Abstract: Health care sector in India has grown fast in the past few decades. The primary reason for existence of health care sector is to provide care for its patients and to satisfy their needs. Providing excellence in service is an imperative determinant for the escalation and development of health care units. The present study seeks to identify the effect of customers perceived value on customer satisfaction, loyalty and service quality of selected hospitals in the state of Chhattisgarh. With the help of 400 inpatient and outpatient sample respondent’s data were collected from ten hospitals covering four districts of Chhattisgarh. Purposive sampling technique was adopted for data collection with structured questionnaire. Structured equation modelling was performed for data analysis with the help of smart PLS v3 (trial). The study outcome revealed that the dimension customer perceived value is found to have positive effect on service quality, customer satisfaction and customer loyalty in health care sector of Chhattisgarh. Perceived value is also found to positively predict the dimension of service quality including assurance, tangibility, reliability, responsiveness and empathy.

Index Terms: Customer loyalty, Customer satisfaction, Hospital, Perceived Value, Service quality

1. INTRODUCTION

Hospitals are the health care institutions which provides treatment with specialised medical services. It is one of the sector that acquires a prominent place in the service industry. The hospital industry has been in cut throat competition in the market in past decade [1]. Health care sector in India has a high growth rate since it attracts demand from both international and domestic patients [2]. Service sector has potential to earn profitability and hence has been an area of interest for the investors. The value of the health care market of India is US$65 billion. Presently health care sector is grooming and acts as a base for service sector. It is a sector of returns with strong national demand. The country spends 4% of its GDP on healthcare, with national health care expenditure of 25% [3]. Offered services are the amalgam of two parties which revolves around service providers and the consumers. Not all the services are tangible but a combination of both tangibles and intangibles component. With respect to health care it mostly constitutes of the intangible component [3]-[5]. Services offered by the health care are measured by the patients or the customers who avail them and on the basis of that they exhibit satisfaction. Customer/patient satisfaction is the degree to which customer feels contented with product and services offered by organisation which is an instrument for shaping customers repurchase intention and customer loyalty [6]. Service quality component for its enhancement can be related to strategic planning process and hence find a prominent place for the development in the health care sector [7],[8]. Literature suggests that service quality affects the behavior of consumer of services [9]. It can be stated in the form of benefits and costs. Mathematically it is the difference between the benefits (as per consumers perception) and the actual cost (which the consumers pay) from purchase of services [10]-[12]. Customer loyalty refers to patients' reassurance to revisit a hospital for obtaining further health-care services. Building loyalty is a long-term process [13]. Perceived value of the customers, services offered by firms and satisfaction and loyalty of customers tends to provide competitive advantage to the firm and contribute to the image of the organisation [14]. The service quality construct was given by Parasuraman, Zeithaml and Berry, 1984, 1988, 1994 followed the qualitative and quantitative research [15]-[17]. This measurement is widely accepted containing 22 items, also called as SERVIQUAL (service quality). The instrument measures service quality on five different dimensions i.e. tangibility, responsiveness, reliability, assurance and empathy. Tangibility is the components of physical facilities and equipment’s. According to Zeithaml and Bitner, the customer experiences and their repurchase intention are affected by service quality, moreover they can help in formulation of suitable experiences [18]. Reliability can be defined in terms of promise made to the customers for delivering the service in a more efficient and accurate manner. In more simple term it is trustworthiness of information [19]. Responsiveness may be defined in terms of assistance provided to the customers for timely services [20]. Assurance is the belief and sureness with which the service provider inspires their customers. Empathy is the caring attitude, which seeks personal attention of the customer. Whereas knowledge and behaviour of employee with the ability to deliver trust and deal with users’ request is the main idea of assurance [16] and is defined as caring and personalized attention that the firm provides to its product users [21].
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Model modification in the SERVQUAL (service quality) to SERVPERF (service performance) was made by Cronin and Taylor, 1994 which contains 22 items [22]. SERVPERF approach is a better tool for measurement of service quality than SERVQUAL.

II. REVIEW OF LITERATURE

There are ample to studies, which describes the relationship between perceived value, service quality, customer satisfaction and customer loyalty.

A. Perceived value in association between service quality and customer satisfaction

There are ample of literature showing the relationship between perceived value, service quality and customer satisfaction. Perceived value is found to be a partial mediator in between service quality and customer satisfaction [23]. Customer satisfaction grounded with degree of value and perceived value is a key antecedent of satisfaction [24]. Perceived value is found as a intervening and moderating factor between service quality and customer satisfaction in multiple service industry [25]-[27]. Many studies in literature, which agreeably underline that equal weight is put in each with the effect of service quality and satisfaction and loyalty of customers [28]-[34]. Positive relationship of customer value with quality and satisfaction in restaurant service industry was also found [16].

