

## **FACTORS AFFECTING CHOICE OF HOSPITAL SERVICES IN BILASPUR CITY**

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### **ABSTRACT**

*Health is considered to be the principal asset of human being. With modernization human beings are more likely to suffer from unavoidable diseases. Hospital services are providing treatments and therefore have become key part of individual's life. In this context the role of an individual in choosing hospital services is a dedicate issue in influencing their health. The present study aims in identifying the key factors which affects individual decision in choosing hospital services in Bilaspur city in the state of Chhattisgarh. Sample size taken in the study constitutes 156 respondents. Factor analysis technique was used to identify the key components which play a significant role in consumer decision making process.*

**Keywords:** Hospital Services, Factor Analysis, Consumer decision

### **INTRODUCTION**

Growing population and pollution can lead to rise in health related problems. There is an old popular saying "Health is wealth". Human being is the most precious and intellectual creature on the earth. They are structured with all amenities to enjoy the comfort and luxury. But it is all possible if one is perfectly fit i.e. healthy body and mind. Good health is a crown on the head of a well person that only a sick person can see. With the growth of civilization man has turned busy and modernization has made him more prone to causal of unavoidable diseases. Medical problems are common these days. One has to frequently take the help of hospital services for their minor or major health related problems. With the growing concern on health and diseases individual has to incline towards the best of the medical facilities available to him. Therefore availability and choice criteria of hospitals has become an extensive issue among the consumers at large. The type of hospitals and availability of wide range of services have facilitated the patients in receiving proper treatment and getting cured. The present study aims at identifying the importance of various factors which affects the consumer while choosing hospital services in Bilaspur city in the state of Chhattisgarh. As per provisional India's census 2011 Bilaspur had overall population of 454,000 which constitutes of 51% of males and 49% of females. The overall literacy rate is 87.29% which is much higher than national average of 74%. The male literacy rate in the city is 92.94% and the female literacy rate is 81.33%.

**LITERATURE REVIEW**

Kashinath et al (2010) in their article studied the attitudes of patients attending OPD of Sree Siddhartha Dental College, Tumkur. The study found that the patients were dissatisfied when their needs were not fulfilled. 66% of the respondents were dissatisfied regarding parking facility and 60% regarding the waiting periods in various treatments. Singh and Shah (2011) in their study at Manipal find out customers priority in selection of private Hospitals for treatment. They found availability of specialist's doctors, surgeons and infrastructure consideration of the hospitals are the key reason for the choice of the hospitals by the patients. Santolino (2011) in his study in Spain identified dimensions like age, gender and type of victim, as well as the location and nature of injuries, were the factors that influence the likelihood of being admitted to hospital or the length of hospital stay required to recover from injuries sustained in a motor collision. Musunuru (2011) in his study on 93 respondents in Hyderabad examined Most of the patients tend to switch hospitals when they are not satisfied in terms of non-clinical aspects. McKee and Healy (2007) identified the function of hospital in changing environment. Awoyemi<sup>1</sup>, Obayelu<sup>1</sup> and Opaluwa (2011) in their study in rural areas of Kogi state in Nigeria observed that there is unequal distribution of health facilities and low level of accessibility of patient to medical facilities. Kumar and Chowhan (2013) in their research paper studied different Hospitals of Jaipur, to get an insight into the working system of the various Out-Patient Department and indicated that most of the patients interviewed were satisfied with the services they received at OPD, attitude of front Office Staff including Health Care Providers was found to be Satisfactory.

**OBJECTIVES OF STUDY**

Present study aims at identifying various factors which affects the consumers in selection of hospital services in Bilaspur city in the state of Chhattisgarh. The study is based on identifying the key criteria which influences the patients in making decision regarding choice of hospitals and availability of services.

**METHODOLOGY**

The study was conducted during the month of January and February 2013 in different households in Bilaspur city. Convenience sampling technique was adopted for data collection in the present study. A total of 250 self-structured questionnaires were administered to collect data which was distributed in 250 households in the city. But only 181 questionnaires could be collected during the course of survey. Therefore the response rate was found to be 72.4%. While tabulation, few questionnaires were found to be incomplete hence were eliminated out. A total of 156 questionnaires were found to be complete and therefore the researcher has to go with the same sample size. Table-1 shows a total of 17 different variables were taken in the administered questionnaire. Each item in the questionnaire constitutes a five point scale i.e. Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree and the respondents were asked to rate the items on their best possible choice.

Data analysis was done by the means of SPSS Version 16. Reliability and validity test were made taking 17 different items by cronbachs alpha and Bartlett Test of Sphericity. Kaiser-Meyer-Olkin test was conducted to find the adequacy of sample. In order to draw meaningful inference from the study factor analysis technique was used. Factor analysis is used for data reduction so as to identify most important factors which have significance in

the study. Principle component analysis was the approach used in factor analysis which considers the total variance in the data. It determines the minimum number of factors which will accumulate maximum variance in the data. Varimax method is used for rotation in the study. It maximizes the numbers of variable with high loading on a factor, which enhances the interpretability of factors.

