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Cause-and-Effect Relationship Between Service Quality Perception and Patient's Satisfaction with Special Reference to Private Diabetic Clinics

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Abstract

Background: Healthcare industry in India is growing at a tremendous pace owing to its strengthening coverage, services, and increasing expenditure by public as well as private players. Healthcare outfits as organizations pretty much depend on patient admissions. So ultimately, this brings emphasis on importance of the healthcare consumers and impact of their behavior on hospital's performance. This paper seeks to find out (1) impact of socioeconomic profile of the patients on service quality perception, (2) impact of service quality perception on patient's behavior, and (3) assess the usability of such impact to formulate healthcare strategy. This study is basically an exploratory cum causal research, which attempts to explore certain relationships between socioeconomic characteristics versus behavioral characteristics of patients. The data were collected from 800 small and medium private clinics where competition is stringent. The resultant data assumed to be related to three constructs viz. socioeconomic profile, service quality perception, and patient's behavior. There are 13 variables in the dataset. Study used reliability analysis to evaluate the internal consistency in the data. Factor analysis together with structural equation modeling was used to evaluate study constructs. Certain socioeconomic characteristics are significant towards certain service quality dimensions. There is also certain level of evidence in support of study proposition that patient's satisfaction and attitude depends on their perception of service quality. The hospitals as healthcare organizations can make use of the impact of socioeconomic profile of patients while strategizing care so that it impacts patient's service quality perception. More specifically, while strategizing patient's perception of accuracy, the hospitals can make use of entire socioeconomic makeup as a single construct.

Keywords: Service Quality, Healthcare Service, Patient's Perception, Patient's Attitude, Patient's Satisfaction

Introduction

Healthcare industry in India is growing at a tremendous pace owing to its strengthening increasing expenditure, services, and coverage by public as well private players (IBEF. 2017). During 2008-20, the market is expected to record a CAGR of 16.5 per cent (Dalmia, S. 2017). The total industry size is expected to touch USD 160 billion by 2017 and USD 280 billion by 2020. As per the Ministry of Health, development of 50 technologies has been targeted in the FY16, for the treatment of disease like Cancer and TB (FII, 2016 & IBEF, 2017).

Service quality becomes increasingly important for healthcare organizations where patients satisfaction is considered as acme of the service setup. Many healthcare organizations, particularly private clinics started delivery of patient care rather more strategically (Porter, M. E., Lee, T. H., 2013). One of the reasons why hospitals need to give over-weightage is perhaps that patients are empowered to a great extent. Information accessibility, increased educational levels, rising awareness of treatment regimen, increased income levels might be very few to name that impact the empowerment of healthcare consumers (Lober, W. B., Flowers, J. L., 2011 & Porter, M. E. 2009). However, there are also certain other section of research community who strongly dissuade such improvements and their impact. Service quality could be considered as a part of imperative strategy that helps hospitals to attain a competitive advantage. The other potential consideration for healthcare operators is of course profitability (Woolhandler, S., 2007). The rising

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competition is, perhaps, the other factor that provides a plausible premise that supports patient satisfaction (Raju, P. S., Lonial, S. C., 2002). Service quality is very crucial for enhancing hospital performance, which underlies the widespread adoption of quality improvement initiatives (Li Ling X., 2010). Service quality improvement or achieving customer expectations and satisfaction has become a major challenge for healthcare service industry (Andaleeb, S. S., 2001).

