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THE IMPACT OF THE "SEHA" ELECTRONIC PLATFORM ON THE LEVEL OF BENEFICIARIES' SATISFACTION WITH HEALTH LICENSING SERVICES IN THE KINGDOM OF SAUDI ARABIA: A DESCRIPTIVE STUDY

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ABSTRACT

The study sought to investigate the effect of the electronic platform "Seha" on beneficiaries' satisfaction from health licensing services in Saudi Arabia, through a descriptive research approach. This study aimed at assessing beneficiaries' perceptions on the usability of the platform, satisfaction with electronic services, and perceived impact and challenges of using the platform. The data was gathered using a structured questionnaire and respondents were 300 individuals representing various age, gender and educational groups. Data analysis included descriptive statistical methods such as means, standard deviations, frequencies and percentages. The results showed that there was a positive perception of the "Seha" platform among the participants in general. Overall there was high agreement on easy use of platform, accessibility of services, transaction processing time, and effectiveness of technical support. Beneficiaries also indicated that having this platform made health licensing transactions quicker and easier, and allowed them to obtain health services without having to travel to a physical location. Some aspects were rated as moderately satisfactory, however, this mainly concerned the completeness of the services, the procedures for uploading files and some technical or operational concerns. The participants also noted that there is a need to constantly enhance the platform's interface and functionality. The study found that the "Seha" electronic platform has a great impact on increasing the beneficiaries' satisfaction and promoting digital transformation in the Saudi healthcare sector within the framework of Saudi Vision 2030 objectives. Based on the study, recommendations include ongoing technical development, better service integration, user experience, and technical support services that will further enhance the effectiveness and sustainability of electronic health licensing services.

KEYWORDS: Seha Platform, Electronic Health Platform, Health Licensing Services, Beneficiary Satisfaction, Digital Transformation, Saudi Arabia, E-Government, Descriptive Study.

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1. INTRODUCTION

Governmental public services are greatly impacted by the swift pace of information and communication technology development, which has changed how governments provide public services. E-government platforms have emerged at a critical time to improve administrative efficiency, make services more accessible and increase user satisfaction. In the healthcare sector, digital transformation has contributed to reducing bureaucratic procedures and minimizing the need for physical interaction in completing health-related transactions and licensing procedures. The World Health Organization defines digital health as the "systematic application of digital technologies to assist in delivering healthcare, enhancing the quality of service, and solving health-related problems. By leveraging digital health systems, healthcare providers can not only improve the safety, accessibility, and effectiveness of healthcare services but also lower operational expenses.

To align with these global developments, Saudi Arabia has made digital transformation a key pillar of its national development plan, Saudi Vision 2030, which focuses on the modernization of public sector services, especially in the healthcare sector. To assist such a shift, the Ministry of Health has launched a number of digital initiatives with one of the most prominent being the Seha electronic platform which seeks to provide integrated health care services in a single electronic interface. The platform helps in the communication between the beneficiaries and the Health Care Authorities and allows for completion of various health-related transactions electronically, such as Health Licensing Services.

Past research has demonstrated the increasing significance of digital health apps for the improvement of service quality and users' satisfaction. For example, Alharbi et al. (2021) found that using the Seha application helped to increase access to health care services, the satisfaction of the people using it and the efficiency of service delivery compared to the traditional methods of providing the services. Likewise e-health is defined by Eysenbach (2001) as a combination of medical informatics, public health and digital communication technologies with a special focus on the use of the internet for healthcare services in the health care system. This concept was further advanced by Shaw et al. (2017) who suggested a multidimensional approach to the evaluation of e-health that introduces three components, technical, organizational and human, and thus supports the value of multidimensional user-centered assessment models.

Since the onset of COVID-19, the demand for assessing digital healthcare platforms has risen significantly as the use of electronic health services has gone up significantly. According to Alanzi (2022), Saudi users were highly satisfied with mobile health apps, mainly because of the system reliability, mobility, and functionality characteristics. In addition, AlSalloum et al. (2023) suggested that demographic factors and system-related factors significantly affect e-health services users' satisfaction, which in turn affects their user experience, and therefore, this is different for different groups of people in Saudi society.

Although digital health systems are emerging and there are studies that investigate general e-health applications, there is still a significant amount of work that investigates beneficiaries' satisfaction with health licensing services offered through the digital health system Seha. Health licensing services are different from other kinds of health care or telemedicine services and have specific aspects of their procedures, regulations and administration. Furthermore, platform actors such as healthcare professionals, healthcare facilities and regulatory authorities directly engage with the actors of these services in specific operational environments that demand specific assessments.

Thus, the aim of this study is to assess the effect of Seha electronic platform on beneficiaries' satisfaction with health licensing services in the Kingdom of Saudi Arabia. In particular, the study seeks to determine users' perceptions of the usability of the platform, measure their satisfaction on the most important attributes of the service (accessibility, speed, efficiency, etc.) and examine how the perceived benefit of the platform for the organization and the individual changes as a result of its use. The study also aims to find out the difficulties encountered by the beneficiaries in accessing the platform and the possibilities for further development.

