IMPACT OF VALUE CREATION ON REVISIT INTENTION OF PATIENTS IN E-HEALTH SERVICES: A MODERATING EFFECT OF DEMOGRAPHICS

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ABSTRACT

E-health services have proven globally as a vital means to the delivery of healthcare services in a cost-effective way, and without compromising the health of the care providers and patients, who are exposed to higher risk of infections in physical healthcare settings. It is, therefore, imperative to investigate perceived value creation in e-health services and its impact on the revisit intention of patients, with the moderating role of the demographic profile of patients. A study was conducted employing a quantitative, cross-sectional method using the structural equation modeling technique with the help of Smart PLS4 software. A sample of 260 e-health users was taken by both online and telephonic surveys, using purposive sampling. The findings revealed a significant impact of healthcare outcome value on the revisit intention of patients. However, the impact of process value on the revisit intention, as well as the moderation effect of selected demographics were proved insignificant, which is a major contradiction of earlier studies. This contradiction paves the way for future research, exploring different value-creation conceptualizations and models.

Keywords: *e-Health Services; Value Creation; Healthcare Strategy; Healthcare Management; Telemedicine; Healthcare Organization.*

INTRODUCTION

The world has seen a devastating impact of the recent pandemic of coronavirus that collapsed the healthcare delivery systems of even stronger GDP countries like Italy and Germany etc. In the wake of that agony, the provision of healthcare remotely without compromising the health of care providers and patients has not been possible, but by means of the only feasible option, which is termed as e-health services or telemedicine.

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E-health or telemedicine are the two terms used interchangeably and it is the utilization of the ICT capabilities and networks for the delivery of healthcare. Due to the growing importance of online healthcare delivery systems, there is a surge in strategy research recommending different aspects of value creation in e-health services platforms. In Pakistan, this area is still overlooked, and up till now, the research stream in e-healthcare value creation is still limited. This study is invested in filling that research gap by the research questions, whether there is an impact of perceived process value and outcome value created in e-health service encounters, on the revisit intention of patients. Also, it is intended to answer whether demographic variables of age, income, and education moderate the relationship between perceived value creation and revisit intention of patients. The activity of value creation remains at the heart of any business entity. Value creation rests at the core of the business strategy of any kind of business, irrespective of size and industry. This may be the main reason the value creation concepts crop up in discussions of business strategy quite frequently (Brandenburger & Stuart, 1996). Extant literature (e.g. Ravald and Gronroos, 1996; Chesbrough, Lettl & Ritter, 2018; Porter, 1985, etc.) recognizes that the value is embedded in the "customer perceived value", that is the customer is perceived to be a central point to be considered while defining value in either a value creation, value capture, or even value co-creation processes. Therefore, only the patient perspective of value creation is investigated in this study resulting from e-health service encounters.

LITERATURE REVIEW

e-Health Services

Telehealth and telemedicine are the terms used interchangeably are subset of e-health and is the use of telecommunications technology in health care delivery (Gajarawala & Pelkowski, 2021). Telemedicine at one end provides an innovative way to deal with a recent pandemic and other shortage of resource issues such as a means for reducing the risk of cross-contamination due to closer interaction (Smith et al., 2020) improves efficiency without additional costs, reduces patient travel and waiting time (Gajarawala & Pelkowski, 2021). Anthony Jnr (2021) has classified the barriers to the adoption of e-health which places importance on the human factors for users like readiness due to education.

Value Concepts

In several consumer behavior research (e.g. Engel & Blackwell, 1982; Engel *et al*., 1990; Schiffman and Kanuk, 1978; Zaltman and Wallendorf, 1983; cited in Ravald & Grönroos, 1996) the "value" is constantly used as "Customer value". In some research (e.g. Peter & Olson,

1993) the value is simply the utility that the consumers receive when purchasing a product and the consumer's overall assessment of the utility of a product based on a perception of what is received and what is given (Zeithaml, 1988) which Zeithaml suggested value as a function of customer's subjective evaluation and occasions. Ravald and Gronroos (1996) posit that there is no clear definition of value until the pricing literature is explored. In this context, Monroe (1991) has defined the value as the "ratio between perceived benefits and perceived sacrifice made" that drew a mathematical expression mentioned below.