To serve better, the healthcare organization might depend on number of patient admissions (Duggirala, M. Rajendran, C., 2003 & Diwas S. Kc. Christian T., 2003). So ultimately, this shows that the healthcare consumer is important to keep hospitals going. There are two major issues in healthcare industry that need to be addressed by every private clinic or hospital. They are namely profitability and operational efficiency (Bhatt, R., Jain, N., 2006). Every hospital is a business entity but not-for-profit, but private hospitals are operated by self-finance so they have the responsibility to address many liabilities. This very observation makes the hospitals eschew profitability as one of the goals (Devaraj, K. Kohli, R., 2002 & Jun, J. B., Jacobson, S. H., and Swisher, J. R., 1999). The revenue of the hospitals depends on patient enrollments also called as admissions. Private hospitals need to think about revenue, which in turn depends on expenses meted by the patients as a matter of treatment or any such service expected from a hospital. Therefore, the survival of private hospitals willy-nilly depends on fee collected from the patients (Gapenski, Louis C. Vogel, Bruce W., 1993 & Jerilyn, W. Colesa, W. S., 1998). This is one of the reasons that private clinics or hospitals think about meeting patient's expectations by providing good healthcare services (Amin, M., 2013 & WHO. 2016).

Research Methods

There is lot of literature as how to make healthcare services rather more attractive and most of such literature were written on service quality. While there is no question about offering quality services, but providing the same to utmost importance of patient satisfaction as a matter of profitability is very less. In addition to that, this research or literature tries to concentrate on only providing quality services regardless of patient satisfaction. Every patient is a social being, so he or she must be having certain social makeup, which is very much essential while assessing impact of quality of service on patient satisfaction. This research was done in order to explore certain relationships in-between service provider as an employer, service people as employees, and customer. The model tries to see the relationships very superficially without giving due diligence to these participants in terms of their socioeconomic context. For instance, WHO defines health as "a state of complete physical, mental and social wellbeing but not absence of disease or infirmity" [20] There is certain amount of research in this very context but findings are divergent and have lack of common consensus. Finding a concrete evidence for impact of socioeconomic profile over patient's behavior is still a gap. Therefore, in this study there is certain emphasis on social makeup of these participants. In other words, the study tries to find and assess the impact of service quality on patient's satisfaction in the light of their social makeup. The following are the research questions, which seek to provide solution to the study. These questions appeared as matter of literature review.

- What influences patient's perception? Do these service quality dimensions influence patient's perception of healthcare?
- Does socioeconomic profile of patients truly influence the way they perceive service quality? If so, what characteristics have measurable effect on perception?
- Is it possible to understand patient's attitude and satisfaction through their perception of service quality dimensions? If yes, is it possible to realize the level or degree of influence?

Objectives & Hypotheses

Statistical analysis of the study addresses the above questions. Statistical analysis shows quantitative evidence through concrete measures. The following list of objectives provides means to perform quantitative analysis.

- To know and assess the impact of socioeconomic profile of patients on their perception towards service quality
- To know as to socioeconomic characteristics exclusively important or influential towards service perception

- To know and assess if there exists any dependent relationships between service quality perception on both attitude and satisfaction

In order to realize these objectives, the study proposes the following hypotheses.

H_1: Socioeconomic profile of patients influences their perception towards service quality.

H_2: Certain socioeconomic characteristics like gender, age, income, family, occupation might influence service perception.

H_3: Patients' satisfaction and their attitude depend on their perception of service quality.

These hypotheses are study propositions, which need to be tested through certain statistical analysis. This study used certain multivariate statistical techniques like exploratory and confirmatory factor analysis together with structural equation modeling to realize the objectives.

Dataset

This research seeks to clarify that whether the service quality and patient satisfaction depend on social makeup of sample patients. There is lot of research that explains relationships between these two constructs but the same that in purview of socioeconomic understanding of patients is still a question. So, to address this very loophole, a sample of 800 patients were chosen for this study in and around Visakhapatnam *aka* Vizag area located in India. These sample respondents were studied through a structured and unambiguous questionnaire with 13 study variables (response variables) and five socioeconomic variables (exploratory variables). The study variables were measured with the help of Likert scale with 5 anchored items wherever applicable.

Coming to the information-related variables, 10 quality dimensions namely communication(c), responsiveness (res), reliability (rel), tangibility (tan), empathy (emp), credibility (cre), courtesy (court), security (sec), competency (comp), and access (acc) were taken into consideration for the study. There are three construct in the study: perception (per), attitude (att), satisfaction (sat). All service quality variables were measurement variables.

