



Impact of Perceived Servicescape on Patient Satisfaction through Mediating Role of Service Credibility and Moderating Role of Received Word of Mouth in Rehabilitation

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Abstract: The aim of this study was to explore the effects of perceived servicescape (PS) and credibility of the healthcare service provider (CHSP) on patient satisfaction (PtS) in rehabilitation settings of public and private hospitals of Islamabad and Rawalpindi, Pakistan. Mediating effect of CHSP and moderating effect of received word of mouth (WOM) have also been studied in this relationship. A sample of 300 patients receiving rehabilitation care was selected by applying convenience sampling technique. The design of this study was cross-sectional in nature. Self-administered questionnaire was designed to be utilized. Application of the correlation and regression were executed to analyze the collected quantitative data. The cross-sectional study method, limited geographical area coverage, and small sample size did not allow the detailed testing of the causal relations among study variables. Results of this study have indicated that there was a significant direct positive relationship between perceived servicescape and patient satisfaction and this relationship was also mediated positively by CHSP. There was a substantial direct positive relationship between perceived servicescape and CHSP and, between CHSP and patient satisfaction. However, the moderating effect of received WOM was found to be insignificant. It is recommended that healthcare managers should develop a credible service framework that focuses on better affordability, competitiveness, awareness, empathy, service expertise, pleasant interactions with patients through centeredness communication and beliefs and, subsequently, it will contribute to patient satisfaction and success of the rehabilitation settings. This is the first-ever study of the impact of perceived servicescape on patient satisfaction through CHSP as a mediator and the moderating influence of received WOM in rehabilitation.

Keywords: Perceived Servicescape, Service Credibility, Received Word of Mouth, Rehabilitation, Healthcare Service Environment.

1. INTRODUCTION

World Health Organization (WHO) reported in 2023 about the disabled population that more than 1 billion people live with some form of disability and are increasing in recent years due to demographic trends and chronic health conditions [1]. According to the disability statistics report till 2021 provided by the Pakistan Bureau of Statistics, 371,833 people living in Pakistan are experiencing some form of disability. Out of 371,833 disabled people, majority (147,539) of them are living in Punjab and majority (295,093) of them have a physical disability [2]. Early rehabilitation is crucial in physical and neurological disabilities for functional outcomes [3]. The major challenges

faced by persons with disabilities in Pakistan have been poor-quality rehabilitation services. The developing country “Pakistan” still lacks a registry of national disability to estimate the total burden of people with disabilities accurately [4].

Rehabilitation settings is defined as the place where the therapists provide therapeutic services to address both physical and mental health conditions after surgical interventions or illnesses [5]. There are few physical rehabilitation centers located in the urban areas of Pakistan, whereas a large percentage of the disabled population lives in rural parts. Moreover, rehabilitation settings have been in the developing stage [6]. Kotler [7] introduced the concept of servicescape by using

the term ‘atmospherics’ for the first time and stated that buying environment of the organization produces specific emotions in the customers that increases the likelihood of purchase. The term ‘servicescapes’ was first used by Bitner [8] in a service environment, where three servicescape dimensions, such as ambient condition, spatial layout/functionality and sign, symbol and artifact were explained. All three servicescape dimensions have shown the significant positive impact on patient satisfaction [8, 9]. DCunha *et al.* [10] stated that service quality perception by customers depends on ambient, design and social factors of the servicescape of the hospital that contributes to customer satisfaction, enhances the patient experience, retains existing customers and attracts new ones.

Credibility of the healthcare service provider (CHSP) is the capability of the healthcare professional to meet a level close to expectations of the patient [5]. Jeng [11] stated that the service is regarded as reliable when provider of that service has both expertise and trustworthiness. When patients personally experience the servicescape that meets their expectations, it contributes to the credibility of a service provider and trust of the patients [12]. CHSP enhances pleasure-feeling. The image of the healthcare organization is influenced by both the servicescape of the hospital and service credibility [13]. Lai and Chong [5] found that servicescape is a significant driver that shapes the behavior of patients and has significant impact on service credibility.

According to Ngoma and Ntale [14], customers spread either negative or positive word of mouth (WOM). Word of mouth shapes attitudes and behaviors of the customers resulting in patient satisfaction. Positive WOM recommendations remove uncertainty, create customer excitement and act as a switching barrier resulting in long-term relationships with the healthcare service providers. Fatima *et al.* [15] concluded that the better servicescape of the hospital contributes to patient satisfaction and loyalty intentions, resulting in positive word of mouth recommendations. Limbu *et al.* [16] found that the decision-making of the patient is extremely affected by positive word of mouth recommendations.

