

PAPER

Mobile Health Service Adoption: Reducing the Digital Gap and Age's Moderating Influence

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ABSTRACT

In the past few years, mobile health services (MHS)—a growing topic in the healthcare sector—have received increasing attention. Technologies related to mobile health, or m-health, have several advantages for people, businesses, and medical professionals. Indeed, using m-health can help older people become more proactive patients and lessen the strain on health systems and financial resources. However, the potentially revolutionary impact of m-health is constrained since a large number of senior citizens oppose its adoption, which creates an age-based digital divide. Few studies have examined how public consumers of MHS adopt MHS, even though prior study on this topic is very substantial. We discover that user attitudes towards MHS are positively impacted by perceived benefits and usefulness, perceived barriers, and external cues. Perceived service availability also has a major impact on perceived benefits and usefulness, which, when combined with attitude, directly increases intention. Additionally, we discover that the MHS's utilization intent has moderating effects. The final section discusses the implications for mobile health marketing. The results indicate that perceived ease of use, vulnerability, and severity are more significant factors for middle-aged and older users to use MHS. The moderator analysis confirmed that different age groups have specific moderating effects on the adoption of mobile health services.

KEYWORDS

mobile health services (MHS), businesses, medical professionals, marketing

1 INTRODUCTION

Recent technical improvements that boost data collection and analysis capabilities provide both potential for improving decision-making and hazards to people's privacy. People's control over their privacy regarding their personal information decreases when data collection increases. The established body of privacy literature indicates the constraining effect of privacy issues on individuals' willingness to share information and embrace technologies. Nevertheless, further study is required to comprehend privacy in the context of developing technologies [1].

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The present investigation centers on mobile health (m-health) technology and the significance of privacy in creating a digital divide in m-health. M-health, which can be broadly defined as the use of mobile technologies to achieve health goals, includes a range of mobile apps, wearable technology, and health record systems. Even though practically everyone with an Internet connection can use these technologies, elderly adults stand to gain more from using m-health to treat chronic diseases.

The attainment of these advantages is contingent upon adoption, which is still low among senior adults, indicating the presence of an age-based digital divide in m-health adoption. In the field of information systems (IS), the digital gap has been examined from various angles, especially in the literature on social inclusion. This body of work focuses on comprehending the disparities in opportunities related to technology and access that people have depending on their demographic attributes, like gender and ethnicity. This significant corpus of work has brought attention to disparities in minority groups' access to and technology support. A recent study examined the effects of money, education, and ethnicity on diabetics' willingness and capacity to look up health information online. Although m-health is accessible to anyone with a smartphone or other device, adoption among older folks is still low. The reasons underlying older persons' reluctance to m-health are rarely investigated, and empirical evaluations of the factors affecting the adoption of m-health are still rare. Consequently, the underlying causes of the age-based adoption gap are still unknown and require further study.

As illustrated in Figure 1, a general gig m-health system integrates m-health care operations (information management, system updates, scheduling, diagnosis, and inquiry) with mHealth care services (booking appointments, diagnosis, and scheduling) into a gig economy system that is defined by independent contracts, free agents, and freelance work. This concept allows for the simplification of health care services and activities into smaller jobs, or gigs, which can then be shared or outsourced among numerous independent contractors.

Due to a variety of circumstances, including smoking, rigorous academic demands, and social pressure, the prevalence of chronic diseases among younger citizens has been steadily rising in recent years. Bangladesh is one of the ten countries where the majority of the world's smokers—more than 80% of whom are young—live [2]. Thirty percent of younger ladies and over fifty percent of younger boys in Bangladesh use tobacco in any form—smoke or not. In underdeveloped nations such as Bangladesh, smoking is the primary cause of several illnesses that result in early death among young people. In addition to being risk factors for heart attacks, strokes, cardiac failures, cardiovascular conditions, and heart diseases, young people in Bangladesh also suffer from hypertension and Type 2 diabetes [3], two of the world's top causes of death.

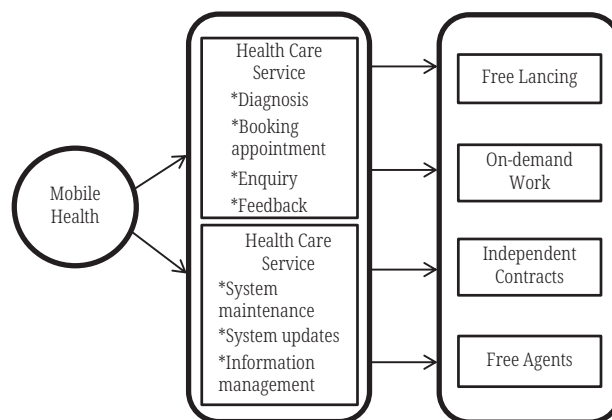


Fig. 1. All-purpose mobile health systems

Personalized and customized medical services are offered to those in need, particularly young citizens, using mobile phone-based health services, or mHealth. It's considered one of the best instruments available for treating illnesses and enhancing wellbeing. People can enhance their standard of living and manage chronic diseases more skillfully with the help of mHealth services. Type 2 diabetes and hypertension can both be prevented and controlled by it. It has also grown in favor of a smoking cessation method for younger citizens in developing nations. A m-health intervention can lower costs, improve reach, foster more communication between patients and doctors, and make it simpler and quicker to communicate health and disease-related information. Medicine, dietary habits, sleep, physical activity, blood sugar, and other bodily functions and behaviors can all be improved by m-health adoption.