Certain statistical techniques like descriptive statistics, exploratory factor analysis together with confirmatory factor analysis were used to realize the objectives.

Reliability Analysis

Reliability analysis essentially deals with internal consistency of measurement variables. The items that were used for measuring respondent's characteristics like satisfaction, perception, and attitude are behavioral variables. These variables were measured by using 5-point Likert scale. Reliability analysis helps to know and assess the consistency of this scale across the dataset. Cronbach's alpha was selected for this study to assess the internal consistency.

Factor Analysis

This paper has several methods to analyze the datasets. One of the methods is factor analysis and later structural equation modeling though R. In multivariate statistics, exploratory factor analysis (EFA) is one of the important data reduction techniques available to view hidden study constructs in the data. In this study, there are 13 study constructs. The Table 1 shows the description to study variables.

Table 1: Study Variables

Study construct	*Number of variables*
Communication	5
Responsiveness	5
Reliability	5
Tangibility	5
Empathy	5
Credibility	6
Courtesy	5
Security	5
Competence	3
Access	5
Satisfaction	4
Attitude	4
Perception	4

Source: Dataset from Survey

Structural Equation Modeling

Structural equation modeling (SEM) is extension of CFA, which in turn is a continuation to EFA. EFA is unsupervised learning method where the structures will be realized without knowing or serving any hypothetical inputs. CFA is supervised learning method where the analysis requires certain study hypothesis for factor structures. This study use SEM to perform *common or general factor analysis, hierarchical factor analysis.* Common factor analysis reveals that whether the data have any unique underlying latent variable instead of a structure. Hierarchical modeling reveals that whether the data explain a structure with few or many latent variables. Parallel analysis describes various dynamics of choosing number of factors for the analysis.

Variables

Satisfaction, perception, and attitude are latent variables and these are endogenous. Variables like communication, responsibility, reliability, etc., are exogenous variables. One key difference between exogenous and endogenous variables is that the exogenous variables are not influenced by the study variables whereas endogenous ones are. In such a model, all variables of quality are exogenous variables and study variables are endogenous. For instance, satisfaction, perception, and attitude depend on service quality dimensions.

About R Language

R is community software (open source) and programming language freely available from http://r-project.org. R is known as lingua franca of statistics, which is widely used and respected across academia. R has approximately 650 packages for all variegated needs of numerical analysis. Only few packages like psych, sem, lavaan, semPlot were used for analysis. Psych has pretty well-defined methods for factor analysis and it serves as precursor for SEM. Sem is another package that has methods to perform structural equation modeling. Lavaan is helpful for performing both CFA and SEM. The final results were communicated with appropriate interpretation. The following section describes R output in detail.

Analysis

The very first part of the analysis is reliability analysis. As it was mentioned earlier, reliability analysis provides measures to assess internal consistency. Table 2 shows the summary statistics for reliability analysis. The statistical analysis for this table was performed using R language.

Table 2: Summary Statistics for Reliability Analysis

raw_alpha	std.alpha	G6(smc)	average_r	S/N	ase	mean	sd
0.96	0.96	0.99	0.27	24.97	0.00	3.51	0.46

Source: Data Analysis

The raw alpha is 0.96 and standard alpha is 0.96. The internal consistency is excellent across the items in the dataset. This shows that the measurement criteria adopted for the study is highly reliable. The Guttmann's Lambda (G6) is 0.99 and which is greater than alpha (0.96). This shows that there is lumpiness in the data, which in turns shows a positive signal for partial correlations and evidence in support of existence of latent variables (traits) in the data. Since the alpha () is 0.96, we can also suspect a general factor or common factor scenario. Figure 4 adds visualization to common factor analysis. The analysis was done in R through psych package. Omega is one of the highly useful functions of psych package. The left side oval, i.e., *g* indicates general factor. The common or general factor supports a unique underlying latent variable in spite of the structure. A structure is a path diagram, which possess hypothesized relations among multiple factors. All the loadings are positive and there is no variable that shows significant relationship with latent (general/common) factor; whereas on the right side, there exists three ovals, which means that there are three latent traits or factor in the data, which is explained by parallel factor structure. Figure 4 also shows the default EFA and the analysis shows that there exists three factors in the data. All variables have positive loadings except marital status, attitude 2 and attitude 4. These variables

