

Assessing the Influence of Doctor-Selection Applications on Egyptian Patient Decision-Making and Healthcare Choices

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Abstract:

This study explores the impact of doctor-selection applications on patient decision-making and healthcare choices in Egypt. Through a survey, the research examines how app features, such as user reviews, ratings, and ease of use, influence healthcare decisions. The findings indicate that Veezeta is the most popular app, with the majority of users engaging with it 1-3 times. Key features such as doctor reviews, reservations, and transparency were highly valued by participants. While most users felt empowered by these apps, challenges such as limited doctor availability, inaccurate information, and usability issues were identified. Payment options were generally satisfactory, although some participants experienced difficulties with processing and refunds. The study reveals that doctor-selection applications significantly enhance healthcare access by empowering patients to make informed choices. However, disparities in digital literacy and technology access remain barriers for certain populations. The research concludes that these applications offer a promising tool for improving patient engagement and decision-making, though there is a need for further improvements in app accuracy, features, and accessibility to ensure broader adoption and satisfaction.

Keywords:

Doctor-selection applications; patient decision-making; healthcare choices; patient reviews; healthcare access

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تقييم تأثير تطبيقات اختيار الأطباء على قرارات المرضى المصريين واختياراتهم الصحية

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الملخص:

تهدف هذه الدراسة إلى دراسة تأثير تطبيقات اختيار الأطباء على قرارات المرضى واختياراتهم الصحية في مصر، وذلك من خلال استبيان يقيّم مدى تأثير الميزات المختلفة لهذه التطبيقات، مثل تقييمات المستخدمين والمراجعات وسهولة الاستخدام، على القرارات الطبية للمرضى. تكشف النتائج أن تطبيق "فيزيتا" هو الأكثر استخدامًا بين المشاركين، حيث يتفاعل معه معظم المستخدمين بمعدل يتراوح بين مرة إلى ثلاث مرات. وقد أعرب المشاركون عن تقديرهم لميزات أساسية مثل مراجعات الأطباء، وخدمات الحجز، ومستوى الشفافية الذي توفره هذه التطبيقات. ورغم ذلك، أظهرت الدراسة وجود تحديات تواجه المستخدمين، من أبرزها محدودية توفر بعض الأطباء، وعدم دقة بعض المعلومات، بالإضافة إلى مشكلات تتعلق بسهولة الاستخدام. كما كانت خيارات الدفع مرضية إلى حد كبير، إلا أن بعض المشاركين أشاروا إلى صعوبات في عمليات الدفع والاسترداد.

تؤكد الدراسة أن تطبيقات اختيار الأطباء تساهم في تعزيز الوصول إلى الخدمات الصحية عبر تمكين المرضى من اتخاذ قرارات أكثر وعيًا بشأن الرعاية الصحية التي يحتاجونها. ومع ذلك، لا تزال الفجوات في المعرفة الرقمية، وضعف إمكانية الوصول إلى التكنولوجيا، تمثل عوائق تحول دون الاستفادة الكاملة من هذه التطبيقات لدى بعض الفئات.

وتخلص الدراسة إلى أن هذه التطبيقات تُعدّ أداة واعدة لتحسين تفاعل المرضى مع المنظومة الصحية، وتعزيز قدرتهم على اتخاذ قرارات مستنيرة. إلا أن هناك حاجة إلى تحسين دقة المعلومات المقدمة، وتعزيز مزايا التطبيق، وزيادة سهولة الوصول إليه لضمان انتشار أوسع ورفع مستوى رضا المستخدمين.

الكلمات الدالة:

تطبيقات اختيار الأطباء؛ اتخاذ قرارات المرضى؛ اختيارات الرعاية الصحية؛ مراجعات المرضى؛ الوصول إلى الرعاية الصحية.

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Introduction:

In recent years, the rapid evolution of digital technologies has transformed how individuals interact with healthcare systems, particularly through the proliferation of doctor-selection applications. These platforms, which allow patients to search for, compare, and book appointments with healthcare professionals, have become increasingly popular worldwide. By offering user-friendly interfaces, detailed doctor profiles, and patient reviews, such applications have positioned themselves as fundamental tools in facilitating informed decision-making in healthcare.