The overarching theory supporting this study was the Expectancy-Disconfirmation theory. According to this theory, customer relates his experience of the service received with his own expectations. If the perceived service encounter of the customer is equivalent to or higher than his expectations, he/she will be more satisfied [17]. In this study, this theory suggests that if the perceived servicescape experience of the patient in the rehabilitation settings meets equal or higher than his/her expectations, it will enhance the CHSP which, subsequently, contributes to patient satisfaction. The role of the Stimulus–Organism–Response (SOR) Model in explaining the behavior of disabled patients has also provided the theoretical foundation for this research [18]. In this study, this SOR model suggests that stimulus from the service environment (servicescape) affects organism (i.e., CHSP), which, subsequently, affect patient response behavior (patient satisfaction). Directed by the SOR model and Expectancy-Disconfirmation Theory, the research model of this study will give a more comprehensive assessment of how the servicescape of the rehabilitation settings will influence CHSP and their consequent effects on patient satisfaction. The servicescape of the rehabilitation settings in Pakistan have got limited attention by healthcare managers. Nowadays, the challenge is the increasing demand for better rehabilitation services which also includes servicescape cues [19]. There were gaps in the healthcare literature that how patients’ perceptions of the servicescape of rehabilitation settings were related to the CHSP and patient satisfaction; and whether received WOM would strong or weak the relationship between the CHSP and patient satisfaction (Figure 1). This study addressed these gaps in the existing literature and extended the existing literature on the study variables that was the significance of this study. To my knowledge, this study is a unique attempt and it is relevant to the study of Lai and Chong [5]. This study will also extend the understanding of patient satisfaction by proposing the importance of received word-of-mouth in Pakistani environment where collectivism is promoted over individualism that contributes to social bonding capital and trust; and people share their thoughts, beliefs and feelings [20]. There is a necessity to understand the mediating role of CHSP because it influences the decision making and emotional states of the patients as when a patient has faith in the claims

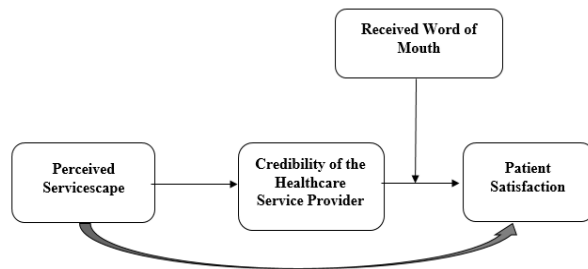


Fig. 1. Research model: Impact of perceived servicescape on patient satisfaction with mediating role of CHSP and received word of mouth as a moderator.

of the hospital credibility, he/she may experience pleasure-feeling and satisfaction towards the hospital [13].

This study would guide the local healthcare managers to better understand how cues of servicescape influence satisfaction of the disabled patients in the rehabilitation settings. This study has also extended the literature on received word of mouth, CHSP and patient satisfaction that will help local healthcare managers and marketing agencies when targeting, attracting, engaging, and retaining patients in the rehabilitation settings. The findings of this study would be fruitful for the local healthcare managers.

The research objectives of this study are to find out the effects of perceived servicescape on patient satisfaction, perceived servicescape on CHSP, and CHSP on patient satisfaction. Moreover, mediating effect of CHSP on perceived servicescape, patient satisfaction relationship and the interactive effect of received WOM and credibility of the healthcare service provider on the dependent variable (patient satisfaction) in the rehabilitation have also been analyzed.

Based on the preceding discussion, hypotheses are proposed that:

H1: Perceived servicescape will have a significant positive impact on patient satisfaction in the rehabilitation settings.

H2: Perceived servicescape will have a significant positive impact on credibility of the healthcare service provider in the rehabilitation settings.

H3: CHSP will have a significant positive impact on patient satisfaction in the rehabilitation settings.

H4: CHSP will mediate the relationship between perceived servicescape and patient satisfaction in the rehabilitation settings.

H5: Received word of mouth will moderate the relationship between credibility of the healthcare service provider and patient satisfaction in a manner that this causal relationship will be stronger when received word of mouth is highly positive.

2. MATERIALS AND METHODS

2.1. Sample and Data Collection

Primary data were collected from study participants (disabled patients) who were receiving rehabilitation care for some form of disability at rehabilitation settings in Rawalpindi and Islamabad, Pakistan. These participants were both male and female patients aged between 18-80 years receiving rehabilitation care for some form of disability such as cerebral palsy, spina bifida, polio, congenital talipes equinovarus, genu-valgum, genu-varum, stroke patients, musculoskeletal disorders, knee osteoarthritis and amputees. Patients having current symptoms of psychosis, dementia and other psychological illnesses were excluded. For data collection, participants receiving rehabilitation care were reached out to fill the questionnaire through traditional field survey technique such as hard copy questionnaires as study tool. A cover letter was attached with the questionnaire ensuring the participants about strict confidentiality of the information, consent, and providing details about the purpose of the study. In addition, data collection was cross-sectional and voluntary participation was ensured in this study. This study was grounded on convenience sampling technique. Out of 324 questionnaires distributed in hardcopy, the researcher received 312 responses. Useable responses were 300 resulting in a response rate of 93%.

2.2. Scales and Measures

All four variables were measured by utilizing the five-point Likert scale. In this Likert scale, 1 denoted the low value of the variable and 5 denoted the high value of the variable and it has a range from 1=strongly disagreed to 5=strongly agreed. The questionnaire was formed in the English language. English is taught as a compulsory subject in Pakistan. Therefore, the translation of the questionnaire into the native language was not required.