B. Effect of Perceived value on Customer loyalty

Customer loyalty the aftermath of customer perceived value and encourages organization performance [35]. It also develops competitive advantage among firms [36]. The overall loyalty that the customers receive can be stated in terms of consumer’s expectation and actual receiving of value [37]. Customer loyalty concept is driven by the theory that the customers firstly forms the expectation regarding the value they wish to receive from a particular service and after receiving the service if their expectation match his actual service performed that they tend to receive satisfaction or else feel dissatisfaction. When customer perceived value go above the anticipations of the customers, they feel satisfied [38], [39] and the repetition over a period of time leads to the creation of customer loyalty. [40]. Findings shows that both satisfaction and loyalty are correlated with customer perceived value [41],[42]. Perceived value has positive impact on patient loyalty have been supported in transport services [43],[46]. In service industries like airline travel and retail customer perceived value is treated as a key component of loyalty [47]. Customer perceived value is a noteworthy precursor of customer loyalty in different sectors [48]-[50]. It is also found to have significant positive effect in e-business [51]-[54]. Many researchers have underline that perceived value positively and directly correlated with customer loyalty in hotel and internet services [25], [55]-[58]. High-perceived value could ominously raise customer loyalty [48].

C. Perceived value effect on Customer Satisfaction

According to Kotler and Keller, 2012 satisfaction is “a person’s feelings of pleasure or disappointment resulting from comparing perceived products’ performance (or outcome) in relation to his or her expectations” [12]. Dissatisfaction are the outcome of difference that exists between expected performance and actual performance, incase the difference is null, the customers feel satisfied, incase it exceeds expectation the customers feel delighted [12]. Customer perceived value significantly influence patient satisfaction in hospitals [35], [60], [61]. It is a direct path, and meaningfully affects the customer satisfaction [23],[24], [62]-[64]. Most of the studies supported the positive relationship between perceived value and customer satisfaction in various sectors of industries of India and abroad [35], [51], [65]-[73].

D. Effect of Perceived value on Service Quality

Literature also shows that perceived value and service quality are closely related to each other. There are numerous studies which shows that service quality positively influences perceived value in multiple service industries [14],[66],[67],[72]-[82].

III. RESEARCH METHODOLOGY

The hypothetical model proposed in the study is shown in figure 1, it shows the association between perceived value and others variables in the study. It is proposed that perceived value has direct effect on service quality, customer loyalty and customer satisfaction in hospitals of Chhattisgarh.

The factor service quality constructed of five constructs namely tangibility 4-items, reliability 5-items, responsiveness 4-items, assurance 4-items, and empathy 5-items. Factor perceived value constructed of 15 items, customer satisfaction with 5 items, and customer loyalty 7 items.

For sampling, the sample size of the study constitutes of 400 participants among four district of Chhattisgarh state. The inclusion criteria for the participants of the study were patients who went earlier to the hospitals for either general or surgical treatment and have spent at least one day in the hospital for treatments a patient. Respondents were patients who were not necessarily in patients at the hospital. Both inpatient and out-patients were included as sample respondent from both government and private hospitals. Ten different hospitals were chosen based on 100 plus beds, the instrument used for data collection consists of service quality scale consisting of 22 items develop by Cronin & Taylor 1992. Self-structured scale on perceived value (15 items) customer loyalty (7 items), and customer satisfaction (5 items) were used in the study. All the items were measured using 7-point Likert scale (1= very dissatisfied; 7= Very satisfied). For the analysis of data, SPSS v25 (Licensed) and, SMART PLS v3 trial software were used.
Hypotheses:
H1: Perceived value would be statistically significant in influencing customer satisfaction.
H2: Perceived value would be statistically significant in influencing customer loyalty.
H3: Perceived value would be statistically significant in influencing service quality.
H4: Perceived value would be statistically significant in influencing Assurance.
H5: Perceived value would be statistically significant in influencing Empathy.
H6: Perceived value would be statistically significant in influencing Reliability.
H7: Perceived value would be statistically significant in influencing Responsiveness.
H8: Perceived value would be statistically significant in influencing Tangibility.

The demographic profile of the respondent (n = 400) with their frequency, mean, standard deviation (SD) and confidence interval (CI) is shown in table 1.