The shift toward digitalization in healthcare aligns with broader societal trends emphasizing convenience, transparency, and patient autonomy. In regions where access to healthcare information has traditionally been limited, doctor-selection applications play a significant role in bridging the gap. They empower patients to make choices based on criteria such as specialization, location, availability, cost, and patient ratings, enhancing a sense of control over their healthcare journey. However, the growing reliance on these platforms raises critical questions about their influence on patient decisions and the broader implications for healthcare delivery.

While studies highlight the potential of mobile health applications (MHAs) and medical applications (MAs) in improving patient-provider relationships, enhancing self-management of chronic diseases, and supporting digital health transformations in fields like gastroenterology (Kernebeck, et al., 2020); (Qudah & Luetsch, 2019), their impact is often intertwined with other factors such as doctor-patient trust, performance expectancy, social influence, and facilitating conditions (Meng & Guo, 2024). The moderating role of trust, particularly during crises like the COVID-19 pandemic, further highlights how external variables shape user engagement rather than MHAs and MAs functioning as isolated determinants of healthcare outcomes. Consequently, defining their standalone effect remains complex, necessitating further research to delineate their role amidst broader healthcare dynamics.

This study aims to explore the impact of doctor-selection applications on patient decision-making and healthcare choices. Specifically, it investigates how these applications shape patients' perceptions of healthcare providers, influences their trust in medical services, and potentially alter healthcare-seeking behaviors. By analyzing the relationship between technological innovation and patient decision-making, this research seeks to contribute to the understanding of how digital tools are reshaping the healthcare landscape and what challenges and opportunities they present for both patients and providers.

Problem Statement:

The research problem centers around understanding how doctor-selection applications influence patient decision-making and healthcare choices. Despite the growing use of these applications, there is limited knowledge about their impact on

the way patients select healthcare providers and navigate the healthcare system. Furthermore, there is a need to explore how these applications may contribute to or mitigate disparities in healthcare access, particularly for underserved populations. This research seeks to fill these gaps by examining the role of doctor-selection apps in shaping patient behavior and healthcare outcomes.

Research Importance:

On the theoretical level, this research contributes to the broader understanding of patients' decision-making in the healthcare sector, particularly in how digital tools, like doctor-selection applications, influence patient choices. It offers new insights into how technology shapes the way patients interact with healthcare systems, emphasizing factors such as trust, convenience, and perceived quality. By examining the mechanisms behind app-based decision-making, the study adds to the growing body of knowledge on patient autonomy and informed decision-making. Additionally, it helps contextualize the evolving role of digital health tools in consumer behavior, deepening our understanding of their impact on healthcare choices and behaviors.

From a practical perspective, the findings of this research are important for healthcare providers looking to enhance the effectiveness of digital tools. By identifying the app features that patients value most, healthcare organizations can improve their platforms to meet patients' expectations and boost satisfaction. Moreover, the study highlights the role of digital tools in improving healthcare access, which can inform policymakers seeking to reduce disparities in healthcare access and ensure more equitable care delivery. Ultimately, it helps shape the future of healthcare by improving how patients choose providers and interact with the system.

Research Objectives:

1. Evaluate the impact of doctor-selection applications on patient decision-making.
2. Examine how application features influence patient healthcare choices.
3. Analyze the role of patient reviews and ratings in selecting healthcare providers.
4. Assess the correlation between application usage and healthcare access equity.
5. Identify the Egyptian users' demographic factors that influence application adoption and decision-making.
6. Investigate the emotional and psychological effects of using doctor-selection applications, particularly how they impact patient confidence or anxiety.

Literature Review:

This literature review explores the key dimensions of mobile health applications, focusing on their impact on patient decision-making, healthcare choices, and

engagement. It examines how app features, user reviews, and ratings influence patient decisions and improve healthcare access.