has negative loadings to factor three. Respondents have same level of opinion as far as other variables are concerned. This shows that respondent's attitude appears to be significant along with marital status. Attitudinal differences exist with respects to individuals as by their marital status. In other words, hierarchical factor analysis shows evidence that patients' satisfaction might depend on attitude and which in turn is influenced by marital status. More evaluation might require understanding these significant relationships. Table 3 shows summary statistics for common factor analysis.

Table 3: Summary Statistics for Common Factor Analysis

Common factor		*Structure*	
Measure	*Value*	*Measure*	*Value*
Explained variance	0.58	Explained variance	-
Fit	26.46	Fit	32.0
Chi^2	2826.69	Chi^2	3470.31
P-value	1.6e-30	P-value	3.1e-66
DoF	2013	DoF	2144
RMSR	0.06	RMSR	0.12
RMSEA	0.075	RMSEA	0.086
BIC	-7017.58	BIC	-7014.6

Source: Data Analysis

From Table 3, it seems that the data show more evidence in support of general structure compared to hierarchical substructures. BIC for common factor structure is –7014 where as it is only –7014 for hierarchical structure. Both models agree with alternative hypothesis that both structures has sufficient level of fitness (*p*-values: 1.0e-30; 3.1e-66).

The study has overwhelming evidence from both common structure and hierarchical structure. This observation in fact is very critical for forthcoming analysis, i.e., EFA and SEM. In subsequent sections, the analysis tries to find evidence in support of study hypothesis.

Optimum Number of Factors

Parallel analysis shows that the data can support a maximum of four factors. The right side Figure 5 is screen shot and it helps to disguise level at which factors are apparent. OC curve crosses the scree plot at fourth factor. This shows that the study might need four factors to study the data. In other words, the data have four latent variable structure. Therefore, it is clear that there is evidence in support of study constructs from data. However, the study need more analysis to know if four factor structure is viable for study.

Determining most interpretable structures is not a simple task in factor analysis. No method is certain and precise in determining optimum number of factors. It is always advisable to crosscheck the results of one method with the other method. Same attempt is done in this study. The observations from parallel analysis were crosschecked with the results of very simple structure (VSS) only to know about the consistency in the results. VSS is, in fact, a Cattel's test for optimum number of factors where the decision depends on statistic. Table 4 shows the results from VSS analysis done through psych package in R.

Table 4: VSS Analysis

No. of Factors	*Dof*	*chisq*	*prob*	*RMSEA*	*eChisq*	*SRMR*
1	119	115.1677	0.5823	0.099216	166.5789	0.142878
2	103	97.81133	0.625932	0.101889	128.8397	0.125655
3	88	78.4908	0.756038	0.095008	96.21748	0.108588
4	74	66.85212	0.709637	0.105201	69.51187	0.092296

No. of Factors	Dof	chisq	prob	RMSEA	eChisq	SRMR
5	61	56.15394	0.651775	0.116388	51.4608	0.079413
6	49	44.27651	0.664741	0.119836	40.44221	0.0704
7	38	37.51396	0.49176	0.144481	28.49064	0.059089
8	28	27.1089	0.512323	0.14804	19.6632	0.049089

Source: Data Analysis

VSS analysis is also in agreement with the previous analysis, i.e., parallel analysis. From Table 4, it is clear that the value drops suddenly after fourth factor along with its *p*-value. Therefore, the optimum number of factors for this study is only four factors. The following section shows factor analysis.

