

Awareness, Attitudes, and Perceived Quality of life regarding Sehhaty Application among aging adults in Jeddah, Saudi Arabia: A Cross-Sectional Study

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Abstract

Digital health applications have become an essential component of modern healthcare systems by improving access to healthcare services and promoting patient engagement. The Sehhaty application is one of Saudi Arabia's leading governmental digital health platforms; however, evidence regarding aging adults' awareness, attitudes, and experiences with its use remains limited. Therefore, this study examined factors associated with aging adults' awareness and attitudes toward using the Sehhaty application and explored its relationship with perceived quality of life in Jeddah, Saudi Arabia

A quantitative cross-sectional study was conducted among 200 adults aged 50 years and older residing in Jeddah, Saudi Arabia. Data were collected using a structured questionnaire assessing demographic characteristics, awareness of the Sehhaty application, attitudes toward its use, and perceived quality of life. Statistical analyses were performed using SPSS version 27, including descriptive statistics, reliability analysis, Chi-square tests, correlation analysis, and regression analysis. Statistical significance was set at $p \leq .05$

The findings showed that participants generally had high awareness of the Sehhaty application, and most had previously used the application. Overall, participants reported positive attitudes toward Sehhaty, particularly regarding its usefulness, ease of use, and trustworthiness. No significant associations were found between demographic characteristics and application use. However, positive attitudes toward the Sehhaty application were significantly associated with better perceived quality of life and emerged as a significant predictor of quality-of-life outcomes among the study population

The findings suggest that fostering positive perceptions of the Sehhaty application may contribute to improved quality of life among aging adults. Enhancing the accessibility and usability of digital health services while addressing the specific needs of aging adults may strengthen healthcare engagement and improve healthcare experiences

.Keywords: Aging adults; mobile health; Sehhaty; digital health; quality of life; Saudi Arabia

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1. Introduction

The rapid advancement of mobile health (mHealth) technologies has transformed healthcare delivery systems by improving access to healthcare services, supporting self-management, and enhancing health-related quality of life. As part of broader digital transformation initiatives, governments increasingly rely on digital health applications to improve the efficiency, accessibility, and responsiveness of public healthcare services. These technologies are particularly important for aging adults, who often require continuous access to healthcare services and regular management of chronic health conditions (Bertolazzi et al., 2024; Jutai et al., 2024)

In Saudi Arabia, digital health transformation represents a key component of healthcare modernization under Vision 2030 (Saudi Ministry of Health, 2024). The Ministry of Health has introduced several digital platforms to improve healthcare accessibility and service delivery, among which the Sehhaty application is one of the most widely used (Saudi Ministry of Health, 2026). The application provides a variety of healthcare services,

including appointment booking, access to medical records, preventive healthcare services, prescription management, and communication with healthcare providers (Saudi Ministry of Health, 2026)

Despite the growing availability of digital health services, disparities in the adoption and utilization of mHealth technologies remain a significant challenge. Aging adults may experience difficulties in accessing and using digital healthcare applications because of differences in digital literacy, technology acceptance, and other age-related factors. Consequently, understanding how older adults perceive and utilize government-provided digital health services has become increasingly important for ensuring equitable access to healthcare and promoting inclusive public service delivery

Although the Sehhaty application has been widely implemented across Saudi Arabia, limited research has specifically examined aging adults' awareness and attitudes toward the application and its potential impact on quality of life. Furthermore, evidence regarding the factors influencing the use of national digital health platforms among older adults remains limited, particularly within the Saudi context. This gap highlights the need for further investigation into how aging adults engage with digital healthcare services and whether these services contribute to improved well-being

Therefore, this study aims to investigate the factors influencing aging adults' awareness and attitudes toward using the Sehhaty application and to examine its perceived quality of life in Jeddah, Saudi Arabia. The findings may contribute to the growing body of knowledge on digital health adoption and provide practical insights for policymakers and healthcare administrators seeking to improve the accessibility and effectiveness of digital health services for aging populations

1.1 Research Questions:

What is the level of awareness among aging adults regarding the Sehhaty application?

What factors influence the adoption and use of the Sehhaty application among aging adults?

How does the use of the Sehhaty application relate to health-related quality of life among aging adults?

The expected findings of this study include identifying the major usability, cognitive, and awareness-related factors influencing mHealth adoption among aging adults. The study is also expected to clarify the extent to which using the Sehhaty application contributes to improving quality of life. These findings may help enhance digital health policies, strengthen inclusive public service delivery, and support healthy aging through the effective use of information technology.