Mobile health applications have significantly transformed healthcare delivery by improving patient access, engagement, and decision-making. Studies like (Mosa, Yoo, & Sheets, 2012) and (Agarwal & Biswas, 2020) explore how mobile apps cater to a wide range of users, from healthcare professionals to patients. (Mosa, Yoo, & Sheets, 2012) categorize 83 mobile apps, with functionalities covering areas such as disease diagnosis, medical calculators, and chronic illness management, highlighting the widespread adoption of mobile apps across healthcare sectors. (Agarwal & Biswas, 2020) focus on India, where apps like Practo and mfine facilitate both online consultations and offline appointments, emphasizing their growing role in patient care. These findings highlight how mobile apps empower patients and enhance healthcare accessibility, allowing patients to make informed decisions about their health.

Patient engagement and decision-making are further explored by (Garas, 2021), who examines factors influencing the adoption of aggregator medical mobile apps. The study reveals that perceived usefulness, ease of use, and product involvement positively impacted users' intent to adopt these apps, while perceived risk did not significantly influence their decisions. (Zhang Z. , 2024) supports this notion by evaluating the service quality of medical apps in China, finding top-performing apps like Chunyu Doctor and Ali Health excelled in consultation accuracy and user experience. With a large percentage of users expressing high satisfaction, these apps highlight how patient-centered design improves healthcare decision-making by providing accurate and professional medical guidance. (Lee, Choi, Lee, & Jiang, 2018) also add to this body of research by assessing mHealth interventions for chronic disease management. They found that 10 out of 12 studies on mHealth interventions showed significant improvements in health outcomes, with common features like real-time symptom assessments and pre-programmed reminders. However, the studies did not explore the link between patient engagement and health outcomes, revealing a gap in understanding how engagement influences long-term results.

While mobile health applications show great promise in enhancing healthcare, significant challenges remain in their evaluation and regulation. (Maaß, et al., 2024) argue that traditional methods like randomized controlled trials (RCTs) are often unsuitable for evaluating digital health interventions, urging the adoption of alternative evaluation methods. This aligns with the findings of (Senbekov, et al., 2020), who identify challenges in regulating digital health technologies, particularly as they evolve rapidly. Both studies call for adaptive regulatory frameworks to address the unique characteristics of mobile health apps and ensure their safety and efficacy.

The development of frameworks for the approval and reimbursement of digital health applications also varies across countries. (Schudt, et al., 2022) compare the

regulatory approaches of Belgium and Germany, showing key differences in their evaluation processes. Belgium employs a 3-level validation pyramid, while Germany offers both standard and fast-track evaluation procedures. Additionally, Belgium reimburses apps only at stage 3, while Germany reimburses apps from both provisional and permanent listings. These differences highlight the complexity of achieving regulatory consistency across countries. Similarly, (Zhang Z. , 2024) highlights the challenges in China, where regulatory frameworks for mobile health apps are still developing, contributing to the uneven quality and integration of these apps in healthcare.

The integration of emerging technologies like AI and the metaverse into healthcare is also a growing focus. (Oyenyi, 2024) examines how AI and mobile apps can enhance patient-centric healthcare by improving engagement, self-management, and communication with healthcare providers. In a similar vein, (Bansal, Rajgopal, Chamola, Xiong, & Niyato, 2022) explore the potential of metaverse technologies in healthcare, highlighting the integration of virtual reality and augmented reality in telemedicine and clinical care. While these technologies hold promise, both studies emphasize the need for addressing regulatory and technical challenges before their widespread adoption.

Finally, the COVID-19 pandemic has accelerated the use of mobile health applications, especially for remote consultations and disease management. (Reina, Ventura, Cristofaro, & Gentile, 2021) analyze the role of mobile apps in managing COVID-19, revealing their crucial role in self-management and patient-practitioner interactions during the pandemic. Similarly, (Tebeje & Klein, 2021) find that e-health technologies, including telehealth and mobile health apps, played a significant role in supporting person-centered healthcare during the pandemic. Both studies emphasize that while these apps show promise, further research is needed to evaluate their long-term effectiveness and integration into healthcare systems.

