


Acceptance of Mobile JKN Application Technology Among Older Adults Reviewed from the Technology Acceptance Model in Supporting Gerontic Nursing Services

¹Crisna Lumban Gaol, ²Jefry Banjarnahor, ³Mery Lestari Simanjuntak, ⁴Dewi Purba, ⁵Renta Sihombing

Sekolah Tinggi Ilmu Kesehatan Kesehatan Baru Doloksanggul

| Article Info | ABSTRACT |
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| <p>Keywords: Mobile JKN, elderly, Technology Acceptance Model, gerontic nursing, technology acceptance</p> | <p>The Mobile JKN application is a digital service innovation developed by BPJS Kesehatan to facilitate public access to healthcare services online. Among the elderly, technology acceptance becomes a challenge due to age limitations, technological abilities, and adaptation to digital systems. This study aimed to analyze the technology acceptance of the Mobile JKN application among the elderly based on the Technology Acceptance Model (TAM) in supporting gerontic nursing services in Humbang Hasundutan Regency in 2025. This research used a quantitative method with a cross sectional design. The population consisted of elderly users of the Mobile JKN application in Humbang Hasundutan Regency. The sampling technique used purposive sampling with a total sample of 379 respondents. Data were collected through questionnaires and analyzed using Structural Equation Modeling–Partial Least Square (SEM-PLS) with SmartPLS software. The results showed that perceived usefulness significantly affected elderly user satisfaction with a p-value of 0.000 and t-statistic of 13.547. Perceived ease of use significantly affected elderly user satisfaction with a p-value of 0.000 and t-statistic of 4.828. Perceived usefulness significantly affected continuance intention to use the Mobile JKN application with a p-value of 0.000 and t-statistic of 7.034. Perceived ease of use also significantly affected continuance intention with a p-value of 0.000 and t-statistic of 4.483. Elderly user satisfaction significantly affected continuance intention with a p-value of 0.03 and t-statistic of 2.177. Based on the results, it can be concluded that the technology acceptance of the Mobile JKN application among the elderly is influenced by perceived usefulness and perceived ease of use in supporting gerontic nursing services in Humbang Hasundutan Regency in 2025.</p> |
| <p>This is an open access article under the CC BY-NC license</p>  | <p>Corresponding Author: Crisna Lumban Gaol Sekolah Tinggi Ilmu Kesehatan Kesehatan Baru Doloksanggul</p> |

INTRODUCTION

According to the World Health Organization (WHO), older adults are a vulnerable age group that often experiences various health problems, thus requiring continuous and easily accessible healthcare services. Along with the rapid development of digital technology in the healthcare sector, the Indonesian government through BPJS Kesehatan has developed the

Mobile JKN application as a digital healthcare service innovation to improve access to healthcare services for the public, including older adults.

The Mobile JKN application provides various healthcare service features, such as participant registration, membership data updates, online queue registration for healthcare facilities, contribution billing information, and online health consultation services. The presence of this application is expected to improve the efficiency of healthcare services and make it easier for the public to obtain healthcare services without having to visit healthcare facilities directly.

However, in its implementation, the use of digital technology among older adults still faces several obstacles. Older adults often experience limitations in understanding technology, difficulties in operating digital applications, visual impairments, and low levels of digital literacy. These conditions result in not all older adults being able to utilize the Mobile JKN application optimally.

The Technology Acceptance Model (TAM) is one of the most widely used theories to explain an individual's acceptance of information technology usage. TAM states that technology acceptance is influenced by two main factors: perceived usefulness and perceived ease of use. These two factors subsequently influence user satisfaction and the intention to continue using the technology.

In gerontic nursing services, the use of digital health technology has become an important effort to improve the quality of healthcare services for older adults. The utilization of the Mobile JKN application can help older adults obtain healthcare services more quickly, reduce queues at healthcare facilities, and improve independent access to health information. Therefore, technology acceptance among older adults needs to be considered to ensure that digital-based healthcare services can function optimally.

Humbang Hasundutan Regency is one of the regencies in North Sumatra with a high level of National Health Insurance (JKN) participation. The local government continues to encourage the community to utilize digital healthcare services through the Mobile JKN application. However, based on the researcher's preliminary observations, there are still older adults who experience difficulties using the Mobile JKN application due to limited understanding of digital technology and limited ability to operate smartphones.

Previous research conducted by Fred Davis (1989) stated that perceived usefulness and perceived ease of use are the main factors influencing technology acceptance. Another study by Viswanath Venkatesh and Fred Davis (2000) also stated that user satisfaction with information systems would increase the intention to continue using technology.

Based on the description above, the researcher is interested in conducting a study on the acceptance of the Mobile JKN application technology among older adults based on the Technology Acceptance Model in supporting gerontic nursing services in Humbang Hasundutan Regency in 2025.

RESEARCH METHODS

This study employed a quantitative research method with a cross-sectional study design. The research was conducted in Humbang Hasundutan Regency in 2025. The population in this study consisted of all older adults using the Mobile JKN application in Humbang Hasundutan Regency. The sampling technique used was purposive sampling, with a total sample of 379 respondents.