The value of this study is that it adds to the expanding body of research on digital health governance and e-service quality in the Saudi healthcare sector. Furthermore, this research will give realistic recommendations to help the ongoing advancements of the Seha platform to meet the goals of Saudi Vision 2030 and the overall objectives of sustainable digital transformation in healthcare services.

2. LITERATURE REVIEW

The quickly evolving digital healthcare

technologies have garnered significant scholarly interest across the globe, especially on the adoption aspect, user satisfaction, service quality, and the effectiveness of electronic healthcare systems. The current literature has tended to approach digital health services from a theoretical and empirical perspective of technology acceptance and user behaviour in healthcare settings. These models include the Technology Acceptance Model (TAM) and its extensions, which have been the most commonly used models to explain user interaction with e-health systems.

Stoumpos et al. (2023) provided a thorough review of digital transformation by focusing on technology acceptance in health care. They found that perceived ease of use, perceived usefulness, trust, and system reliability were some of the most important factors that influenced users' willingness to use digital healthcare platforms. The study also showed that the service efficiency and technical reliability mediate the relationship between the overall user satisfaction. The authors estimate that if the performance and usability of the system is poor, users might not persist with the use of the digital health service even if they originally intended to use it. These findings give a theoretical base to the current study, especially for the assessment of the usability and reliability as the two most important properties of a platform to evaluate the satisfaction of beneficiaries.

In Saudi Arabia, Alharbi et al. (2021) performed a cross-sectional study to assess the Seha application among users and non-users of telemedicine services. They found that the users of Seha platform perceived their access to healthcare services and their overall satisfaction with it as significantly higher than the non-users. The study has shown the capability of Seha platform to enhance the accessibility and efficiency of healthcare services. This study, however, was mainly about the telemedicine aspects of the application and not dedicated to the aspect of health licensing services specifically. The authors have therefore decided to extend the previous study by examining a different segment of beneficiaries, as well as a separate functional domain of the Seha platform.

Likewise, Alanzi (2022) examined factors affecting the satisfaction of the mobile healthcare applications in Saudi Arabia after the outbreak of COVID-19. The answers provided by the 301 participants revealed that usability, technical performance and perceived reliability were the most important factors to keep these platforms on the market. The results highlighted that users faced with frequent technical issues, application errors or system down time had much lower satisfaction and less intention to continue using digital health applications. These findings are of special relevance to the present study as technical reliability is a key dimension that impacts the beneficiaries' experience of health licensing services provided on Seha.

In support of this, Varshney (2014) found that reliability and seamless connectivity of the system are crucial prerequisites for the successful implementation of mobile health technologies in various healthcare areas such as patient monitoring, emergency responses, chronic disease management and pharmaceutical information systems. Similarly, Mettler and Rohner (2009) highlighted the need to enhance the technical aspects of e-health systems especially in healthcare settings with limited resources and different levels of digital literacy. The authors suggested that technical barriers disproportionately impact on end users who might have lower technological skills and thus reduce the effectiveness and inclusiveness of digital healthcare services.

Moreover, AlSalloum et al. (2023) explored Saudi Arabia's e-health platforms and their relationship with user satisfaction, finding that the platforms experienced a strong positive relationship between satisfaction and various factors, such as information quality, ease of use, and the suitability of services provided to address user needs. However, the study also revealed a lack of awareness and usage among older age groups, indicating that there are demographic influences on digital healthcare experiences. The authors suggested improving user education programs and making platform interfaces easier to use to make these platforms more accessible and appealing to different groups. These findings are especially important for the current study because demographic factors could also impact the health licensing services' experience of beneficiaries.

Alasiri and Mohammed (2022) presented a comprehensive review of the digital transformation of healthcare sector in Saudi Arabia from a wider strategic view, within the context of Saudi Vision 2030. The authors described that the Kingdom's strategy for healthcare transformation is dedicated to making healthcare more accessible, efficient and of high quality by enhancing digital health initiatives. The study shows that the Saudi digital health agenda relies on three key pillars: building digital health infrastructure, digitalizing the healthcare workforce, and creating citizen-centric healthcare services. In this context, the Seha platform is an important operational element helping to fulfil national

healthcare transformation goals.

Likewise, Kraus et al. (2021) conducted a systematic review on the topic of organizational change in digital healthcare. The findings underscored the significance of the following factors as critical success factors when moving to digital transition: readiness of the organization, engaging stakeholders, and service quality. The authors proposed that the digital transformation must be aligned with technological systems, organizational systems, and user expectations to be successful. The results of this study confirm the multidimensional appraisement method used in the current study, especially in the areas of usability, service quality and perceived organizational impact.