The paper is organized as follows: Section 2 presents the methodology utilized in selecting the assessed literature and doing the content analysis. Section 4 provides a summary of these procedures as they are implemented, after Section 3 explains the differences between these methods. Furthermore, the current limitations of these approaches are examined, along with potential study paths and trends for using the previously described methodologies in inventions. There is a closing statement in Section 5.

2 RELATED WORKS

The definition of m-health is “using wireless mobile communication devices to aid in the delivery of health services.” A recent study on market study for health care indicates that 31% of US individuals have accessed health information via their mobile phones. Moreover [4], 19% of US individuals with smartphones have at least one health app on them, with the most widely used ones being for diet, fitness, and weight management. In a recent m-health opinion survey, about half of the patients asked said they thought mHealth could give them more control over their medical treatment, make it easier for them to get the information they needed, and eventually lower the cost and enhance the standard of their care.

Even though the study has shed more light on the primary variables influencing consumer intention and the use of MHS, there are still some crucial details that need to be clarified. Technical reliability is a key factor in encouraging clients to use technology-based self-service, according to earlier study [5]. Reliability has been regarded as one of many characteristics of service quality in the majority of studies conducted so far. Undoubtedly, dependability is a crucial factor in assessing services and has been the focus of much study and insightful information.

In Bangladesh, family members would take care of their own older relatives while they lived in joint houses, as per the socio-cultural and religious traditions of the country. But fast changes in the socioeconomic and demographic spheres, shifting social and religious beliefs, and the impact of western culture have all contributed to the breakdown of this institution. Furthermore, more elderly people are living freely at home or in residential care in urban regions such as Bangladesh's capital, Dhaka [6]. The healthcare system is anticipated to be in unprecedented demand as a result of these changes. In order to meet this need for the handling of chronic diseases and to change and enhance the healthcare system for underprivileged patients with chronic diseases, particularly in developing nations' cities, mHealth appears to have a bright future.

Accordingly, mobile health services (MHS) are a range of health services (such as hospital registration, location-based services, and health consultation) that are provided via the m-health platform. Because of its benefits of mobility, portability, and ubiquity, m-health, a subset of e-health, offers individualized and interactive health services everywhere. As a result [7], m-health shows an even greater ability to handle emergencies than does traditional e-health, which has encouraged its widespread development worldwide to address the issue of old healthcare, particularly in nations with significant aging populations such as in China.

David Bowie once said, “Ageing is an amazing process where you become who you really should have been.” This demographic is still understudied, despite appeals for privacy and technological adoption study that concentrates on older populations. Moreover, there is no consensus regarding the age range or the reasoning behind this selection among the scant number of studies that have been conducted so far, which either look at older adults’ intentions to utilize health technology or their privacy concerns separately [8]. It is true that challenges in characterizing older individuals continue outside of privacy and IS. The retirement date of sixty-five or sixty-six is widely accepted, but it varies from nation to nation and arbitrarily defines “older adult.” Moreover, the term “old age” is frequently linked to negative implications, such as the incapacity to engage in social activities.

A fundamental shift in the way customers interact with financial institutions has resulted from the introduction of IT-based self-service platforms in the financial industry. Study have examined the impact of customers’ adoption of digital banking on consumer transactions in both offline and online environments, and studies have attempted to understand the relationship between user activity and digital banking usage. Compared to previous study, our work focuses on hidden defection [9], a phenomenon that could have long-term detrimental effects on traditional banks’ client base, and multihoming behavior, a crucial component of the financial industry’s adoption of online channels.

There are a number of hygiene and motivational elements that influence MHS uptake by users. Previous study on MHS adoption mostly explained the adoption process at the human level, with little attention paid to the organizational level. Organizational MHS adoption is influenced by similar factors as individual adoption, but the former is different in terms of adopting incentives and demotivators [10]. On the one hand, organizations use MHS with varying goals in mind. People use MHS to enhance their physical quality by making positive behavioural, lifestyle, and job habit changes. Therefore, for each user’s adoption, the personal outcomes associated with health improvement—such as perceived worth, perceived simplicity of use, satisfaction, and sense of usefulness—are highly valued.

