

Patient Perception of the Use of *Mobile JKN* Using the TAM Method at the Wolio Health Center

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A B S T R A C T

Mobile JKN is an application designed to facilitate a variety of services for users, including new participant registration, obtaining and updating membership information, checking contribution payments, locating healthcare facilities, registering for service queues, undergoing health screenings, consulting with doctors, and providing a This study aims to explore patient perceptions regarding the use of Mobile JKN through the Technology Acceptance Model (TAM) approach at Puskesmas Wolio in 2025. The research utilized a descriptive quantitative method with a cross-sectional design, gathering data through questionnaires, observations, and document review. The results indicate that the Perceived Usefulness aspect received a score of 76%, categorized as highly beneficial, implying that the majority of respondents considered Mobile JKN to be easy to use, particularly for service registration, accessing information, and speeding up service processes. The Perceived Ease of Use aspect scored 73%, categorized as beneficial, indicating that the application effectively supports healthcare service efficiency, from simplifying registration to saving time. In conclusion, the greater the perceived benefits of an information system, the higher its acceptance and sustained use among the community.

INTRODUCTION

Technological advances in the modern era are currently taking place very fast and are getting more sophisticated. The availability of information technology has become an important need in supporting various human activities, because almost all fields of work require technology to facilitate the completion of tasks. This is because information technology is able to manage data and information quickly, thus supporting more accurate decision-making while significantly reducing resource usage. (Aini & Sigit, 2023). One of the institutions that takes advantage of modern technological advances is BPJS Kesehatan, a public legal entity that provides a health insurance program for all Indonesian people and officially began operating on January 1, 2014. To increase operational effectiveness, BPJS Kesehatan launched an application-based service known as Mobile JKN (Rani, 2020).

The *Mobile JKN* application is designed to provide convenience to the community, including in registering new participants, managing and changing membership data, checking contributions, finding the location of health facilities, registering service queues, health screening, and consulting with medical personnel. In addition, this application also functions as a means of conveying criticism, suggestions, or complaints from the public. These health services are the right of every individual, including those organized through health centers, namely the health facility is a first-level service that provides preventive, palliative and handling services for people in their work areas. (Permenkes RI No. 19, 2024) and (Erika Novita Sari, 2024)

Referring to the *Technology Acceptance Model* (TAM), there are a number of aspects that affect a person's intention to adopt an innovation, namely usability, view of use, convenience perception, and personal standards. Among these aspects, consider usability to be seen as an important influence in the use of information systems, adoption flows, and user actions (Rahayu, 2016). If individuals feel that the JKN mobile application provides real benefits, then they tend to accept and be encouraged to continue using the service, especially if the application is able to meet their needs while providing benefits in the future (Wahyudi et al., 2021)

Previous research by (Andhi Febisatria, 2024) which examined the use of *Mobile JKN* applications with a TAM approach, found that the public recognizes the benefits of this application in making BPJS Kesehatan services easier. However, they also assessed that the application still has weaknesses, both in terms of features and system errors, causing difficulties in its use. Different results are shown in the study (Rani, 2020), There is an explanation that states that perceived *usefulness* has less impact on the view in the application (*attitude toward using*). On the other hand, perceived *ease of use* is recognized to have an impact on the view, and the user's view afterwards has an effect on the desire for action (*behavioral intention to use*). Based on these findings, BPJS Kesehatan needs to build user trust by providing continuous socialization so that the benefits of the *Mobile JKN* application can be felt more by the wider community.

The results of a preliminary study at the Wolio Health Center on March 18, 2025 showed that of the 10,382 BPJS patients who were registered and received health services in that month, only 17 people used the *Mobile JKN* application to access services. These findings show that the utilization rate of the application is still very low compared to the number of existing patients. This condition raises questions about patients' perceptions of the *Mobile JKN* application, both related to its usability, convenience, and obstacles they face in its use. Therefore, this study is important to analyze patient perceptions by utilizing the Technology Acceptance Model (TAM) framework which focuses on two main aspects, namely *perceived usefulness* and *perceived ease of use*.

METHOD

This study was carried out with a descriptive quantitative method using a cross-sectional design, where parameter measurements were carried out simultaneously at one time. Of the total 1,329 BPJS Kesehatan patients at the Wolio Health Center, 93 participants were obtained which were determined through the Slovin formula with an error level of 10% and explored using purposive sampling techniques based on the criteria of patients who had used the *Mobile JKN* application. The research activities took place in April-June 2025 with a focus on independent aspects, namely *Perceived Ease of Use* and *Perceived Usefulness*, as well as dependent variables in the form of patients' views on the use of *Mobile JKN*. The data acquisition instrument is in the form of a questionnaire with a 4-point Likert scale, equipped with stationery and a calculator. The collected data is processed through *editing*, *coding*, and *tabulation* stages, then evaluated using descriptive methods to show the frequency distribution and percentage of each research indicator.

