

Perceived benefits and Usage behaviour for Mobile Healthcare Mobile Apps among Urban Youth: An Empirical Study

¹Dr. Tulika Singh, ²Dr. Adyasha Suvadarsini, ³Dr. Priti Yadav, ⁴Debajyoti Sarkar,

¹Associate Professor, Global Institute of Management, Bhubaneswar.

²Assistant Professor, Global Institute of Management, Bhubaneswar.

³Demonstrator, Department of Optometry, Faculty of Paramedical Sciences, UPUMS, Saifai, Etawah, (U.P.)

⁴Research Scholar, Department of Commerce, Rajiv Gandhi University, Rono-Hills, Doimukh, Arunachal Pradesh

Abstract

As smartphones become ubiquitous in cities, understanding the motivations and behaviours of young users has become highly significant. The study investigates the perceived benefits and usage patterns of these apps, emphasising the dynamic nature of user preferences. In contemporary urban settings, where lifestyles are fast-paced and technology-centric, mobile healthcare apps have emerged as indispensable companions in the pursuit of health and wellness. This empirical study will look into the factors influencing the adoption and sustained use of these apps among urban youth. From fitness tracking to symptom monitoring, these applications promise a personalised and accessible avenue for urban youth to engage with their well-being. User-friendly interfaces, engaging features, and social influence play pivotal roles in adoption. As urban youth increasingly navigate the complexities of modern life, the integration of mobile healthcare apps into their daily routines represents a fascinating intersection of technology and health consciousness. To ensure widespread acceptance, developers, healthcare providers, and policymakers must align app functionalities with user needs. Study survey was conducted among 219 urban youths to find the factors that shows Perceived benefits and Usage behaviour for Mobile Healthcare Mobile Apps among Urban Youth and found that Convenience, Health Monitoring and Community Support are the factors that shows Perceived benefits and Usage behaviour for Mobile Healthcare Mobile Apps.

Keywords: Mobile Healthcare Apps, Urban Youth, Perceived Benefits, Technology and Health, Usage Behaviour

Introduction

Mobile healthcare apps represent a significant change in the convergence of technology and healthcare, offering a diverse array of software applications tailored for smartphones, tablets, and other mobile devices. These apps offer a range of services, from keeping track of vital signs to helping with chronic conditions, accessing medical records, talking to doctors online, and even ordering prescriptions. The potential impact of mobile healthcare apps extends to enhancing the quality, accessibility, and affordability of healthcare services, particularly benefiting the tech-savvy, health-conscious, and busy urban youth. This study delves into the intersection of perceived benefits and usage behaviour pertaining to mobile healthcare apps among urban youth. As smartphones become ubiquitous in urban environments, exploring the motivations, preferences, and patterns of engagement with healthcare apps is essential for understanding the potential impact on health outcomes and the broader healthcare ecosystem.

But not all of these apps are the same. Some are better than others in terms of how easy they are to use and how much you can trust them. User preferences, expectations, and perceptions regarding these apps can vary significantly, influencing their adoption and usage patterns. How easy and helpful people think a mobile app is can strongly influence whether they want to use it or not. This shows that young consumers tend to try out and stop using apps quite often, highlighting the changing preferences among this group (Mehra et al., 2020). To make sure these apps work well for young city dwellers, it's important for the people who create them, the healthcare providers, and the people who make the rules to understand what users want and need.

As technology advances, the integration of artificial intelligence (AI) applications into healthcare raises critical concerns, particularly in low-resource environments. Issues such as automation, potential misdiagnosis, data access, surveillance, security, and privacy intricately weave a tapestry of challenges that must be navigated, reflecting the nuanced landscape of AI adoption in healthcare (Okolo et al., 2021).

For these apps to be widely adopted, we need to understand what users like and what they don't. Engaging features, user-friendly interfaces, and social influence are usually what catalyses the adoption of health apps. This shows the necessity for implementing strategies that focus on raising awareness and fostering community building, particularly targeting the adolescent demographic (Chan et al., 2017). Developers should focus on making apps that not only do the job but also are easy to use and reliable. Healthcare providers can use these apps to help more people, especially those in cities, get the care they need. Policymakers can create rules that protect users and encourage new ideas in healthcare technology.

Literature Review

Urban youth increasingly embrace mobile healthcare apps due to smartphones' ubiquity, offering convenience and instant connectivity. The popularity of healthcare apps among clinicians and patients is rising, enhancing access to clinical data and reference information but the effectiveness depends on the quality, context-aware content adhering to medical practices (Tanuja Lohnari et al., 2016).

Consumers, particularly those managing chronic conditions, utilise health apps for self-care. There is a need for continuous stimulation in app design to accommodate changing user requirements. While gamification benefits are a significant factor, sustained app engagement requires regular intervals and personalised rewards. It is thus important to design health app aligning with user experiences, providing insights for developers to enhance involvement, capabilities, info management, and user-friendliness (Anderson et al., 2016).

Amid the pandemic, Saudi Arabia showed that the rise of mobile health apps like Sehha, Mawid, and Tetamman is driven by perceived benefits and self-efficacy, with barriers and cues to action having minimal impact. Government's view these apps, crucial for pandemic management. To enhance adoption, developers should customise apps to community needs, emphasising benefits and self-efficacy (Alharbi et al., 2022).