Table 1: Demographic profile of the respondents

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Mean</th>
<th>SD</th>
<th>CI 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 20</td>
<td>11</td>
<td>2.8</td>
<td>34.01</td>
<td>0.78</td>
<td>33.72-35.52</td>
</tr>
<tr>
<td>21-30</td>
<td>152</td>
<td>38.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31-40</td>
<td>183</td>
<td>45.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>41-50</td>
<td>45</td>
<td>11.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-60</td>
<td>9</td>
<td>2.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>244</td>
<td>61.0</td>
<td>1.39</td>
<td>0.48</td>
<td>1.34-1.44</td>
</tr>
<tr>
<td>Female</td>
<td>156</td>
<td>39.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td>29</td>
<td>7.2</td>
<td>3.4</td>
<td>1.06</td>
<td>3.30-3.51</td>
</tr>
<tr>
<td>10+2</td>
<td>48</td>
<td>12.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate</td>
<td>100</td>
<td>25.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postgraduate</td>
<td>179</td>
<td>44.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>44</td>
<td>11.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profession</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt. Service</td>
<td>146</td>
<td>36.5</td>
<td></td>
<td></td>
<td>2.19-2.46</td>
</tr>
<tr>
<td>Private Service</td>
<td>120</td>
<td>30.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business</td>
<td>50</td>
<td>12.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultivation</td>
<td>26</td>
<td>6.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>58</td>
<td>14.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly Income</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Less than 15000    | 88        | 22.0       | 2604 | 1.39  | 25214-2800     |
Rs 15001-2500      | 87        | 21.6       |      |       |                |
Rs 25001-3500      | 102       | 25.6       |      |       |                |
Above Rs 35000     | 123       | 30.8       |      |       |                |

Type of Hospital Visited
Government         | 200      | 50.0       | 1.5  | 0.50  | 1.45-1.55      |
Private            | 200      | 50.0       |      |       |                |

Source: own Analysis from primary data source

IV. RESULTS AND FINDING

All data after coding were entered into the statistical software were both measurement and structural models were evaluated.

A. Evaluation of measurement models
The model specified in the conceptual framework has four constructs with reflective measurement models, where estimates between their latent and manifest variables were examined. The outer loadings of all items used in this study are accepted. Table 2 reveals that customer loyalty (Cronbach’s α = 0.953, CR= 0.954 and AVE= 0.747), similarly customer satisfaction (Cronbach’s α = 0.919, CR= 0.920 and AVE = 0.698), perceived value (Cronbach’s α = 0.971, CR= 0.971 and AVE= 0.688), assurance (Cronbach’s α = 0.851, CR= 0.896 and AVE= 0.684), empathy (Cronbach’s α = 0.891, CR= 0.899 and AVE= 0.628), Reliability (Cronbach’s α= 0.909, CR= 0.912 and AVE= 0.675), responsiveness (Cronbach’s α = 0.927, CR= 0.927 and AVE= 0.762) and tangibility (Cronbach’s α= 0.865, CR= 0.866 and AVE= 0.618). The reliability measurement of construct is shown in table 2. The reliability of Cronbach’s α > 0.70 the constructs found to be acceptance [83, 84]. Since, CR > 0.70 is considered fair [85]. The AVE > 0.50 confirms the convergent validity of the construct [87].

Table 2: Reliability measurement of the Constructs

<table>
<thead>
<tr>
<th>Construct</th>
<th>Alpha</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Loyalty</td>
<td>0.953</td>
<td>0.954</td>
<td>0.747</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>0.919</td>
<td>0.920</td>
<td>0.698</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>0.971</td>
<td>0.971</td>
<td>0.688</td>
</tr>
<tr>
<td>Assurance</td>
<td>0.851</td>
<td>0.896</td>
<td>0.684</td>
</tr>
<tr>
<td>Empathy</td>
<td>0.891</td>
<td>0.899</td>
<td>0.628</td>
</tr>
<tr>
<td>Reliability</td>
<td>0.909</td>
<td>0.912</td>
<td>0.675</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>0.927</td>
<td>0.927</td>
<td>0.762</td>
</tr>
<tr>
<td>Tangibility</td>
<td>0.865</td>
<td>0.866</td>
<td>0.618</td>
</tr>
</tbody>
</table>
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B. Discriminant Validity

Discriminant validity checks whether two constructs in the study have statistical difference between each other. In other words, it is used to find out the overlapping of two said constructs [83],[88],[89]. Table 3 demonstrates discriminant validity measurement of construct.