Extent of Benefit from Literature Review:

This research will fill a significant knowledge gap in understanding how doctor-selection applications (DSAs) influence patient decision-making processes. While existing studies have examined the role of digital platforms in healthcare, few have focused specifically on how DSAs impact the decisions patients make when selecting healthcare providers. There is limited research on how factors such as doctor ratings, reviews, and credentials affect patient choices, especially in terms of accessibility and equity in healthcare, particularly for underserved or rural populations. Furthermore, while studies have explored the general use of healthcare apps, there is a lack of focus on the behavioral influences of DSAs, such as how convenience, cost, and reputation shape healthcare choices. Additionally, the quality and reliability of the information presented on these platforms, such as user-generated reviews, have not been thoroughly examined. Lastly, the emotional and psychological effects of using these applications, such as how they impact

patient confidence or anxiety, remain underexplored. This research will address these gaps by investigating how DSAs influence patient decision-making.

Research Questions:

1. How do doctor-selection applications influence patients' decision-making processes when choosing healthcare providers?
2. What specific features of doctor-selection applications most significantly shape patients' healthcare choices?
3. How do patient reviews and ratings impact the selection of healthcare providers on doctor-selection applications?
4. To what extent does the use of doctor-selection applications affect healthcare access equity among different populations?
5. What demographic factors influence the adoption of doctor-selection applications and their role in healthcare decision-making?
6. What are the emotional and psychological effects of using doctor-selection applications on patients' confidence and anxiety levels?

Research Methodology:

To achieve the research objectives and address the research questions, a quantitative methodology will be employed, utilizing a structured survey as the primary data collection tool. The survey was conducted online via Google Forms, allowing for broad participation.

Research Sample:

The research will target a diverse sample of 212 respondents to ensure reliable data collection. The sample will include individuals of all genders and age groups, ranging from 18 to over 60 years. This diversity aims to capture a broad spectrum of experiences and perspectives related to the use of doctor-selection applications.

Demographic Profile of Survey Respondents

The survey, conducted with 212 respondents, reveals diverse demographic characteristics. The majority of participants fall within the age group of 18-30 (46.7%), with smaller proportions aged 18-25 (32.5%), 31-45 (7.1%), and fewer above 46 years old. Gender distribution skews toward females, representing 67% of the sample, while males account for 33%. In terms of education, a significant majority (72.6%) have attained a university degree, followed by those with postgraduate studies (7.1%), secondary education (16%), and less than secondary education (4.2%).

Theoretical Framework:

This research will employ the Theory of Planned Behavior (TPB) to examine how attitudes, subjective norms, and perceived behavioral control influence patients' adoption and use of doctor-selection applications.

The TPB, developed by Ajzen (1988, 1991, 2002) as an extension of the Theory of Reasoned Action (Ajzen & Fishbein, 1980), aims to predict and explain human behavior across various contexts. The TPB hypothesizes that behavior is primarily influenced by three interconnected factors which are attitudes toward the behavior, subjective norms, and perceived behavioral control. These factors collectively shape behavioral intentions, which are the immediate precursors to actual behavior. By emphasizing the role of underlying beliefs—behavioral, normative, and control—the TPB provides a framework for understanding how motivation, social pressures, and perceived capability interact to drive intentional behaviors.

The TPB posits that human behavior is shaped by three primary considerations which are behavioral beliefs, which reflect the perceived outcomes of a behavior; normative beliefs, which involve the expectations of others; and control beliefs, which pertain to the factors that may facilitate or hinder the behavior. These beliefs influence attitudes toward the behavior, perceived social norms, and perceived behavioral control, respectively. Together, they shape behavioral intentions, which are considered the direct precursors to actual behavior. The theory suggests that when individuals have favorable attitudes, supportive social norms, and a high degree of perceived control, their intention to perform the behavior strengthens. Provided sufficient actual control exists, they are likely to act on these intentions (Bosnjak, Ajzen, & Schmidt, 2020).

