and help the public better understand the substance of Mobile JKN [5]. Another study, by M. Dwi Setiawan (2022) et al., discusses the analysis of quality aspects of National Health Insurance which shows that health service facilities are responsible for the satisfaction of patients using JKN or not. Health services that provide assistance and are responsive can significantly increase user satisfaction and quality of these health services. Other things that need to be considered to increase patient satisfaction are providing sufficient rooms, increasing the intensity of education to the community, and disseminating information about the JKN Program [9]. Research conducted by Rizalia Wardiah., et al (2022) in Jambi City highlighted the use of Mobile JKN on patient satisfaction. In this research, there were 400 respondents, 98.3% of Mobile JKN users were people of productive age (15-65 years), with a composition of 194 men (48.5%) and 206 women (51.5%). This research uses quantitative instruments with a descriptive design, namely observations on the sample to determine the description of the variables studied, namely the effectiveness of the JKN Mobile Application with analysis using the effectiveness formula. In this research, it was found that System Quality in the JKN Mobile Application was 73.36% (Successful), Information Quality in the JKN Mobile Application was 72.81% (Successful), Service Quality in the Application Mobile JKN was 69.12% (Success), User Satisfaction on the Mobile JKN Application was 66.8% (Success), and the Effectiveness of the Mobile JKN Application was 71.77% (Success) [10]. In research conducted by Khotimah (2022) significant results were found between the use of the Mobile JKN application and improving the quality of hospital services in the Jabodetabek area. This research involved 100 respondents who used the JKN mobile application, using a questionnaire instrument to obtain valid data. This research proves that JKN Mobile has a significant effect on participant satisfaction with health services. This assumption is proven using the T test with a sig value of $0.00 < 0.05$. This value shows that the significance level is smaller than 0.05, which is H1 is accepted [16].

Barriers and Benefits in Implementing the JKN Mobile Application

Hospital administration efficiency has increased significantly with the implementation of an online registration system using Mobile JKN, especially in outpatient management. The success rate of online registration is highly dependent on factors such as internet connection availability, digital literacy, and technical support. Patients who understand technology and have reliable internet access are usually more likely to be active in using online registration [22]. In research by Welong S. Surya, et al (2024) at RSU GMIM Bethesda Tomohon, there are still several challenges that must be resolved, such as a lack of technological knowledge and a lack of understanding of the Mobile JKN online registration system, because not all Mobile JKN users understand technological advances. The problem experienced by RSU GMIM Bethesda Tomohon and many other hospitals, the server section is a challenge in itself because even though the patient has registered via Mobile JKN, the application indicates that the service says service expired or has expired even though the patient's computerized registration is still active. Apart from that, some users still don't know about Mobile JKN due to lack of socialization, because socialization from below has not been like that carried out at Community Health Centers and Family Doctors [22]. The level of community participation in using Mobile JKN in the online

registration flow still has obstacles in its implementation. This has resulted in the use of Mobile JKN in Indonesia still being relatively low. There are several problems that become obstacles, namely external and internal problems. External problems such as interference from the BPJS server which makes Mobile JKN unable to work, or internet- based problems which make Mobile JKN inaccessible. Meanwhile, internal problems are immediately followed up, for example, when a patient cannot register, there are officers who have been provided to follow up [22]. In the research of Fitri Widyawati et al, (2024), in the Malang BPJS Health case study, there were factors that became obstacles in implementing the Mobile JKN application, namely data verification and technical problems, this received many complaints from the public. The data verification process to access the Mobile JKN application is still an obstacle for BPJS Health users. Some users are still having difficulty uploading identities and following verification procedures. There are many users and data that must be verified, and the volume of data is usually high which can slow down the data verification process because it takes time to review each information thoroughly. As with other applications, the Mobile JKN application can experience technical problems that cause users to be unable to access its services. This problem can be in the form of server problems, difficulty processing transactions, or difficulty logging in [23]. The accessibility of the Mobile JKN application provides very diverse benefits, namely by facilitating access to information on health service queues and membership status. Because various services can be accessed independently by participants via the application, this helps minimize the workload of BPJS staff and saves participants' time and energy[24]. Apart from that, the Mobile JKN application also has other benefits, such as making it easier for users to view contribution bills, providing a more practical means for conveying information and complaints, facilitating the transfer of health facilities, providing access to digital KIS, and making it easier for users to update personal information. The overall benefits of this application increase the safety of participants in obtaining health services [19]. In Trianggriani & Wahyuni's research (2024), there is an application of Mobile JKN at Siti Khodijah Hospital that has gained various benefits. The first benefit is to improve service efficiency because patients can use Mobile JKN to access JKN services quickly and easily without having to queue. This shortens patient waiting time and improves the efficiency of the service process. Second, it improves service effectiveness as medical personnel can provide more precise and faster services by using Mobile JKN to access real-time patient information. Third, it increases patient satisfaction because patients feel satisfied with the ease and timeliness of services obtained through Mobile JKN. Fourth, it increases the motivation of medical personnel because medical personnel are more encouraged to work better because Mobile JKN supports them to provide high-quality services to patients [25]. Health-care service providers involved in the JKN need to be accredited. This will improve the quality of both the facilities and the health-care workers by setting minimum standards. The level of services that medical personnel should provide is set through the National Development of Medical Services, the Medical Services Guide, Standard Operational Services and “Clinical Pathway”. Health workers have greatly contributed to the successful development of the health sector. At the national level, based on public health centre figures, there is a surplus of general practitioners, midwives, nurses and other health workers.

