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Investigating the Impact of Perceived Effectiveness of Telemedicine Services on the Behavioural Intentions of Patients With the Moderating Role of Ease of Registration and Structural Assurance

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Abstract:

Recently, telemedicine services have drawn more and more attention. However, the causes of the acceptability and adaptability of mobile medical services are not well understood. Some important services aim to extend the patient-physician relationship beyond the traditional clinic environment. To fill this research gap, this study proposes a research model for predicting the 'perceived effectiveness of telemedicine services on the behavioural attention of patients with the moderating role of ease of registration and structural assurance'. The study had a sample size of 273 Pakistani telemedicine users, data were collected through online questionnaires by convenient sampling. Result analysis was carried out using SPSS version 22. Correlation and moderated regression analysis were performed to test hypotheses. It was evident from the analysed results that structural assurance has a significant positive impact on the behavioural intentions of patients while ease of registration has no impact. The limitations were the small sample size and common method bias due to self-report. The findings have both theoretical and practical implications that may guide practitioners and researchers to understand behavioural intentions of patients. It was suggested that more research can be done using more variables and larger sample size.

Keywords:

Telemedicine Services, Behavioural Intentions, Structural Assurance, Adaptability, Acceptability

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Introduction

The phrase “The doctor will see you now- on your cell phones” (Grigsby et al., 1995) refers to a new advancement in medicine that has undoubtedly been made possible by digitalization with cell phones (Nanda et al., 2021). Telemedicine has been strengthened by the rapid advancement of connected healthcare technologies, huge data, and analytics, paving the way for customer-to-provider relationships (Shiferaw et al., 2021).

A healthcare provider has advanced in their acceptance of telemedicine applications thanks to how they perceive the internet and smart technologies. As a result, cutting-edge methods like using telemedicine to treat patients are now widely used. Through various methods, such as video conferencing and email, telemedicine has the potential to link healthcare professionals with patients in remote locations so they may provide them with expert guidance. In developing nations, videoconferencing between doctors and rural patients in impoverished and isolated locations is becoming more common in various clinical situations. Communication over long distances has become both feasible and appropriate thanks to the all-pervasive accessibility of digital bandwidth and the enormous facilities for downscaling high-resolution videos. It has also become extremely cost-effective due to the falling prices of computer systems and data transmission. All of these qualities have improved the ability of to set medication systems for any medical facility, regardless of size, at a lower cost. Telemedicine, in contrast, eliminates the need for travel and waiting time while increasing access to specialist consultations for communities (Kohnke et al., 2014). Utilizing interpersonal organization investigation, the Theory of Reasoned activity enjoying benefit to connect the reception practice across numerous foundation of media. Although the Theory of Reasoned Action, which served as technology acceptance model’s (TAM) reference theory, covers an individual norm make for this aim, respective theory is not always well-suited to explain social impact. The TAM can then clarify why people believe telemedicine is practical and simple to use (Hosseini & Kubavat, 2022; Suroso & Sukmoro, 2021).

The application allows users to consult a doctor. An application that is coupled with online transportation services allows users to order drugs, lab tests, and home care services. Before using a health application or website, users should take into account a number of factors (Suroso & Sukmoro, 2021). In fact, telemedicine has proven to be helpful in both public health emergencies and non-emergencies, providing cost savings and sustaining high-quality medical care via remote consultations. There are also questions about whether the public's attitude and use of telemedicine have changed as the world returns to pre-pandemic normalcy. Even after the pandemic fades, the public must continue to support telemedicine services. Research is necessary to evaluate this acceptance since it is crucial, especially when it comes to pinpointing areas where telemedicine may be enhanced, like resolving privacy,

security, and care quality issues. This makes it possible for telemedicine services to better meet patient requirements, enhance health outcomes, and make the most use of available resources.

One of the main factors influencing the utilization of telemedicine was confirmed to be perceived simplicity of use. By enabling practitioners to provide treatments across geographic borders, cutting down on unnecessary hospital stays, and easing traffic in medical institutions, telemedicine improves access to healthcare. Additionally, telemedicine ensures that individuals in rural areas have simple access to health care services by successfully bridging the distance between physicians and patients. Perceived utility and simplicity of use in telemedicine are crucial metrics for evaluating the effective uptake and incorporation of this cutting-edge medical strategy into our contemporary healthcare systems. These two elements are crucial in determining whether or not people choose to use telemedicine, which in turn shapes how accessible and effective healthcare is (Kumar & Pandey, 2024).

Additionally, consumers' decisions to utilize health apps or websites are influenced by how frequently other people use them (Suroso & Sukmoro, 2021). It is well known that developing countries' health systems are in terrible shape. Due to its wide reach and cheap cost mechanism, mHealth has become a feasible option to meet the urgent healthcare requirements in the poor world. It does so by improving access to, affordability of, and effectiveness of healthcare services (United Nation Foundation 2008). E-Health is perceived as a transformation agent for the medical industry. The potential of mHealth Services has expanded as a result of the remarkable increase in mobile phone adoption in countries where people have less or marginalized people from the previous ten years. From several decades, the smart gadgets was not even thought can be an influential device to close the digitalization of health services (Ray et al 2010).

