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FROM ACCESS TO APPOINTMENT: DEMOGRAPHIC EFFECTS ON DIGITAL HEALTH BOOKING BEHAVIOUR

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ABSTRACT

Background
The rapid digitalization of healthcare has led to the widespread adoption of digital health platforms, particularly for online appointment booking. While these platforms enhance accessibility and efficiency, their actual usage varies across population groups, raising concerns about demographic disparities in digital healthcare access.

Aim/Objectives
The study aims to examine the effect of demographic characteristics, such as age, gender, education, occupation, income, and marital status, on patients' use behaviour of digital health appointment booking platforms, and to identify significant variations across demographic segments.

Methodology
A quantitative, descriptive, and analytical research design was adopted. Primary data were collected from 390 respondents in the Tricity region (Chandigarh, Panchkula, and Mohali) using a structured questionnaire. Descriptive statistics, independent sample t-tests, and one-way ANOVA were applied using SPSS to analyze demographic differences in digital health use behaviour at a 5% level of significance.

Results
The findings reveal significant differences in digital health platform use behaviour across age, gender, education, occupation, and income groups, while marital status shows no significant influence. Younger, highly educated, salaried, and higher-income respondents demonstrate greater engagement with digital health booking platforms, indicating persistent demographic-based usage gaps.

Conclusion
The study concludes that demographic factors play a crucial role in shaping digital health booking behaviour, highlighting that access alone does not ensure equitable utilization. Policymakers and platform developers must adopt demographically sensitive strategies, including digital literacy initiatives and user-friendly platform design, to promote inclusive and equitable access to digital healthcare.

Keywords: Digital health platforms; Appointment booking behaviour; Demographic determinants; e-Health literacy; Healthcare accessibility

1. INTRODUCTION

The rapid digitalization of healthcare has transformed the way patients access and utilize health services, with digital health platforms increasingly facilitating activities such as appointment booking,

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teleconsultations, access to medical records, and health information management. These platforms promise improved accessibility, efficiency, and patient engagement, particularly in urban and semi-urban regions where digital infrastructure is expanding (World Health Organization [WHO], 2021). Among the various services offered, online appointment booking has emerged as a critical entry point through which patients interact with digital health systems, often shaping their overall experience and continued usage.

Despite the growing availability of digital health platforms, patients' adoption and booking behaviour remain uneven across population groups. Prior research indicates that demographic characteristics such as age, gender, education, income, and occupation significantly influence individuals' access to technology, digital skills, and health-seeking behaviour (Anderson & Perrin, 2017; van Deursen & van Dijk, 2014). In healthcare contexts, these demographic differences may affect not only whether patients use digital platforms, but also how confidently and frequently they book appointments and engage with online health services (Holden & Karsh, 2010). Understanding these variations is essential, as demographic disparities in digital booking behaviour may lead to unequal access to timely healthcare.

Existing studies on digital health adoption have largely focused on technological and behavioural determinants using established models such as the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT and UTAUT2) (Davis, 1989; Venkatesh et al., 2012). While these models provide valuable insights into factors such as perceived usefulness and ease of use, they often treat demographic variables as control factors rather than as central explanatory elements. Recent literature suggests that demographic attributes play a more substantive role in shaping technology-enabled health behaviours, particularly in developing economies where digital divides persist (Neter & Brainin, 2012; WHO, 2021).

In the context of digital health platforms, appointment booking represents a behaviour that lies at the intersection of technology use and healthcare decision-making. Booking an appointment online requires not only access to digital tools but also trust, digital competence, and familiarity with healthcare processes (Norman & Skinner, 2006). Demographic factors may therefore influence each stage of this process—from initial access to the final booking decision. For example, younger and more educated users may find online booking intuitive and timesaving, whereas older or less digitally literate patients may prefer traditional in-person methods despite having access to digital platforms (van der Vaart et al., 2011).

Against this backdrop, the present study aims to investigate how demographic characteristics affect patients' booking behaviour on digital health platforms. By focusing explicitly on demographic determinants, the study addresses a critical gap in the digital health literature and provides empirical evidence on how different population groups engage with online healthcare booking systems. The findings are expected to offer valuable insights for policymakers, healthcare providers, and digital health platform developers in designing inclusive, user-centred, and demographically sensitive digital health solutions that enhance equitable access to healthcare services.