Pai & Alathur (2019) investigated the factors affecting intention to use mHealth technology and applications, it was found that awareness and personal innovativeness significantly influence the intention to use mHealth technology. In particular, the willingness to embrace new ideas personally and being well-informed are recognized as key factors influencing this intention..

Shifting from a 'disease-centered model' to a 'citizen/client model' that emphasises patient engagement is needed as chronic diseases necessitate a more active role for individuals in their health management. Patient engagement, viewed as a synergistic emotional, cognitive, and cognitive experience, can be facilitated by Positive Technology, including virtual reality and online communities. This transformation is crucial for economic sustainability and improved healthcare performance worldwide (Wiederhold et al., 2013).

In Bangladesh, the widespread availability and affordability of mobile phones have transformed social relations and significantly impacted the healthcare sector. Perceived usefulness significantly influences the intention to use mHealth services but perceived ease of use is deemed less significant in mHealth adoption (Hoque et al., 2015).

In the Indian scenario, the primary drivers influencing expectations regarding the usage of mHealth apps are perceived usefulness, enjoyment, and time commitment. Conversely, factors like cost, heightened dependability, perceived ease of use, and increased protection do not play a significant role in shaping these expectations. Despite the growing availability of healthcare applications, understanding and promoting factors is crucial for effective utilisation (Chakraborty, 2020).

There is an increasing interest in user-centered mobile health tracking apps but a limited awareness of factors promoting continued use. Usability is identified as a crucial aspect for motivating users with chronic conditions to engage with these apps. While feasibility has been demonstrated on a small scale, there is a large gap in understanding the views and experiences of diverse populations with chronic conditions (Birkhoff & Smeltzer, 2017).

Balapour et al. (2019) studied patient intentions to adopt mobile healthcare (mHealth) apps and they discovered that if patients see these apps as part of their identity with mobile technology, have some experience with IT, and believe in their ability to use such apps, they're more likely to want to use them from clinics. Surprisingly, having a higher level of education was linked to a lower likelihood of wanting to use these apps.

The decision to use mHealth apps is significantly influenced by factors such as how easy users perceive them to be, social influence, expectations of performance, usage conditions, and trust. Also, trust, facilitating conditions, and users' intentions also play positive roles in the actual adoption of mHealth apps (Kaur et al., 2022).

Basic psychological needs, such as the desire for autonomy, competence, and connection with others, have a positive impact on internal motivation. In addition to these, factors related to gamification, like perceived enjoyment and the level of challenge, positively affect external motivation. Both intrinsic and extrinsic motivation contribute to engagement, leading to loyalty in using mHealth apps among young consumers (Soni et al., 2021).

Lee et al. (2017) conducted a study in Korea exploring the influence of gamification on user intention to use mHealth and found that gamification is particularly effective in increasing user intention among healthy and younger individuals. mHealth developers should include gamification elements to motivate both healthy individuals and the younger demographic to engage in healthcare activities.

Objective

1. To find the factors that shows Perceived benefits and Usage behaviour for Mobile Healthcare Mobile Apps among Urban Youth.

Methodology

Study survey was conducted among 219 urban youths to find the factors that shows Perceived benefits and Usage behaviour for Mobile Healthcare Mobile Apps among Urban Youth. "Random sampling method" and "Factor Analysis" were used to collect and analyse the data.

Data Analysis

In the total population of study survey males are 56.2% and females are 43.8%. 30.5% of them are below 40 years, 42.9% comes under the age group of 40-45 years and rest 25.6% are above 45 years of age. 42.5% are graduate and below and rest 57.5% are post graduate and above.

"Table 1 General Details"

"Variables"	"Respondents"	"Percentage"
Male	123	56.2
Female	96	43.8
Total	219	100
Age (years)		
Below 40	69	31.5
40-45	94	42.9
Above 45	56	25.6
Total	219	100
Education		
Graduate and below	93	42.5
Post graduate and above	126	57.5
Total	219	100

Table 2 “KMO and Bartlett's Test”

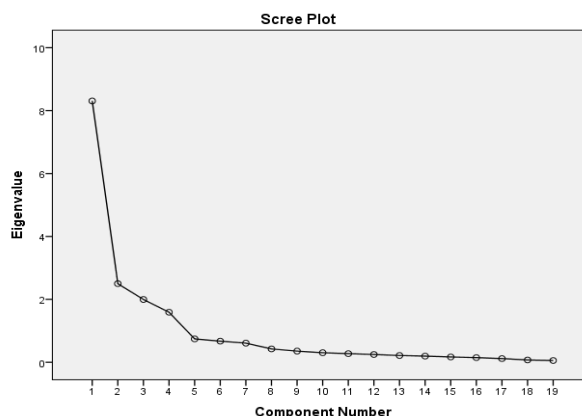
“Kaiser-Meyer-Olkin Measure of Sampling Adequacy”		.889
“Bartlett's Test of Sphericity”	Approx. Chi-Square	3632.710
	df	171
	Sig.	.000

In the table above KMO value is 0.889 and the “Barlett’s Test of Sphericity” is significant.