Exploratory Factor Analysis

Table 5 shows the statistical diagnosis for exploratory factor analysis. Bartlett's measure is a test of spherecity or homogeneity of covariances or correlations in the data. The Bartlett's measure is 302.94 and the *p*-value is 2.2e-16, which shows that there is no problem of homogeneity in the data. The data might be heterogeneous. Kaiser-Meyer-Olkin (KMO) test of factor adequacy also shows sufficient evidence that the data are fit for exploratory factor analysis. KMO measure evaluates the partial correlations in the data.

Table 5: Statistical Diagnosis for Exploratory Factor Analysis

Bartlett's K-squared = 302.94	df = 66	p-value < 2.2e-16
Kaiser-Meyer-Olkin factor adequacy	0.86	

Source: Data Analysis

EFA shows only one significant relationship in the structure and that is through occupation. All the study variables has best fit with factors in the data except the variable occupation. The results from SEM show rather more interesting relationships. The loadings, Table 6, show these relationships rather more clearly. All socioeconomic variables had significant relationships with factor 1 (MR1) except income. It might be difficult as what makes income have positive relationships with rest of the variables and standing in contrary to other socioeconomic variables. There are other study variables like accuracy, satisfaction, and perception which have negative loadings to factor one (MR1), making attitude an exception. These variables remained significant while explaining first factor. All service quality dimensions have positive loadings to first factor. So first factor appears to have significant relationships for all socioeconomic variables along with accuracy, perception, and satisfaction. One important observation is that the accuracy is one of the service quality dimensions; whereas, perception and satisfactions are endogenous variables. Therefore, accuracy seems to explain perception and satisfaction.

Table 6: Factor Loadings

Variable	MR1	MR2	MR3	MR4	Variable	MR1	MR2	MR3	MR4
Age	-0.28481 0.150792 -0.09105			0.240085	cre4	0.262253	0.002579	0.430671	0.121147
Gender	-0.07938	0.085546	0.007734	-0.24607	cre5	0.406621	0.086679	0.257403	-0.0232
Occupation	-0.33074	0.027975	0.114804	0.154493	cre6	0.275707	-0.04368	0.473932	0.196659
Income	0.034578	-0.12791	0.090316	0.338474	court1	0.097596	0.284798	0.140262	0.488003
Maritalstatus	-0.02015	0.158178	-0.11283	-0.18905	court2	0.147344	-0.00273	0.501988	0.27175
Edu	-0.00122	-0.11851	0.010444	0.06397	court3	0.466922	0.03726	0.274176	-0.01404
c1	0.061037	0.210121	-0.03516	0.419262	court4	0.432219	0.175292	0.304537	-0.09164
c2	0.285577	-0.00624	0.102793	0.324954	court5	0.433785	-0.03648	0.317424	0.02886