2. Literature Review

Digital health technologies, particularly mobile health (mHealth) applications, are increasingly recognized as important tools for improving healthcare accessibility, efficiency, and quality of life among aging adults. Previous studies have examined the effectiveness, acceptance, and challenges associated with mHealth applications from different perspectives, including clinical outcomes, user experiences, and healthcare system adoption.

Several studies have demonstrated the positive impact of mHealth applications on the quality of life of aging adults.

A randomized clinical trial conducted in Hong Kong found that the use of a mobile health application combined with nurse follow-up significantly improved self-care abilities and overall quality of life among community-dwelling older adults (Wong et al., 2022). Similarly, qualitative research involving aging adults with cognitive impairment reported that mHealth technologies supported daily health management and improved communication with healthcare providers, which positively influenced participants' health-related quality of life (Christiansen & Lindberg, 2020).

Systematic reviews have further supported the benefits of mHealth technologies for aging populations. Chou et al. (2023) found that mobile health applications, including chatbot-based interventions, showed strong potential in improving mental health and psychological well-being among older users. In addition, Paiva et al. (2020) highlighted the role of mobile applications in disease management, health monitoring, and promoting healthier lifestyles among aging adults.

During the COVID-19 pandemic, mHealth applications also played an important role in maintaining continuity of healthcare services and supporting access to medical care for older individuals (Abbaspur-Behbahani et al., 2022).

Despite these advantages, previous literature consistently identifies several barriers that limit mHealth adoption among aging adults. Common challenges include limited digital literacy, usability difficulties, cognitive decline, and reduced confidence in using mobile technologies. Tajudeen et al. (2022)

identified accessibility, usability, and perceived usefulness as major factors influencing aging adults' willingness to use mobile health applications. Similarly, Ramdoowar et al. (2024) emphasized the importance of interface design, noting that many older users experience difficulties when applications contain complex layouts, unclear instructions, or unfamiliar medical terminology.

More recently, Sun et al. (2026) explored older adults' experiences with mHealth applications using a qualitative approach. The study found that age-related stereotypes, limited digital literacy, usability challenges, and insufficient social support negatively influenced older adults' willingness to use mobile health applications. The authors emphasized that age-friendly design and appropriate support strategies are essential to improve digital health adoption among older adults. These findings further highlight the importance of examining aging adults' awareness and attitudes toward government-supported digital health applications such as the Sehhaty application.

Within the Saudi Arabian context, research on mHealth adoption has mainly focused on the general population rather than aging adults specifically. Khalifa et al. (2018) examined the use of mobile health applications among mental health patients in Saudi Arabia and reported moderate levels of adoption influenced by awareness and perceived usefulness. Furthermore, Jadi (2020) discussed both the opportunities and challenges associated with mobile health services in Saudi Arabia, emphasizing the importance of infrastructure readiness and user acceptance. Aljohani and Chandran (2019) also identified several factors affecting mHealth adoption within the Saudi healthcare system, including trust, ease of use, and organizational support.

Although these studies provide valuable insights into mHealth adoption and usability, a significant gap remains regarding aging adults' awareness and attitudes toward national healthcare applications such as the Sehhaty application. In addition, limited research has examined the relationship between the use of government-provided mHealth applications and quality of life among aging adults in urban Saudi settings such as Jeddah. Therefore, this study seeks to address this gap by investigating the factors influencing aging adults' awareness and use of the Sehhaty application and examining its relationship with health-related quality of life. The findings may contribute to the development of more inclusive digital health policies and improved public healthcare services in Saudi Arabia.

3Research Methodology

3.1Research Design

This study adopted a quantitative cross-sectional research design to investigate the factors influencing aging adults' awareness and attitudes toward the use of the Sehhaty mobile health application in Jeddah, Saudi Arabia. A cross-sectional design involved collecting data at a single point in time, which allowed the researchers to examine relationships between key variables such as awareness, attitudes, and usage behavior. A quantitative approach was appropriate for this study because it enabled the collection of measurable data using structured questionnaires. This method also allowed for statistical analysis to identify patterns and relationships among variables within the target population.

In the field of digital health research, quantitative cross-sectional designs have been commonly used to assess technology adoption, user satisfaction, and perceived usefulness. Therefore, this design provided a suitable framework for examining how aging adults interacted with government-supported digital health applications such as the Sehhaty application.