Studies extending TPB, such as those by (Willis, Lee, Reynolds, & Klik, 2020) and (Canova & Manganelli, 2020), have explored the role of group identity and habitual behavior in shaping intentions, highlighting how TPB can adapt to complex contexts and improve predictive accuracy.

In recent years, the Theory of Planned Behavior (TPB) has evolved significantly, with Ajzen and collaborators publishing numerous works to refine the model's core variables—attitude, subjective norm, and perceived behavioral control. They developed standards for constructing TPB questionnaires, introducing the TACT principle to ensure accuracy in measuring behavior, intention, and attitude. Ajzen also explored the gap between intention and behavior, emphasizing the roles of implementation intention, commitment, and conscientiousness in bridging this gap. Furthermore, the Norm-Focus Theory expanded TPB's understanding of subjective norms, considering injunctive, descriptive, and personal norms. Cultural influences were found to moderate the relationship between subjective norms and intention, with collectivist cultures showing a stronger influence from subjective norms on behavior. TPB has been widely applied in predicting individual behavior across various fields, including health, marketing, and environmental behavior. It has also been explored in new media contexts, though its applicability in different cultural settings, such as between Western and Asian cultures, highlights variations in its predictive power (Zhang K. , 2018).

Extent of Benefit from the Theoretical Framework:

TPB provides a framework for understanding decision-making processes by linking behavioral intentions to actual behavior. Its added value lies in its ability to identify key psychological and social factors driving app usage, enabling a deeper analysis of how these platforms shape healthcare choices. The theory's hypotheses—attitudes toward the behavior (e.g., perceived usefulness), subjective norms (e.g., social influence), and perceived behavioral control (e.g., ease of app use)—help predict patient decisions. By applying TPB, this research will uncover insights into how to optimize these applications to improve patient outcomes and healthcare access

Research Findings

Most Commonly Used Doctor-Selection Applications

Application Name	No. of Respondents	Percentage (%)	Relative Frequency
Veezeta	114	53.8	0.538
Altibbi	54	25.5	0.255
Cura	41	19.3	0.193
Shifa	29	13.7	0.137

This table shows the survey results on the most commonly used apps for selecting doctors or medical services, based on 212 responses. Veezeta was the most popular app, with 53.8% of respondents selecting it, followed by Altibbi at 25.5%, Cura at 19.3%, and Shifa at 13.7%. The high usage of Veezeta suggests it is the preferred platform for users, likely due to its features or user experience, while Altibbi also has a significant share. The given data highlights the dominance of a few key players in the healthcare app market.

Frequency of Use of Doctor-Selection Applications

Frequency of Use	No. of Respondents	Percentage (%)	Relative Frequency
1-3 times	102	48.1	0.481
Once	45	21.2	0.212
More than 3	43	20.3	0.203
Always	22	10.4	0.104

This table shows the frequency of usage of online medical applications. The most common usage frequency was "1-3 times", selected by 48.1% of users, indicating that many people use these apps occasionally. A significant portion of respondents (21.2%) used them only "Once", while 20.3% used them "More than 3" times, reflecting that some users engage with these apps more regularly. The least

frequent use was "Always", with only 10.4% of respondents selecting this option, suggesting that a smaller group of users relies on these applications consistently. The results indicate that while online medical apps are useful to many, they are not yet a daily necessity for most, and there may be opportunities to increase regular engagement.

Most Useful Features in Doctor-Selection Applications

Feature	No. of Respondents	Percentage (%)	Relative Frequency
Doctors' reviews and evaluations	118	55.7	0.557
Availability of reservation	67	31.6	0.316
Specially filters	44	20.8	0.208
Site-based searches	24	11.3	0.113
Insurance coverage compatibility	15	7.1	0.071

This table shows the results of a survey on the most useful features in apps. It shows that "Doctors' reviews and evaluations" was the most selected feature, chosen by 55.7% of respondents, followed by "Availability of reservation" at 31.6%. Other features, such as "Specially filters" (20.8%) and "Site-based searches" (11.3%), received fewer selections, while "Insurance coverage compatibility" was the least chosen at 7.1%.