**Table 1.** Variables and Their Descriptions

Variable	Description
V1	I choose hospital where nursing staff are punctual in their duties
V2	I prefer hospital having name and fame in the locality.
V3	Publicity and advertisement plays important role in the selection of hospital
V4	Agents/ Dalal influence patient or his family member for choosing a hospital
V5	I would like my hospital to be present nearer to me.
V6	I would like hospital having 24 hour outdoor services.
V7	I prefer those hospitals where admission process is quickly and have less paper work.
V8	I prefer hospital having ATM facility inside the hospital campus.
V9	I would prefer hospital that using good condition equipments, machinery and technology
V10	Computerized and well equipped hospital attracts patients.
V11	I would visit hospital having quality specialist doctor for my treatment.
V12	Approach of the doctor to the patient plays a major role in the patient's repetition to the hospital.
V13	I like those hospitals where my treatment record will be confidential.
V14	I believe totally on the information's of the others regarding hospital selection
V15	I would like to choose the hospital again if its basic facilities (like water, electricity and cooling system) are good.
V16	I select that hospital which I can afford
V17	I choose hospital having medicine shop inside/near by the hospital campus

## ANALYSIS AND INTERPRETATION

Table-2 shows the General background of the respondents i.e. demography. Data were collected from household respondents of Bilaspur city in the state of Chhattisgarh. The Age, gender, monthly income, profession, educational qualification, marital status and family size of 156 respondents are shown in the table.

Before applying factor analysis reliability test was conducted by the means of cronbachs alpha. Table-3 shows the overall value of cronbachs alpha for 17 different items was found to be 0.732 which suggests the data is reliable for analysis. Further, Kaiser-Meyer-Olkin measure of sampling adequacy was computed (shown in Table-4), which was found to be 0.814 indicating the fact that the sample was good enough for study. Moreover Bartlett Test

of Sphericity was performed and the correlation matrix was found to be overall significance (significant at 0.000) (shown in Table-4), which provided support for validity of data for factor analysis.

**Table 2.** Demography of the Respondents

		Frequency	Percent
Age of the respondents	20-30 years	34	21.8
	30-40 years	90	57.7
	40-50 years	16	10.3
	above 50 years	16	10.3
Gender of the respondents	Female	44	28.2
	Male	112	71.8
Monthly income of the respondents	Below Rs.5000	3	1.9
	Rs.5001-10000	16	10.3
	Rs.1001-15000	39	25
	Rs.15001-20000	66	42.3
	Above Rs.20000	32	20.5
Profession of the respondents	Student	4	2.6
	Service	50	32.1
	Cultivation	71	45.5
	Business	27	17.3
	Others	4	2.6
Educational qualification of the respondents	high school(10th)	6	3.8
	12th	37	23.7
	Graduate	75	48.1
	Post Graduate	38	24.4
Marital status of the respondents	single	20	12.8
	married	121	77.6
	widow	11	7.1
	Divorcee	2	1.3
	Separated	2	1.3
Family size of the respondents	1-2 members	15	9.6
	3-4 members	74	47.4
	5-6 members	44	28.2
	more than 6 members	23	14.7

**Source:** Data collected from Questionnaire

**Table 3.** Reliability Test

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.734	0.732	17

**Table 4.** Validity Test)

KMO and Bartlett's Test

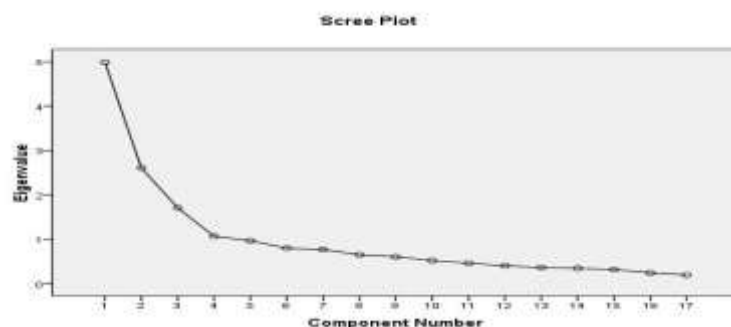
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.814
Bartlett's Test of Sphericity	Approx. Chi-Square	1.03E+03
	df	136
	Sig.	0

**Table 5.**

Total Variance Explained

Component	Initial Eigen Value			Extraction sum of squared Loadings			Rotation sum of squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.987	29.334	29.334	4.987	29.334	29.334	4.904	<b>28.848</b>	28.848
2	2.608	15.34	44.674	2.608	15.34	44.674	2.421	<b>14.243</b>	43.091
3	1.709	10.051	54.725	1.709	10.051	54.725	1.808	<b>10.637</b>	53.728
4	1.068	6.284	61.009	1.068	6.284	61.009	1.238	<b>7.281</b>	<b>61.009</b>
5	0.965	5.676	66.686						
6	0.798	4.693	71.379						
7	0.768	4.516	75.895						
8	0.65	3.822	79.717						
9	0.605	3.56	83.277						
10	0.519	3.055	86.332						
11	0.46	2.708	89.04						
12	0.402	2.365	91.404						
13	0.361	2.121	93.525						
14	0.345	2.029	95.554						
15	0.318	1.873	97.427						
16	0.242	1.425	98.852						
17	0.195	1.148	100						

Extraction Method: Principal Component Analysis.