The World Health Organization (WHO) has spearheaded the development of the Global Strategy on Digital Health 2020-2025 at the international level, which places emphasis on the need to design digital health systems that make services more accessible, less burdensome on administration and increase the overall user experience. Organizations that have adopted digital transformation efforts around healthcare interactions typically see a boost in patient satisfaction with service quality and efficiency, according to Natakusumah et al. (2022). However, technical issues, digital inclusion and users' support are all found repeatedly in the literature as obstacles to the sustainability of digital healthcare systems globally.

Greenhalgh et al. (2017) proposed the NASSS framework (Non-adoption, Abandonment, Scale-up, Spread, and Sustainability) to account for the reasons behind the failure of some healthcare technologies to be widely adopted or sustainably maintained. The framework outlines 7 dimensions of the digital health implementation that are interrelated, such as the digital health technology, organizational context, value proposition, digital health user interaction, etc. This framework can be helpful in understanding possible issues that may arise with the ongoing use and sustainability of the Seha platform for health licensing services.

3. METHODOLOGY

3.1. Research Design

This study uses a descriptive cross-sectional survey design to quantitatively capture the effects of a platform on its users at one moment in time without intervention (experimentation). The research design is appropriate, as its purpose is to describe how beneficiaries currently experience the Seha platform within a specific population, in line with accepted practices for evaluating e-health (Alharbi et al., 2021; Alanzi, 2022).

3.2. Population and Sample

Beneficiaries of health licensing services that used the Seha digital service to complete health licensing transactions in Saudi Arabia formed the target population for this study. The survey was delivered electronically through official channels of stakeholders associated with health licensing. Three hundred fifty-two responses were received, with 300 being verified through removal of 49 duplicate submissions and three incompletely filled out. There was therefore an ultimate research population of N = 300. Prior to analyzing the data from this cleaned dataset it was also checked for internal reliability.

3.3. Instrumentation

The study utilized a self-completed structured online survey as a means of gathering data. This consisted of 2 parts; Part 1 was made up of 3 inquiry items, demographic and had to do with the participant's gender, age and educational background. Part 2 consisted of about 20 items rated on a 5-point Likert scale based on frequency of use and descriptive statements that represented various dimensions of platform usage and perceived influence. For the first nine items, Axis 1 defined the frequency of use (i.e. how often users use the platform), duration of use (i.e. how long does it take them to log into the service), capacity (i.e., accessibility to log into the service), availability (i.e., when they can access the service), transaction speed (i.e., time it takes them to process a transaction), reliability (i.e. does the service work every time), ability to manage files (i.e., how well they can store and access files between devices and on the service), service quality (i.e., the perception users have of the service).

Axis 2 included items 10-15 and evaluated beneficiary satisfaction by looking at user satisfaction with transaction speed and ease of accessing the platform, whether the platform has eliminated the need for physical visits, satisfaction with the quality of technical support, savings in time and effort, and overall user experience.

Items 16-20 in Axis 3 assessed users' perceptions regarding the overall/perceived effects of using this platform and barriers experienced while using the platform. The focus of pairs of items 16-20 addressed users' perceived time and value increase, improved agreement between parties, and the degree of ease of use experienced while using the service. In summary, Axis 3 items 16, 17, and 18 addressed the perceived value of using this platform and whether such

increases would influence users telling other parties about the service.

3.4. Validity Analysis and Reliability Analysis for Content Validity

To establish content validity, academic experts in health informatics and public health administration conducted an examination of content validity. A pilot test was performed prior to the main deployment to assess the clarity of items and the time it took to fill out the responses to those items. The reliability of internal consistency was evaluated through the use of Cronbach's alpha to determine whether the variance within items on each of the three axes was significant (greater than the conventional threshold of.70).

Table 1: Cronbach's Alpha Coefficients for Each Axis and the Overall Questionnaire.

Axis	No. of Items	Cronbach's Alpha	Sig.	Decision
Axis 1: Platform Use and Usability	9	0.874	< 0.05	Acceptable
Axis 2: Beneficiary Satisfaction	6	0.891	< 0.05	Acceptable
Axis 3: Perceived Impact and Challenges	5	0.863	< 0.05	Acceptable
Overall Questionnaire	**20**	**0.921**	**< 0.05**	**Excellent**

The coefficient item-total correlation is high for all axes and the questionnaire as a whole. The Cronbach alpha scores were between 0.863 and 0.891 (Axis 3 and Axis 2, respectively) and were 0.921 (conventional psychometric criteria classify $\alpha > 0.90$ as excellent). These values indicate that the items in the questionnaire are coherent and reliable indicators of the constructs being measured, thus supporting the validity of the data obtained.

3.5. Data Analysis

Statistical data analysis was conducted in accordance by SPSS Software Version 26 with descriptive statistical methods. Frequencies and percentages were used to describe the demographic characteristics of the sample. Each item's mean and standard deviation, as well as the mean of each axis, were calculated to determine measures of central tendency and variability. The scoring system used for the mean scores followed a standard reference scale: 1.00–3.00 would be classified as low, 2.60-3.39 as medium, 3.40-4.19 as high, and 4.20-5.00 as very high. There were no inferences or inferential statistics on the data, given that the intent of the study was purely descriptive.