One of the study's objectives was to investigate the connection between the general public's behavioral intention to utilize telemedicine and the perceived utility and usability of telemedicine services. Using the technology acceptance model (TAM) as a theoretical framework, we hypothesize that perceived utility and perceived ease of telemedicine use explain behavioral intention, which in turn predicts actual actions. The TAM is frequently used to look into how people adopt and use technology. It is among the most widely used frameworks for comprehending how people acquire technology on an individual basis (Kumar & Pandey, 2024). The Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) are the most by and large applied information development affirmation models. Almost talking, the UTAUT model has more vital legitimate limit than (TAM)(Kohnke et al., 2014). Use of telemedicine is not just a health behaviour, but also a behaviour that medical information systems are adopting. Additionally, people's levels of trust are influenced by subjective norms, particularly when it comes to online activities (Chaouali et al., 2016). While some academics have confirmed that when it comes to telemedicine, subjective norms directly influence users' intentions

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to use it and have no discernible impact on their trust in healthcare providers. Telemedicine services, which are provided to patients and are directly related to their health and medical expenses. As a result, they won't use telemedicine services until they gain their trust (Wu et al., 2021). Patients are more inclined to trust doctors to deliver top-notch care when they can get them accurate, timely, comprehensible, and valuable information (Nielsen, 2011). Internet-based technology can enable patients and doctors interact more easily, give patients access to more medical information, feel less distant from one another, and improve patient-doctor contact. Patients may trust telemedicine more and use it as a result if they are aware of this benefit (Nielsen, 2011) .

Structural assurance (SA) is defined as the extent to which consumers think institutional elements' such as guarantees, laws, pledges, legal redress or other procedures are in place to support success' It concerns how consumer ideas and intentions are impacted by current institutional arrangements. Sometimes referred to as institution-based trust or technology trust, structural assurance is a concept (Sha, 2009). As a significant factor in determining people's willingness to utilize a technology, trust has emerged as a key notion in studies on technology acceptance. A person's level of trust in a technology demonstrates their confidence in its ability to live up to their expectations despite the risk of unfavourable effects (Koester & Salge, 2020). Patient are more attracted toward the technology when they get the desired result as they are perceiving and when technology fulfilling their desired perception then their intension change for use in future. Most of the time people prefer easy way which safe their time and energy so when they ease in registering himself as well as when they have trust that their confidential information would not share with general public then this thing built trust and change their intention to use in future.

Literature Review

Perceived Effectiveness of Telemedicine Services

Telemedicine was initially practiced by a nurse or doctor who gave advice to patients over the phone. The availability of high-resolution photos, video, audio capabilities, and interactive connections with medical professionals are now all made possible by web-based portals. Telemedicine has a lot of potentials to improve healthcare and cut expenses **(Kohnke et al., 2014).** For instance, if doctors and patients believe a mobile health app would help them manage their health care, increase their productivity, and perform better at work, they are more likely to accept it. The term “perceived” usefulness is employed since the user's assessment of whether the app would increase performance and productivity is based on his or her individual viewpoint. Even if their levels of use could vary. For instance, if the app helps users get medicine updates and first-hand knowledge, or if it helps users manage their health more effectively, users will find it beneficial. Patients have good attitudes toward

apps and have positive behavioural intentions to utilize them when they believe the apps will improve their health care results (Suroso & Sukmoro, 2021).

Medical professionals' acceptance of telemedicine technology in hospitals was significantly influenced by their perceptions of its utility. In accordance with earlier studies, it is projected that patients who have a high opinion of telemedicine value will be more likely to use the service (Zobair et al., 2021).

Perceived Effectiveness of Telemedicine Services and Behaviour Intention of Patients

A person's conscious plans or likelihood of engaging in a particular behaviour are referred to as behavioural intention. In this study, behaviour refers to a patient's acceptance of the mobile health app. Patients who were beforehand non-clients of the portable wellbeing application and adopters who need to keep utilizing it are both ordered as having social expectations to utilize, which is risky for the ongoing review (Yee et al., 2019).

The concept of perceived behavioural control examines whether the subject thinks they are capable of acting in the way they do. Individuals are normal to have areas of strength for a to participate in the lead assuming they trust that doing so is an option for them to use (Ramírez-Rivas et al., 2021).

H1: ***Perceived effectiveness will have a positive significant effect on the behavioural intention of patients***

The Moderating Role of Ease of Registration Between Perceived Effectiveness of Telemedicine and Behaviour Intention

The interaction between users and service providers online is improved by usability. The extent to which someone perceives that utilizing a specific technique will prerequisite perceived simplicity of usage is defined as requiring no active or passive effort. Thus, the level of technological acceptance will be high if the user can use the technology without exerting additional effort (Purwanto & Budiman, 2020). Rural and disadvantaged populations in developing nations can receive better and more flexible primary healthcare help from telemedicine. (Zobair et al., 2021). TAM has been routinely utilized to forecast users' intentions to use a mobile health app in studies of technology acceptance (Sun et al., 2013) developed a framework to explain why consumers adopt health technology using TAM theory and other concepts. A versatile telemedicine application that is easy to utilize, easy to figure out how to utilize, and whose client experience is satisfied by patients is utilized to operationalize the apparent usability in this review (Chin, 2019).