3.2Study Setting

The study has been conducted in Jeddah, one of the largest urban centers in Saudi Arabia. Jeddah has a well-developed healthcare infrastructure and is actively engaged in digital transformation within the healthcare sector. The Sehhaty application, developed by the Ministry of Health, provides a wide range of digital health services, including appointment booking, access to medical records, preventive care services, and communication with

healthcare providers. The application is widely promoted across healthcare facilities in Jeddah, making the city an appropriate setting for studying awareness and usage among aging adults.

In addition, Jeddah includes a diverse population in terms of education, socioeconomic status, and health conditions, which enhances the ability to explore variations in digital health adoption among aging adults.

3.3 Study Population

The target population of this study consisted of adults aged 50 years and above who resided in Jeddah. This age group was considered important in digital health research because individuals at this stage of life were more likely to require regular healthcare services, chronic disease management, and continuous medical follow-up.

Although different international definitions classify "older adults" as individuals aged 60 years and above, this study included participants starting from the age of 50 in order to obtain a broader understanding of digital health awareness and usage among aging populations. This wider age range also helped improve sample accessibility and strengthened the statistical power of the study.

However, adults in this age group might have faced several challenges in adopting mobile health technologies, including limited digital literacy, reduced familiarity with smartphones applications, and age-related changes in vision, cognition, or motor skills. These factors might have influenced their awareness, attitudes, and use of digital health services.

Therefore, this study aimed to examine aging adults' awareness and attitudes toward the Sehhaty application and to explore its relationship with their perceived quality of life.

3.4 Inclusion and Exclusion Criteria

Specific inclusion and exclusion criteria were applied to ensure that the study participants were appropriate for the research objectives.

The inclusion criteria included individuals aged 50 years and above who resided in Jeddah and used smartphones. Participants were also required to have at least basic awareness of the Sehhaty application or to have previously heard about digital health services.

The exclusion criteria included individuals younger than 50 years, individuals who did not use smartphones, and those who were unable to complete the questionnaire due to severe cognitive or communication difficulties. These criteria were applied to ensure that participants were capable of providing reliable and valid responses regarding their experiences with mobile health applications.

3.5 Sample Size and Sampling Technique

The study used a convenience sampling technique to recruit participants. Participants were selected based on their accessibility and willingness to participate. Convenience sampling was considered appropriate for this study due to practicality in recruiting participants from the target population.

Older adults visiting primary healthcare centers, outpatient clinics, and community health facilities in Jeddah were invited to participate in the study. This approach allowed the researcher to reach individuals who were more likely to interact with healthcare services and digital health platforms.

The sample size for this study was approximately 200 participants. This sample size was considered adequate for cross-sectional studies and was sufficient to perform statistical analyses and examine the relationships between awareness, attitudes, and quality of life.

3.6 Data Collection Instrument

The data were collected using a structured questionnaire developed based on previous studies related to mobile health adoption and quality of life among aging populations.

The questionnaire consisted of four main sections. The first section collected demographic information, including age, gender, education level, and the presence of chronic diseases. These variables help describe the characteristics of the study sample.

The second section assessed participants' awareness of the Sehhaty application, including their knowledge of its services and features. The third section measured participants' attitudes toward using the application, including perceived usefulness, ease of use, and trust in digital healthcare services.

The fourth section evaluated the perceived impact of the Sehhaty application on quality of life. This includes aspects such as improved access to healthcare, better communication with healthcare providers, and enhanced self-management of health conditions .

All items were measured using a five-point Likert scale ranging from “strongly disagree” to “strongly agree,” allowing participants to express the degree of their agreement with each statement .

3.7Data Collection Procedure

Prior to data collection, ethical approval was obtained from the relevant institutional review board or research authority. Participants were informed about the purpose of the study, its procedures, and their rights before participation .

The questionnaire was distributed both in paper form at healthcare facilities such as primary healthcare centers and outpatient clinics, and in electronic form through online survey platforms. This dual approach helped increase accessibility and participation among aging adults with different levels of digital literacy . Participants were given sufficient time to complete the questionnaire. Assistance was provided when necessary to ensure that all questions are clearly understood .

3.8Data Analysis

The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS).

Descriptive statistics were used to summarize demographic characteristics and participants' responses, including frequencies, percentages, means, and standard deviations . Inferential statistical tests were used to examine relationships between study variables. Correlation analysis was conducted to assess the relationship between awareness of the Sehhaty application and attitudes toward its use .

In addition, regression analysis was used to identify the factors that significantly influence the adoption of the application and its perceived impact on quality of life. The level of statistical significance was set at $p \leq 0.05$.