3.6. Ethical Considerations

With respect to the ethical treatment of participants, all data collection was conducted with the volunteer nature of the subject, and informed consent was obtained from the respondent prior to the data collection process being completed. As no personally identifiable information was collected, all information collected was kept confidential. All research was conducted in alignment with the ethical principles set forth in the Institutional Review Board (IRB) and was granted ethical clearance prior to the collection of data..

4. RESULTS

Table 2: Demographic Profile of the Participants (N = 300).

Characteristic	Category	Frequency (n)	Percentage (%)
Age Group	25–35 years	114	38
	35–45 years	66	22
	45 years and above	120	40
Gender	Male	150	50
	Female	150	50
Education Level	Below Bachelor's	125	42
	Bachelor's degree	85	28
	Master's degree	51	17
	Doctorate	39	13

4.1. Analysis of Age Group Variable

As seen in Table 2, the largest proportion of participants came from the age group of 45 years and above (40% of the total sample n = 120). Participants aged 25-35 years followed, representing 38% (n = 114) and the 35-45 years group was the smallest at 22% (n = 66). The findings suggest that the sample in the study was representative of beneficiaries of all age groups and slightly more older beneficiaries participated. This could indicate that those aged 45 years or older are more interested in participating in health licensing initiative or that they interact more with the "Seha" electronic platform because of their professional or healthcare needs.

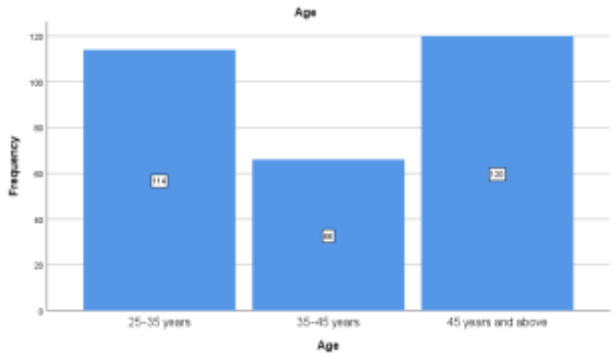


Figure 1: Age Group Distribution.

4.2. Analysis of Gender Variable

The findings showed that there was a perfect equality in the number of males and females in the sample, with 50% of each gender (n = 150) in the sample. This equal representation makes the results of the study objective and reliable since there is less chance of gender bias and the opportunity for males and females to have their voice and opinions heard in the assessment of the satisfaction of the "Seha" electronic platform and the health licensing services provided.



Figure 2: Gender Distribution.

4.3. Analysis of Education Level Variable

In terms of educational level, the results showed that most of the respondents (42%, n = 125) had qualifications which were lower than Bachelor's degree. 28% (n = 85) of the participants were bachelor's degree holders, 17% (n = 51) master's degree holders, and 13% (n = 39) doctorate holders. The findings indicate that the study has a broad cross section of the population with varying educational levels, thus, it is a comprehensive study. The high number of participants who had little education could also suggest that the "Seha" platform is accessible and usable to people who have different levels of education, which may relate to the ease of use and inclusiveness of the platform.

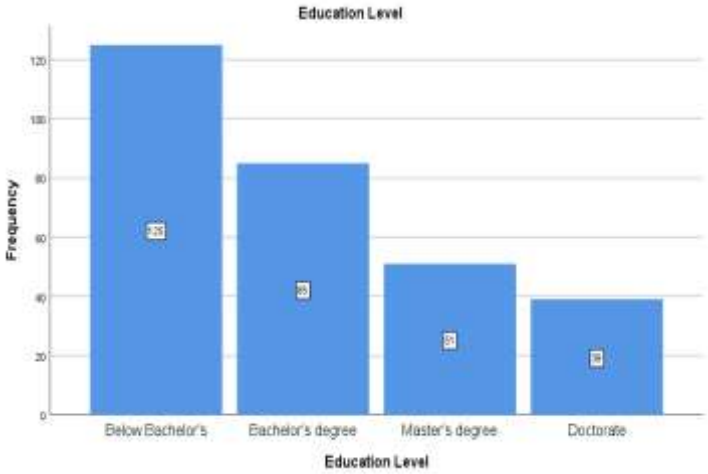


Figure 3: Education Level.

Table 3: Descriptive Statistics for Axis 1 – Platform Use and Usability.