The phrase “degree to which a person believes that utilising the system will be devoid of an effort” is used to describe perceived ease of use. Perceived effectiveness and ease of registration are the utmost

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frequent and important factors that influence how well a technology is received, according to TAM's early research. Accordingly, we guess that patients will possibly acknowledge and utilize telemedicine administrations when they think doing so will give prevalent results (Kamal et al., 2020) been widely examined in prior research using TAM (Purwanto & Budiman, 2020).

H2: ***Ease of registration moderates the relationship between the perceived effectiveness of telemedicine and behaviour intensions of patients in such a way that when ease of registration is high then more patients adopt Telemedicine services***

The Moderating Role of Structural Assurance on Perceived Effectiveness of Telemedicine on Behaviour Intention

Trust is frequently regarded as an essential precondition for the acceptance, use, and loyalty to e-services provided by the Internet. It has been well researched in relation to the adoption and usage of technology. This is also true for telemedicine, where it has been found that patient acceptability depends critically on trust (Van Velsen et al., 2015). Aspects of trust include numerous studies based on health services that demonstrate how much acceptance of health technology is influenced by trust. Since personal medical records contain sensitive information that only patients and healthcare professionals are permitted to view, privacy and security are crucial in the world of health technology. Most patients only want to discuss their private information with their doctors, not other people like their co-workers' supervisors or even their own family members. Privacy is one of the elements that empirically effects a person acquiring technology, according to prior study on the acceptability of health applications in developing nations (Purwanto & Budiman, 2020).

For instance, patients may be reluctant to share health-related information with a third party out of fear of discrimination and social embarrassment. These suggest that if patients believe their privacy and personal information is effectively secured, they are more likely to embrace telemedicine healthcare services. According to a recent study by Dutot, Bergeron, Rozhkova, and Moreau (2019), users' interest to using healthcare services is correlated with secure and well-protected systems. Similar to this, multiple studies revealed that privacy concerns have a significant impact on patients' perceptions of privacy and confidentiality risk as well as their intention to adopt (Ahani et al., 2021). Patients will always be more devoted and loyal to facilities that offer quality medical care. Therefore, a patient's loyalty to the homebound depends on the quality of the service and their level of happiness. Patients who are happy with the care they receive at home will grow to be devoted clients and are more likely to select the hospital for their medical needs. If a patient gains more confidence, their commitment to or loyalty to one home will grow.

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H3: ***Structural assurance moderates the relationship between the perceived effectiveness of telemedicine and behaviour intention in such a way that the relationship is strong when structural assurance is high then more people adopt telemedicine services***