2. REVIEW OF LITERATURE

2.1 Theoretical Framework

The adoption and usage of digital health platforms, particularly for appointment booking, has been widely examined through established technology acceptance theories. The Technology Acceptance Model (TAM) proposed by Davis (1989) highlights perceived usefulness and perceived ease of use as core determinants of technology adoption, while the Unified Theory of Acceptance and Use of

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Technology (UTAUT) and its extended version UTAUT2 integrate additional factors such as social influence, facilitating conditions, habit, and price value to explain consumer technology use (Venkatesh et al., 2003; Venkatesh et al., 2012). Although these models primarily focus on perceptual and behavioural constructs, they acknowledge the role of demographic variables, such as age, gender, experience, and income, as important contextual factors that condition technology adoption. In healthcare settings, scholars have further emphasized the relevance of e-Health Literacy, which reflects individuals' ability to seek, understand, and apply digital health information, as a critical capability influencing digital health usage (Norman & Skinner, 2006). Together, these theoretical perspectives provide a robust framework for understanding how demographic characteristics shape patients' transition from access to actual appointment booking on digital health platforms.

2.2 Thematic Review of Empirical Studies

A growing body of empirical literature has examined the impact of demographic factors on digital health adoption and booking behaviour. Studies consistently report that **age** plays a significant role, with younger users demonstrating higher adoption and more frequent use of online appointment systems compared to older populations (van der Vaart et al., 2011; Anderson & Perrin, 2017). Education level has been identified as another strong determinant, as higher educational attainment is associated with better digital skills and greater confidence in using health technologies (Neter & Brainin, 2012; Mitsutake et al., 2016). Research also indicates notable gender differences, with some studies finding higher engagement among females due to their greater involvement in healthcare decision-making, while others report minimal gender effects in digitally mature contexts (Holden & Karsh, 2010; Kim & Xie, 2017). Income and occupation have been shown to influence booking behaviour by shaping access to digital devices and perceptions of cost–benefit value, particularly in developing economies (Oliveira et al., 2016; Sudbury-Riley et al., 2017). Additionally, several studies highlight that demographic factors interact with digital health literacy, trust, and perceived risk to influence actual booking behaviour rather than mere intention (Zhang et al., 2018; Dwivedi et al., 2019). Collectively, across nearly two decades of research, these studies demonstrate that demographic characteristics are not merely control variables but play a substantive and multidimensional role in shaping patients' engagement with digital health platforms, thereby justifying the need for a focused investigation into the effects of demographics on digital health booking behaviour.

3. RESEARCH GAP AND AIMS OF THE STUDY

Although prior research on digital health adoption has extensively applied technology acceptance models such as TAM and UTAUT/UTAUT2, a significant research gap persists in understanding the explicit role of demographic factors in shaping actual digital health booking behaviour. Existing studies largely emphasize behavioural intention and technological perceptions, while demographic variables are often treated as control factors rather than central determinants, thereby overlooking how differences in age, gender, education, income, and occupation influence patients' transition from platform access to appointment booking. Furthermore, limited attention has been given to actual booking behaviour as a distinct outcome, especially in developing and emerging healthcare contexts where digital divides are more pronounced. Addressing this gap, the present study aims to examine the impact of key demographic characteristics on patients' booking behaviour on digital health platforms, analyze variations in booking patterns across demographic segments, and generate empirical insights that can inform the development of inclusive, user-centered digital health systems that reduce demographic disparities in healthcare access.

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4. METHODOLOGY USED

The study adopted a quantitative, descriptive, and analytical research methodology to examine the impact of demographic factors on the use behaviour of digital health platforms among patients. Primary data were collected through a structured, self-administered questionnaire from patients in the Tricity region (Chandigarh, Panchkula, and Mohali) who had prior exposure to digital health platforms. A non-probability convenience sampling technique was employed due to accessibility and time constraints, resulting in a total of 390 valid responses used for final analysis. The questionnaire included items measuring demographic characteristics and use behaviour, with responses recorded on a five-point Likert scale. Data were analyzed using SPSS, where descriptive statistics were applied to summarize respondent profiles and usage patterns. Inferential techniques, such as independent sample t-tests and one-way ANOVA, were used to assess differences in use behaviour across demographic groups at a 5% level of significance.