Defining Value in Healthcare

In defining the value concept in healthcare, the contribution of veterinary strategy writer Micheal Porter is significant (e.g. Porter, 2009, 2010; Porter & Lee, 2013). The notion of healthcare value is not very different from the other consumer research stream, which is to say, that the very core of Michael Porter's definition of healthcare value is consistent with e.g., Grönroos & Ravald (2011) and Monroe (1991), etc. In this context, the value is determined by how the medicine is practiced (Porter & Lee, 2013) to improve the health status of a patient. The healthcare value is defined as the "patient health outcomes achieved per dollar spent" (Porter, 2010). This means, that for an improved healthcare value, a healthcare system needs to improve positive health outcomes by simultaneously reducing the costs of the care provided. However, this improved healthcare value is challenged by constantly increasing healthcare costs (Porter & Lee, 2013). However, with the constant increase of healthcare costs, (Porter, 2009) calls for a national agenda for executing a healthcare reform to increase patient value.

According to Porter (2010), value should always be defined around patients, the healthcare service receivers. In this connection Porter, (2010) suggested that achieving a higher patient value should be the main goal of healthcare organizations.

Customer perceived value = perceived benefits / perceived sacrifices

According to Nguyen et al. (2020), the measurement of patient satisfaction with telemedicine must include overall satisfaction with the care consisting of perceived usefulness, ease of use, and reliability. McColl-Kennedy et al. (2012) conceptualize that value is not realized until the service is consumed, i.e., refers to the value-in-use.

Value Creation Concepts

The International Federation on Accountants (2020) establishes that it is important to understand value creation and enable a value creation business model, before being able to measure, track and communicate on value creation. According to IFAC (2020) this can be

accomplished through a management process of defining, creating, delivering, and sustaining value. (International Federation of Accountants, 2020).

Value in Use, Value in Exchange, and Captured Value

Worth mentioning here are the concepts of value creation as given by Bowman & Ambrosini (2000), who argued that a distinction among different values is necessary to be developed, that is, *value in use, exchange value,* and *value captured*. According to Bowman & Ambrosini (2000), value in use is the subjective assessment by the customer as she utilizes the product/service. However, the sources of new use value are the labor performed by organizational members which is heterogeneously performed, which is why determines the competitive advantage among firms. The exchange value is realized at the time of sale. Thirdly, the value captured is determined by the perceived bargaining power relationship between buyers and sellers which also confirms the views of Chesbrough et al. (2018) that value creation is "an actor's attempt to increase value".

According to Chesbrough et al. (2018), the value-in-use is the outcome of a process and is realized at a time when resources are used. Therefore, the value-in-use perspective argues that value is bound to an actor applying resources in a process aimed at moving toward a valued goal. whereas, the exchanged value is encapsulated in the exchange of valuable resources, such as the purchasing cost and estimated benefits.

Concisely, the value "in use" and "exchange" are two different points in time, i.e. when the resources are "used" and "exchanged". Further to this notion of Chesbrough et al., (2018) there is some consensus in the literature that a distinction exists between value creation and value capture. Brandenburger & Stuart (1996) have defined value creation as a simple equation of

Value Created = Willingness to Pay – Opportunity Cost

A review of literature by McColl-Kennedy et al. (2012) conceptualizes that value is not realized until the service is consumed, i.e., refers to the value-in-use.

Dimensions of Value Creation: The Process and Outcome Value

Consistent with the ideas such as Chesbrough et al. (2018); Bowman & Ambrosini (2000), the research of Hau et al. (2017) distinguishes the perceived created value as "process value and outcome value", as adapted from Sweeney & Soutar (2001). Keeping in view the cost-to-benefits ratios and, Porter's (2010) definition of the healthcare value concept, we have adapted the dimensions of value creation as Outcome Value (OV) and Process Value (PV) out of the measures used by Hau et al. (2017). The variable items of the two constructs included the

expected benefits of e-health service (Hau et al., 2017; Nguyen et al., 2020), the perceived and expected value (Hau et al., 2017; Nguyen et al. 2020; Porter, 2010; Sweeney & Soutar, 2001), and the outcome value in terms of health improvement (Porter, 2010; Sweeney & Soutar, 2001). For the perceived value, the included items are the patients' feeling of confidence, encouragement from doctors, and the positive experience felt during the e-healthcare service encounter (Hau et al., 2017; Nguyen et al., 2020; Sweeney & Soutar, 2001).