Research Model

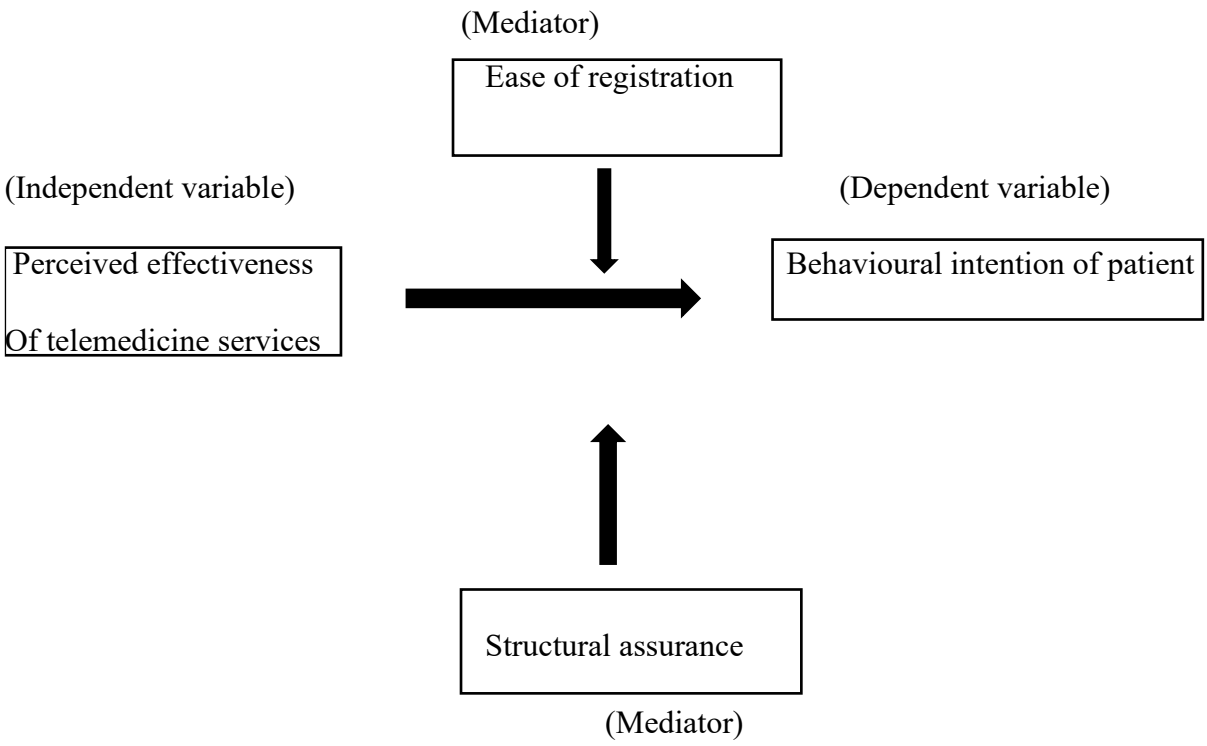

Figure 1: Research Model

Methodology

Sample

Data was obtained from Pakistan's public and private sector using convenient sampling method. Respondents include healthcare professionals and the general public who had encountered telemedicine services outside of diagnostic facilities and businesses. The respondents themselves must complete the questionnaire. Since respondents, or health care workers or employees, are in direct contact with their work in order to integrate the questionnaire into their experience. Google-prepared forms through social apps like WhatsApp Messenger, Gmail, Yahoo mail, LinkedIn were sent and disseminated to different healthcare professionals and general public of Kashmir and Pakistan. There

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are 350 sample were distributed 280 were received 07 were not completely filled, therefore sample size is 273.

Measures/Scales of Variables Used

Perceived Effectiveness of Telemedicine Services

A researcher's five-point Likert scale was used to evaluate it (Rahi et al., 2021). The total number of items was four. There is a sample item supplied. “You'll have to put in a lot of effort to get your assignment done.” This scale had a Cronbach alpha of .89.

Behaviours Intention of Patient

Only one dependent variable — “behaviors intention of patients” — will be present in this investigation. It was based on a 5-point Likert scale created by (Rahi et al., 2021). The total number of items was five. “Adequately completes assigned duties,” for example. This scale had a Cronbach alpha of.84.

Ease of Registration and Structural Assurance

In our study, we used two moderators: “easy of registration” and “structural assurance.” The ease of registration was evaluated using a five-point Likert scale created by (Abdool et al., 2021). Number of items was nine. Structural assurance was measured using 5 point Likert scale developed by (Sha, 2009) . The total number of item was five. Sample items included “ I can always rely on these online health services to meet my health needs” The Cronbach alpha for this scale was .89 and .78 respectively.

Procedure

The information examination and determined outcome from the got information are remembered for this section of the exploration study. SPSS (Statistical Package for Social Sciences) version 22 programming is used for information investigation. Reliability analysis, one-way ANOVA testing, correlation analysis, regression analysis was performed to obtain the results.

Results

In this chapter, the results of the data acquisition were then discussed. We looked over my results using a statistical tool. The examination includes the demographics analysis, reliability test, correlation analysis, and regression analysis. The Preacher & Hayes approach is used for moderation analysis, and regression analysis is also used to evaluate its moderating analysis.

Demographics

According to the result of the studies out of 273, there have been 42.9% men with 54.6% percent women in the survey. These variables were kept under control during the regression analysis.

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Variables	Frequency	Percent	Valid percent	Cumulative percent
Male	117	42.9	42.9	42.9
Female	149	54.6	54.6	97.4
Other	7	2.6	2.6	100.0
Total	273	100.0	100.0	

Table 1: Gender of respondents

According to the study's classification of respondents by qualification, 40.7% of them have completed a four-year bachelor's degree. Only 27.5% of people had a postgraduate degree, whereas 15.8% had an intermediate degree. 5.5% of participants in the research were in matriculation, and 10.6% completed a diploma.

Variables	Frequency	Percent	Valid percent	Cumulative percent
Diploma	29	10.6	10.6	10.6
Matric	15	5.5	5.5	16.1
Intermediate	43	15.8	15.8	31.9
Graduation	111	40.7	40.7	72.5
Postgraduate	75	27.5	27.5	100.0
Total	273	100.0	100.0	

Table 2: Education of respondents

According to age demographics, the majority of participants in the study, 44.7%, were young adults between the ages of 18 and 25. Out of 270 responses, 25% were between the ages of 26 and 35, 20.5% were between the ages of 36 and 45, and only 9.2% were over the age of 45. 52.0 percent of research participants were single, compared to 48.0% of the 273 respondents who were married.

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
	18-25	122	44.7	44.7	44.7
	26-35	70	25.6	25.6	70.3
	36-45	56	20.5	20.5	90.8
	above45	25	9.2	9.2	100.0

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	Total	273	100.0	100.0	

Table 3: Age of respondents

Results show that from total population of 273 respondents there were 53.1%were employed, 24.5% were unemployed while 22.3% were involved in other business things like that. The frequency and percentages for respondent demographics are summarized below.

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
	Married	131	48.0	48.0	48.0
	Unmarried	142	52.0	52.0	100.0
	Total	273	100.0	100.0	

Table 4: Marital Status of respondents

	BI	
Source of variation	**F statistics**	**P VALUE**
Gender	6.304	0.002
Age	2.931	0.034
Marital status	3.969	0.047
Education	8.257	0.000

Table 5: One-way ANOVA

Note: N=273, BI=Behavior intentions

Correlation Analysis

Correlation test is done to determine whether the parameters were statistical significant connected. The outcomes can be seen on the table beneath.