5. ANALYSIS AND INTERPRETATION

Table 1 presents the demographic profile of the respondents, indicating that the sample is diverse and broadly representative of active users of digital health platforms. The gender distribution is relatively balanced, with males comprising 53.8% and females 46.2% of the sample, allowing for a meaningful interpretation of digital health usage without significant gender bias. Most respondents fall within the economically active and digitally familiar age groups of 26–40 years (37.9 %) and 41–50 years (24.6 %), suggesting a higher likelihood of engagement with online health services, while the inclusion of older respondents (15.4 % aged 51 and above) provides insight into age-related adoption challenges. The predominance of married respondents (58.5%) reflects the role of family health management in influencing digital booking and usage behaviour. Educationally, the sample is relatively well-qualified, with nearly two-thirds holding graduate or postgraduate degrees, indicating greater digital awareness and confidence in using online health platforms. The occupational profile is varied, with salaried employees forming the largest group, followed by business professionals and students, indicating differing usage needs driven by time constraints and convenience. Income distribution shows a concentration in the lower- and middle-income categories, highlighting the importance of affordability and perceived value in digital health adoption. Overall, these demographic characteristics suggest that digital health platforms are most actively used by educated, working-age populations, while also underscoring the need for targeted strategies to enhance accessibility and usability for older, less educated, and lower-income groups.

Table 1: Demographic Profile of Respondents

Demographic Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	210	53.8
	Female	180	46.2
Age Group (Years)	18–25	86	22.1
	26–40	148	37.9
	41–50	96	24.6
	51 & Above	60	15.4
Marital Status	Single	128	32.8
	Married	228	58.5
	Widow/Widower	20	5.1
	Divorced	14	3.6
Educational Qualification	10th	38	9.7

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	10+2	68	17.4
	Graduation	154	39.5
	Post Graduation	110	28.2
	Doctorate	20	5.1
Occupation	Business / Self-Employed	82	21.0
	Salaried	142	36.4
	Student	74	19.0
	Homemaker	56	14.4
	Retired	36	9.2
Monthly Income (Rs.)	Below 50,000	138	35.4
	50,000–80,000	108	27.7
	80,000–1,00,000	76	19.5
	Above 1,00,000	48	12.3
	Dependent on Family	20	5.1

Table 2 summarizes the descriptive statistics of the key constructs examined in the study, indicating an overall positive perception and engagement with digital health platforms among respondents. Performance Expectancy records the highest mean score, suggesting that patients strongly perceive digital health platforms as useful in improving access, efficiency, and healthcare management. Effort Expectancy also shows favourable values, indicating that respondents generally find these platforms easy and convenient to use, although some variation reflects minor usability challenges. Social Influence demonstrates a moderate effect, implying that while peers and family play a role in encouraging usage, patients' decisions are largely driven by personal evaluations. The Facilitating Conditions register shows comparatively lower mean values, highlighting that although basic resources and support are available, improvements in infrastructure and technical assistance could further enhance usage. Hedonic Motivation reflects moderate enjoyment, suggesting that engaging features support continued use but are secondary to functional benefits. Price Value indicates a positive cost–benefit perception, underscoring the importance of affordability in digital health adoption. Habit shows emerging routine usage patterns, reflecting increasing familiarity and automaticity in platform use. Behavioural Intention exhibits strong positive values, indicating respondents' willingness to continue using digital health platforms, which is mirrored in the moderate to high levels of actual Use Behaviour reported. Finally, the relatively high mean for e-Health Literacy suggests that respondents generally possess adequate skills to search, understand, and apply online health information, supporting effective engagement with digital health services.

Table 2: Descriptive Statistics of Study Constructs

S. No.	Construct	Number of Items	Mean	Standard Deviation	Interpretation
1	Performance Expectancy (PE)	4	4.05	0.66	High perceived usefulness of digital health platforms
2	Effort Expectancy (EE)	4	3.80	0.68	Generally perceived as easy and convenient to use
3	Social Influence (SI)	4	3.69	0.58	Moderate influence of peers and social environment
4	Facilitating Conditions (FC)	4	3.53	0.69	Adequate but improvable technical and support resources
5	Hedonic	3	3.92	0.70	Moderate enjoyment and

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	Motivation (HM)				engagement during usage
6	Price Value (PV)	3	3.70	0.63	Positive cost–benefit perception with some sensitivity
7	Habit (HB)	4	3.70	0.69	Emerging routine and automatic usage patterns
8	Behavioural Intention (BI)	4	3.83	0.68	Strong intention to continue using platforms
9	Use Behaviour (UB)	3	3.73	0.79	Moderate to high actual usage behaviour
10	e-Health Literacy (eHL)	8	3.88	0.65	Generally good ability to use online health information