Ethical considerations were an essential component of this study. Participants were fully informed about the purpose of the research and their rights prior to participation .

Participation was voluntary, and participants had the right to withdraw at any time without any consequences. No personally identifiable information was collected, and all responses remained confidential .

The data were used strictly for academic purposes and were reported in aggregate form to ensure privacy and confidentiality of all participants .

4. Results

A total of 200 participants were included in the final analysis. Females represented the majority of respondents (74%), whereas males accounted for 26%. The largest proportion of participants (59.5%) belonged to the 50–54-year age category.

Awareness of the Sehhaty application was highly prevalent among respondents. Nearly all participants (97%) reported being aware of the application, and 91% indicated previous use.

However, usage patterns varied, with many respondents reporting occasional rather than regular use.

Participants generally reported positive perceptions toward Sehhaty. Approximately 87.5% agreed that the application was useful, 86.5% trusted the information provided, and 87% believed that it saved time. In addition, 77.5% considered the application easy to understand and navigate.

Regarding quality-of-life outcomes, positive responses were frequently reported. Around 83.5% stated that Sehhaty improved access to healthcare services, while 78% reported overall improvements in quality of life. Furthermore, 74.5% believed that the application increased their independence in managing healthcare needs.

Internal consistency analysis demonstrated excellent reliability for the questionnaire (Cronbach's Alpha = .921).

Chi-square findings showed no statistically significant relationship between gender and use of the Sehhaty application ($\chi^2 = 0.000$, $p = 1.000$). Likewise, age category was not significantly associated with awareness levels.

Correlation analysis demonstrated a statistically significant moderate positive relationship between attitudes toward Sehhaty and quality-of-life outcomes ($r = .539$, $p < .001$). Regression analysis indicated that attitudes toward the application significantly predicted quality-of-life outcomes and explained 29% of the variance ($R^2 = .290$).

Table 1. Sociodemographic Characteristics of the Participants (N = 200)

%	n	Characteristic
		Gender
74.0	148	Female
26.0	52	Male
		Age Group
59.5	119	50–54 years
10.5	21	55–59 years
13.0	26	60–64 years
7.5	15	65–69 years
9.5	19	≥70 years
		Education Level
32.0	64	Secondary or below
53.5	107	University
14.5	29	Postgraduate
		Chronic Disease
45.0	90	Yes
55.0	110	No

Table 2. Awareness and Previous Use of the Sehhaty Application (N = 200)

%	n	Variable
97.0	194	Aware of the Sehhaty application
3.0	6	Not aware
91.0	182	Previous use of Sehhaty
9.0	18	Never used Sehhaty

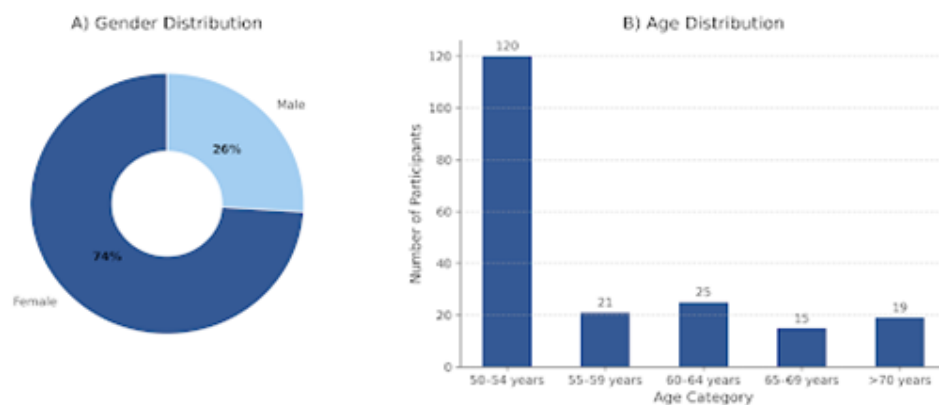


Figure 1: Demographic characteristics of the study participants (N = 200). (A) Distribution of participants by gender, showing a predominance of female respondents (74%). (B) Distribution of participants across different age categories, with the majority falling within the 50–54 years cohort.