Perceived Healthcare Value Creation and the Revisit Intention

Healthcare literature, like other consumer research, is rich in the impact of perceived value on revisit intention and customer loyalty (e.g., Nguyen et al., 2021; Huang et al., 2021). The findings of Nguyen et al. (2021) reflect that patient re-visit intention depends largely on the perceived created value of the healthcare services. Nguyen et al. (2021) think that when the patient is provided with care at reasonable prices and meets her expectations will generally go for a re-visit. Also, the post-purchase perceived value explains and predicts the loyalty behavior of customers in the healthcare services context in a hospital (Moliner, 2009). Moreover, Moliner (2009) posits that if the patient senses that the hospital fulfills some need, desire, and goals, this perceived value converts into satisfaction that leads to re-visit the healthcare services. A perceived valuable outcome in a healthcare service encounter encourages customers to visit again (Tragl et al., 2022). This notion is the confirmation by (Pevec & Pisnik, 2018) who argued that the higher the perceived value of patients, the higher the loyalty which in turn causes patients to visit again. Furthermore, a mediated relationship may exist between patients' perceived value of medical services and their loyalty (Huang et al., 2021). Also, the value drivers such as hospital image and perceived medical quality may drive a revisit intention (Mohd Isa et al., 2019). Chahal & Kumari, (2012b) posit that the different value driver set in healthcare such as acquisition and transaction value has a direct impact on the revisit intention of patients. Another study by Asidiqhi & Yasri (2022) reflects that the perceived value drives customer satisfaction, and perceived quality, therefore customers are willing to avail the services again. Based on the extant literature, it is, therefore, comfortably hypothesized that;

H1: There is an impact of perceived healthcare outcome value on the revisit intention in an e-healthcare service encounter.

H2: There is an impact of perceived process value on the revisit intention in an e-healthcare encounter.

The Moderating Role of Demographics

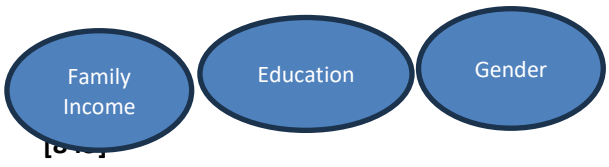
The study of demographics is crucial in understanding the perceived value creation and revisiting the intention of consumers. A literature review by Akbarov (2020) reflects a significant moderating effect of demographics on different psychological constructs. Studies, (such as Akbarov, 2020; Hernández et al., 2011; Molinillo et al., 2021) have shown moderating effects of demographic variables on the value perception in an online buying behavior perspective. Hernández et al. (2011) argue that there are gender differences in decision-making such that, for example. men are more pragmatic, and female face anxiety when they face new activities. Also, females are influenced more by their immediate environment than the male (Hernández et al., 2011). However, a survey on gender differences by Eurostat, (2009; cited in Hernández et al., 2011), suggested that more women are engaged on the internet-based platforms, which shows the gender gap is on a reducing trend. Molinillo et al. (2021) argue that gender moderates the perceived value of customers and loyalty, which certainly leads to revisiting the intention of users.

Several studies have included income as an explanatory variable in the online shopping perspectives (e.g., Al-Somali et al., 2009; cited in Hernández et al., 2011), yet concerning results are contradictory. Higher-income consumers appear to take implicit risk, the low-income consumers are more concerned about their financial losses (Hernández et al., 2011) leading to differences in value perception and the revisit intention in an online shopping platform. However, (Hernández et al., 2011) furthered that once the users acquire experience of this online platform, they are no longer influenced by their income difference. Income level appears to moderate the relationship between value consciousness and loyalty (Akbarov, 2020) which may lead patients to revisit e-health services. In some medical sciences research e.g., (Ganz, 1989), the education of patients acts as a moderator of psychological distress, which may impact the value perception. Another study by Sheikh et al. (2014) shows education as a moderator of health and wellbeing which is a measure of outcome value in this research. This discussion may lead to the development of the following hypotheses.

H3 (a, b, c): Age, gender, and income class moderate the relationship between outcome value and revisit intention in e-health services.

H4 (a, b, c): Age, gender, and income class moderate the relationship between process value and revisit intention in e-health services.