3 METHODS AND MATERIALS

3.1 Theories of health behaviour

A number of academics have included health behavior theories into their study models to examine the impact of user attitude and behavioral intention on mobile health adoption, given that adopting mobile health is one type of health behavior. Health behavior, according to definitions, is any action a person takes to promote, protect, or maintain their health, regardless of their actual or perceived state of health. Therefore, adopting m-health is a behavior that is tied to health as well as

accepting technology. Protection motivation theory (PMT) and the health belief model (HBM) are the two main theories that are used to explain health behavior in Figure 2 [11]. According to HBM, an individual decides whether or not to take part in a health-related activity by weighing the potential risks of not acting as well as the potential rewards of acting. Net advantages are determined by taking into account perceived barriers and benefits, while perceived threats are determined by taking into account perceived susceptibility and intensity.

A wireless health monitoring adoption model and an integration model of TAM and HBM were developed for mobile health adoption, drawing on the theory of HBM. The findings showed that user attitudes regarding MHS are positively impacted by perceived barriers and advantages. The danger evaluation and responding appraisal processes are the foundation of PMT, which offers a number of components that are comparable to HBM to explain health behavior. The frequency statistics show that PMT was adopted more broadly in mobile health than HBM. Perceived vulnerability and perceived severity make up threat evaluation, which primarily determines the situation's seriousness and severity.

Reaction efficacy, self-efficacy, and reaction cost make up the components of coping assessment, which primarily evaluates how the person responds to the circumstances. Certain constructs, such as perceived utility in technology acceptance theories that were left out of the conceptual model, have a close relationship with coping appraisal. Threat assessment and coping appraisal elements influence intended adoption through attitude, according to a study on mobile health acceptability based on PMT. Based on UTAUT2, PMT, and privacy calculus theory, it was discovered that consumers' views towards the use of wearable technology in healthcare will be strongly impacted by their perceptions of perceived severity and vulnerability. The relevance of health behavior theory has been confirmed in relation to the adoption of mobile health, which may legitimately represent the impact of health constructs on personal adoption behavior.

While self-efficacy and response time in PMT can be thought of as perceived behavioral control in PBC, response efficacy in PMT is comparable to perceived usefulness in TAM. In order to better understand users' health behavior, we opted to incorporate perceived severity and perceived vulnerability—two key constructs from PMT—into our conceptual model, given that PMT offers advantages over HBM in terms of adding more components.