	Means	**SD**	1	2	3	4
1 PET	3.97	0.58	0.89			
2 EOR	3.97	0.73	0.69**	0.89		

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3 SA	3.63	0.65	0.65**	0.73**	0.78	
4 BIP	3.90	0.71	0.68**	0.64**	0.65**	0.84

Table 6: Correlation mean, standard deviation

Note: **p<0.01, *p<0.05, ns not significant, N=273

The findings of correlation between variables explored in this study, like as; are listed in table ahead. Perceived effectiveness of telemedicine services (PET), Ease of registration (EOR), Structural assurance (SA) and Behaviour intention of patients (BIP) and mean and standard deviation of these variables. Mean of PET (3.97), EOR (3.97), SA (3.63) and BIP(3.90) and standard deviation of PET (.58), EOR (.73), SA (.65) and BIP (.71). The table indicates that perceived effectiveness of telemedicine services is significantly correlated with behavior intentions of patients (.68**, p< 0.001), However, ease of registration exhibited a strong degree of association with behaviour intentions of patient (.64**, p< 0.001) and structural assurance (.73**, p< 0.001). . On the other hand ease of registration significantly correlated with behavior intentions of patient (.69**, p<0.001).

Regression Analysis

There is significant variation or change in dependent variable BIP due to the independent variable PET.

There is a significant positive impact of Perceived effectiveness of telemedicine services (PET) on Behaviour intentions of Patient (BIP). Hence H1 is supported

Predictors		**Project success**	
	B	**R**	**R^2**
Step1 Control variable	0.501		
Step 2			
Education	-0.058		
PET	.0.862	0.501	0.505

Table 7: Results of Regresion Analysis

To examine the link among developed model, regression analysis is being used. The regression analysis findings were provided in the following tables.

Moderated regression analysis (Confidence Interval 95%)

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	B	T	P	LLCI	ULCI
Constant	-0.1470	-.2966	0.7678	-1.1262	0.8323
PET	0.7962	5.2643	0.0000	0.4984	1.0939
EOR	0.5206	3.1564	0.0018	0.1959	0.8454
Int_1	-0.0606	-1.4182	0.1573	-0.1448	0.0235
R^2	0.0033				

Table 8: Regression analysis for perceived effectiveness of telemedicine services on behaviour intentions of patient's

Note: N=273, p=<.05=significant*, p<.05**, p<.01***, p<.001''

The findings with regression analysis involving independent along with dependent variables, perceived effectiveness and ease of registration. For investigate these moderation hypotheses, H2 employed Hayes' process macro. result above table shows the relationship of ease of registration between perceived effectiveness of telemedicine services and behavior intention that is not significant, hence moderation hypothesis H2 was not acknowledged.

Moderated regression analysis (confidence interval 95%)

	B	T	P	LLCI	ULCI
Constant	-1.0635	-2.0701	0.0394	-2.0750	-0.0520
PET	0.9802	6.6345	0.0000	0.6893	1.2711
SA	0.8691	4.7847	0.0000	0.5115	1.2268
Int_1	-0.1327	-2.9158	0.0038	-0.2223	-0.0431
R^2	0.0133				

Table 9: Regression analysis for relationship between perceived effectiveness of telemedicine services and structural assurance

Note: n=273, p<.05=significant, * p<.05 ** p<.01, *** p<.001,"

The results of regression analysis including independent and dependent variables, such as patient behaviour intentions and perceived telemedicine service effectiveness, are displayed in the table above.

Interaction between telemedicine services' perceived effectiveness, patient behaviour intentions, and structural assurance. The current study hypothesized that structural assurance moderated the link between patients' behavioural goals and how effectively they considered telemedicine services to be

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working for them. H3 used Hayes' process macro to test these moderation assumptions. The moderation hypothesis (H4) was accepted because the data above demonstrates a structurally significant negative link between patient behaviour intentions and perceived effectiveness of telemedicine services.