RESEARCH MODEL



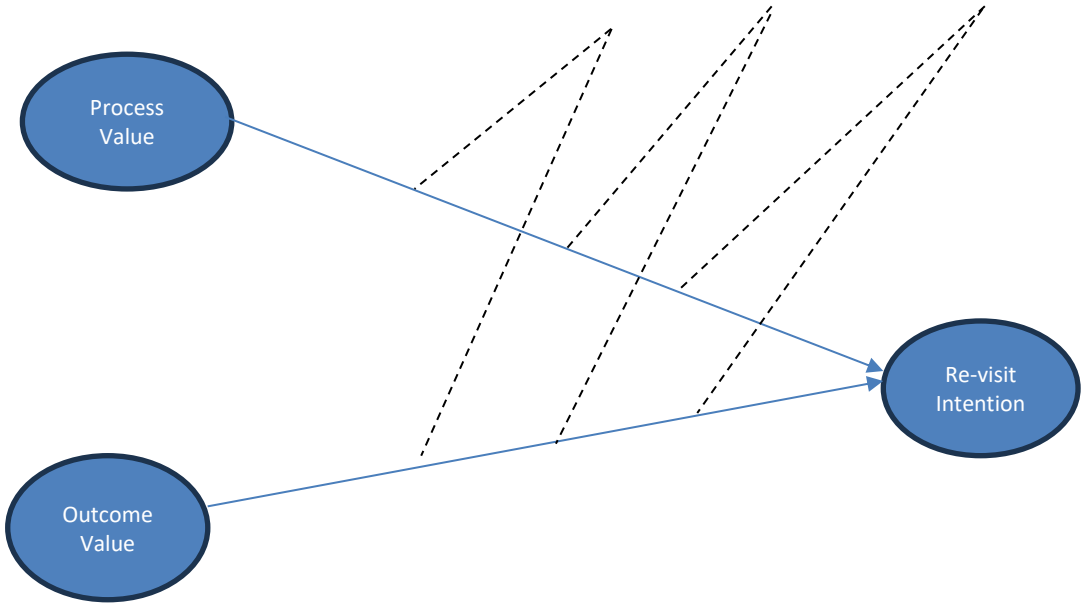


Figure 1. *Research Model*

METHODOLOGY

The time horizon of the study was cross-sectional, with quantitative research techniques applied, and relevant theoretical constructs were deduced by adaptation, based on the problem at hand. The target population consists of all those patients and their attendants who have ever consulted online for seeking any healthcare advice. A non-probability purposive sampling was used to collect data. The survey instrument was administered online in Google Docs, through social media, and by making a phone call after receiving a list of patients from a well-known telemedicine company operating in Pakistan. Therefore, the main sampling frame of this study consisted of a list of patients and attendants from the telemedicine company as well as different social media networks.

Instrument Building

A structured questionnaire has been used to collect the primary data, having section A for demographic information of patients and attendants whereas section B comprises constructs of perceived created value, with its sub-constructs as Outcome Value (OV) and Process Value (PV), and Revisit Intention (ReVis), with relevant items.

The items of "process value" and "outcome value" of the "perceived created value" were deduced and adapted from Hau et al., (2017), Nguyen et al., (2020), Porter, (2010), and Sweeney & Soutar, (2001). Likewise, the items of the construct of "revisit intention" were

adapted from the discussion made based on the theoretical underpinnings of D. Chakraborty & Paul, (2023), Mohd Isa et al., (2019;) and N. X. Nguyen et al., (2021).

Pilot Testing and Administration of Survey

The survey instrument was pilot tested in two stages. First, it was exposed to a group of ten patients to check the face validity as defined in Sekaran & Bougie, (2016) and with the subject experts for ensuring face and content validity. In the second stage, the survey instrument was administered to 34 patients, and calculated the reliability statistics using Cronbach Alpha using SPSS 26 software. The Cronbach alpha values turned out to be satisfactory as per Nunnally & Bernstein, (1994) which are mentioned below.

perceived created value (7 items) $\alpha = 0.926$, perceived process value (3 items) $\alpha = 0.942$, perceived outcome value (4 items) $\alpha = 0.844$, and revisit intention (4 items) = 0.887. The overall Cronbach alpha (11 items) was $\alpha = 0.943$. The instrument was later administered online and through telephonic calls.

The Structural Equation Modeling technique was performed through Smart PLS 4, for analysis for both the measurement and the structural model, contingent on the recommendations of Hair et al. (2019). The Smart PLS is useful for inferring and analyzing the relationship between variables, and therefore testing the hypotheses and model more robustly than the other contemporary software (Hair et al., 2019). Over the last decade, the Smart PLS is a preferred analysis software for both the assessment of quality criteria, (like reliability and different validity) and the testing of the inner model, by the majority of researchers in social sciences and management research (Hair et al., 2019, 2021; Lowry & Gaskin, 2014).

PLS-SEM estimates coefficients (i.e., path model relationships) that maximize the R2 values of the (target) endogenous constructs (Hair et al., 2014). This feature achieves the prediction objective of PLS-SEM (Hair et al., 2017). PLS-SEM is therefore the preferred method when the research objective is theory development and explanation of variance e.g., prediction of the constructs (Hair et al., 2019).

According to (Memon et al., 2020) there is an influence of the analysis of software for the sample size determination. However, according to the recommendations of (Ringle et al., 2020; Ryan, 2020) with large datasets, i.e., samples of 250 and above, both CB SEM and PLS-SEM may give similar results. It is, therefore, we choose to run the analysis with a sample size of 260 samples, as per the recommendations of Hair et al. (2019).