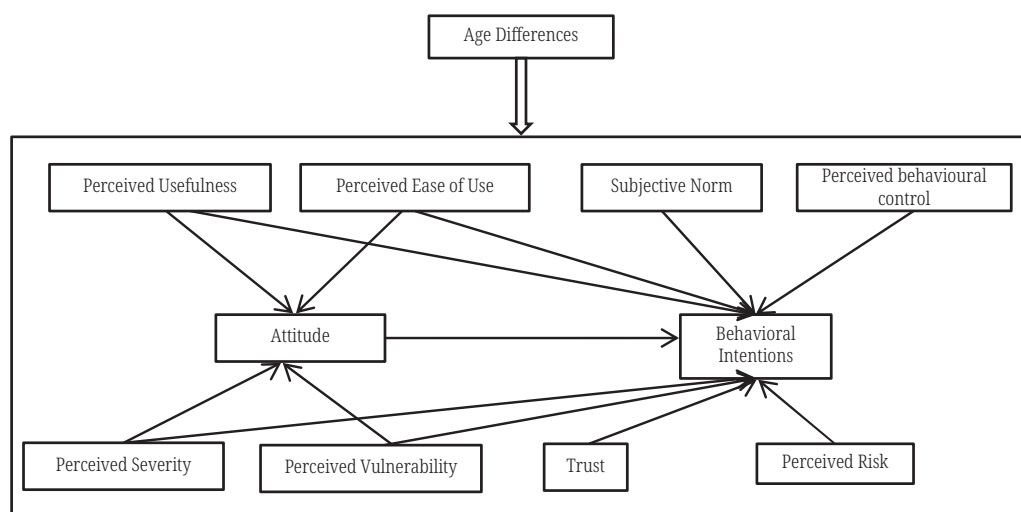


Fig. 2. The health belief model (HBM) are the two main theories

3.2 Age disparities

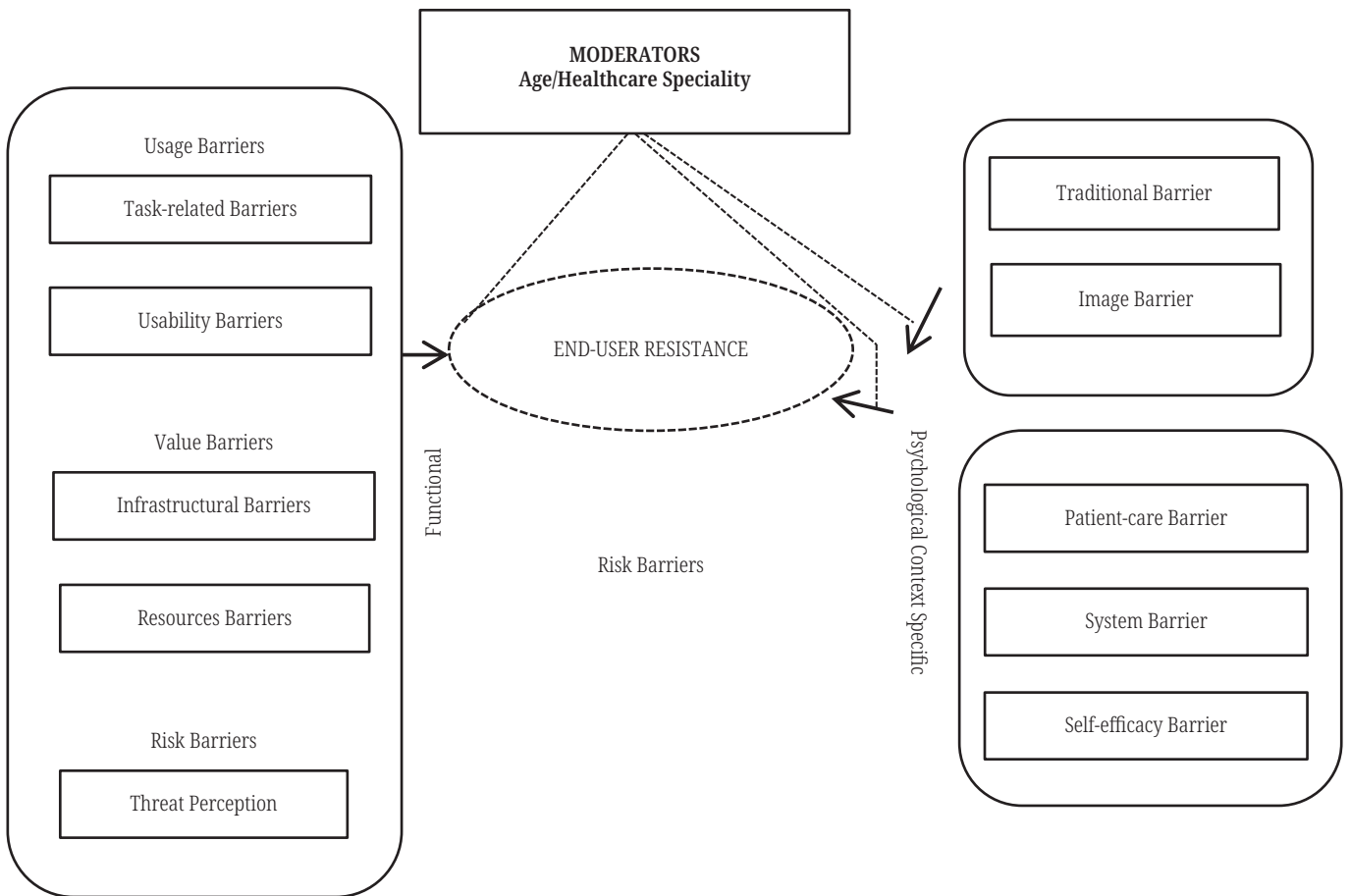


Fig. 3. Framework conceptualization: End-user opposition to e-health advances

As a result [12], we classify task-related and aesthetic barriers as classic usage obstacles within functional barriers because they are related to the difficulties that patients and healthcare practitioners believe come with utilizing e-health technologies. Next, we categorize resource and infrastructure hurdles as traditional value barriers since they reflect the financial and budgetary consequences of implementing e-health innovations, which may lessen the advantages that patients and healthcare organizations anticipate from these advances. Lastly, and rather logically, since threat perception relates to several vulnerabilities that healthcare organizations may encounter if they implement these innovations, we categorize it as a traditional risk hurdle.

Two well-known psychological barriers were also identified by our narrative analysis of the data gathered: tradition and image. As a result, we use the same language to refer to these obstacles. Finally, we propose patient care, structure, and self-efficacy obstacles as context-specific barriers, extending traditional IRT to the healthcare setting. Apart from the previously described obstacles, our conceptual model incorporates two moderating variables: age and medical specialty. Our investigation verified these variables as possible origins of individual variations in the encountered obstacles. The proposed conceptual framework is shown in Figure 3 [13].