This table indicates that Egyptian users prioritize features that directly enhance their experience with finding and evaluating medical services. The high selection of "Doctors' reviews and evaluations" suggests that users value feedback and assessments from others when choosing a healthcare provider. The popularity of "Availability of reservation" further highlights the importance of convenience and ease in booking appointments. The results suggest a strong preference for user-centric, accessible, and transparent features that facilitate decision-making.

Primary Purposes of Using Doctor-Selection Applications

Purpose	No. of Respondents	Percentage (%)	Relative Frequency
Read doctors' reviews	93	43.9	0.439
Search for specialization doctors	67	31.6	0.316
Saving time	64	30.2	0.302
Reservation appointments	47	22.2	0.222
Telemedical consultation	29	13.7	0.137

This table shows the primary purposes of using doctor selection apps. The most common purpose was "Read doctors' reviews", selected by 43.9% of respondents, indicating that users prioritize feedback from others when choosing doctors. "Search for specialization doctors" followed with 31.6%, showing that users often seek specific types of medical professionals. This indicates that users mainly use these apps for accessing reliable doctor information and finding specialized care, with telemedicine being a secondary consideration.

Sense of Control Over Health Choices with Doctor-Selection Applications

Response	No. of Respondents	Percentage (%)	Relative Frequency
Yes, it gives me the freedom to choose what suits my needs	91	42.9	0.429
Yes, but more information is needed to decide which is best	89	42.0	0.420
No, I feel that options are limited or misleading	23	10.8	0.108
I didn't make any decisions using these applications	9	4.3	0.043

The table illustrates that the majority of respondents (84.9%) feel that doctor selection apps provide them with a degree of control over their health choices. Among these, 42.9% appreciate the freedom to select options that suit their needs, while 42.0% acknowledge this benefit but emphasize the need for additional information to make better decisions. These findings highlight that while these applications largely empower users in managing their health decisions, enhancing the quality and depth of information could further optimize their effectiveness.

Equality of Access to Healthcare Services Through Doctor-Selection Applications

Response	No. of Respondents	Percentage (%)	Relative Frequency
No, equality is affected by factors such as income and location	83	39.2	0.392
That would depend on the applications and their coverage range	65	30.7	0.307
Yes, but not without challenges	45	21.2	0.212
Yes, full equality is provided	19	9.0	0.090

This table indicates that only a small portion of respondents (9%) believe doctor selection apps provide full equality in access to quality healthcare services. A

significant percentage (39.2%) feel that access is inequitable, being affected by factors like income and location, and 30.7% believe the level of equality depends on the specific application and its coverage. This suggests that while these apps hold the potential for bridging gaps in access, disparities related to socioeconomic status and geographical coverage persist, necessitating targeted improvements to achieve broader inclusivity.

Ease of Use of Doctor-Selection Applications

Ease of Use	No. of Respondents	Percentage (%)	Relative Frequency
Normal	138	65.1	0.651
Easy	59	27.8	0.278
Hard	15	7.1	0.071

This table shows that the majority of respondents (65.1%) find doctor selection apps "Normal" in terms of ease of use, while 27.8% consider them "Easy" to use, indicating that most users do not face significant challenges when navigating the apps. This indicates that while the apps are relatively accessible, there may still be opportunities to improve the user experience for those who find them difficult to navigate.

Influence of Doctors' Reviews on Users' Decision-Making

Extent of Influence on Decision	No. of Respondents	Percentage (%)	Relative Frequency
Moderate Effect	85	40.1	0.401
Slight Effect	46	21.7	0.090
No Effect at all	31	14.6	0.146
Significant Effect	31	14.6	0.146
Strong Effect	19	9	0.217

This table shows how doctors' reviews influence users' decisions when selecting a doctor. The majority of respondents (40.1%) indicated that reviews "moderately affect" their decision, while 21.7% stated that reviews "strongly affect" their choice, demonstrating that reviews are important for a significant portion of users. However, 14.6% of users reported that reviews "do not affect at all", and 9% said reviews "slightly affect" their decision, suggesting that while reviews are influential, they are not the sole determining factor for all users. This highlights the importance of reviews in the decision-making process, though it also points to a diverse range of factors influencing user choices.