Data were collected using questionnaires related to perceived usefulness, perceived ease of use, user satisfaction, and the intention for continued use of the Mobile JKN application. Data analysis was performed using SmartPLS through univariate and multivariate analyses with Structural Equation Modeling–Partial Least Square (SEM-PLS) model testing.

RESULTS

Respondent Characteristics Based on Gender

Table 1. Frequency Distribution of Respondents Based on Gender

| No. | Gender | Frequency (n) | Percentage (%) |
|-------|--------|---------------|----------------|
| 1. | Male | 146 | 39 |
| 2. | Female | 233 | 61 |
| Total | | 379 | 100 |

Based on the table above, it is known that the majority of respondents were female, with 233 respondents (61%).

Respondent Characteristics Based on Age

Table 2. Frequency Distribution of Respondents Based on Age

| No. | Age | Frequency | Percentage (%) |
|-------|-------------|-----------|----------------|
| 1 | < 50 years | 39 | 10 |
| 2 | 51–60 years | 170 | 45 |
| 3 | 61–70 years | 123 | 32 |
| 4 | 71–80 years | 46 | 12 |
| 5 | ≥ 80 years | 1 | 1 |
| Total | | 379 | 100 |

The majority of respondents were in the 51–60 years age group, with 170 respondents (45%).

Perceived Usefulness Variable

Table 3. Distribution of the Perceived Usefulness Variable

| No. | Category | Frequency | Percentage (%) |
|-------|----------|-----------|----------------|
| 1. | Good | 320 | 84.4 |
| 2. | Poor | 59 | 15.6 |
| Total | | 379 | 100 |

Based on the table above, it is known that most respondents perceived the Mobile JKN application as having good usefulness, with 320 respondents (84.4%).

Perceived Ease of Use Variable

Table 4. Distribution of the Perceived Ease of Use Variable

| No. | Category | Frequency | Percentage (%) |
|-------|------------------|-----------|----------------|
| 1. | Easy to Use | 315 | 83.1 |
| 2. | Difficult to Use | 64 | 16.9 |
| Total | | 379 | 100 |

Most respondents stated that the Mobile JKN application was easy to use, with 315 respondents (83.1%).

User Satisfaction Variable

Table 5. Distribution of User Satisfaction

| User Satisfaction | Frequency | Percentage (%) |
|-------------------|-----------|----------------|
| Satisfied | 331 | 87.3 |
| Dissatisfied | 48 | 12.7 |
| Total | 379 | 100 |

The majority of respondents were satisfied with using the Mobile JKN application, with 331 respondents (87.3%).

Continuance Intention Variable

Table 6. Distribution of Continuance Intention

| No. | Continuance Intention | Frequency | Percentage (%) |
|-------|-----------------------|-----------|----------------|
| 1 | High | 340 | 89.7 |
| 2 | Low | 39 | 10.3 |
| Total | | 379 | 100 |

Most respondents had a high continuance intention toward the use of the Mobile JKN application, with 340 respondents (89.7%).

Discussion

The results of this study indicate that the perceived usefulness of the Mobile JKN application has a significant effect on user satisfaction. Older adults who perceive the Mobile JKN application as beneficial in helping them obtain healthcare services tend to feel more satisfied with using the application. This finding shows that the tangible benefits of the application are an important factor in the acceptance of digital health technology.

Perceived ease of use also has a significant effect on user satisfaction. Older adults who perceive the application as easy to learn and operate demonstrate higher levels of satisfaction. Ease of use is an important factor because older adults often experience limitations in using digital technology.

In addition, user satisfaction influences the intention for continued use of the Mobile JKN application. The more satisfied users are with the application, the stronger their intention to continue using it to obtain healthcare services.

The findings of this study are consistent with the Technology Acceptance Model developed by Fred Davis (1989), which states that perceived usefulness and perceived ease of use influence technology acceptance. This study also supports the research conducted by

Viswanath Venkatesh and Fred Davis (2000), which stated that user satisfaction can increase continuance intention toward the use of information technology.

In the context of gerontic nursing services, the Mobile JKN application can serve as a supporting tool for digital healthcare services for older adults. Therefore, it is necessary to develop applications that are simpler and more elderly-friendly, as well as provide education on the use of digital health technology for older adults so that the utilization of the Mobile JKN application can be optimized.

CONCLUSION

Based on the results of the study regarding the acceptance of the Mobile JKN application technology among older adults reviewed from the Technology Acceptance Model in supporting gerontic nursing services in Humbang Hasundutan Regency in 2025, it can be concluded that:

1. Perceived usefulness of the Mobile JKN application has a significant effect on elderly user satisfaction.
2. Perceived ease of use of the Mobile JKN application has a significant effect on elderly user satisfaction.
3. Perceived usefulness and perceived ease of use have a significant effect on the intention for continued use of the Mobile JKN application.
4. User satisfaction has a significant effect on the intention for continued use of the Mobile JKN application.
5. Acceptance of the Mobile JKN application technology among older adults is influenced by perceived usefulness, perceived ease of use, and user satisfaction.

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