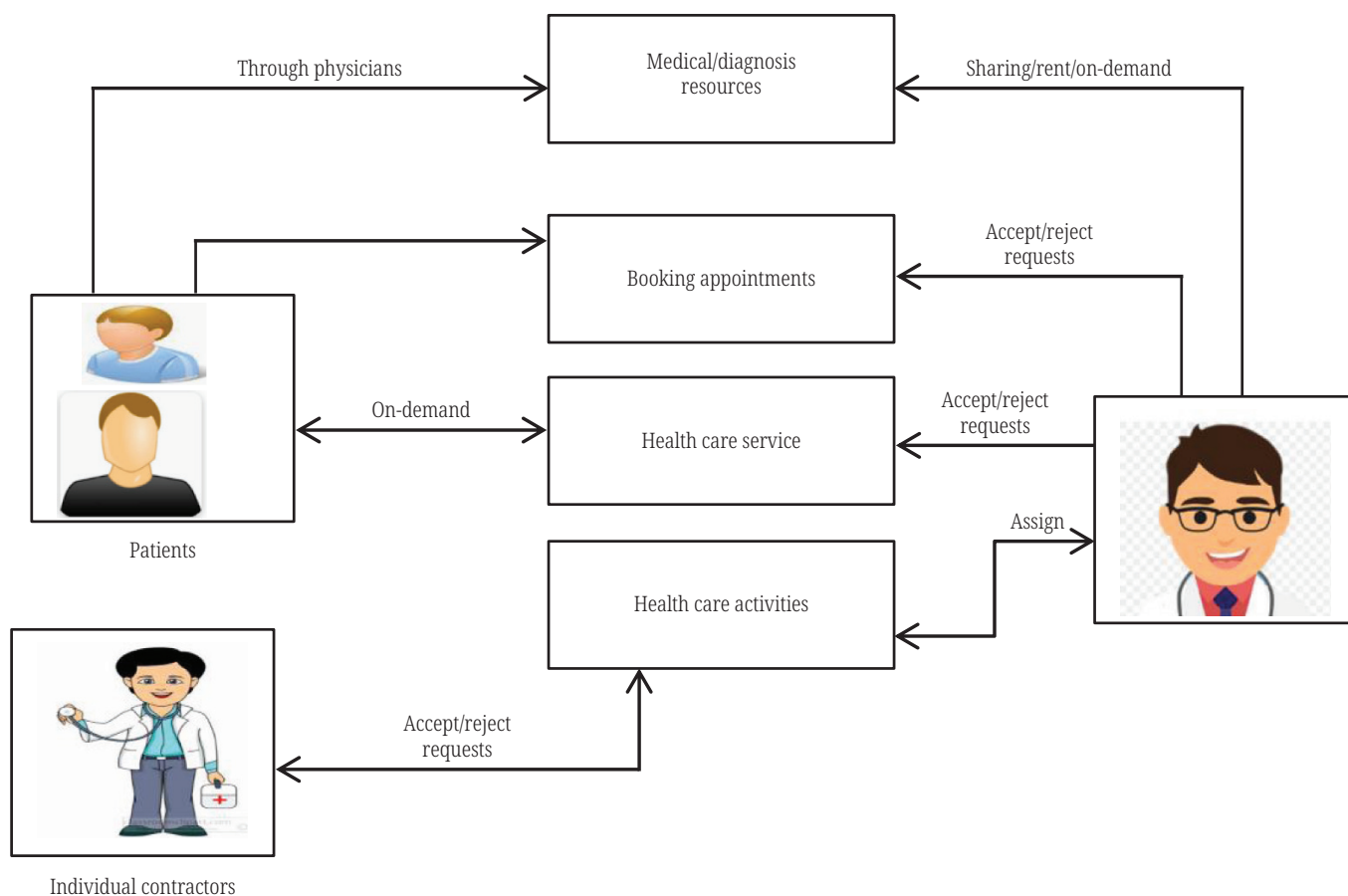


Fig. 4. Adoption of the gig economy in the context of mobile health

In order to effectively incorporate m-health systems with the features of a gig economy akin to Uber, Upwork, Turo, and other businesses, it is advantageous to adhere to the guidelines of the so-called aggregator business model, which comprises the fundamental principles upon which the aforementioned companies' economic structures rest. This model is sometimes referred to as the Uber for X model or the on-demand delivery model.

In this scenario, an aggregator is a business, brand, or company like the ones that were previously mentioned, or it can be a business that combines mHealth systems with the gig economy, like in our case, and gathers a group of partners or vendors to provide gigs, or goods and services, to a clientele. A contract outlining the terms of service, quality, pricing, and commission that the organizing firm or aggregator will get is signed by the other parties, gigs, and providers of goods or services. It is stated that the aggregator's offer may be accepted or rejected by the other parties.