Ethical Consideration

Informed consent was taken from the respondent before collecting data and making sure of their confidentiality and anonymity. Also, this study involves no physical or psychological harm in any way. Therefore, the ethical considerations were well considered.

Table 1. Demographic Analysis

Demographics	Categories	Frequencies (%)
Gender	Male	83 (31.8%)
	Female	178 (68.2%)
Education	Less than Matric or no education	76 (29.1%)
	Matriculation/O-Level	6 (2.3%)
	Intermediate/A-Level	14 (5.4%)
	Graduation/Bachelors	96 (36.8%)
	Masters	63 (24.1%)
	PhD	6 (2.3%)
Family Income	less than Rs. 40,000	90 (34.5%)
	Rs. 40,000-70,000	35 (13.4%)
	Rs. 71,000-100,000	35 (13.4%)
	Rs. 101,000-150,000	32 (12.3%)
	Rs. 151,000-200,000	16 (6.1%)
	Rs. 201,000-250,000	11 (4.2%)
	More than Rs. 250,000	42 (16.1%)

The results of the demographic profile in Table 1 show that females appear to compose more part of the survey than male respondents showing their interest in e-health services. Also, a more positive sign is that there are no great differences in the usage of e-health services based on education as respondents with lower education (such as less than matriculation, 34.5%) are adopting online health services.

Assessment of the Measurement Model

The quality criteria of the construct reliability and validity were tested with different statistics.

Table 2. Reliability Statistics

Items	Outer Loadings	Cronbach's Alpha	Composite Reliability (Rho_C)	Average Variance Extracted (AVE)
OV1	0.872	0.858	0.904	0.702
OV2	0.829			
OV3	0.822			
OV4	0.827			
PV1	0.867	0.858	0.914	0.779
PV2	0.907			
PV3	0.874			
ReVis1	0.802	0.871	0.912	0.722
Revis2	0.809			
Revis3	0.89			
Revis4	0.894			

The items reflect a robust relationship with their respective constructs as they are loaded well above the common threshold values of 0.7 (Hair et al., 2014; Kline, 2023). A good internal consistency within constructs is shown as Cronbach alpha values exceed the generally accepted value of 0.7 (Nunnally & Bernstein, 1994). The composite reliability statistics also show well above the acceptable value of 0.7(Hair et al., 2014). Moreover, the average variance extracted (AVE) numbers are above 0.5,(Fornell & Larcker, 1981) indicating that a substantial amount of variance is explained by the constructs relative to measurement error, which supports convergent validity.

Table 3. Discriminant Validity (Fornell and Larcker Criterion)

Constructs	Out Come Value	Process Value	Revisit Intention
Out Come Value	***0.838****		
Process Value	0.738	***0.883***	
Revist Intention	0.747	0.642	***0.85***

**Square roots of AVE on diagonals*

The Fornell-Larcker criterion was measured for the constructs, by comparing the square root of the average variance extracted for each construct to the correlation between the constructs. According to Fornell & Larcker (1981) and Hair et al., (2017), the discriminant validity is established based on the Forell-Larcker criterion when the square root of the AVE for each construct is greater than the correlations between that construct and other constructs. In table 3, the Outcome Value has an AVE of 0.838, the Process Value has an AVE of 0.883, and the Revisit Intention has an AVE of 0.85, all higher than their respective correlations with other constructs, showing a strong discriminant validity among the constructs.

Also, the cross-loadings of each of the construct items as shown in Table 4 reflect that all the items are loaded better on their parent constructs than all the other constructs, indicating a good discriminant validity, again as per the criteria developed by Fornell & Larcker (1981) and Hair et al. (2017).

Table 4. Cross loadings

Items	Out Come Value	Process Value	Revisit Intention
OV1	***0.872****	0.591	0.687
OV2	***0.829***	0.579	0.620
OV3	***0.822***	0.635	0.575
OV4	***0.827***	0.677	0.614
PV1	0.665	***0.867***	0.564
PV2	0.654	***0.907***	0.562
PV3	0.637	***0.874***	0.575
ReVis1	0.642	0.581	***0.802***
Revis2	0.586	0.465	***0.809***