c3	0.304751	-0.17744	0.159003	0.456074	sec1	0.286455	0.528033	-0.03832	0.061906
c4	0.329246	0.202387	0.091435	0.265294	sec2	0.294216	0.131796	0.30066	-0.03209
c5	0.209997	-0.00131	0.127745	0.602944	sec3	0.192877	0.250233	0.399371	0.013628
res1	0.429204	0.276221	-0.11327	0.34766	sec4	0.48837	0.320704	0.115411	-0.126
res2	0.336184	-0.00541	0.284844	0.227228	sec5	0.128792	0.377067	0.256976	0.052055
res3	0.271653	0.085907	0.147774	0.149311	comp1	0.333981	0.531826	-0.00113	-0.02148
res4	0.413769	0.064983	0.085397	0.29876	comp2	0.19777	0.448671	0.186182	-0.08824
res5	0.527409	0.002923	0.004422	0.321977	comp3	0.134148	0.694958	0.007295	-0.1141
rel1	0.609829	0.158347	-0.12166	0.036422	acc1	0.136634	0.598204	0.128458	0.011151
rel2	0.698586	0.001199	0.019354	-0.03162	acc2	-0.01997	0.137707	0.730835	0.008029
rel3	0.504029	0.047853	0.181155	-0.07734	acc3	0.03159	0.301565	0.333507	0.021094
rel4	0.580779	-0.17449	0.26305	-0.07275	acc4	-0.13947	0.206064	0.541473	0.054944
rel5	0.756648	0.08936	-0.20869	0.076725	acc5	-0.13956	0.411551	0.440827	0.084083
tan1	0.371991	0.333364	-0.1033	0.088741	sat1	-0.11632	0.703281	-0.11314	0.275971
tan2	0.464724	0.043386	0.168874	0.107301	sat2	0.007214	0.31919	0.13821	0.324315
tan3	0.654101	0.029423	0.00352	0.049643	sat3	-0.21452	0.379811	0.309106	0.430948
tan4	0.603466	0.254907	-0.11786	0.075343	sat4	-0.0284	0.504971	0.113013	0.270113
tan5	0.541332	0.137714	0.163642	-0.00795	att1	0.162648	0.686529	-0.03259	-0.08911
emp1	0.410833	0.371486	-0.07693	0.219896	att2	0.154847	0.468951	0.227874	-0.21803
emp2	0.548482	0.012516	0.194716	-0.06177	att3	0.132602	0.644182	0.141281	-0.25871
emp3	0.465804	-0.10531	0.34083	0.230282	att4	0.099176	0.483781	0.25023	-0.27867
emp4	0.419045	0.050863	0.226587	0.194827	per1	-0.05894	0.653724	0.011808	0.240898
emp5	0.294954	0.124531	0.293294	0.103671	per2	-0.00505	0.531329	0.123704	0.042842
cre1	0.457069	0.353187	-0.13312	0.23735	per3	-0.06682	0.646873	0.13947	0.167536
cre2	0.433717	-0.00532	0.324423	-0.00951	per4	0.096529	0.486492	0.161815	0.149118
cre3	0.486496	0.047438	0.131943	-0.02444					

As far as factor two is concerned, income is significant which was the only variable not significant for factor one among socioeconomic variables. Education remained significant as it is to the factor one. No other variable has any significant relationships except communication. Three variables out of five from communication observed to be significant. There is no distinct patter from rest of the quality dimensions. Therefore, for factor two, the inference could be if income becomes significant it might positively affect communication. In addition, these two variables had negative contribution to the second factor. While coming to third factor, no distinct relationships were identified. In addition, while coming to fourth factor, there are interesting patterns in the study. For instance, gender and marital status were found to be influential and they are related to reliability, credibility, and competence. So perceptual levels of the patients pretty much depend on gender and marital status and patients' opinion regarding reliability, credibility, and competence appears to be significant. The following structure shows the patterns in the SEM.

Factor1 → age + gender + maritalstatus + occupation + education + ACCURACY + PERCEPTION

Factor2 → income + COMMUNICATION

Factor3 → age + maritalstatus

Factor4 → gender + maritalstatus + RELIABILITY + CREDIBILITY + COMPETENCE + ATTITUDE

These equations show those variables that have relationships with significant difference to that particular factor. So patients whose relationship with factor one found significant towards other factors such as accuracy and perception. Therefore, it seems so clear that patient's perceptions towards accuracy and perception pretty much

depends on socioeconomic status. In addition, another interesting finding is that accuracy is actually service quality dimension whose relationship with significant to first factor also shares significant relationship with perception. Therefore, it seems plausible to state that accuracy is significant for perception given the patients is significantly different in their social makeup. In the same fashion factor two reveals interesting patters with respect to income and communication. Patients with different income levels have different expectations regarding communication at healthcare setups. This seems plausible because it is so rampant that the hospitals exercise treatments based on patient's affluence. The third factor might not be so important for the reason that this factor did not have much important observation except that age and marital status has same level of influence. Forth factor seems to be rather more interesting, for this factor has covered few of service quality dimensions along with study constructs. After careful examination, it looks like gender and marital status have certain influence on reliability, credibility, competence, and attitude. Patients with different marital status might expect different levels of credibility, competence, and attitude from the service provider and this observation is same to that of gender.