“Table 3 Total Variance Explained”

“Component”	“Initial Eigen values”			“Rotation Sums of Squared Loadings”		
	“Total”	“% of Variance”	“Cumulative %”	“Total”	“% of Variance”	“Cumulative %”
1	8.306	43.715	43.715	4.363	22.964	22.964
2	2.500	13.156	56.871	3.832	20.168	43.132
3	1.997	10.509	67.380	3.339	17.576	60.708
4	1.590	8.369	75.749	2.858	15.042	75.749
5	.742	3.908	79.657			
6	.672	3.535	83.192			
7	.608	3.201	86.392			
8	.425	2.237	88.629			
9	.355	1.868	90.497			
10	.305	1.603	92.101			
11	.274	1.444	93.545			
12	.248	1.306	94.851			
13	.215	1.134	95.985			
14	.196	1.034	97.018			
15	.170	.895	97.913			
16	.148	.781	98.695			
17	.117	.618	99.313			
18	.074	.387	99.700			
19	.057	.300	100.000			

The “principal component analysis” method was applied to extract the factors and it was found that 19 variables form 4 Factors. The factors explained the variance of 22.964%, 20.168%, 17.576% and 15.042% respectively. The total variance explained is 75.749%.



The graph above depicts the Eigen values generated from the "Total Variance Explained table" for an elbow with 4 components.

"Table 4 Rotated Component Matrix"

"S. No."	"Statements"	"Factor Loading"	"Factor Reliability"
	Access to Information		.954
1	Mobile healthcare apps provide a wealth of information	.856	
2	Facilitate quick and easy access to health-related information	.849	
3	Help in accessing personalized health information	.845	
4	Apps provide emergency information and first aid resources	.843	
5	Facilitate community knowledge sharing through forums and discussions	.784	
	Convenience		.906
6	At the forefront is the convenience as they provide in accessing healthcare services	.883	
7	It is convenient to seek medical advice, schedule appointments through apps	.859	
8	Convenient to receive medical advice without visiting a clinic	.855	
9	Mobile healthcare apps help users avoid long waiting times at physical healthcare facilities	.840	
10	Level of comfort and familiarity with technology influences the frequency and ease of app usage	.648	
	Health Monitoring		.885
11	Users who are more health-conscious may exhibit higher usage behaviors like health monitoring	.892	
12	Health apps enable users to set health goals and track their progress	.873	
13	Help to track dietary habits and nutritional intake	.826	
14	Mobile healthcare apps monitor sleep duration and quality.	.653	
15	It monitors stress levels and mental well-being.	.614	
	Community Support		.852
16	Allow users to share their health experiences facing similar health challenges	.859	
17	Help to seek and provide advice on managing health conditions, treatments, and wellness practices	.833	
18	Help to integrate healthcare professionals or experts who participate in community discussions	.800	
19	Facilitate connections with local healthcare resources and support groups	.699	

Access to Information is first factor which includes the variables like Mobile healthcare apps provide a wealth of information, facilitate quick and easy access to health-related information, help in accessing personalized health information, Apps provide emergency information and first aid resources and Facilitate community knowledge sharing through forums and discussions. Next factor is Convenience and its associated variables are at the forefront is the convenience as they provide in accessing healthcare services, It is convenient to seek medical advice, schedule appointments through apps, Convenient to receive medical advice without visiting a clinic, Mobile healthcare apps help users avoid long waiting times at physical healthcare facilities and Level of comfort and familiarity with technology influences the frequency and ease of app usage. Another factor is Health Monitoring which includes the variables like Users who are more health-conscious may exhibit higher usage behaviours like health monitoring, Health apps enable users

to set health goals and track their progress, help to track dietary habits and nutritional intake, Mobile healthcare apps monitor sleep duration and quality and it monitors stress levels and mental well-being. Other factor is Community Support which includes the variables like apps allow users to share their health experiences facing similar health challenges, help to seek and provide advice on managing health conditions, treatments, and wellness practices, help to integrate healthcare professionals or experts who participate in community discussions and facilitate connections with local healthcare resources and support groups.

Conclusion

The examination of how urban youth perceive and use mobile healthcare apps reveals a compelling story about the close relationship between technology and health in today's cities. As we navigate the complexities of modern life, these apps have become essential tools, seamlessly fitting into daily routines and significantly contributing to the well-being of urban youth. The benefits urban youth associate with mobile healthcare apps go beyond mere convenience. They signify a fundamental change in how individuals think about their health. The convenience of having health-related resources readily available encourages a sense of independence and responsibility, fostering a proactive approach to health. The insights from this study not only help in academic discourse but also offer practical implications for healthcare providers, and policymakers looking to improve digital health interventions for urban youth.

The study was conducted to find the factors that shows Perceived benefits and Usage behaviour for Mobile Healthcare Mobile Apps among Urban Youth and found that Access to Information, Convenience, Health Monitoring and Community Support are the factors that shows Perceived benefits and Usage behaviour for Mobile Healthcare Mobile Apps.

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