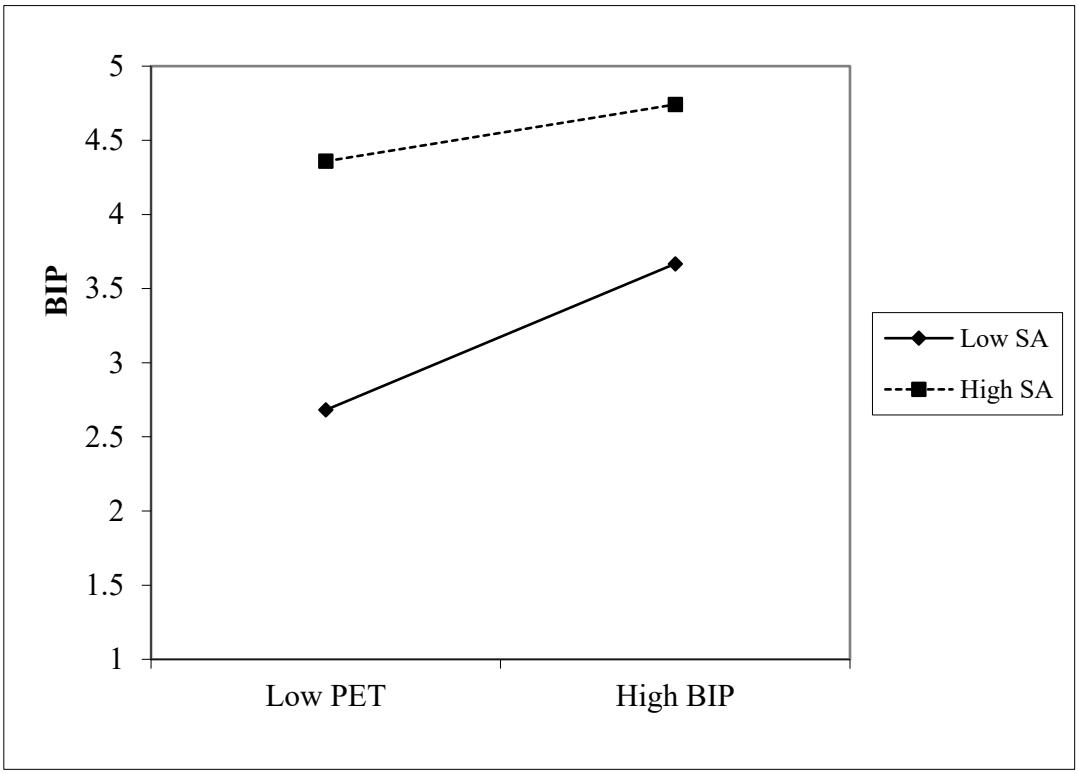

Figure 2: Interactive effect of perceived effectiveness of telemedicine services and structural assurance on behaviour intentions of patients

Significant interactions for high and low values of the moderator are shown in Figures 2. Figure 2 illustrates the perceived effectiveness of telemedicine services – behaviour intentions of patients relationship was stronger when structural assurance was high, which supports hypothesis 3.

Assessment of Accepted/Rejected Hypothesis

Hypothesis	**Statements**	**Results**
H1	Perceived effectiveness will have a positive significant impact on behaviour intention of patients	***Supported***

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H2	Ease of registration will have a positive significant impact on the behaviour intentions of patients in such a way that when ease of registration is high then more patients adopt Telemedicine services	***Not supported***
H3	Structural assurance moderates the relationship between the perceived effectiveness of telemedicine and behaviour intention in such a way that the relationship is strong when assurance is high.	***Supported***

Table 10: Summary of Hypothesis Acceptance / Rejection

Discussion and Conclusion

Despite the fact that a lot of research has been done in different regions of the world to examine the influence of telemedicine services' effectiveness on patients' behavioural intentions. A study that has concentrated on the effect of registration convenience and structural assurance on patients' behavioural intentions. Finding the elements that affect people's intentions to use telemedicine services was the goal of this study. According to the study's findings, factors impacting telemedicine service usage intention include perceived effectiveness, perceived ease of registration, and enabling circumstances. With such a moderating influence of simplicity of registration and structural assurance, the current study explored the impact of perceived effectiveness of telemedicine services onto behavioural intentions of patients working in the public and private sectors inside Kashmir as well as Pakistan. Learners, trainees, junior and senior ranks employees, physicians, and healthcare professionals working in various departments at various levels provided the data collection methods. The collected data were subjected to a statistical analysis using SPSS, and the results are provided below.

A regression study shows a connection between patient behavioural intentions and the perceived effectiveness of telemedicine services so hypothesis H1 supported. That suggests that people's behavioural intentions regarding telemedicine services alter when they receive services in accordance with their perceptions, and they will use those services again in the future. The results of this investigation seem to agree with those of earlier research. If family members and friends believe that telemedicine services can improve healthcare situations, people will be more willing to use them. Rural residents are fully aware of the significance of proper technical infrastructure and how it affects usage intention (Kamal et al., 2020).

Additionally, Davis, Bagozzi, and Warshaw discovered that even if users didn't like a new IT system, they would utilize it if they thought it was valuable. A consumer behavioural intention to use technology is influenced by four key principles, according to Venkatesh et al Unified's Theory of Acceptance and Use of Technology. Performance Expectancy, one of these four notions, includes the constructs of perceived utility and relative advantage; both of these variables are connected to the understanding of

the advantages of telehealth and have an impact on patients' acceptance of the technology. One's propensity to continue using health services is strongly influenced by their perceived quality and level of satisfaction.

Regression analysis was performed on our data, and the results showed that there was no significant relationship between patient behavioural intentions and registration ease so, hypothesis H2 was not supported. Previously very fewer studies taken ease of registration as a moderator with the behaviour intentions of patients regarding technology acceptance. As nowadays everything is available on smartphones and one can easily register on telemedicine services. People do not trust as much anything related to their health which is available with just one click they are not sure about that with the ease is it reliable as well that's why they are not that much concerned with this feature of ease of registration to change their behaviour intention. The increased easiness people feel while using mobile technology may help to explain the relative lack of significance of perceived usability in evoking a sense of quality (Ouimet et al., 2020).

The degree to which a person feels employing technology will require the least amount of effort on his or her part is called PEOU. On the basis of that, we predict that patients will only decide to accept and employ telemedicine services when they think doing so will lead to better outcomes (Kamal et al., 2020). The third hypothesis related to the structural assurance changes the behaviour intentions of patients. This hypothesis was accepted and supported by other studies too. It is evident that structural assurance increase institutional base trust and more likely to use again. Older users' unwillingness to provide family members access to their personal health data and their limited ability to use electronic services both contribute to anxiety about utilizing computers for health services. Patients' faith in the medical professionals and the technology would increase if they saw institutional safeguards in place at telemedicine services (Suroso & Sukmoro, 2021).