RESULTS & DISCUSSION

Respondent Characteristics

Based on the results of the study, the demographic characteristics of *Mobile JKN* user respondents at the Wolio Health Center can be seen in the following table:

Table 1. Characteristics of *Mobile JKN* User Respondents at Wolio Health Center in 2025

Characteristics	Category	Quantity (n)	Percentage (%)
Age	14–19 years old	25	26,9
	20–35 years old	44	47,3
	36–45 years old	8	8,6
	46–80 years old	16	17,2
Gender	Man	36	38,7
	Woman	57	61,3
Work	Not working yet	21	22,6
	Employee	18	19,4
	Housewives	13	14,0
	Miscellaneous	41	44,0
Education	SMP	24	25,8
	SMA	34	36,6
	S1	23	24,7
	Miscellaneous	12	12,9

Source : Primary Data, 2025

Based on the table presented above, it can be concluded that the demographic characteristics of the respondents show that the majority of *Mobile JKN* users are in the age range of 20–35 years (47.3%),

followed by adolescents aged 14–19 years (26.9%), the elderly between 46–80 years old (17.2%), and the final adult aged 36–45 years (8.6%). These findings are in accordance with the theory (Wibowo, 2024) which states that the productive age group tends to be more technologically literate and more capable of accessing digital services, Based on previous research by (Febriyani et al., 2024), it also shows the dominant participation of the productive age group in the use of digital health service applications.

In terms of gender, the number of female respondents was more (61.3%) than men (38.7%), which shows that women are more active in using Mobile JKN. This is similar to research (Pramesti & Gita 2023) which shows trends indicating that women are more involved in digital healthcare due to their role in family health management.

In terms of employment, users are dominated by unemployed groups (22.6%), employees (19.4%), and housewives (14.0%), while other categories reach 44.0%. This shows that the Mobile JKN application is used by various levels of society, both those who are actively working and those who are not working, which confirms that this digital service reaches a wide segment of the community. These findings are in line with research (Yoga et al., 2022) that states that digital health services are used by productive age groups with a variety of employment backgrounds, including students, self-employed people, and employees.

From an educational perspective, the majority of respondents had a high school background (36.6%), followed by junior high school (25.8%) and S1 (24.7%), while other categories covered 12.9%. These findings show the dominance of secondary and upper education, which is related to the digital literacy needed to utilize the Mobile JKN application. According to (Wibowo, 2024), the level of education affects an individual's ability to understand procedures and utilize digital services.

Overall, the combination of characteristics of productive age, female gender, middle to upper level education, and diverse employment shows that acceptance and satisfaction with Mobile JKN is influenced by demographic factors. Users with these characteristics tend to be more critical, adaptive, and used to using technology, which has the potential to increase the effectiveness of application use and satisfaction with digital health services at the Wolio Health Center.

Patient Perception of the Use of *Mobile* JKN Using the TAM Method at the Wolio Health Center Perceived Ease of Use

Perceived Ease of Use is a key indicator in the undefined *Technology Acceptance Model* (TAM) which explains the extent to which users trust that using a system does not require heavy effort. In the context of this study, the indicator was obtained through several statement questions addressed to respondents regarding their participation in interacting with the Mobile JKN application. Based on the tabulation findings, a recapitulation of respondents' responses to statements included in the *Perceived Ease of Use* indicator as shown in table 2 is obtained:

Table 2. Repsonden's Answer recapitulation based on <i>Perceived Ease of Use</i>					
No	Statement	STS	TS	S	SS
<i>Perceived Easy Of Use</i>					
1	P1	0	28	40	25
2	P2	0	31	31	31
3	P3	0	30	27	36
4	P4	0	29	37	27
5	P5	0	8	44	41

Source : Primary Data, 2025

Based on the data contained in table 2, an analysis of the score based on the Likert scale was then analyzed. The results of the analysis regarding the aspect of user convenience are presented in table 3 as follows:

Table 3. Interpretation of score calculations						
Statement No.	STS	TS	S	SS	Total Score Per Statement $\sum f.n$	Highest score Per Statement Y (4.38)
	f.n	f.n	f.n	f.n		
1	0	56	120	100	276	372
2	0	62	93	124	279	372
3	0	60	81	144	285	372
4	0	58	111	108	277	372
5	0	16	132	164	312	372
Total Score	0	252	537	640	1429	1860
Results of the Achievement Assessment (Total Score Per Statement/Highest Total Score) x 100					(1429/1860) X 100 = 76%	

Source : Primary Data, 2025

Based on the information 3 above regarding the evaluation of the calculation of the number of perception of comfort of use, data was obtained that in the first statement (P1) the total number was 276 from the highest score of 372. In the second statement (P2), the total number reached 279 out of a high score of 372. Furthermore, in the third statement (P3) a total of 285 points were obtained out of the highest score of 372. For the fourth statement (P4), the number obtained was 277 out of a high score of 372. Meanwhile, in the fifth statement (P5), the highest total number was 312 out of the highest score of 372, showing more positive criticism than other statements and in the effectiveness evaluation data, a score of 76% was obtained with the respondent evaluation criteria being very useful in the use of the Mobile JKN application for JKN KIS participants.