2.2.1. Perceived servicescape (PS)

Perceived servicescape was measured using 11 items of the scale developed by Reimer and Kuehn [21]. One sample item of the scale was “The building’s architecture is visually appealing”. The scale reliability as measured by Cronbach’s alpha was 0.946.

2.2.2. Credibility of the healthcare service provider (CHSP)

Credibility of the healthcare service provider was measured using 8 items of the scale developed by Jeng [11]. One sample item of the scale was “The healthcare service in this center delivers what it promises”. The scale reliability as measured by Cronbach’s alpha was 0.945.

2.2.3. Received word of mouth (RWOM)

Received WOM was measured using 3 items of the scale developed by Schumann *et al.* [22] and modified by Sundermann [23]. One sample item of the scale was “People I know have recommended this rehabilitation center to me”. The scale reliability as measured by Cronbach’s alpha was 0.927.

2.2.4. Patient satisfaction (PtS)

Patient satisfaction was measured using 3 items of the scale developed by Choi and Kim [24]. One sample item of the scale was “Overall, I am satisfied about the experience with this physical environment”. The scale reliability as measured by Cronbach’s alpha was 0.947.

2.3. Control Variables

A one-way ANOVA was executed to manage the deviation in the analysis of the CHSP, received word of mouth, and patient satisfaction caused by the demographic variables. Results (Table 1) showed substantial differences in patient satisfaction across gender ($F = 42.52$, $p < 0.05$), marital status ($F = 4.99$, $p < 0.05$), and type of hospital ($F = 184.61$, $p < 0.05$). Therefore, these demographic variables (gender, marital status, and type of hospital) were put as control variables in the regression analysis for patient satisfaction.

However, results (Table 1) presented no substantial differences appeared in the mean values of the credibility of the healthcare service provider (CHSP-mediating variable) among groups on the basis of age, gender, qualification, marital status, type of hospital, and frequency of visitation. Similarly, results presented (Table 2) that no substantial differences appeared in the mean values of received word of mouth (moderating variable) among groups on the basis of age, gender, qualification, marital status, type of hospital, and frequency of visitation.

2.4. Measurement Model

This section includes confirmatory factor analysis (CFA) level 1 and level 2, and measurement model estimates involving the items of scale of each study variable, factor loadings, Cronbach’s alpha reliability, composite reliability, and average variance extracted for analyzing the validity and reliability of the scales of the study variables

Table 1. One-way ANOVA executed to manage the variation in the CHSP, received word of mouth, and patient satisfaction due to demographic variables.

	Credibility of the Healthcare Service Provider		Received Word of Mouth		Patient Satisfaction	
	F value	p-value	F value	p-value	F value	p-value
Age	1.06	0.39	1.09	0.36	1.1	0.33
Gender	64.68	0.06	44.79	0.06	42.52	0*
Qualification	4.24	0.06	4.95	0.06	5.31	0.24
Marital status	2.33	0.07	2.73	0.06	4.99	0*
Type of hospital	122.18	0.06	107.53	0.06	184.61	0*
Frequency of visitation	0.313	0.73	0.43	0.65	0.25	0.78

N = 300, *p value < 0.05.

performed in the Smart-PLS 3. According to Hair *et al.* [25], the minimum threshold of factor item loadings is 0.6. According to Fornell and Larcker [26], the minimum threshold of average variance extracted (AVE) is 0.50, composite reliability (CR) is > 0.60, and Cronbach alpha is > 0.6 for assessing the convergent validity of the scale. The values of Cronbach alpha, composite reliability, and AVE had met the threshold levels (Table 2) indicating the reliability (alpha and composite reliability) and validity (AVE) of the scales used and showing good model fit. Figure 2 and Figure 3 illustrated the factor loadings of all items of the study variables and relationships between them. As the factor loadings of all items were 0.6 or greater than 0.6 except the PS-9 as shown by the results (Figure 2). Therefore, the PS-9 item was removed due to low factor loadings, i.e., 0.574 for performing further data analysis and slight improvement was observed (Figure 3). These figures proved the convergent validity of each scale item used and model was ready and adequate. Moreover, results have shown that

the values of good model fit were within acceptable ranges (SRMR= 0.05, and NFI = 0.91). According to Hair *et al.* [27], the value of SRMR must be less than 0.10 and NFI > 0.90 for good model fit.