Conclusion and Implication

The proposed model has been shown to be useful for assessing and predicting the behavioural intentions of telemedicine services because it makes it easy for patients to avoid travelling a long distance to see a consultant or, in some cases, it is impossible for patients to travel a long distance, and also because if they do travel to see a physician, it adds another hassle to find a parking spot at the physician clinics. In all of these circumstances, telemedicine services make life easier for them. By using these services on a mobile device, anyone may become an expert in it and get the ability to arrange an appointment in accordance with their availability.

Another important factor that has contributed to changing patients' behaviour intentions is structural assurance. Some patients are reluctant to give their private information online, but it is the obligation of

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the operating facility to reassure the patients that their information will be secure and kept private. This undoubtedly help the institution because it will make identifying illnesses easier for them because they have patient histories. The report establishes the foundation for subsequent research that will help health systems comprehend what needs to be done, how things can be made better, and how patients' intentions evolve.

Summary

This research examines the influence of perceived telemedicine service effectiveness on patients' behavioral intentions, emphasizing the moderating effects of registration ease and structural assurance. We used a convenience sample of 273 people from both the private and public sectors in Pakistan and Kashmir. We collected data through self-administered questionnaires and used correlation and regression techniques to analyze it. The results show that how effective patients think a treatment is has a positive effect on their intentions to behave, and this effect is even stronger when structural assurance is high. However, the ease of registration did not significantly influence the relationship. The study provides practical implications for healthcare providers to improve telemedicine adoption and is the inaugural research examining structural assurance as a moderating factor in this context.

Practical Implication

Understanding the elements that will contribute to the proliferation of this breakthrough will be useful for practitioners and academics. It provides some intriguing recommendations for medical facilities that provide telemedicine services, a brand-new technology-mediated service with the potential to expand access to and lower the cost of medical care. This research study provides qualitative research findings and preliminary conceptual development on the factors that influence customer adoption of telemedicine services. This study discusses adoption precursors in the context of a technology's indirect use. Additionally, because telemedicine service adoption concerns people's physical health and well-being, it is widely believed that this innovation bears a bigger inherent risk than the risk associated with individual adoption of organizational or personal technologies. Our findings suggest that patient behavioural and intentions can change when telemedicine treatments are seen as being beneficial. If people receive the desirable services they are hoping for, their objectives will change. Another significant factor is structural assurance. When patients are surer that sharing their personal information on the website will be safe, they are more likely to use the services in the future and their intentions for use will also change as a result**.**

Theoretical Implication

Theoretically, this investigation confirmed the technology acceptance model's (TAM) accuracy in predicting customers' inclination to accept and use mobile medical treatment (MMT) services. The

current findings more accurately reflect what behaviour is appropriate for telemedicine in the context of online medical treatment. Additionally, the results showed that other factors, like technological fear, trust, privacy concerns, personalisation, and interaction, had a substantial impact. These findings emphasise the need to expand the TAM by highlighting these particular telemedicine-related variables and features. By doing this, we present an enhanced model that might better capture the heterogeneity in users' acceptance and adoption behaviour in specific e-health apps.

Since service personalization generally requires the disclosure of personal information, users may be concerned about privacy leaks. Previous research have shown that factors connected to the privacy-personalization problem might affect user acceptance behaviour.

Therefore, telehealth adoption is not always guaranteed by a high level of personalisation. Telemedicine service providers are urged to provide thorough justifications for how users' personal information is used, ensure that all personally identifiable information obtained is secure, and reject function creep in light of the detrimental effects of privacy concerns on users' perceived usefulness and trust that the current study has identified. Additionally, those who may be more concerned about their privacy should be given special attention by telemedicine service providers, who should also provide them with alternative channels for doing so. For instance, telemedicine applications might let users give only the most basic details and edit or delete their data at any time while receiving the service. According to the current research, users' perceptions of interactivity affect how easily they can utilize services and how much they trust them. Therefore, it stresses how crucial it is to increase user involvement and interaction when using telemedicine services. Potential solutions include opening up new channels of communication between patients and physicians, making it possible to capture medical and health-related data, such as graphic displays of health records, and utilizing virtual or conversational assistants to offer more useful feedback.

Study Limitations

Each study has a number of drawbacks and could use more data from other fields. The current study identified a number of issues that other future researchers would need to address. First and foremost, the small sample size and specific target industry make it appear that the current study cannot be generalized. Second, the most current research appears to be focused on or after a certain geographic position, specifically Pakistan's largest cities and Azad Kashmir. Thirdly, this most recent study examines viewpoints from Pakistan's largest cities, which are situated in a certain geographic region; Finally, solely self-reported feedback was used to measure variables in this study based on the findings.

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Recommendations

More research is essentially required to look at the other crucial aspects of the health care system that influence people all across the country to use telemedicine services, such as psychological aspects including habit, self-efficacy, hedonic motivation, and cost-benefit analysis. Additional factors including human drive, inventiveness, and cultural norms should also be taken into consideration when determining if telemedicine services would be accepted in a poor country.

References

Abdool, S., Abdallah, S., Akhlaq, S., & Razzak, H. A. (2021). User acceptance level of and attitudes towards telemedicine in the United Arab Emirates: a Quantitative Study. *Sultan Qaboos University Medical Journal*, *21*(2), e203.