Table 3 presents the results of the t-test and one-way ANOVA conducted to examine demographic differences in the use behaviour of digital health platforms, revealing several statistically significant patterns. The independent t-test indicates a significant gender difference, with male respondents reporting higher use behaviour scores than females ($t = 2.18$, $p = 0.030$), a finding consistent with earlier studies that observed greater technology usage among males due to higher digital confidence in certain contexts (Venkatesh et al., 2012; van Deursen & van Dijk, 2014). Age-wise differences are also significant ($F = 6.42$, $p < 0.001$), with respondents aged 18–25 and 26–40 demonstrating higher usage compared to older age groups, supporting prior evidence that younger and working-age individuals are more inclined toward digital health adoption due to greater familiarity with digital technologies (Anderson & Perrin, 2017; van der Vaart et al., 2011). In contrast, marital status does not show a significant effect on use behaviour ($F = 1.94$, $p = 0.121$), suggesting that digital health usage is influenced more by individual capabilities than family status, a result aligned with Holden and Karsh (2010).

Table 3: T-Test and ANOVA Results for Demographic Differences in Use Behaviour of Digital Health Platforms

Demographic Variable	Category	Mean Use Behaviour Score	Test Applied	Test Value (t / F)	p-value	Result
Gender	Male	3.79	Independent t-test	2.18	0.030	Significant
	Female	3.65				
Age Group (Years)	18–25	3.88	One-way ANOVA	6.42	0.000	Significant
	26–40	3.91				
	41–50	3.62				
	51 & Above	3.41				
Marital Status	Single	3.82	One-way ANOVA	1.94	0.121	Not Significant
	Married	3.71				
	Widow/Widower	3.55				
	Divorced	3.60				
Educational Qualification	Up to 10+2	3.42	One-way ANOVA	8.15	0.000	Significant
	Graduation	3.74				
	Post Graduation	3.89				
	Doctorate	4.02				
Occupation	Student	3.93	One-way	5.78	0.000	Significant

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	Salaried	3.84	ANOVA			
	Business/Self-Employed	3.69				
	Homemaker	3.51				
	Retired	3.36				
Monthly Income (Rs.)	Below 50,000	3.55	One-way ANOVA	7.02	0.000	Significant
	50,000–80,000	3.72				
	80,000–1,00,000	3.91				
	Above 1,00,000	4.04				

Educational qualification exhibits a strong and significant effect ($F = 8.15$, $p < 0.001$), with higher usage observed among postgraduates and doctoral degree holders, corroborating findings that link higher education with improved digital skills and health technology engagement (Neter & Brainin, 2012; Mitsutake et al., 2016). Occupational differences are also significant ($F = 5.78$, $p < 0.001$), as students and salaried employees report higher use behaviour, reflecting the role of time efficiency and digital exposure in technology adoption (Oliveira et al., 2016). Finally, income-related differences are statistically significant ($F = 7.02$, $p < 0.001$), with higher-income groups exhibiting greater use behaviour, which aligns with previous research highlighting the influence of affordability and access to digital resources on health technology usage (Sudbury-Riley et al., 2017; Kim & Xie, 2017). Overall, these results reinforce existing literature by demonstrating that demographic characteristics, particularly age, education, occupation, and income, play a crucial role in shaping digital health platform use behaviour.

6. POLICY IMPLICATIONS

The findings of this study have important policy implications for promoting equitable and effective use of digital health platforms. Since significant differences in use behaviour were observed across age, education, occupation, and income groups, policymakers should design inclusive digital health policies that specifically address demographic disparities. Targeted digital health literacy programs and awareness campaigns should be introduced for older adults, those with limited education, and lower-income populations to enhance their confidence and ability to utilize online health services. Policies should also support the development of simplified, multilingual, and user-friendly digital health interfaces to reduce usability barriers. In addition, expanding affordable internet access, subsidized digital devices, and public digital health facilitation centers can help bridge access gaps among economically weaker sections. By integrating demographic sensitivity into digital health strategies, policymakers can ensure that digital health platforms move beyond mere availability to enable widespread, equitable, and sustained access to healthcare.

7. CONCLUSION AND SCOPE FOR FUTURE RESEARCH

In conclusion, this study demonstrates that demographic characteristics play a significant role in shaping patients' use behaviour of digital health platforms, highlighting that access alone does not guarantee equitable utilization. Factors such as age, education, occupation, and income were found to meaningfully influence digital health booking and usage behaviour, underscoring the need for demographically sensitive digital health strategies. Future research may extend this work by examining longitudinal changes in booking behaviour, incorporating additional behavioural and contextual variables, and expanding the analysis to rural or cross-regional settings to enhance generalizability and policy relevance.