Table: 3 Discriminant Validity measurement of Construct

<table>
<thead>
<tr>
<th>Variables</th>
<th>Direct effect (R Square)</th>
<th>Path coefficient (β)</th>
<th>T Value</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Value</td>
<td>0.710</td>
<td>0.843**</td>
<td>40.496</td>
<td>0.000</td>
</tr>
<tr>
<td>Customer Loyalty</td>
<td>0.780</td>
<td>0.883**</td>
<td>59.960</td>
<td>0.000</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>0.951</td>
<td>0.975**</td>
<td>294.066</td>
<td>0.000</td>
</tr>
<tr>
<td>Customer Loyalty</td>
<td>0.989</td>
<td>0.995**</td>
<td>152.377</td>
<td>0.000</td>
</tr>
</tbody>
</table>

The assessment of reliability and discriminant validity of the constructs shows that measurement model is fairly reliable and valid.

C. Evaluation of the structural model

The structural equation model was evaluated on basis of inspecting criteria that are determined by the model. This involves evaluation of path coefficient, direct effect, t and p value measures.

The validated data were analyzed with Smart PLS (trial) to construct variance based structural equation model for analysis. The procedure used was partial least square (PLS) path modelling [86],[87],[90]. Obtained coefficients, direct effects, etc. are depicted in table 4 and figure 2:

As demonstrated in table 4 all the path coefficients in the model have significant value indicating association between respective variables.

Based on the result in figure 2 and table 4; perceived value was found to be positively associated with customer satisfaction ($R^2 = 0.710$, $β = 0.843$, $t = 40.49$, $p < 0.01$) and explained 71% direct effect on the criterion variable customer loyalty. Perceived value also played a significant positive role and explained 78.0% direct effect on customer loyalty ($R^2 = 0.780$, $β = 0.883$, $t = 59.960$, $p < 0.01$). Similarly, perceived value played a significant positive role and explained 95.1% direct effect on service quality ($R^2 = 0.951$, $β = 0.975$, $t = 294.066$, $p < 0.01$). Furthermore, service quality dimension assurance and perceived value are positively associated with each other ($R^2 = 0.989$, $β = 0.995$, $t = 152.337$, $p < 0.01$), and explained 98% variances. Perceived value also played a significant positive role and explained 78% direct effect on tangibility ($R^2 = 0.831$, $β = 0.912$, $t = 74.486$, $p < 0.01$). Perceived value also played a significant positive role and explained 94.6% direct effect on reliability. ($R^2 = 0.946$, $β = 0.973$, $t = 129.610$, $p < 0.01$). Perceived value also played a significant positive role and explained 91.6% direct effect on responsiveness ($R^2 = 0.916$, $β = 0.975$, $t = 155.661$, $p < 0.01$). Similarly, perceived value played a significant positive role and explained 92% direct effect on empathy ($R^2 = 0.920$, $β = 0.959$, $t = 138.044$, $p < 0.01$) Multicollinearity is not desirable. The value of variance inflation factor (VIF) was found 1.00 [68].

Table 4: Direct effect, Path coefficients (Total effect), T value and P value

DISCUSSION

The purpose of the study to predict the effect of service quality on perceived value, customer satisfaction, and customer loyalty in hospitals of Chhattisgarh. The result of this study confirms the existence of a positive relationship between service quality on perceived value, customer satisfaction and customer loyalty. The study supports the first hypothesis of the study and finds that perceived value positively and statistically predicts customer satisfaction, which means that the customer expectation in relation to value they receive are well with in their satisfaction.
This finding is similar to that of outcomes of the past literatures [25],[44]-[46],[48]-[50],[55]-[57]. The findings also support the second hypothesis and reveals that perceived value positive and significant influence customer loyalty, which indicates that customer expectation regarding hospital services builds on their loyalty. This outcome also consistent that of the work of preceding studies [35],[51],[65],[66],[70]-[72]. The finding also supported the third hypothesis and confirms that customer perceived value of the work of preceding study. It suggests that increase in the perceived value of the services builds on their loyalty. This outcome also consistent with components of the service quality dimension, which means that customer perception of values is regarded with the formation of service quality measures on hospital of the state. Also perceived value is found significant and positive relation with components of the service quality constructs i.e. assurance, empathy, reliability, responsiveness and tangibility. This outcome is also supported with studies done is the past [66],[67],[72],[73],[79],[80],[82].

The outcome heavily draws managerial implication on the study. It suggests that on increase in the perceived value of the customer would result in increase in their satisfaction level and thereby generate high customer loyalty. On the other hand, perceived value also result in higher domain of service quality i.e. increase in assurance, empathy, reliability, responsiveness and tangibility.

REFERENCES

Effect of Perceived Value on Customer Satisfaction, Loyalty and Service Quality of Selected Hospitals in Chhattisgarh


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