Main Challenges Faced by Users of Doctor-Selection Applications

Challenge	No. of Respondents	Percentage (%)	Relative Frequency
Limited availability of doctors in certain disciplines	74	34.9	0.349
Lack of accuracy or detail of information about doctors	64	30.2	0.302
Difficulty navigating within the app	48	22.6	0.226
Distrust doctors' assessments and options	40	18.9	0.189
Problems with reservation or cancelling appointments	33	15.6	0.156

This table shows the main challenges users face when using doctor selection apps. The most common issue was "Limited availability of doctors in certain disciplines", selected by 34.9% of respondents, followed by concerns about the "Lack of accuracy or detail of information about doctors" (30.2%). Other challenges included "Difficulty navigating within the app" (22.6%) and issues with "Distrust of doctors' assessments and options" (18.9%). These results indicate that users are frustrated by the limited availability of specialists, inaccurate information, and usability issues, which can delay their experience with doctor selection apps.

User Disappointment with Healthcare Providers Found via Doctor-Selection Applications

Response	No. of Respondents	Percentage (%)	Relative Frequency
Of course, I was disappointed by the lack of either specialization or experience	75	35.4	0.354
Yes, I was disappointed in the quality of care	69	32.5	0.325
No, it was a positive experience	60	28.3	0.283
I have never used these apps	8	3.8	0.038

This table reveals that a significant proportion of users have encountered disappointment with healthcare providers selected through doctor selection apps. Among respondents, 35.4% expressed dissatisfaction due to a lack of specialization or experience, while 32.5% were disappointed in the quality of care. These findings

suggest that while many users find the apps helpful, there is a considerable level of dissatisfaction, emphasizing the need for improved vetting processes and clearer communication of doctors' qualifications and expertise to enhance user trust and satisfaction.

Difficulty Level of Refund Process for Cancelled Appointments or Services

Difficulty Level	No. of Respondents	Percentage (%)	Relative Frequency
Normal	119	56.1	0.561
Easy (I didn't have a problem)	47	22.2	0.222
Difficult	41	19.3	0.193
Very Difficult	5	2.4	0.024

This table reveals that more than half of the respondents (56.1%) found the refund process for cancelled appointments or services to be "Normal", indicating a generally straightforward experience. Meanwhile, 22.2% of users rated the process as "Easy (I didn't have a problem)", highlighting a positive experience for this group. This indicates that while most users find the refund process manageable, a notable minority experiences difficulties, suggesting that improving the clarity, speed, and reliability of refund procedures could enhance whole satisfaction.

Payment Problems Faced by Users of Doctor-Selection Applications

Payment Problem	No. of Respondents	Percentage (%)	Relative Frequency
Lack of appropriate payment methods such as e-wallets or bank cards	67	31.6	0.316
Refuse payments for no apparent reason	66	31.1	0.311
Delay in payment processing	59	27.8	0.278
Unexpected or excessive charges	43	20.3	0.203

This table shows the payment problems users experience when using doctor selection apps. The most common issues were "Lack of appropriate payment methods such as e-wallets or bank cards" (31.6%) and "Refuse payments for no apparent reason" (31.1%), indicating that users often struggle with limited or unreliable payment options. "Delay in payment processing" (27.8%) was also a significant concern, while "Unexpected or excessive charges" was the least common issue (20.3%). These findings suggest that payment-related challenges, such as limited methods, refusals, delays, and unexpected fees, impact users'

experiences and could benefit from improvements to streamline transactions and enhance trust in the platform.