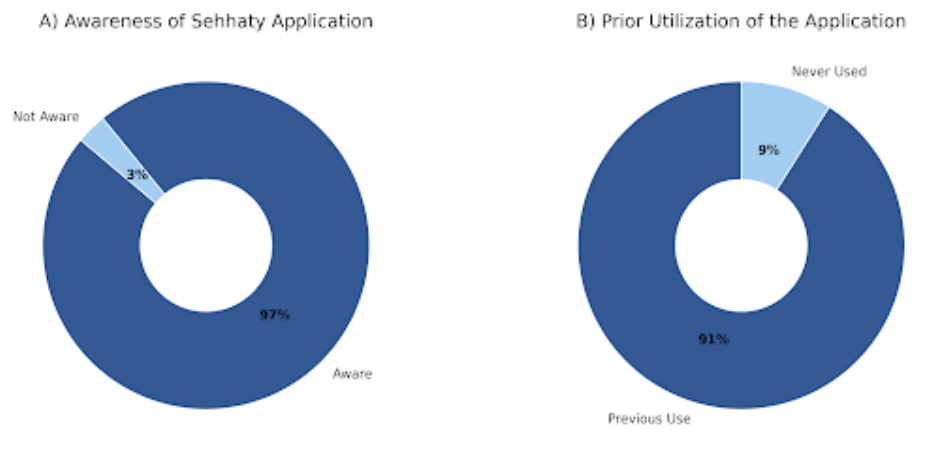


Figure 2: Participant interaction and familiarity with the "Sehhaty" mobile health application (N = 200). (A) Level of awareness regarding the existence and purpose of the application (97% aware vs. 3% not aware). (B) Proportions of previous utilization, demonstrating that 91% of the sample had prior experience using the platform.

5. Discussion

This study explored awareness, attitudes, and use of the Sehhaty application among aging adults in Jeddah and examined its relationship with perceived quality of life. Findings revealed substantial awareness and widespread prior use of the application among respondents. These findings may reflect the expansion of digital health services and governmental efforts to improve healthcare accessibility across Saudi Arabia.

Although awareness and previous use were highly reported, participants differed in usage frequency.

This suggests that awareness alone may not be sufficient to ensure continuous engagement with digital health applications. Previous studies have similarly highlighted the influence of usability barriers, digital literacy, and confidence in technology use among older populations.

Participants generally expressed positive attitudes toward Sehhaty, particularly regarding usefulness, trustworthiness, and convenience. These findings align with previous evidence indicating that perceived usefulness and ease of use play important roles in technology acceptance among older adults.

The present study also identified a statistically significant relationship between positive attitudes and quality-of-life outcomes. Participants who reported more favorable perceptions of the application also tended to report better healthcare experiences and improved quality of life. This finding is consistent with previous research suggesting that digital health technologies can support self-management, facilitate healthcare access, and improve well-being.

Interestingly, demographic variables were not significantly associated with application use. This may indicate that psychological and usability-related factors have greater influence on engagement with digital healthcare services than demographic characteristics alone.

Overall, these findings highlight the importance of designing digital health systems that address the specific needs of aging populations through user-centered and accessible approaches.

6. Conclusion

This study investigated aging adults' awareness and attitudes toward using the Sehhaty application and examined its relationship with quality of life in Jeddah, Saudi Arabia. The findings demonstrated high levels of awareness and previous use of the application among participants. Positive attitudes toward Sehhaty were significantly associated with improved quality-of-life outcomes.

The study highlights the importance of user-centered digital healthcare systems and emphasizes the need to improve accessibility and support for aging populations. Strengthening digital health initiatives may contribute to enhancing healthcare experiences and promoting healthy aging in Saudi Arabia.

7. Recommendations

Based on the findings of this study, several recommendations are proposed:

Health institutions should implement educational initiatives to improve digital literacy among aging adults. The Sehhaty application should incorporate more age-friendly design features, including simplified navigation, larger text options, and clearer instructions.

Public awareness campaigns should be expanded to encourage sustained use of digital healthcare services.

Healthcare professionals should provide guidance and technical support for aging adults during initial application use.

Future studies should adopt longitudinal approaches to evaluate long-term outcomes associated with mobile health use. Additional research should examine social, behavioral, and technological factors influencing adoption across different regions of Saudi Arabia.

8. Future Research Directions

Future research should conduct longitudinal studies to examine changes in aging adults' awareness and attitudes toward the Sehhaty application over time. Studies involving larger and more diverse samples from different regions of Saudi Arabia are recommended to improve the generalizability of the findings. Future research may also investigate additional factors affecting the adoption and continued use of the Sehhaty application, including digital literacy, health literacy, socioeconomic characteristics, and perceived ease of use. Moreover, qualitative studies are needed to provide deeper insights into older adults' experiences, barriers, and facilitators related to the use of digital health applications. Evaluating interventions designed to improve awareness and promote effective use of the Sehhaty application would also be valuable.

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