CONCLUSION

The implementation of the JKN mobile application helps people access health services in

the era of digital transformation. The effectiveness of the JKN mobile application can increase public satisfaction, loyalty and trust in health services. Digital transformation encourages the use of the JKN mobile application with the aim of reaching and providing access to the community, besides that the implementation of JKN mobile helps cover the deficit in health workers and inadequate infrastructure. It was recorded that 66.8% of the public were satisfied using the JKN mobile application, followed by the quality of the JKN mobile application service at 69.12% and the effectiveness of the JKN mobile application at 71.77%. These three data showed that the implementation of the JKN mobile application helps accelerate digital transformation in the health sector. The obstacles experienced are usually influenced by the availability of internet connections, digital literacy and technical support. Some other difficulties include the limited ability of the community to follow verification procedures and transaction processes.

REFERENCES

- [1] N. Sari, E. Ervianingsih, and I. Zahran, “The Influence of System Quality, Information Quality and Service Quality on User Satisfaction of the Management Information System of Hospital 'X' Palopo City,” *Surya Medika Journal*, vol. 9, no. 2, pp. 219–224, Aug. 2023, doi: 10.33084/jsm.v9i2.5698.
- [2] E. M. Odelia, “Developing Organizational Capacity Through the Implementation of a Hospital Management Information System (SIMRS) to Improve the Quality of Health Services at RSUD dr. Mohamad Soewandhie Surabaya,” *Journal of Public Policy and Management*, vol. 6, no. 1, 2018.
- [3] Sri Nurul Kur'aini, Anggi Napida Anggraini, Intan Nurcahyaningsih, Pri Handini Setyoningsih, and Febriana Widyastuti, “Socialization of the Utilization of BPJS Kesehatan JKN Mobile Services in Health Services as an Effort to Increase BPJS Membership at RSO Prof. Dr. Soeharso Surakarta,” *Genitri Journal of Community Service in the Health Sector*, vol. 2, no. 1, pp. 1–6, Jun. 2023, doi: 10.36049/genitri.v2i1.90.
- [4] H. Yuliasuti and Moh. Jawahir, “Analysis of the Effectiveness of Utilizing the National Health Insurance Mobile Health Service Application in Indonesia,” *Blue Sky Community Service Journal (JPKM)*, vol. 4, no. 01, pp. 28–40, Mar. 2023, doi: 10.54147/jpkm.v4i01.726.
- [5] A. Wulandari, Sudarman, and Ikhsan, “BPJS Kesehatan Innovation in Providing Services to the Community: JKN Mobile Application,” *Jurnal Public Policy*, vol. 5, no. 2, 2019.
- [6] R. Rinjani and N. Sari, “Analysis of the Application of the JKN Mobile Application to Participants Health Social Security Administering Agency Subulussalam Branch,” *PUBLIKA : Journal of Public Administration Science*, vol. 8, no. 2, pp. 209–223, Oct. 2022, doi: 10.25299/jiap.2022.vol8(2).10491.
- [7] M. A. F. Putri, K. A. S. Wijaya, and N. W. Supriyanti, “Effectiveness of the National Health Insurance (JKN) Mobile Application in Improving Service Quality (Case Study of the Denpasar Branch of the Social Security Administration Agency),” *Socio-political Communication and Policy Review*, vol. 1, no. 2, pp. 42–54, Mar. 2024, doi: 10.61292/shkr.105.
- [8] Yudiana, L. Setiyani, and N. L. S. Ningrum, “Analysis of BPJS Health Application Acceptance Using the Technology Acceptance Model (TAM) Case Study of BPJS Health Users in Karawang,” *Proceedings of the National Seminar on Innovation and Technology Adoption (INOTEK)*, vol. 1, no. 1, 2021.
- [9] D. Setiawan, F. Fauziah, M. Edriani, and F. P. Gunung, “Analysis of the Quality of Health Services in the National Health Insurance Program,” *Tambusai Education Journal*, vol. 6,

no. 2, 2022.