3. RESULTS

The results of the frequency distributions of demographic variables are given in Table 3. Out of 300 respondents, most of the participants (41%) receiving rehabilitation care aged 18 to 30 years. 41.7% were male and 58.3% were female. 30% were unmarried, 68% were married and 2% were divorced and widow. Most of the respondents (45.3%) completed nursery to matric education. 150 (50%) of them were drawn from the public rehabilitation settings while 150 (50%) of them were drawn from the private rehabilitation settings. 48.7% of respondents visited the rehabilitation center 1-2 times, 21.7% of them visited the rehabilitation center 3-5 times and 29.7% of them visited the rehabilitation center above 5 times

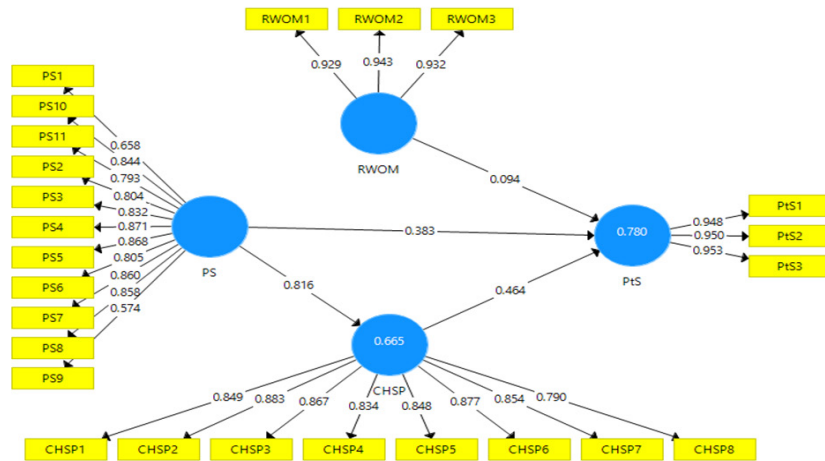


Fig. 2. Confirmatory factor analysis level 1.

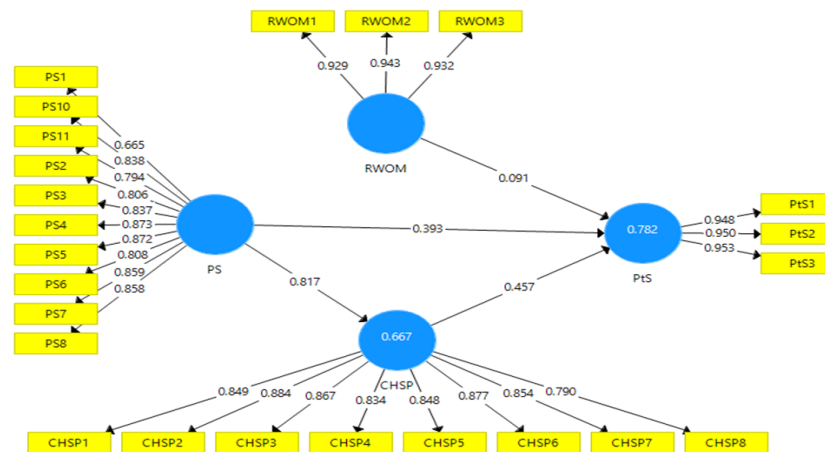


Fig. 3. Confirmatory factor analysis level 2.

Table 2. Measurement model (estimates) for analyzing the validity and reliability of the scales of the study variables.

Constructs	Items	Loadings	Alpha	Composite reliability (CR)	Average variance extracted (AVE)
PS	PS 1	0.665	0.946	0.954	0.678
	PS 2	0.806			
	PS 3	0.837			
	PS 4	0.873			
	PS 5	0.872			
	PS 6	0.808			
	PS 7	0.859			
	PS 8	0.858			
	PS 10	0.838			
	PS 11	0.794			
	CHSP	CHSP 1			
CHSP 2		0.884			
CHSP 3		0.867			
CHSP 4		0.834			
CHSP 5		0.848			
CHSP 6		0.877			
CHSP 7		0.854			
CHSP 8		0.790			
RWOM	RWOM 1	0.929	0.927	0.954	0.873
	RWOM 2	0.943			
	RWOM 3	0.932			
PtS	PtS 1	0.948	0.947	0.966	0.904
	PtS 2	0.950			
	PtS 3	0.953			

Abbreviations: PS = Perceived Servicescape, CHSP = Credibility of the Healthcare Service Provider, RWOM = Received Word of Mouth, PtS = Patient Satisfaction.

in the last 12 months. Quantitative data for each demographic variable is presented in Table 3.

3.1. Descriptive Statistics and Correlation Analysis

Descriptive statistics and correlation coefficients are presented in Table 4 and Table 5, respectively. The study findings unveiled that all variables are positively correlated to each other. Table 5 indicated that perceived servicescape exhibited a positive correlation with patient satisfaction ($r = 0.83$, $p < 0.05$); thus, providing initial confirmation of the hypothesis H1. Perceived servicescape was positively correlated with CHSP ($r = 0.82$, $p < 0.05$). CHSP was positively correlated with patient satisfaction ($r = 0.85$, $p < 0.05$). Received WOM also exhibited a significant positive correlation with

patient satisfaction (0.73 , $p < 0.05$). The skewness values were between the range of +1 and -1 and kurtosis was between the range of +3 and -3, as mentioned by Hair *et al.* [28], the data of this study was normally distributed.

3.2. Regression Analysis

3.2.1. Simple linear regression analysis

In step one, Demographic variables such as gender, marital status and type of hospital were put as control variables. The results indicated that perceived servicescape had a significant positive direct effect on patient satisfaction in rehabilitation settings ($\beta = 0.833$, $p < 0.05$) as shown in Table 6. The hypothesis H1 was validated, as R-square

Table 3. Frequency distributions of demographic variables.