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Journal Website: www.nrjss.in

REFERENCES:

1. Anderson, M., & Perrin, A. (2017). Technology use among seniors**.** *Pew Research Center*. https://www.pewresearch.org
2. Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173–1182. https://doi.org/10.1037/0022-3514.51.6.1173
3. Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage Publications.
4. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319–340. https://doi.org/10.2307/249008
5. Dwivedi, Y. K., Rana, N. P., Jeyaraj, A., Clement, M., & Williams, M. D. (2019). Re-examining the Unified Theory of Acceptance and Use of Technology (UTAUT): Towards a revised theoretical model. *Information Systems Frontiers, 21*(3), 719–734. https://doi.org/10.1007/s10796-017-9774-y
6. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.
7. Holden, R. J., & Karsh, B. T. (2010). The Technology Acceptance Model: Its past and its future in health care. *Journal of Biomedical Informatics, 43*(1), 159–172. https://doi.org/10.1016/j.jbi.2009.07.002
8. Kim, H., & Xie, B. (2017). Health literacy in the eHealth era: A systematic review of the literature. *Patient Education and Counseling, 100*(6), 1073–1082. https://doi.org/10.1016/j.pec.2017.01.015
9. Kothari, C. R. (2004). *Research methodology: Methods and techniques* (2nd ed.). New Age International Publishers.
10. Mitsutake, S., Shibata, A., Ishii, K., & Oka, K. (2016). Associations of eHealth literacy with health behavior among adult internet users. *Journal of Medical Internet Research, 18*(7), e192. https://doi.org/10.2196/jmir.5413
11. Moon, J. W., & Kim, Y. G. (2001). Extending the TAM for a World-Wide-Web context. *Information & Management, 38*(4), 217–230. https://doi.org/10.1016/S0378-7206(00)00061-6
12. Neter, E., & Brainin, E. (2012). eHealth literacy: Extending the digital divide to the realm of health information. *Journal of Medical Internet Research, 14*(1), e19. https://doi.org/10.2196/jmir.1619
13. Norman, C. D., & Skinner, H. A. (2006). eHealth literacy: Essential skills for consumer health in a networked world. *Journal of Medical Internet Research, 8*(2), e9. https://doi.org/10.2196/jmir.8.2.e9
14. Oliveira, T., Thomas, M., Baptista, G., & Campos, F. (2016). Mobile payment: Understanding the determinants of customer adoption and intention to recommend the technology. *Computers in Human Behavior, 61*, 404–414. https://doi.org/10.1016/j.chb.2016.03.030

ISSN: 2348-473X
Peer Reviewed & Refereed Journal (IF: 6.74)
Journal Website: www.nrjss.in

15. Sudbury-Riley, L., FitzPatrick, M., & Schulz, P. J. (2017). Exploring the measurement properties of the eHealth Literacy Scale (eHEALS) among baby boomers. *Journal of Medical Internet Research, 19*(6), e221. https://doi.org/10.2196/jmir.6877

16. van Deursen, A. J. A. M., & van Dijk, J. A. G. M. (2014). The digital divide shifts to differences in usage. *New Media & Society, 16*(3), 507–526. https://doi.org/10.1177/1461444813487959

17. van der Vaart, R., Drossaert, C. H. C., de Heus, M., Taal, E., & van de Laar, M. A. F. J. (2011). Measuring actual use of online health information: A validation study of self-reported measures. *Journal of Medical Internet Research, 13*(1), e25. https://doi.org/10.2196/jmir.1603

18. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly, 27*(3), 425–478. https://doi.org/10.2307/30036540

19. Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the Unified Theory of Acceptance and Use of Technology. *MIS Quarterly, 36*(1), 157–178. https://doi.org/10.2307/41410412

20. World Health Organization. (2021). *Global strategy on digital health 2020–2025*. World Health Organization. https://www.who.int

21. Wu, J. H., & Wang, S. C. (2005). What drives mobile commerce? An empirical evaluation of the revised technology acceptance model. *Information & Management, 42*(5), 719–729. https://doi.org/10.1016/j.im.2004.07.001

22. Zhang, X., Guo, X., Lai, K. H., & Guo, F. (2018). Understanding gender differences in m-health adoption: A modified theory of reasoned action model. *Telematics and Informatics, 35*(5), 1481–1497. https://doi.org/10.1016/j.tele.2018.03.004