Revis3	0.669	0.556	***0.890***
Revis4	0.638	0.574	***0.894***

**Respective items of each construct in bold*

Analysis of Structural Model

Table 5. Structural Model Results, **Relationship is significant at P < 0.001*

Hypotheses	Beta Coefficients	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values*
OV -> ReVis	0.586	0.589	0.108	5.431	0.000
PV -> ReVis	0.131	0.119	0.129	1.015	0.310
FamilyIncome x OV -> ReVis	-0.154	-0.155	0.108	1.434	0.152
Education x OV -> ReVis	0.119	0.114	0.158	0.757	0.449
Gender x OV -> ReVis	-0.054	-0.045	0.149	0.363	0.717
FamilyIncome x PV -> ReVis	0.142	0.141	0.106	1.340	0.180
Education x PV -> ReVis	-0.149	-0.139	0.120	1.249	0.212
Gender x PV -> ReVis	0.138	0.139	0.158	0.870	0.385

Fig 2 shows that the R-square value, i.e., 0.60 establishes a 60% variation, is explained by the OV and PV in the ReVis, which also reflects a good model fit. Table 5 shows the predictive behaviors of independent constructs i.e., process value (PV) and outcome value (OV) to the dependent variable revisit visit intention (ReVis), considering the moderating effects of demographic variables of family income, education, and gender differences. The OV appears to predict significantly to the ReVis ($\beta = 0.586$, t-statistics = 5.431, $p < 0.001$). Therefore, the impact of OV on ReVis is statistically significant. Conversely, the relationship between PV and ReVis does not appear to be statistically significant, with a p-value of 0.310 above the 0.05 threshold, though, the coefficient ($\beta = 0.131$) shows some (weaker) influence of PV over Revis (Cohen et al., 2003; Tabachnick & Fidell, 2007).

However, the multipliers effects of the moderators, such as Family Income x OV ($\beta = -0.154$, $p = 0.152$), Education x OV ($\beta = 0.119$, $p = 0.449$), and Gender x OV ($\beta = -0.054$, $p = 0.717$) exhibit weaker or non-significant effects on ReVis, indicating no significant moderation by these demographic variables on the OV-ReVis relationship. Also, interactions like Family Income x PV ($\beta = 0.142$, $p = 0.180$), Education x PV ($\beta = -0.149$, $p = 0.212$), and Gender x PV ($\beta = 0.138$, $p = 0.385$) do not significantly moderate the PV-ReVis relationship, guided by (Cohen et al., 2003; Tabachnick & Fidell, 2007). The moderators, which help uncover the conditions under which the association between the two variables, i.e., perceived value creation and revisit intention (Hayes, 2018), the moderation of the demographic variables appear to be non-existent. This situation gives sufficient grounds to conclude that while OV and PV independently influence ReVis, the demographic variables (Family Income, Education, and Gender) do not seem to moderate these relationships substantially.