Ahani, A., Nilashi, M., Zogaan, W. A., Samad, S., Aljehane, N. O., Alhargan, A., Mohd, S., Ahmadi, H., & Sanzogni, L. (2021). Evaluating medical travelers' satisfaction through online review analysis. *Journal of Hospitality and Tourism Management*, *48*, 519-537.

Chaouali, W., Yahia, I. B., & Souiden, N. (2016). The interplay of counter-conformity motivation, social influence, and trust in customers' intention to adopt Internet banking services: The case of an emerging country. *Journal of Retailing and Consumer Services*, *28*, 209-218.

Chin, S. W. (2019). A comparison of change detection techniquies to detect illegal landfilling in rural areas: a case study in Hong Kong.

Grigsby, J., Kaehny, M. M., Sandberg, E. J., Schlenker, R. E., & Shaughnessy, P. W. (1995). Effects and effectiveness of telemedicine. *Health Care Financing Review*, *17*(1), 115.

Hosseini, H., & Kubavat, A. (2022). Why Do People of Asian Descent Not Utilize Mental Health Treatments Compared to Other Ethnic Groups in the United States? *Hospital Topics*, 1-6.

Kamal, S. A., Shafiq, M., & Kakria, P. (2020). Investigating acceptance of telemedicine services through an extended technology acceptance model (TAM). *Technology in Society*, *60*, 101212.

Koester, N., & Salge, O. (2020). Building Trust in Intelligent Automation: Insights into Structural Assurance Mechanisms for Autonomous Vehicles.

Kohnke, A., Cole, M. L., & Bush, R. (2014). Incorporating UTAUT predictors for understanding home care patients' and clinician's acceptance of healthcare telemedicine equipment. *Journal of technology management & innovation*, *9*(2), 29-41.

Kumar, M., & Pandey, K. M. (2024). Analysing the Impact and Efficacy of Telemedicine through Data Analysis. *Int. J. Prev. Med. Health*, *5*, 10-15.

Nanda, M., Singhal, A., & Sharma, R. (2021). A Paradox of Best Healthcare Systems and Large COVID-19 Burden: Review of 1 Year of COVID-19 Epidemiology and Public Health Response in Europe. *Available at SSRN 3827869*.

Nielsen, B. B. (2011). Trust in strategic alliances: Toward a co-evolutionary research model. *Journal of Trust Research*, *1*(2), 159-176.

Ouimet, A. G., Wagner, G., Raymond, L., & Pare, G. (2020). Investigating patients' intention to continue using teleconsultation to anticipate postcrisis momentum: Survey study. *Journal of medical Internet research*, *22*(11), e22081.

Purwanto, E., & Budiman, V. (2020). Applying the technology acceptance model to investigate the intention to use e-health: a conceptual framework. *Technology Reports of Kansai University*, *62*(05), 2569-2580.

Rahi, S., Khan, M. M., & Alghizzawi, M. (2021). Factors influencing the adoption of telemedicine health services during COVID-19 pandemic crisis: an integrative research model. *Enterprise Information Systems*, *15*(6), 769-793.

Ramírez-Rivas, C., Alfaro-Pérez, J., Ramírez-Correa, P., & Mariano-Melo, A. (2021). Predicting telemedicine adoption: an empirical study on the moderating effect of plasticity in brazilian patients. *Journal of Information Systems Engineering and Management*, *6*(1), em0135.

Sha, W. (2009). Types of structural assurance and their relationships with trusting intentions in business-to-consumer e-commerce. *Electronic Markets*, *19*(1), 43-54.

Shiferaw, K. B., Mengiste, S. A., Gullslett, M. K., Zeleke, A. A., Tilahun, B., Tebeje, T., Wondimu, R., Desalegn, S., & Mehari, E. A. (2021). Healthcare providers' acceptance of telemedicine and preference of modalities during COVID-19 pandemics in a low-resource setting: An extended UTAUT model. *Plos one*, *16*(4), e0250220.

Suroso, J. S., & Sukmoro, T. C. (2021). Factors affecting behavior of the use of healthcare mobile application technology in Indonesian society. *Journal of Theoretical and Applied Information Technology*, *99*(15), 3923-3934.

Van Velsen, L., Wildevuur, S., Flierman, I., Van Schooten, B., Tabak, M., & Hermens, H. (2015). Trust in telemedicine portals for rehabilitation care: an exploratory focus group study with patients and healthcare professionals. *BMC medical informatics and decision making*, *16*(1), 1-12.

Wu, D., Gu, H., Gu, S., & You, H. (2021). Individual motivation and social influence: A study of telemedicine adoption in China based on social cognitive theory. *Health Policy and Technology*, *10*(3), 100525.

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https://doi.org/10.51137/wrp.ijdht.590

Yee, T. S., Seong, L. C., & Chin, W. S. (2019). Patient's intention to use mobile health app. *Journal of Management Research*, *11*(3), 18-35.

Zobair, K. M., Sanzogni, L., Houghton, L., Sandhu, K., & Islam, M. J. (2021). Health Seekers' Acceptance and Adoption Determinants of Telemedicine in Emerging Economies. *Australasian Journal of Information Systems*, *25*.