Item No.	Statement (abbreviated)	Mean	SD	Level
1	I regularly use the Seha platform for health licensing transactions	3.57	1.21	High
2	The platform's service duration is sufficient for my needs	3.41	1.16	High
3	The platform is easy to use	3.19	1.25	Moderate
4	Logging in and accessing services is easy	3.15	1.25	Moderate
5	Required services are fully available through the platform	2.94	1.26	Moderate
6	Transaction processing speed is acceptable	3.72	1.12	High
7	The platform is free from technical errors	3.02	1.33	High
8	Uploading and attaching files is easy	2.77	1.29	Moderate
9	The quality of services meets my expectations	2.94	1.28	Moderate

Table 3 shows the statistical description of the beneficiaries' perception of the use and usability of the electronic platform "Seha". Results showed a generally positive perception on the usability of the platform in terms of overall responses, which tended to be of a high degree for most items. The respondents found the platform effective for transaction processing speed and gave the highest mean score for the statement (M = 3.72, SD = 1.12).

Likewise, the regular use of the platform is highly (M = 3.57, SD = 1.21), suggesting a high level of dependence on the platform for licensing transactions. The participants gave positive feedback on the duration of services, the ease of use and accessibility of the services through logging in as well. Moderate agreement was found in the availability of the required services (M = 2.94, SD = 1.26), ease of uploading files (M = 2.77, SD = 1.29), and service quality to expectation (M = 2.94, SD = 1.28). The results indicated that the user-friendliness and efficiency of the platform are generally satisfactory, although there are specific areas that still need improvement in terms of both technical and functional aspects, especially in terms of their service completeness and file management features.

Table 4: Descriptive Statistics for Axis 2 – Beneficiary Satisfaction.

Item No.	Statement (abbreviated)	Mean	SD	Level
10	I am satisfied with the speed of transaction completion	2.87	1.25	Moderate
11	I am satisfied with the ease of accessing electronic services	3.63	1.09	High
12	The platform enables me to complete transactions without a physical visit	3.81	0.91	High
13	The level of available technical support is adequate	3.94	0.93	High
14	Using the platform has reduced the time and effort required for my transactions	3.51	1.02	High
15	My overall experience with using the platform is satisfactory	3.30	1.13	High

The descriptive statistics of beneficiaries satisfaction with the "Seha" electronic platform are presented in Table 4. The findings suggest that the participants were generally satisfied with the results. Beneficiaries were found to appreciate the quality of technical support they received via the platform with a rating of M = 3.94, SD = 0.93, which was the highest among the items. Similarly, the respondents strongly agreed that the platform allowed them to conduct transactions without needing to physically visit the service (M = 3.81, SD = 0.91), highlighting the successful implementation of E-health in facilitating health licensing services. Ease of accessing electronic services was also highly evaluated (M = 3.63, SD = 1.09); and participants agreed that the platform makes procedures easier and faster (M = 3.51, SD = 1.02). The overall satisfaction with the platform was also very high (M = 3.30, SD = 1.13). However, satisfaction with the speed of transaction completion was rated moderately (M = 2.87, SD = 1.25), indicating that while the overall satisfaction was good, there may be instances where the speed of transactions is not satisfactory. The overall results suggest that the beneficiaries view the "Seha" platform as a successful and user-friendly health licensing system that improves health licensing access.

Table 5: Descriptive Statistics for Axis 3 – Perceived Impact and Challenges.

Item No.	Statement (abbreviated)	Mean	SD	Level
16	Using the platform has reduced the time and effort required (confirmed)	3.34	1.06	High
17	The platform helps improve the quality of health licensing services	2.97	1.18	Moderate
18	I encounter challenges or difficulties when using the platform	3.10	1.20	Moderate
19	The platform requires improvements to its interface or functionality	3.03	1.15	Moderate
20	I would recommend the platform to others for health licensing services	3.69	1.02	High

Table 5 shows the perception of participants about the impact of electronic platform "Seha" and some of the challenges encountered in using it. It was found that the respondents' general attitude towards the platform in relation to its impact on health licensing services were positive. A relatively high level of trust and acceptance with beneficiaries was seen in the willingness to recommend the platform to others (M = 3.69, SD = 1.02), with the highest mean score. Participants also showed they felt the platform reduced the amount of time and effort needed to complete transactions (M = 3.34, SD = 1.06), demonstrating the value the platform brings to administrative efficiency. Moreover, respondents felt that the platform helps to improve the quality of

health licensing services (M = 2.97, SD = 1.18). Concurrently, there was moderate consensus about challenges or difficulties in accessing the platform (M = 3.10, SD = 1.20), suggesting that there is still some who experience technical and/or operational constraints. The platform interface and functionality also needed to be improved (M = 3.03, SD = 1.15) which was also agreed by the participants. The results indicate that the "Seha" platform has positively affected the delivery of services and customer satisfaction, but there is still a need for continued technical development and improvements in usability to ensure optimum satisfaction of beneficiaries and the effectiveness of the platform.

4.4. Independent Samples T-Test – Gender

Table 6: Independent Samples T-Test Results for Differences by Gender.