The last phase of this study is testing study hypotheses. The study proposes certain structure and this structure were depicted in research methods. The study assumes that the given certain relationships among socioeconomic profile versus quality dimensions; satisfaction and attitude might depend on perception. Table 7 shows the SEM output done in R through both sem and lavaan. From the summary statistics (of SEM), it seems there is overwhelming evidence in support of study proposition. So, there is evidence in the data that satisfaction, attitude of patients pretty much depends on their perception towards service quality. The following is the structure diagram for SEM analysis.

Table 7: SEM Output for Study Proposal

Measure	*Value*
Number of observations	133
Estimator	ML
Minimum function test statistic	1315.784
DoF	612
P Value (χ^2)	0.000

Source: Data Analysis

It is very clear that all relationships show seamless fitness. Therefore, there is overwhelming evidence in support of study proposition. All study constructs have positive loadings upon each other. The loading between perception and attitude is 0.80; the loading for perception versus satisfaction in 0.94. In turn attitude, satisfaction has very strong loadings for their respective measurement variables. Therefore, hospitals might have to think about patient's perception towards service quality dimensions, which might influence their attitude and satisfaction towards healthcare services. The tables show the fit measures.

From Table 8, it is very clear that there is valid amount of evidence in support of study proposition. The chi-square value is 2471 and p-value is 0. Therefore, the data appears to be in favor of study hypothesis. RMSEA is 0.07 and falls prettily within the limits (0.06 < RMSEA <0.076). Moreover, certain important fit measures like CLI, TLI, NNFI are verily in favor of alternative hypothesis that patient satisfaction and attitude depend on their perception of service quality. Table 1 shows the fitted values for the study proposal along with Z statistics and their corresponding p-values. All p-values are in favor of structural equations proposed by the study.

Table 8: Fit Measures

Fit Measure	*Value*
CHISQ	2470.626
DF	1472
PVALUE	0
BASELINE.CHISQ	5678.305
BASELINE.DF	1540
BASELINE.PVALUE	0
CFI	0.758687
TLI	0.747539
NNFI	0.747539
RFI	0.544801
NFI	0.564901
PNFI	0.539957
SRMR_BENTLER	0.07689
AIC	15729.7
BIC	16088.1
GFI	0.59931
RMSEA	0.07142

Fit Measure	*Value*
RMSEA.CI.LOWER	0.066491
RMSEA.CI.UPPER	0.076295
RMSEA.PVALUE	6.72E-12

Source: Data Analysis

Conclusion

The study is basically exploratory analysis on certain data collected from 800 patients in private clinics regarding their perception towards service quality dimensions like communication, responsiveness, reliability, tangibility, empathy, credibility, courtesy, security, competence, and access. These service dimensions were studied against socioeconomic characteristics along with certain behavioral characteristics namely perception, attitude, and satisfaction. The study proposed a structure as that satisfaction and attitude of patients pretty much depend on their perception towards service quality dimensions. The data were studied through structural equation modeling and the analysis had shown overwhelming evidence in support of study proposition that satisfaction and attitude depend on perception, which in turn depends on service quality dimensions. Moreover, there are certain interesting patterns observed through exploratory and confirmatory factor analyses. The socioeconomic makeup of patients found to be significant and their relationships found significant towards certain behavioral characteristics like access, satisfaction, and attitude. Apart from that, income and marital status found to be highly influential with respect to attitude besides influencing certain service quality dimensions like credibility, competence, and reliability. Interestingly, income doesn't have significant influence on satisfaction. Therefore, clinics can devise a strategy by mapping cross relationships between socioeconomic profile, service quality perception, and patient's behavior by bringing more emphasis on level of significance.

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