**Figure 1.** Eigen value Plot

**Table 6.** Rotated component matrix Table Showing different components

	1	2	3	4
V1	<b>0.744</b>	-0.017	0.001	0.105
V2	-0.098	-0.126	<b>0.718</b>	-0.14
V3	<b>0.489</b>	-0.142	-0.378	-0.161
V4	-0.055	0.126	<b>0.726</b>	-0.031
V5	<b>0.793</b>	-0.015	-0.067	0.239
V6	<b>0.79</b>	-0.051	0.02	0.108
V7	<b>0.682</b>	0.033	-0.046	0.405
V8	0.068	-0.042	-0.121	<b>0.893</b>
V9	<b>0.739</b>	-0.004	0.009	0.013
V10	0.178	-0.12	<b>0.597</b>	0.016
V11	<b>0.768</b>	-0.022	0.011	-0.035
V12	<b>0.805</b>	-0.075	-0.022	-0.22
V13	<b>0.745</b>	0.073	0.051	-0.049
V14	-0.057	<b>0.812</b>	0.052	-0.015
V15	-0.037	<b>0.857</b>	-0.059	0.049
V16	0.06	<b>0.637</b>	-0.485	0.275
V17	0	<b>0.733</b>	-0.003	-0.137

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

**Table 7.** Factor Extraction Table which shows the variable in Each Factor With corresponding Loading and Percentage of Variance

Factors	% of Variance	Variable included in the Factor	Loading
F1	28.848	punctual staff in duties(V1)	0.744
		Publicity and advertisement (V3)	0.489
		Hospital nearer to home (V5)	0.793
		24 hour outdoor services (V6)	0.79
		Quick admission process with less paper work (V7)	0.682
		good condition equipments, machinery and technology(V9)	0.739

**Table 7.** Factor Extraction Table which shows the variable in Each Factor With corresponding Loading and Percentage of Variance (Contd....)

Factors	% of Variance	Variable included in the Factor	Loading
		quality specialist doctor for treatment (V11)	0.768
		Approach of the doctor to the patient (V12)	0.805
		confidential treatment record (V13)	0.745
F2	14.243	Information of the others (V14)	0.812
		basic facilities are good(V15)	0.857
		Affordability(V16)	0.637
		Medicine shop inside/near by the hospital campus(V17)	0.733
F3	10.637	Name and fame of Hospital in the locality(V2)	0.718
		Agents/ Dalal influencing patient (V4)	0.726
		Computerized and well equipped hospital (V10)	0.597
F4	7.281	ATM facility inside the hospital campus (V8)	0.893

**RESULT AND DISCUSSION**

Factor analysis was applied to all the 17 variables taken for study. Table-5 explains the total variance of various factors for study. The eigen values were shown on a bicoordinate plane in the figure-1. It shows the total of 4 factors have eigen value more than one. The same is also observed from the table that only 4 factors had Eigen value more than 1, so considerations were made in regards to these factors and the others are found beyond the scope of study. The total variance explained by factor 1,2,3,4 was found to be 28.848%, 14.243%, 10.637% and 7.281% respectively. The overall cumulative variance explained by all these factors was found to be 61.009 percent. Rest of the variance was due to other factors which are least important for the study. Table-6 shows the Rotated component matrix of various factors with their factor loadings. Each item in the matrix is correlated with the factor corresponding to the factor loading. Stronger correlation is observed between the factor and items where the loading value is high. Table-7 shows the factor extraction table, which was prepared on the basis of rotated component matrix. The table shows the factors in the order of their degree of importance with their respective factor loading. F1, F2, F3 and F4 are the different factors in the decreasing order of their importance and percentage of variance explained by the items. It can be observed from the table that punctual staff in duties, Publicity and advertisement, Hospital nearer to home, 24 hour outdoor services, Quick admission process with less paper work, good condition equipments, machinery and technology, quality specialist doctor for treatment, Approach of the doctor to the patient, confidential treatment record are the most important variables for choosing Hospital services in Bilaspur city. Whereas variables like name and fame in the locality, Agents/ Dalal influencing patient, Computerized and well equipped hospital and ATM facility inside the hospital campus are least important variables for choosing the same.

**CONCLUSION**

Present study examined various factors which are exceptionally important and least important for the people in choosing hospitals services for their treatment in Bilaspur city. After clubbing all the 17 variables into 4 different factors in order of their importance it was found that people choose hospitals which are near their home. Advertisement and publicity



plays vital part in their decision making process. They go for hospitals where punctual staffs with specialist doctors are on duty, approach of doctors towards the patient is good, 24 hours outdoor facility with good equipments (Laboratory) is available, admission can be quickly done and treatment record are kept confidential. They believe in the information provided by other peoples regarding the same. Affordability of the patient and availability of medicines nearby hospitals are also given due importance. People are not much influenced by name and frame of the hospital. References of the hospital agents have least impact in their mind. Fully computerized hospitals and availability of ATM facility inside has little significance in their choice criteria.

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