	Demographic Variables	Frequency	Percentage %
Age (Years)	18-30	123	41
	31-40	57	19
	41-50	60	20
	51-60	32	10.7
	61-70	26	8.7
	71-80	2	0.7
Gender	Male	125	41.7
	Female	175	58.3
Marital Status	Unmarried	90	30
	Married	204	68
	Divorced	4	1.3
	Widow	2	0.7
Qualification	Uneducated	27	9.0
	Nursery school to 8th grade	76	25.3
	Matric	60	20.0
	Intermediate	35	11.7
	Bachelor	60	20.0
	Master	37	12.3
	Doctorate Degree	5	1.7
Type of hospital	Public	150	50
	Private	150	50
Frequency of visitation	1-2 times	146	48.7
	3-5 times	65	21.7
	Above 5 times	89	29.7

Table 4. The results of descriptive statistics.

	Minimum	Maximum	Mean	SD	Skewness	Kurtosis
PS	1.30	5.00	3.13	1.00	-.10	-1.26
CHSP	1.25	5.00	3.15	.95	-.19	-.99
RWOM	1.33	5.00	3.33	.97	-.19	-.82
PtS	1.00	5.00	3.19	1.22	-.23	-1.07

N = 300, *p-value < 0.05, PS = Perceived Servicescape, CHSP = Credibility of the healthcare service provider, RWOM = Received Word of Mouth, PtS = Patient Satisfaction, SD=Standard Deviation.

Table 5. The outcomes of Pearson correlation.

	1	2	3	4
PS	(.95)			
CHSP	.82*	(.95)		
RWOM	.72*	.77*	(.93)	
PtS	.83*	.85*	.73*	(.95)

n = 300, *p-value < 0.05, alpha reliabilities as in parentheses, PS = Perceived Servicescape, CHSP = Credibility of the healthcare service provider, RWOM = Received Word of Mouth, PtS = Patient Satisfaction.

Table 6. Simple linear regression analysis.

Hypothesis	Relationship	Beta Coefficient	R-square	Standard deviation	T statistics	P-Values
Step 1						
	Control variables		0.475			
Step 2						
H1	PS-PtS	0.833	0.693	0.017	48.068	0.000*

n = 300, Dependent variable: PtS = Patient Satisfaction, Independent variable: PS = Perceived Servicescape, Control variables: Gender, Marital status, Type of hospital, *p value < 0.05.

value was 0.693 showing the variation of 69.3% in patient satisfaction due to perceived servicescape as shown in Figure 4.

3.2.2. Mediated regression analysis

The specific indirect effects through CHSP between perceived servicescape and patient satisfaction for mediation regression analysis were reported in Table 7 and demonstrated in Figure 5, indicating the beta values and R-square values, respectively. The results indicated that perceived servicescape had a significant positive direct influence on CHSP in rehabilitation settings ($\beta = 0.817, p < 0.05$), thus, hypothesis H2 was accepted. The results indicated that CHSP had a significant positive direct influence on patient satisfaction in rehabilitation settings ($\beta = 0.507, p < 0.05$), hence, hypothesis H3 was also accepted. Mediating effect of CHSP between perceived servicescape and patient satisfaction in the rehabilitation settings was also found to be significant ($\beta = 0.414, p < 0.05$), thus, hypothesis H4 was also confirmed. As R-square value was 0.667 showing the variation of 66.7% in the CHSP due to perceived servicescape. Moreover, as the value of R-square was 0.779 showing the variation

of 77.9% in the dependent variable owing to perceived servicescape and CHSP.

3.3.3. Moderated regression analysis

In step one, demographic variables (gender, marital status, and type of hospital) were put as control variables. In step 2, direct effects of CHSP and received word of mouth on patient satisfaction were evaluated. In step 3, the interactive effect of received word of mouth and CHSP towards the dependent variable for moderated regression analysis was calculated as presented in Table 8 and shown in Figure 6. Moderating effect of RWOM on the relationship between credibility of the healthcare service provider and patient satisfaction was found to be insignificant ($\beta = -0.003, p = ns$), therefore, hypothesis H5 was not accepted.

4. DISCUSSION

In the present study, we have investigated the impact of servicescape of the rehabilitation settings on patient satisfaction as patient satisfaction is a key to the success of rehabilitation settings today. As, patients and visitors are more focusing on the