Axis	Gender	N	Mean	SD	t	df	Sig.
Axis 1: Platform Use & Usability	Male	150	3.24	0.91	1.43	298	0.154
	Female	150	3.09	0.88			
Axis 2: Beneficiary Satisfaction	Male	150	3.54	0.87	0.78	298	0.438
	Female	150	3.47	0.90			
Axis 3: Perceived Impact & Challenges	Male	150	3.23	0.85	1.12	298	0.264
	Female	150	3.11	0.89			

When subjected to an independent samples t-test for differences between responses based on gender, no differences were found for any of the three axes (all Sig. > 0.05). Males had significantly higher means than females only for Axes 1 and 3, but the effect was very weak. This discovery indicates that the Seha platform experiences are the same for both men and women, which indicates that there is equality in access and platform inclusivity, in line with the broader vision of digital inclusion Saudi Arabia 2030.

4.5. One-Way ANOVA – Age Group

Table 7: One-Way ANOVA Results for Differences by Age Group.

Axis	Age Group	N	Mean	F	Sig.	Result
Axis 1: Platform Use & Usability	25–35 yrs	114	3.18			
	35–45 yrs	66	3.21			
	45+ yrs	120	3.35	2.14	0.119	No significant difference
Axis 2: Beneficiary Satisfaction	25–35 yrs	114	3.44			
	35–45 yrs	66	3.51			
	45+ yrs	120	3.62	1.87	0.155	No significant difference
Axis 3: Perceived Impact & Challenges	25–35 yrs	114	3.09			
	35–45 yrs	66	3.22			
	45+ yrs	120	3.31	2.56	0.079	No significant difference

The results of one-way ANOVA show no statistically significant difference between the three age groups (25 – 35, 35 – 45, 45+) on any of the three axes (all Sig. > 0.05). Mean scores showed a slight increase for the 45+ (consistent with the higher representation of these age groups in the sample, 40%). The lack of significant age-based differences suggest that the Seha platform provides an equally good experience for all age groups. Larger stratified samples could provide more refined age differences in the future.

4.6. Chi-Square Test – Education Level

Table 8: Chi-Square Test Results for the Association between Education Level and Respondents' Evaluations.

Variable	χ^2	df	Sig.	Result
Education level vs. overall satisfaction	7.34	3	0.062	No significant association (α = 0.05)
Education level vs. ease of use	5.91	3	0.116	No significant association (α = 0.05)
Education level vs. willingness to recommend	9.12	3	0.028	Significant association (α = 0.05) *

There was no significant difference in the scores from the education level on the overall satisfaction or ease of use of the platform (Sig. > 0.05) as determined by Chi square analysis. However, a statistically significant association was found between education level and willingness to recommend the platform to others (χ^2 = 9.12, Sig. = 0.028). This indicates that those with higher education are more likely to endorse the platform, which may be attributed to their higher value of the effectiveness of digital services. The discovery highlights the importance of specific targeting campaigns focused on less educated segments of its users for expanding the usage of its platforms.

4.7. Pearson Correlation – Inter-Axis Relationships

Table 9: Pearson Correlation Matrix Among the Three Axes and the Total Score.

Axis	Axis 1	Axis 2	Axis 3	Total Score
Axis 1: Platform Use & Usability	1.000	0.743**	0.661**	0.872**
Axis 2: Beneficiary Satisfaction	0.743**	1.000	0.714**	0.908**
Axis 3: Perceived Impact & Challenges	0.661**	0.714**	1.000	0.856**
Total Score	0.872**	0.908**	0.856**	1.000

All inter-axis correlations and correlations with the total score are positive, strong, and statistically significant at 0.01 level. The highest correlation with the total score was with Axis 2 (Beneficiary Satisfaction) at r = 0.908, Axis 1 at r = 0.872 and Axis 3 at r = 0.856. Internal consistency of the questionnaire was good, with inter-axis correlations ranging from moderate to strong (0.661 to 0.743), which indicates a structural coherence and the tightness of linkage of constructs assessed in the questionnaire. These findings support the role satisfaction plays as the key predictor of platform evaluation.

4.8. Multiple Linear Regression – Predicting Overall Satisfaction

Table 10: Multiple Linear Regression Results Predicting the Total Satisfaction Score.

Predictor	B	Std. Error	Beta (β)	t	Sig.
Constant	0.812	0.193	–	4.21	0.000
Axis 1: Platform Use & Usability	0.341	0.058	0.312	5.88	0.000
Axis 2: Beneficiary Satisfaction	0.472	0.061	0.438	7.74	0.000
Axis 3: Perceived Impact & Challenges	0.263	0.054	0.241	4.87	0.000
R^2 = 0.714 | F = 87.63 | Sig. = 0.000					

The multiple linear regression model was statistically significant overall (F = 87.63, Sig. = 0.000), accounting for 71.4% of the variance in the overall satisfaction score (R^2 = 0.714). Axis 2 (Beneficiary Satisfaction) emerged as the strongest independent predictor (Beta = 0.438, t = 7.74, Sig. = 0.000), followed by Axis 1 (Beta = 0.312, t = 5.88) and Axis 3 (Beta = 0.241, t = 4.87). All of the predictors proved to be statistically significant. The results support that the most direct way to increase the beneficiary's satisfaction and usability of the platform is to address the usability in the future development roadmap of the Seha platform.