Noting that the aggregators or corporations assist suppliers in marketing their services is relevant. However, it should be noted that these individuals are business partners rather than workers. Under this model, the company's clients are suppliers of goods and services as well as service users, in a win-win scenario. Once a service is finished, the client or customer can rate both the vendor and the service itself, and the supplier can rate the client. A network of doctors, nurses, medical facilities, database managers, Internet users, and smartphone apps linked to the patient's database and hospital/clinic cloud already exists within the mHealth system. Furthermore, the mHealth framework encompasses a range of functions, including

but not limited to diagnosis, input, query answer, entering data, data updates, and intelligent app creation. These duties can be broken down into smaller gigs or tasks that can be completed by one or more independent contractors or freelancers within the context of the gig economy.

As illustrated in Figure 4 [14, 15], the model of aggregators in this context classifies the collaborators as healthcare professionals, individual contractors, and providers of m-health medical services (such as diagnosis, appointment scheduling, inquiry, and feedback), as well as m-healthcare activities (such as system maintenance, updates, and data leadership). In this paradigm, consumers and suppliers communicate digitally with the brand, business, and aggregating firm using Windows platforms or smartphone apps. The aggregator's requests can be accepted or rejected by the suppliers, as the figure illustrates.

3.3 Elements affecting the youth

The adoption and usage of mobile technology in the settings of the young and elderly can be analyzed from a variety of theoretical angles. Broadly speaking, this encompasses study on specific technology adoption and mobile service attributes through the application of foundational ideas such as the technology acceptance model (TAM). More specifically, it covers study on the social psychology of both inclusion and exclusion in health behavior as well as the theories that underpin it, such as protection motivation. Nonetheless, certain aspects of aging, or aging-specific elements linked to behavioral intention, influence the decision of the young and elderly to use mobile technology, especially when it comes to m-health and wellness solutions. Among these include, for instance,

- i) Concern related to technology [16];
- ii) One's perception of one's physical state; and
- iii) Reluctance to deviate from the course of natural aging.

3.4 Acceptance and adoption frameworks

The evaluation of mobile services must be based on their own merits and not just on the notions found in acceptance theories, as has been done in numerous study studies in an effort to better understand the acceptance of mobile technology. The majority of information systems study, according to Orlikowski and Iacono, has either ignored or taken for granted the main topic of information technology artifacts. Furthermore, Nikou shows how and why a variety of factors, including

- i) Approval factors (such as willingness to pay);
- ii) techno-economic variables (such as creativity);
- iii) individual factors (such as perceived ease of use); and
- iv) contextual factors (such as situational context and mobility) influence people's behavioral intentions towards the adoption of mobile services.

The decision to use mobile technology and experience its desired benefits—like being able to arrange one's life more effectively—has been demonstrated to be significantly influenced by these considerations. Furthermore, fresh perspectives on

people's intentions to embrace mobile technology are offered by the theoretical contributions made recently by other academics. The study found that the additional variables significantly improved the variance explained in consumers' technology use and behavioral intention.

3.5 Aging-related factors

From this perspective, examining the change that come with age, there are a number of age-related traits that could influence the decision of the young and old to use mobile technology, either directly or indirectly. Changes in one's physical and mental makeup, as well as cognitive and motor abilities, affect how one reacts to and engages with others. As a result, younger generations may find it difficult to interact with emerging technologies and may not feel comfortable using them. The study claims that "information technology anxiety," an age-specific component or psychological variable, is one of the most significant psychographic variables and drivers for technological uptake.

However, Oksman thinks that mobile technology will play a crucial role in the development of future self-service programs for senior citizens. In an additional effort to support self-sufficient elderly Finns, an empirical study was carried out in one of the practical houses. A functional home serves as an exhibition space and knowledge hub where individuals from various walks of life can come to locate equipment, offerings, and remedies for the elderly and disabled. The findings show that when it comes to assisting the young and elderly, sending messages and using mobile phones to operate equipment were deemed to be the most crucial features. Therefore, one could argue that it might be time to reexamine the matter and conduct a thorough literature review of empirical data on studies involving older adults and mobile technology. This would allow one to determine whether or not these studies add to our understanding of how the societal, psychological, technoeconomic, aging-specific, and personal characteristics factors mentioned above actually function.

4 IMPLEMENTATION AND EXPERIMENTAL RESULTS

We employed the two-step method to test the hypothesis after first comparing the means of each factor in the two categories.

4.1 T-Test of the factors' means

The findings showed a significant difference between the middle-aged group and the older group's mean scores on behavior intention, perceived behavior control, perceived well-being, resistance to change, and technology anxiety. In comparison to the middle-aged group, the older group exhibited notably lower behavior intentions regarding MHS, as well as lower levels of perceived behavior control [17], physical condition perception, resistance to change, technology anxiety, and self-actualization needs. Regarding attitude, perceived value, and subjective standards, there were no discernible differences between the two groups.

We then discussed the outcomes of our measurements and structural model testing. Due to the significant disparities between the middle-aged group and the older group that our separate sample t-tests revealed, we also individually tested our mathematical models for the two groups and presented the results.