Sufficiency of Payment Options in Doctor-Selection Applications

Response	No. of Respondents	Percentage (%)	Relative Frequency
Yes	155	73.1	0.731
No	57	26.9	0.269

This table indicates that a significant majority of respondents (73.1%) believe the payment options available in doctor selection apps are sufficient to meet their needs, indicating general satisfaction with the provided methods. However, 26.9% of users expressed dissatisfaction, suggesting that there is still a notable group whose payment preferences are not adequately addressed. This indicates that while most users find the current payment systems functional, expanding the variety of payment options, such as integrating more digital wallets or alternative methods, could enhance accessibility and user satisfaction further.

Discussion

The survey of 212 respondents reveals key insights into the usage of doctor-selection applications in Egypt. Veezeta emerged as the most popular app, used by 53.8% of participants, with the majority of users (48.1%) engaging with these apps 1-3 times. Respondents value features like doctor reviews and reservations, with a strong preference for apps that provide transparency and convenience. While many users feel empowered to make informed health decisions, a significant portion highlights challenges such as limited doctor availability, inaccurate information, and usability issues. Despite these challenges, most users are generally satisfied with the payment options, although some experience difficulties with payment processing and refunds. These findings suggest that while doctor-selection apps have a strong user base, improvements in-app features, accuracy, and payment processes could enhance user experience and trust.

Regarding the **research questions**, results revealed that Doctor-selection applications significantly influence patients' decision-making processes by providing access to reviews, appointment reservations, and filters for specialization, with 43.9% of users prioritizing doctor reviews in their choices. Features like doctor evaluations, reservation availability, and specialization filters are crucial in shaping healthcare decisions, while reviews play a moderate to strong role in decision-making for many users. However, the use of these apps does not fully ensure healthcare access equity, as 39.2% of respondents feel that factors like income and location still affect access. Demographically, younger users (18-30) and those with higher education are more likely to adopt these apps. Emotionally, while the apps provide users with a sense of control over their healthcare choices, challenges such as inaccurate information, payment issues, and dissatisfaction with

providers contribute to mixed feelings, affecting confidence and potentially increasing anxiety among users.

It was found that there are results which are similar to **literature review studies** lying in the significant influence of mobile health apps on patient decision-making, particularly through features like ease of use, user reviews, and the accuracy of information, as highlighted by (Mosa, Yoo, & Sheets, 2012) and (Agarwal & Biswas, 2020). Both also emphasize the role of patient engagement, with apps enhancing healthcare access, a concept supported by (Zhang Z. , 2024) and (Lee, Choi, Lee, & Jiang, 2018). However, the research reveals differences, particularly in addressing healthcare access equity, noting that income and location still affect app adoption (Maaß, et al., 2024), a note less discussed in the literature.

The **Theory of Planned Behavior (TPB)** effectively explains the adoption and use of doctor-selection applications based on the research findings. Attitudes toward these apps are shaped by perceptions of their ease of use, reliability, and accessibility, with positive user experiences driving stronger intentions to use the apps. Subjective norms, influenced by social pressures such as peer recommendations and online reviews, also play a significant role in decision-making. Additionally, perceived behavioral control is evident as patients with higher levels of digital literacy and confidence are more likely to use these apps. Together, these factors—attitudes, subjective norms, and perceived control—shape behavioral intentions, ultimately influencing actual usage of the applications, so based on the research results, the hypothesis of the Theory of Planned Behavior (TPB) is accepted.

Conclusion

In conclusion, this research highlights the significant role that doctor-selection applications play in shaping patient decision-making and healthcare choices in Egypt. The study demonstrates that these applications positively influence patients' attitudes toward healthcare providers by offering transparency, convenience, and a wealth of information, including user reviews and ratings. Features such as ease of use, accessibility, and trustworthiness emerged as key factors driving adoption, while patient reviews and ratings were found to strongly impact selection processes. Additionally, the research reveals that doctor-selection applications contribute to enhancing healthcare access by empowering patients to make informed choices, though disparities in digital literacy and access to technology remain barriers for certain populations. The findings highlight the potential of doctor-selection applications to transform healthcare decision-making, offering patients a more accessible, informed, and personalized approach to selecting healthcare providers.

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