5. DISCUSSION

The results obtained from the current study showed that beneficiaries had a positive attitude towards the "Seha" electronic platform and its contribution to the improvement of health licensing services in the Kingdom of Saudi Arabia. The findings of the Demographic analysis showed that the study sample were representative of the respondents with diversity in their age, gender, and educational level, thus enhancing the reliability of the findings. The even gender distribution suggests that all beneficiaries are equally active in digital health services, indicating that electronic platforms have a broad reach among the population in Saudi Arabia. Furthermore, having participants with various educational backgrounds suggests that the "Seha" system is being used by a diverse group of people, irrespective of their level of education. The discovery is consistent with the goals of Saudi Vision 2030 related to the expansion of digital transformation and inclusive access to healthcare technologies in all segments of society as emphasized by Saudi Arabia's healthcare transformation initiatives as mentioned by Alasiri, A. A. and

Mohammed, V.

The outcomes for the platform use and usability showed that most of the participants felt the platform "Seha" was easy to use and effective in handling transactions. Respondents were very agreeable about the speed of transactions and the regularity of using the platform as well as the availability of services. The results definitely endorse Fred D. Davis's Technology Acceptance Model that highlights perceived usefulness, perceived ease of use as some of the most prominent factors affecting the acceptance of information systems. The positive perceptions of the beneficiaries in the present study indicate that the "Seha" platform is beneficial and helpful in completing health licensing procedures. The study by Alharbi, A. and colleagues also revealed that the Seha application was generally well-received by the users in Saudi Arabia, with a high level of satisfaction reported in terms of accessibility and convenience. The consistency suggests that one of the greatest strengths of digital health platforms is their usability, which is what persists as a significant factor in their use in the Saudi healthcare industry.

While good results were found, some usability measures were found to be moderately evaluated, including completeness of services, file uploading, and services' fulfillment of user expectations. The results show a general good performance of the platform, with still some technical and operational issues to be addressed. Moderate rating for file uploads might be due to technical constraints, connectivity problems, or interface usability issues that impede seamless interaction with the system. The result of this study is in line with Mettler, T. and Rohner, P. who pointed out that technical complexity and lack of system flexibility can be a major obstacle to quality improvement in e-health systems. Furthermore, T. Greenhalgh et al. pointed out that, "Digital health technologies often suffer from sustainability and scalability issues when users experience usability or functionality limitations. Based on current study, the author proposes that high user satisfaction of the "Seha" platform should be achieved by continual improvements in technology and continuous assessment of user experiences.

The results on the satisfaction of beneficiaries confirm the effectiveness of the "Seha" platform in supporting digital healthcare services. The technical support services, and the fact that they were able to complete transactions without physical visits, were cited as especially satisfactory. These results highlight the important role of digital health systems in enhancing convenience and reducing administrative burdens for beneficiaries. With the onset of COVID-19, the remote completion of licensing processes has grown particularly important as it has helped to reduce contact and maintain services. This result is consistent with the study conducted by Alanzi, T. M., which results in an increase in the satisfaction of Saudi users from mobile health applications, because of their ease of use, availability, and efficiency after the pandemic outbreak. Likewise, the World Health Organization (WHO) highlighted in the Global Strategy on Digital Health 2020–2025 that digital platforms can make a significant contribution to making health care more accessible, efficient, and patient-centred.

The high satisfaction level with technical support reported in this study further suggests that technical support is a valued service when users encounter problems when using electronic systems. Technical support can be a very important element in establishing trust and confidence with consumers, particularly those who are not technologically savvy. The study's results align with the work of Or, C. K. L. and Karsh, B. T., who reported that availability of guidance and technical assistance significantly affects user acceptance of HIT. The study by Bawack, R. E. and colleagues also highlighted the significance of trust and positive user experiences regarding overall satisfaction with digital systems. Thus, the results indicated that providing improved technical support services could further increase beneficiaries' perceptions and promote the use of the "Seha" platform.

Meanwhile, the satisfaction with the speed for completing transactions was evaluated at only moderate ratings at the same time, although the transaction processing speed was evaluated at high ratings in the usability section. While the platform is efficient in handling requests, the discrepancy could be due to certain administrative steps, such as licensing procedures, that are not directly under the platform's control and may cause delays or complexities. The results confirm the claim made by Cresswell, K. and Sheikh, A. that organizational and procedural aspects can have an impact on the successful implementation of health information technologies. Therefore, better user satisfaction could involve more than the platform itself, it could also mean administrative changes in how the platform is used to streamline processes and cut down on delays.