4.2 Test results for measurement systems

All factors had composite reliability ratings and Cronbach’s alpha coefficients greater than 0.80, demonstrating their suitability for the corresponding constructs. The majority of the hidden components had standard loadings that were meaningful at the 0.005 level and above 0.60. Furthermore, each factor’s AVE was higher than the 0.7 cutoff, showing reasonable converging validities.

Considering any two concepts’ correlation and the square root of the AVE level is another way to evaluate discriminating validity. The former should therefore be superior to the other one. We determined the correlation coefficient between each of the other parameters for both groups and the squared root of the AVE of each factor, which are displayed as horizontal elements in bold. Our data had strong discriminant reliability since the square roots of the AVEs for each item were greater than the equivalent values for correlation with additional variables.

4.3 Results of evaluating structural models

For middle-aged and older users, we tested our structural model using Lisrel version 9.70. The model, which has 44 items that describe nine latent components, was used to assess the significance of each estimate of the hypothesis for every path that was given, along with the standard deviations and evaluation statistics for every path.

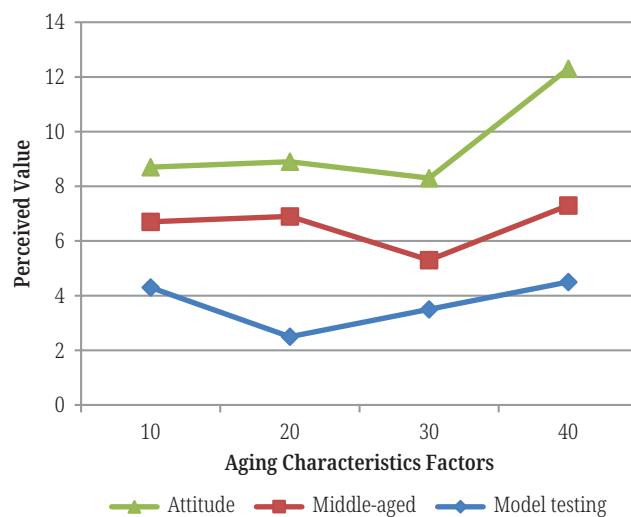


Fig. 5. Findings from the middle-aged research model testing

Figure 5 displays the findings of the structure equation model. It was found that, at 0.07 straight, five of the ten possible routes were significant. There was a 0.64 variation in behavioral intention that was positively predicted by perceived value,

attitude, perceived behavior control, and reluctance to change. Attitude had the highest path coefficient of 0.66 ($p < 0.002$) among these four categories, making it the most significant predictor of behavior intention.

With a trajectory factor of 0.28 ($p < 0.001$), perceived value had less of an impact. Opposition to change had the least significant influence, with perceived behavior control having an impact of 0.30. Furthermore, with a large path coefficient of 0.45 that accounted for 46% of the variation in attitude, perceived value was strongly correlated with user attitude. Nonetheless, there was little correlation between the perceived norm and behavior intention. Furthermore, only the influence of resistance to alteration was substantial among the four constructions of aging characteristics.

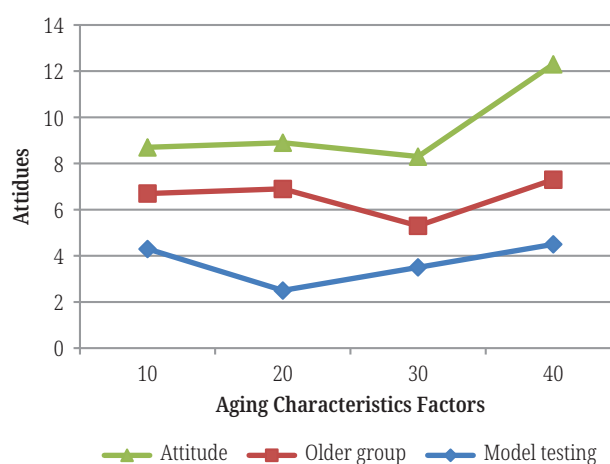


Fig. 6. Outcomes of the older group's study model testing

The older group's structural model testing results. We also used the data from previous users to test the structural equation model. The results are shown in Figure 6, and for the elder group, they showed that behavior intention was strongly influenced by route coefficients for valued mindset, perceived behavior control, anxiety regarding technology, and self-actualization desire. A variance of 0.51 was explained. Attitudes and assessed value had a positive relationship; the path factor, which explained 30% of the variation in mindset, was 0.45.

4.4 Discussion

We were able to investigate the variables influencing the use of MHS in China by examining the perspectives of the middle-aged and older groups independently. This allowed us to gain a deeper understanding of the disparities in the acceptance of MHS between these two user demographics. The investigation yields a number of important conclusions.