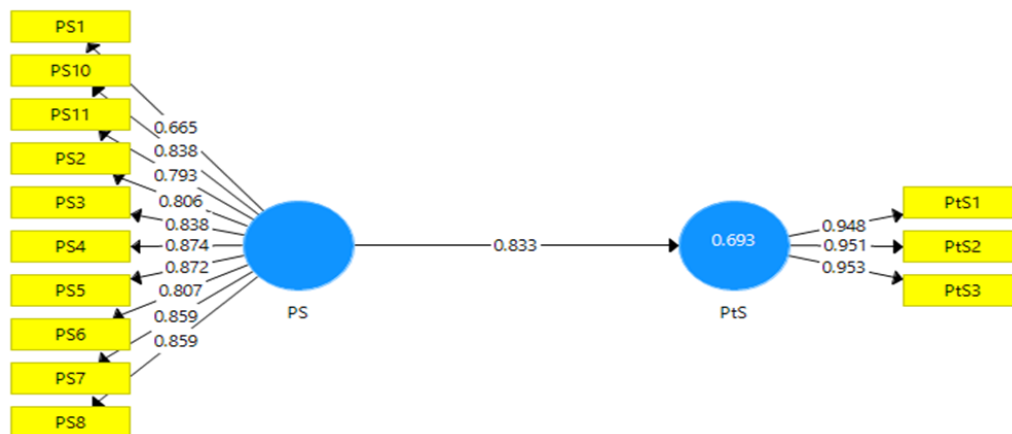


Fig. 4. Structural model (simple linear regression analysis).

Table 7. Mediated regression analysis.

Hypotheses	Relationship	Beta Coefficients	Standard deviation (STDEV)	T statistics	P-Values
H1	PS-PtS	0.833	0.693	48.068	0.000*
H2	PS-CHSP	0.817	0.018	45.951	0.000*
H3	CHSP-PtS	0.507	0.051	9.936	0.000*
H4	PS-CHSP-PtS	0.414	0.042	9.761	0.000*

n = 300, Dependent variable: PtS = Patient Satisfaction, Independent variable: PS = Perceived Servicescape, CHSP = Credibility of the Healthcare Service Provider, *p value < 0.05.

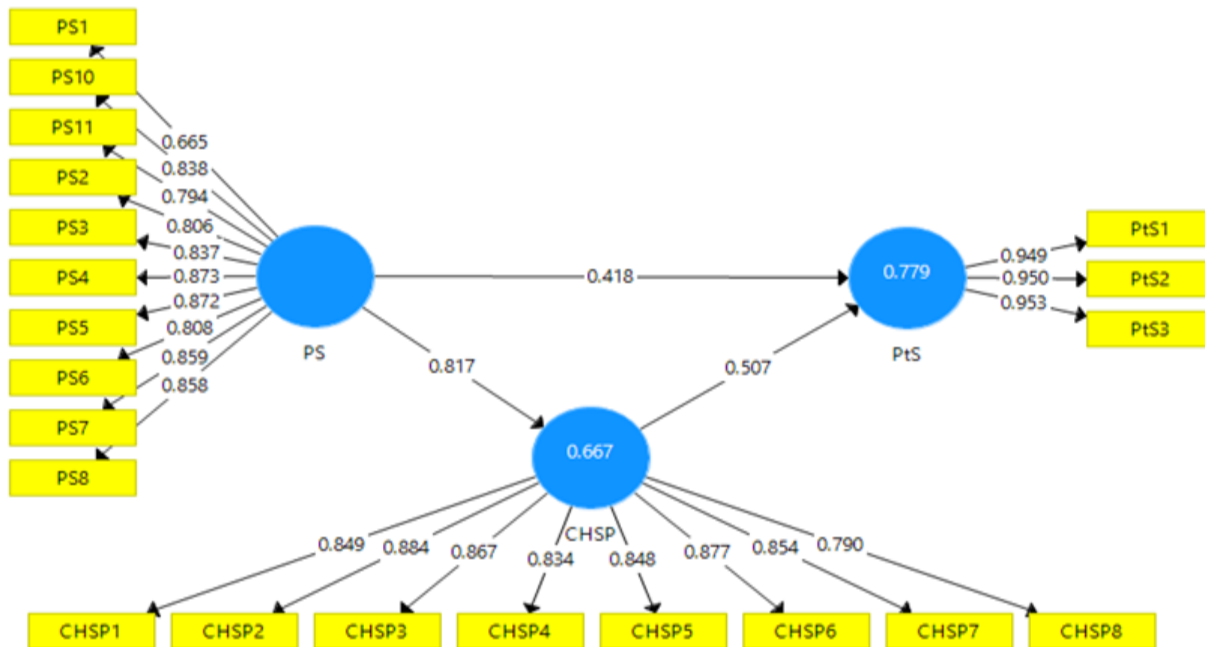


Fig. 5. Structural model (mediated regression analysis).

Table 8. Moderated regression analysis.

Hypotheses	Relationship	Beta Coefficients	R-square	Standard deviation	T statistics	P-Values
Step 1						
	Control variables		0.475			
Step 2						
	CHSP-PtS	0.710	0.735	0.045	15.92	0.000*
	RWOM-PtS	0.179		0.049	3.637	0.000*
Step 3						
H5	CHSP*RWOM-PtS	-0.003	0.735	0.039	0.068	0.940 ns

n = 300, Dependent variable: PtS = Patient Satisfaction, Independent variable: CHSP = Credibility of the Healthcare Service Provider, Moderator: RWOM: Received Word of Mouth, Control variables: Gender, Marital status, Type of hospital, *p value < 0.05, ns = not significant.

aspects of the physical environment now-a-days, healthcare managers of the rehabilitation centers can boost patient satisfaction by paying attention to the physical service environment.