Structural Model

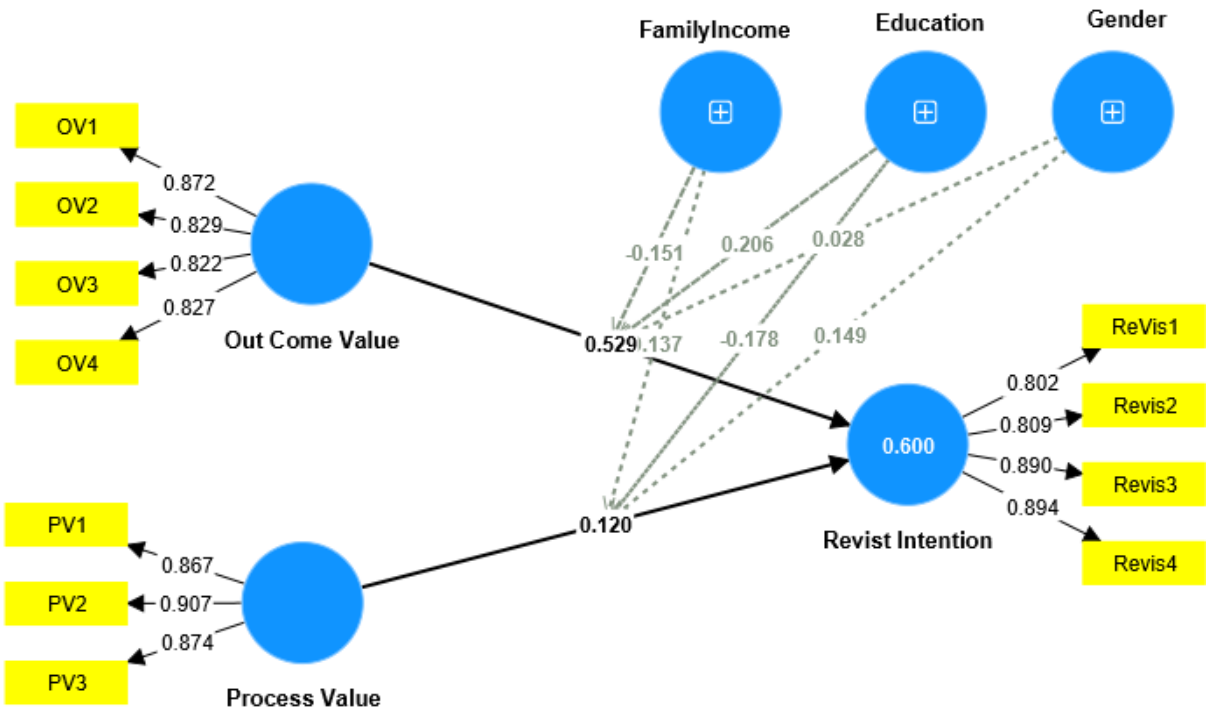


Figure 2. *Structural Model*

DISCUSSION

Healthcare is a transformative service, which means that it involves a positive (or negative) change in the well-being of customers (Hau et al., 2017). This makes the healthcare service dissimilar to other services, as the patients experience a state of fear and stress of illness, making the creation of value difficult, as compared to other services. Value creation, which is fundamental to any transaction, and therefore, remains the core of healthcare services, in online platforms. As per N. X. Nguyen et al., (2021), the perceived value added in e-health services rests at the core of patient satisfaction. This study confirms the overwhelming role of perceived value in online healthcare service encounters, in creating the revisiting intention of patients to the telemedicine platform. Also, the reconfirmation of Porter's, (2009) idea occurred in the study that value should always be defined around "patient". This sounds logical in that the superior perceived value is causing the patient to come again to the e-health service provider, which will become a source of revenue. It is a fact in the literature that revenue growth is the ultimate value for the business. The findings of this research are to a larger extent, consistent with the previous research (e.g., Porter, 2010) that gives greater importance to the perceived value creation, especially the healthcare outcome of patients, concerning the total cost incurred

in the healthcare services. In the contemporary era, the theme of "Value-based healthcare delivery systems" is widely becoming dominant (Porter & Lee, 2013). The findings of this study reflect that the Pakistani telemedicine market is no exception, neither it is different from developed countries when it comes to "patients' perceived value" for achieving better healthcare service outcomes. In our research, the outcome value to revisit intention receives a significant strength of the relationship ($\beta = 0.586$), which confirms Porter's, (2010) notion that healthcare value is "the patient's health outcomes achieved per dollar spent". Therefore, based on the findings of this study, it is crucial to focus on the healthcare outcome as it drives patients to revisit the e-health services platforms. The process for the e-health services is equally important for the e-health service. However, our findings receive a lower beta coefficient (i.e. $\beta = 0.12$), and the relationship between process value and revisit intention turned out to be statistically insignificant. This also reflects that patients are more concerned with their health outcomes rather than the process of executing the service delivered in online healthcare platforms. The current situation puts healthcare policymakers in a challenging state, as according to Berry & Bendapudi, (2007) healthcare is fairly a costly, extremely complex, yet widely used service, that affects economies and the quality of life of people. The daunting economic conditions and increasing inflations are the major challenges in Pakistani healthcare economy, transferring the healthcare costs burdens to patients. The cost-conscious healthcare consumer market (also, as per this study's findings) may refrain from seeking further medical advice or treatment, because of their inability to pay for their next visits.

Pakistan is a low per capita income country, which means that in most services, costs remain the defining factor for patients for a "go or no go" decision, as discussed earlier. This, in turn, means that income may moderate not only the value perception but also the revisit intention of patients as mentioned by Hernández et al. (2011). However, a more interesting contradiction is found in this research with earlier literature in the domain of strategy and marketing, especially from the consumer behavior subject. This is the moderating effect of demographic variables of gender, education, and income. Several earlier studies (e.g., Akbarov, 2020; Hernández et al., 2011; Molinillo et al., 2021) have shown the moderating impact of demographic variables such as income, gender, and education. This study fails to prove any significant moderating effect of these demographic variables with the perceived outcome and process value to revisit intention of patients in an e-health service encounter.

Pakistan is a more masculine culture than a feminine one, as according to Hofstede (1983) it receives a masculinity culture index value of 50. Also, in a male-dominated society like Pakistan, it is encouraging that females are adopting more e-health service platforms, than male

users. This puts healthcare policymakers at ease in that the maternity health and the healthy childbirth ratio may be improved through online consultation among females. Also, the income and education differences are deemed to be disappearing due to the use of e-health services. Education has been one of the major factors of the digital divide among economies. However, if the lower education level does not have an impact on the use and revisit intention for online healthcare, it can be encouraging for e-health organizations. The demographics show little income, education, and education-wise differences in this study, which is earlier explained by (Hernández et al., 2011), that when the users acquire experience of an online service encounter, they are no longer influenced by their income or education level. This may give rise to the e-health business as most of the Pakistani population is less educated and owns a low-income level. The healthcare services may reach a wider population through the e-health services platforms.