First, as predicted, there was strong evidence in both groups that perceived behavior control, attitude, and values were drivers of behavior intent. For middle-aged and older persons, the more favorable their attitude towards the amenities, the more intense their behavior intention was. Attitude was found to be the most significant component in affecting the behavior intent towards mobile medical care in both categories. The study found that perceived value had a noteworthy impact on both attitude and behavior intention in both groups. Specifically, users who were middle-aged and older were more likely to have a positive attitude towards MHS and to use them

if they perceived the services to be valuable. Perceived value indirectly influences behavior intention by promoting the development of a good attitude, since the effect of attitude on behavior intention has been shown to be considerable.

The middle-aged groups perceived worth had a larger path coefficient to behavior intent than the older group's, suggesting that the older group's perception of perceived value had a significantly smaller influence on their attitudes than the middle-aged groups. Based on their attitudes towards mobile medical care, we hypothesized those older adults place less emphasis on the usefulness of these services. Second, we discovered an odd but intriguing finding after analyzing the 524 valid surveys from both samples: whereas resistance to change was not a predictor of behavior intention in the older group, it was in the middle-aged group. We hypothesized that, in accordance with continuity theory, older adults would favor conventional health services due to prior experiences. The outcomes, however, disproved our theory. One possible explanation for this could be the disparities and difficulties in accessing medical care in China, particularly for the elderly.

It always takes a few hours, or perhaps a whole day, to wait to see the doctors. Furthermore, the physical conditions of senior citizens tend to deteriorate, indicating that accessing health care services may require greater effort and provide more challenges. However, some middle-aged users (about 46 years old) can use the Internet to look up health-related data. They most likely don't want to switch to a mobile device with a small screen in order to access health services. Their uptake of MHS would therefore be adversely impacted by the perception of reluctance to change.

Furthermore, according to modernization theory, older people may experience a decline in their social standing in today's scientifically advanced and modern society as a result of the increased emphasis placed on knowledge gained from books as opposed to knowledge gained by firsthand experience. As a result, senior citizens are willing to modify how they receive healthcare if needed and no longer place a great deal of value on their old routines. Third, it was discovered that middle-aged participants did not significantly differ from the older group in terms of their behavior intentions when it came to technological fear. The likelihood that most middle-aged users are still employed suggests that they have greater access to new technology to help them with their work-related responsibilities. But since the majority of senior citizens are retired, their views of technology are stronger since they are less accustomed to it. As a result, they would be more inclined to forego using mobile health services.

The following assertions help to further elucidate the connection between technology anxiety and resistance to change. While technology anxiety relates to people's fear of adopting new technology-based services, such as MHS, reluctance to change refers to consumers' reluctance to alter their way of managing their health and way of life. That is, whereas technological anxiety relates to using technology, reluctance to change relates to how one manages their health and lifestyle. This shows how resistance to change is far more widespread. Even if it doesn't seem like the technology operating part is highlighted in the technology anxiety questions, we have made that very evident in our interviews with respondents. The outcome may therefore suggest that the two notions represent two distinct variables. However, "elderly users' opinion of ease of use is significantly shaped by technology anxiety." Contrary to popular belief, perceived simplicity of use does not positively correlate with people's unwillingness to change. That is, although opposition to change has no discernible impact, technological anxiety may have a major impact on users' desire to behave. An example of this would be a user who wants to switch from the

traditional method of consulting experts for health issues to a new method of using MHS. He or she would not use it nonetheless because of a dread of its intricacy.

Future studies can try to get feedback from older adults with impairments who are not as involved in society. In conclusion, our study examined the influence of multiple factors on middle-aged and older users' adoption of mobile health, with the model accounting for 64% and 71% of the variation. Furthermore, our model did not take other significant parameters into account. Consequently, market practitioners ought to concentrate on aspects beyond those covered in this study.

5 CONCLUSIONS

The primary determinants impacting the adoption of MHS by individuals were examined quantitatively in this study, which also proposed a thorough user adoption paradigm. The study also examined the behavioral variations between various age groups and examined the moderating role of age. The outcomes of this investigation will enhance the scholarly findings regarding the adoption of MHS and add to the field of meta-analysis study. This article's primary contribution is the statistical analysis of empirical study on the adoption of mobile health, which we linked with conventional user adoption theory and health behavior theory.

Additionally, since there haven't been many studies on age differences, we examined the moderating role of age in understanding how different age groups adopt MHS. We found that age has a distinct moderating effect on how these age groups adopt MHS. In order to satisfy real health needs and enhance the quality of the services, the findings may aid academics and medical facilities in understanding how people use mobile health services.

Our study offers insightful information that not only adds to the body of knowledge but also offers practical recommendations for implementation.

Like any academic investigation, ours has limitations in terms of technique and breadth, even with its noteworthy contributions. Prior to suggesting potential avenues for future study, it is imperative to acknowledge these limitations.

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