In this study, a significant positive direct relationship was observed between perceived servicescape and patient satisfaction that supported the formulated hypothesis H1. It also aligned with the results of Fatima *et al.* [15], Lee and Chuang

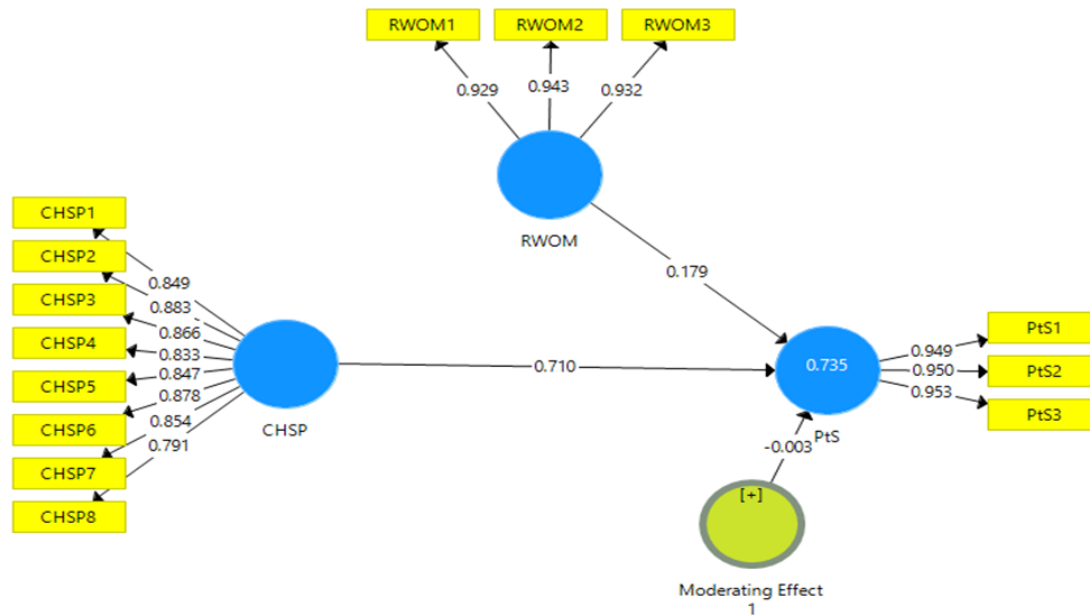


Fig. 6. Structural model (moderated regression analysis).

[29], Peng *et al.* [30], Rosenbaum *et al.* [19], Suess and Mody [31], and Vigolo *et al.* [32]. This may be due to the fact that if the physical environment of the rehabilitation center is well-presented, it will communicate about its professionalism to the patients, and create a sense of affiliation and good rapport between the patients and healthcare service provider. Firstly, the positive attributes of servicescape seem to be more important in building servicescape perception in the minds of the patients as these attributes create the first impression to attract patients [10]. Secondly, tangible aspects of the physical environment help new patients to form their evaluation towards the rehabilitation settings. Moreover, servicescape of the rehabilitation settings also affects the physiological states of patients and influences patient satisfaction. So, all physical and mental dimensions of the physical surroundings must be balanced to provide better experience to the patients receiving rehabilitation care [33]. Therefore, the patient-oriented servicescape has impact on patient satisfaction visiting the rehabilitation settings of Pakistan similarly as in the developed nations.

In this research, a significant positive direct relationship was observed between perceived servicescape of the rehabilitation settings and CHSP that supported the formulated hypothesis H2. It also aligned with the conclusion of Lai and Chong [5]. The reason is that perceived servicescape cues increase their trust in the healthcare service

provider and shape the decision-making of the patients visiting the rehabilitation settings that, consequently, contributes to the CHSP. In addition, when the services perceived by the patients are credible, trustworthiness in the service provider will rise. As a result, when patients have a greater level of trust and perceive that the service is delivered with assurance and reliability, they will become more confident and consequently enable them to develop positive feelings. Consequently, perceived servicescape experienced by the patients visiting rehabilitation settings of Pakistan has direct impact on CHSP.

According to this research, a significant positive direct relationship was observed between CHSP and patient satisfaction that supported the formulated hypothesis H3. It also aligned with the results of Sia *et al.* [12]. Reason for this is that when healthcare service providers deliver what they promised, patients and their family members will trust in the service providers and create favorable impression in the minds of the patients and their families. Moreover, when the promises of the healthcare service providers are credible and reliable, perceived risk and uncertainty about services will reduce. Consequently, patients receiving rehabilitation care may feel happy and even satisfied. Hence, the CHSP has primary worth and has direct impact on patient satisfaction in the rehabilitation settings of Pakistan.