CONCLUSION

There is a growing importance of healthcare outcome value among the e-health service users. Value creation has shown an impact on the revisit intention of patients in an online healthcare platform. This consensus is proved in this study, however, only healthcare outcome value is showing significance. The patients are more health outcome-conscious than the process of healthcare delivery in an online healthcare platform. More specific healthcare outcome parameters are 1) a significant improvement of health after the online consultation, and 2) the doctors provide good value in comparison of time, money, and efforts as expected by the patient. Whereas the following process value determinants receive less importance than the outcome value, such as, 1) making the patient feel confident, 2) having a positive experience, and 3) having an encouraging time during an online healthcare service encounter.

The process value, and demographic characteristics of gender, education, and income level are proved as having statistically insignificant moderation effects. This pattern may have emerged as argued by Akbari & Mahmoudirad (2023) that different value creation scopes constitute different value creation patterns. Nonetheless, this situation opens avenues for e-health services to flourish among masses of patients, who belong to lower-income groups in Pakistan and possess little education, especially in the rural areas of Pakistan. Education and income are among the factors that are causing the digital divide. However, as per our findings, if the demographic factors are not barriers to assigning value to the online healthcare platform and revisiting intention, this would be very encouraging for the e-health organizations. Hence, for an improved healthcare value, an e-healthcare system needs to improve positive health

outcomes by simultaneously reducing the costs of the care provided. However, this improved healthcare value is challenged by constantly increasing healthcare costs, which is also mentioned by (Porter & Lee, 2013) for a developed country like America. For Pakistan, this situation is more challenging, whereby, the national priority agenda like healthcare receives less importance than it deserves. Nevertheless, with the constant increase in healthcare costs, it is calling for a national agenda for executing healthcare reform to increase patient value. A positive sign is the diminishing differences in gender, income, and education in terms of patients seeking online healthcare services. Pakistan is a male-dominated society as per Hofstede's (1983) cultural dimension of masculinity (i.e., MAS = 50), it is much more encouraging that the female population is adopting e-health services even more than the male population. There is a much healthier sign for a low-income country like Pakistan, that people seek a cost-effective means of healthcare service in the form of online consultation, irrespective of their demographic differences.

FUTURE RESEARCH DIMENSIONS

This study has been conducted from the patient's perspective of value creation and revisiting intention in the online platform. However, the service providers' perspective of value may differ from that of patients. It is, therefore, pertinent to explore the e-health service providers' perspective of healthcare value. This exploration of the provider side is mainly important in that the cost constraints are clearer to the provider than the patient. Since costs are a pivotal segment in the delivery of healthcare value, the providers' perspective would be a valuable addition to the existing body of healthcare service knowledge. The study may be extended to the general or physical healthcare services including more variables, such as loyalty as a dependent variable and patient satisfaction as a mediator between the perceived value of healthcare and patient revisit intention and loyalty. Also, the effects of other demographic factors may further be investigated. This study has used the widely accepted concepts as independent variables for value creation (such as, Huang et al., 2021; Porter, 2009, 2010; Porter & Lee, 2013, 2016). Nevertheless, the domain of value creation is very vast, and many other constructs and conceptualizations of value creation can be found in research. Therefore, other ways of operationalizing value creation may be explored and investigated for e-health or telemedicine, to confirm or contradict the present findings.

STUDY LIMITATIONS

One of the major limitations of this study has been approaching the right e-health services users. A larger sample size with a wider cross-section of rural patients may give a better understanding of the value-creation phenomenon in e-health services.

MANAGERIAL IMPLICATIONS

This study presents some important aspects of value creation, especially the outcome value for the continued use the e-health services. The results call for a national agenda for healthcare policymakers to reduce the overall healthcare delivery costs in order to increase the outcome value. However, the other part of the equation is that online healthcare providers, especially doctors may work rigorously to be more focused on positive healthcare outcomes, not merely improving the service experience of patients. The e-health organizations may be at ease by knowing through this study that education, income, and gender are not moderating the e-health service value and revisiting the intention of patients. This would further their market reach to a demographic segmentation basis. Healthcare policymakers may utilize the results of this study to create a more patient-centric healthcare approach. The e-health services may be extended to rural areas as well as to all income classes and different educational levels people because findings reflect the acceptance of telemedicine, irrespective of gender, income, and education levels.

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