- [10] R. Wardiah, DM. Izhar, and Usi. Lanita, “Study of the Effectiveness of the JKN Mobile Application on National Health Insurance (JKN) Participants in Jambi City,” *Endurance Journal: Scientific Study of Health Problems*, vol. 7, no. 3, pp. 607–614, Nov. 2022, doi: 10.22216/jen.v7i3.1664.
- [11] A. U. Hakim, A. E. Rustanto, D. S. Bratakusumah, and A. H. Sutawijaya, “Analysis of the Effectiveness of Using the JKN Mobile Application as Part of Public Services at BPJS Kesehatan in Bekasi City,” *Cahaya Mandalika Journal*, vol. 5, no. 2, 2024.
- [12] D. P. Sulistyawan, Y. Yusuf, and Machrunnisa, “Public Service Innovation in the JKN Mobile Application in Improving the Quality of Public Services in Tangerang City,” *Journal of Public Administration*, vol. 11, no. 2, 2023.
- [13] C. Pertiwi, A. A. Rifdah, P. Kartika, and F. P. Gurning, “Effectiveness of JKN Program Implementation at Adisma Husada Clinic, Medan City,” *FLORONA: Scientific Journal of Health*, vol. 2, no. 1, pp. 24–29, Feb. 2023, doi: 10.55904/florona.v2i1.589.
- [14] L. Wulandari, Rahyono, and L. Lukman, “Effectiveness of the National Health Insurance (JKN) Mobile Digital Service on the Number of Queues of BPJS Kesehatan Participants at the Bandar Lampung Branch Office during the COVID-19 Pandemic,” *Jejama Management Malahayati Journal*, vol. 2, no. 1, pp. 4–10, 2022.
- [15] M. Angelita, S. Lukman, and M. I. Tahir, “Innovation and Effectiveness of Services through Mobile JKN at BPJS Kesehatan in South Jakarta,” *Scientific Journal of the Faculty of Communication Sciences, University of Riau*, vol. 9, no. 2, pp. 292–305, 2021.
- [16] N. Khotimah, “The Influence of System Quality, Service Quality, and Information Quality on The JKN Mobile Application on BPJS Health Participant Satisfaction in the Jabodetabek Area,” *Journal of Accounting and Business Management*, vol. 2, no. 2, pp. 69–76, 2022.
- [17] A. Zilah and H. H. Adinugraha, “The Effectiveness of Using the JKN Mobile Application for BPJS Health Participants in Pekalongan Regency,” *Economics, Business, Management, & Accounting Journal (EBISMA)*, vol. 3, no. 2, pp. 127–132, 2023.
- [18] R. W. Febriyani, N. Adelia, and R. Santa, “Effectiveness of Using the JKN Mobile Application for BPJS Kesehatan Participants in Bandung City,” *Tolis Ilmiah*, vol. 6, no. 1, pp. 53–57, 2024.
- [19] N. A. Baskila, T. N. Farisni, F. Fitriani, and F. F. Jihad, “Utilization of JKN Mobile Health Service Innovation in the Community in Meulaboh City,” *Tambusai Health Journal*, vol. 4, no. 3, pp. 2859–2870, 2023.
- [20] W. D. Mentari, I. Gunawan, A. Ropii, and M. P. Mentari, “Relationship between Perception and JKN Patient Satisfaction with Hospital Service Quality,” *Journal of Public Health Innovation*, vol. 4, no. 01, pp. 243–248, Dec. 2023, doi: 10.34305/jphi.v4i01.978.
- [21] P. Utami, M. Asnawi, and Al Firah, “Analysis of the Utilization of the National Health Insurance (JKN) Mobile Application To Improve BPJS Health Services at the Pratama Bertha Clinic, Medan City,” *Corporate Business Journal*, vol. 8, no. 2, pp. 30–37, 2023.
- [22] W. S. Surya, M. Y. Waworuntu, W. M. E. Lumi, M. R. Taher, R. M. T. Rumengan, and C. E. A. Lumadja, “Analysis Of The Level Of Participation In Outpatient Registration Through The Jkn Mobile Application At Gmim Bethesda Tomohon Hospital,” *Tambusai Health Journal*, vol. 5, no. 3, pp. 6116–6125, 2024.
- [23] F. Widyawati, A. Afifuddin, and T. R. Ilyas, “Health Service Innovation In JKN Mobile Application For Bpjs Health Participants (Case Study of BPJS health Malang),” *Public Response*, vol. 18, no. 3, pp. 30–37, 2024.
- [24] Suhadi, Jumakil, and Irma, “JKN Mobile Application to Facilitate Access to BPJS Services,” *Journal of Health Research FORIKES VOICE*, pp. 262–267, 2022.

- [25] S. A. Trianggraini and S. Wahyuni, “Health Service Innovation Collaboration Through Mobile Jkn at Siti Khodijah Hospital,” *Irpia : Scientific Journal of Research and Development*, vol. 9, no. 9, pp. 9–17, 2024.