This data is in line with the theory (Wicaksono, 2022) which asserts that the perception of user convenience is influenced by the clarity of the system, the availability of technical assistance, and adequate resources. People in the productive group and low secondary to upper education tend to quickly understand and adjust to digital applications, so the level of comfort in using Mobile JKN is very good.

In addition, this data is consistent with previous research (Harsono et al., 2021) which showed the perception of mobile JKN comfort by 84%, as well as research (Andriani et al., 2020) which stated that the easier a system is to use, the higher the user acceptance rate. The findings at the Wolio Health Center said that the Mobile JKN application is powerful to facilitate the enrollment process, access to information, and accelerate assistance for some JKN participants, even though a small number of users face digital literacy obstacles or limited internet access in some areas.

Overall, the figure of 76% shows that the convenience of using the Mobile JKN application is very good, so that it contributes positively to the acceptance and satisfaction of JKN participants in utilizing digital facilities at the Wolio Health Center.

Perceived Usefulness

Based on the tabulation findings, a recapitulation of respondents' responses to statements included in the *Perceived Usefulness* indicator as shown in table 4 is obtained:

Table 4. Recapitulation of Repsonden's Answer based on *Perceived Usefulness*

No	Statement	STS	TS	S	SS
	Perceived Of Usefulness				
1	P1	14	13	30	36
2	P2	20	10	27	36
3	P3	10	17	31	35

4	P4	13	16	26	38
5	P5	15	18	34	29
6	P6	14	10	34	34

Source: Primary Data, 2025

Based on the data contained in table 4, then an analysis of the score based on the Likert scale was carried out. The results of the analysis regarding the user convenience aspect are presented in table 5 as follows:

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Table 5. Interpretation of score calculations						
Statement No.	STS	TS	S	SS	Total Score Per Statement $\sum f.n$	Highest score Per Statement Y (4.38)
	f.n	f.n	f.n	f.n		
1	14	26	90	144	274	372
2	20	20	81	144	265	372
3	10	34	93	140	277	372
4	13	32	78	152	275	372
5	15	36	102	116	269	372
6	14	20	102	136	272	372
Total Score	86	168	546	832	1358	1860
Results of the Achievement Assessment (Total Score Per Statement/Highest Total Score) x 100					(1358/1860) X 100 = 73%	

Source : Primary Data, 2025

Based on the information 5 above related to the assessment of the calculation of the level of perception in use, data was obtained that in the first aspect (P1) the total number was 274 out of the highest score of 372. In the second aspect (P2), the total number reached 265 out of a highest score of 372. Furthermore, in the third aspect (P3) a total of 277 points were obtained from the highest score of 372. For the fourth aspect (P4), the number obtained was 275 out of a high score of 372. In the fifth aspect (P5), the total number was 269 out of a highest score of 372. Meanwhile, in the sixth aspect (P6), a score of 272 was obtained out of the highest score of 372, and in the performance measurement assessment, a score of 73% was obtained which was in the category of quite good based on the interpretation standard of 50-75%.

These findings are in line with the opinion (Wicaksono, 2022) that perception of being influenced by the extent to which tools can help individuals complete tasks or achieve their targets. The results of this research show that JKN participants view Mobile JKN as beneficial in facilitating the administrative process, providing access to membership information, and supporting service efficiency.

In addition, these findings are in sync with previous research by (Harsono et al., 2021) which found the perception of using Mobile JKN at 82.5%, as well as research (Nurhayati et al., 2019) which corroborates that hospital information systems provide real benefits for users. The variation in numbers between the research at the Wolio Health Center (73%) and the research of Harsono et al. (82.5%) may be due to constraints on the condition of the respondents, the level of digital understanding, and the quality of technological facilities at each research site.

Overall, the figure of 73% shows that the Mobile JKN application is beneficial for the majority of respondents, although it has not reached the maximum category. This reinforces that the perception of application usage is an important factor in the application and satisfaction of JKN participants with digital facilities at the Wolio Health Center.

COVER

Based on the findings of research that has been conducted at the Wolio Health Center, this conclusion was compiled based on field results to describe the percentage of respondents adopting *the Mobile JKN* application in terms of ease of use and usability aspects. The following is a summary based on the findings of the previous research. In the aspect of *Perceived Ease of Use* based on research data

at the Wolio Health Center, a score of 76% was obtained, with the interpretation classification being very useful. This indicates that the majority of respondents feel that *the Mobile JKN* application is practical to use, especially in service registration, access to information, and accelerating the service process. These findings confirm that ease of use is the main factor in preserving public acceptance of technological systems. Therefore, the higher the level of ease of use, the greater the degree of acceptance and utilization of *the Mobile JKN* application in supporting health services. In the aspect of *Perceived Usefulness* based on research data at the Wolio Health Center, a score of 73% was obtained, with a classification of useful interpretation. The majority of respondents consider that *the Mobile JKN* application is quite useful in supporting the effectiveness of health services, ranging from the simplicity of registration to time savings. These findings show that perceptions of technological affordability are significant to the decision to continue using the system. Thus, the greater the perceived usefulness of an information system, the higher the degree of acceptance and sustainability of its use among the public.

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