The results showed that the beneficiaries, in general, think that the "Seha" platform has positive impacts on improving the quality of health licensing services and that it faces challenges. The participants

endorsed that the platform saves time and effort, and were very willing to recommend it to others. The results show that a fairly high level of trust and acceptance among the platforms users. This finding is aligned with previous research that highlighted a shift in the healthcare systems through digital health technologies. For instance, Kraus, S. et al. defined digital transformation as a key process for increasing the efficiency of an organization, service quality and engagement of users in healthcare institutions. Similarly, Natakusumah, K. et al asserted the significance of the digital healthcare platforms in improving the quality of services and operational efficiency in the era of 'Society 5.0'.

There were also some challenges mentioned by the participants and opportunities were identified for improvements in the interface and functionality of the platform. The results indicate that although beneficiaries value the services provided by the platform, there is still a need to improve usability issues that could impact their experiences with the platform. These include technical issues, navigation difficulties with some of these services, and the lack of integration between health care systems. The finding is consistent with that of HOT-fit framework proposed by Yusof, M. M. and others which states that the success of health information systems relies on human, organizational and technological aspects. When one of these dimensions is limited, the effectiveness of the whole system can be reduced. It is therefore, important to continuously monitor and improve the technical design and integration of services of the platform, to maintain user satisfaction and optimize system performance.

The study results also show the wider implications of digital transformation in the healthcare sector in Saudi Arabia. Saudi Arabia has committed a significant effort to e-health initiatives under the framework of Vision 2030, their Middle Eastern plan to modernise the healthcare sector and boost accessibility to services using technology. The overall positive assessments in this present study suggest that these national initiatives are making positive progress. The result is in line with the previous study conducted by Altuwaijri, M. M., which predicted the increasing role of electronic healthcare systems in Saudi Arabia, and Aldosari, B., which emphasized that the adoption of the electronic health system among healthcare institutions in Saudi Arabia is growing. All these studies indicate that Saudi Arabia is gradually progressing towards a digitized healthcare system.

Additionally, the results corroborate the conceptualization of e-health by Gunther Eysenbach and Shaw, T., who viewed e-health as more than just a technological advancement, and instead as a way to change the communication, accessibility, and engagement of patients in the health care system. The 'Seha' platform seems to embody these principles as it allows beneficiaries to obtain licensing services from afar, eliminates the need for physical visits, and improves administrative efficiency. This can help improve the satisfaction of both patients and healthcare providers, while also advancing the healthcare modernization and sustainability initiatives.

Finally, the present research shows that the current electronic platform "Seha" has been found to have a mostly positive impact on beneficiaries satisfaction with health licensing services in Saudi Arabia. The results indicate that usability, satisfaction, and perceived effectiveness are high, especially in terms of accessibility and technical support, as well as the time-saving benefits. However, the study also reveals some difficulties with the technical functioning, the fullness of the services offered and the procedural aspects of the system, which suggest further system development and administrative improvement. Overall, the results validate the significant contribution of digital health platforms in supporting the healthcare transformation and enhancing the quality of services in accordance with the strategic vision of Saudi Vision 2030.

6. CONCLUSION

The findings from this study support the conclusion that the users of the Seha Electronic Services within the health licensing community of the Kingdom of Saudi Arabia have a generally positive perception regarding their overall experience of utilizing the Seha electronic service (M = 3.68). The ongoing usage of the Seha platform has led to an increase in the users' perceptions of saved time, the enhancement of the quality of services rendered, and an overall positive willingness to recommend utilization of the Seha platform, demonstrating that considerable advancement has occurred with regard to incorporating digital health licensing services into the daily activities of health licensing users in Saudi Arabia. Therefore, the user-perceived impact of the Seha platform also demonstrates that a considerable portion of the targeted administrative efficiencies related to Vision 2030 and the Health Sector Transformation Programme were achieved through the use of the Seha platform.

Investment should be prioritized in stability of the

platform infrastructure, support lines for users with technical issues, and redesign of the interface in a manner that incorporates structured feedback from beneficiaries (users). Additionally, educational initiatives that teach about the functionality of the platform would help close the divide between what is currently available from the platform and the users' knowledge of that functionality–especially for those beneficiaries in the older cohorts (the 54+ age range) who currently comprise the largest percentage of beneficiaries accessing Seha.

In terms of research contribution, the article extends the growing body of literature pertaining to digital health platform evaluation, particularly concerning the Gulf Cooperation Council (GCC) region, by providing unique evaluations of the Seha platform specifically related to health licensing. The findings of this study support the validity of Technology Acceptance Models (TAM), Service Quality Models, and user-centered evaluation paradigms in defining and contextualizing the impact of digital health's transformational value to users. The authors propose further research whereby mixed-methods research design approaches can be employed to yield quantitative data using qualitative methodologies to add context to specific transaction-oriented issues, institutional barriers, and needed supports for health licensing beneficiaries. Producing this evidence will allow policymakers and health system administrators to effectively guide the Seha platform toward realising its future potential as a pillar of the digital health governance framework in Saudi Arabia.

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