Mediating effect of CHSP between perceived servicescape and patient satisfaction was also found to be significant that supported the formulated hypothesis H4. It also aligned with the outcomes of Lai and Chong [5], Loureiro [13], and Sia *et al.* [12]. The reason is because when the patients receiving rehabilitation care believe that the promises of the rehabilitation centers are trustworthy and credible, they may develop trust, affective commitment, happiness, and satisfaction towards the rehabilitation settings. Moreover, CHSP will help in building a long-term relationship with the patients visiting rehabilitation settings. CHSP is also a good interpreter of rehabilitation center image and pleasure-feeling. As a result, CHSP has primary worth and perceived servicescape has indirect impact on patient satisfaction through CHSP. This study explored the mediating role of CHSP between perceived servicescape and patient satisfaction to address the current research gap.

Moderating impact of received WOM between CHSP and patient satisfaction relationship was proved to be insignificant and it was also contrary to the formulated hypothesis H5. This may be due to the fact that the patients may remain doubtful of the WOM received by the people they know. As health is a vital aspect of the human life, it is difficult for the patients to do decision-making about the selection of the healthcare service providers based merely on word of mouth received from friends, family, colleagues, opinion leaders, influencers, online evaluation platforms and social media. Furthermore, there is a high level of uncertainty in received WOM about the healthcare service providers when the real experiences are lacking by the patients. It also depends on the sources by which the people are receiving WOM such as either traditional or e-word of mouth. Moreover, there may be differences in patients' perceptions about the physical environment of the rehabilitation settings and CHSP when it comes to actual experiences faced by them. Therefore, received word of mouth is not a good predictor of patient satisfaction and it is least effective in satisfying the patients. It was in opposition to the outcomes of Ruswanti *et al.* [34], Sanjaya and Yasa [35], and Kuo and Nakhata [36]. To the best of my knowledge, the present study has investigated the moderating effect of received word of mouth for the first time to address the current research void in Pakistani culture.

4.1. Practical Implications

Healthcare managers should implement measures and devise strategies for patient oriented servicescape of the rehabilitation settings which will contribute to patient satisfaction and success, profitability, and authority of the rehabilitation settings. They should also provide such nurturing atmosphere to their patients where trust and credibility are given top priority. Managers should also put emphasis on ambient condition, spatial layout/functionality and sign, symbol, artifact factors in the rehabilitation settings. Managers should develop a credible service framework for enhancing trustworthiness and affective commitment that focuses on better affordability, competitiveness, awareness, empathy, service expertise, pleasant interactions with patients through centeredness communication and beliefs.

4.2. Limitations of the Study

There are a few constraints concerning this study that require attention. This study employed a cross-sectional design and utilized convenience sampling. This study was restricted by its geographical coverage. The sample size was also small due to limited time duration. This study employed a quantitative approach. Another limitation was the patient's perspective of the servicescape of the rehabilitation settings. Moreover, moderation results of this study were unsupported.

4.3. Directions for Future Research

Future studies are advised to employ larger sample sizes and adopt a prospective approach. Subsequent investigation should perform the qualitative study. Furthermore, it should also explore the impacts of additional moderating factors such as personality traits, emotional intelligence, social support, price, appointment procedures, and cultural factors. Potential research can also be performed by finding the relative importance of each dimension of the servicescape in the rehabilitation settings. Employees can be further investigated to explore their satisfaction with the servicescape of the rehabilitation settings.

5. CONCLUSIONS

This study has provided a clear understanding about perceived servicescape of rehabilitation settings

of Pakistan and how perceived servicescape and credibility of the healthcare service provider contribute to patient satisfaction in order to attract and retain the patients receiving rehabilitation care. Outcomes of this study demonstrates that perceived servicescape influences positively patient satisfaction with the physical environment of the rehabilitation settings in Pakistan justifying the findings of different studies performed in the western countries. Moreover, perceived servicescape influences positively CHSP and CHSP influences positively patient satisfaction. When the patients receiving rehabilitation care experience the better servicescape, they would be more likely to be satisfied and have intention to revisit the rehabilitation settings for the same services or some other services.

As CHSP has direct effects on patient satisfaction, it also acts as a mediator between perceived servicescape and patient satisfaction. So, it is treated as a key determinant in developing patient satisfaction in the rehabilitation settings. This is noteworthy for both theory and practice in the framework of the healthcare industry. However, results of the interactive effect of CHSP and received word of mouth on patient satisfaction suggested that highly positive received word of mouth does not influence patient satisfaction and it is a poor predictor of the patient satisfaction.

As patient satisfaction is central to the accomplishment of rehabilitation settings, healthcare managers can boost patient satisfaction by considering the patient's perceptions that will give insights about how to improve the different aspects of physical environment of the rehabilitation settings. Explicitly, this study may guide the management, investment and marketing decisions that will direct the development of patient-oriented service environment in the rehabilitation settings. Finally, this study will also be useful about how to recruit and train new employees/managers in the rehabilitation settings.

6. ETHICAL STATEMENT

The study was conducted under the Declaration of Professional Ethics and Code of Conduct and the protocol was approved by the FMS Ethics Committee of the Riphah International University.

7. CONFLICT OF INTEREST

The authors declare no conflict of interest.

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