CONSUMER CHOICES AND SATISFACTION IN HEALTH CARE INDUSTRY : A STUDY BASED ON MULTISPECIALTY HOSPITALS IN NORTH INDIA

A

Thesis

Submitted in Fulfillment of

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DOCTOR OF PHILOSOPHY

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Declaration

I hereby declare that the present thesis titled **"Consumer Choices and Satisfaction in Health Care Industry : A Study Based on Multispecialty Hospitals in North India"** is an original work of research conducted by me under the supervision of **Dr. Harjot Singh**, Assistant Professor, L. M. Thapar School of Management, Thapar University, Patiala, Punjab and **Dr. Kalyan Kumar De**, Professor, Amity Business School, Amity University, Noida, UP.

The work embodied in this thesis is being submitted in fulfillment of the requirements for the award of the degree of **DOCTOR OF PHILOSOPHY** in **MANAGEMENT** at L. M. Thapar School of Management, Thapar University, Patiala, Punjab. It has not been previously submitted in part or full to any other university or institute for award of any degree or diploma.

Date: 7/11/16

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Certificate

This is to certify that the thesis titled **"Consumer Choices and Satisfaction in Health Care Industry : A Study Based on Multispecialty Hospitals in North India"** which is being submitted by Mr. Vishal Kamra, in fulfillment of the requirements for the award of the degree of **DOCTOR OF PHILOSOPHY** in **MANAGEMENT** at L. M. Thapar School of Management, Thapar University, Patiala, Punjab, is a record of candidate's original research work carried out by him under our supervision and guidance. The matter embodied in this thesis has not been submitted in part or full to any other university or institute for award of any degree or diploma.

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Abstract

Services form a major portion of our life. In every activity like travelling, watching television, withdrawing money from bank, visiting a hospital for medical aid or educating our children we enlist the services of a wide spectrum of agencies. Service sector forms the backbone of social and economic development of any country. It has emerged as the largest and fastest growing sector in the global economy, making increasing contribution to global output and employment. Its growth rate has been higher than that of agriculture and manufacturing sectors. Entry of private sector into service organizations has led to a greater emphasis on consumer orientation. Increased competition, growing public awareness and expectations, changing technologies and varying business propositions have made service organizations adopt a marketing approach to ensure satisfaction of consumers.

India is rapidly transforming with persistent augmentation of physical infrastructure and technological capabilities across all sectors. Health care sector is also witnessing a significant transformation with the liberalization of market and increasing involvement of private sector. For over three decades after independence, health care has been dominated by public sector, with the contribution of private sector limited to ambulatory care services. Over the past few decades, Indian health care sector has witnessed a growth in number of corporate and private hospitals, providing specialized and tertiary-level medical care.

The study assumes significance because not many studies have been conducted on behavior of health care consumers in developing countries. It presents a comprehensive view of consumer behavior with respect to health care services. It covers consumer choices and satisfaction

particularly for tertiary-level health care services. It looks at the impact of demographic factors on consumer choices and satisfaction. It analyzes repurchase and recommendation decisions of consumers. It categorizes the decision-makers involved in selection of health care facilities. It has also proposed a framework of consumer choices and satisfaction in health care industry.

India has a population of 1.3 billion people residing in 29 states and seven union territories, out of which 31% are situated in northern part of the country consisting of seven states, namely, Haryana, Punjab, Uttar Pradesh, Rajasthan, Uttarakhand, Himachal Pradesh, Jammu & Kashmir, and two union territories, namely, Delhi and Chandigarh. Patients in multispecialty hospitals, particularly those suffering from tertiary-level health diseases and based in north India comprise the population for study. Eight types of tertiary-level health diseases, namely, knee-joint replacement, spinal cord operation, heart by-pass surgery, heart stent implant, renal failure, hip-joint replacement, intestine problem and lungs disorders have been considered in the study.

Primary data has been collected between March and August 2014 from 1000 respondents with the help of a structured questionnaire, based on a five-point likert type scale. A total of 883 questionnaires complete in all aspects have been analyzed. Various demographic variables, viz. age, gender, marital status, residential area, education, occupation, monthly family income and presence or absence of health insurance have been considered to understand the diverse behavior of health care consumers. Statistical tools like exploratory factor analysis, one-way ANOVA, two-tailed t-test and linear discriminant analysis have been employed to test hypotheses.

It has been shown that ten factors, in descending order of consideration, affecting consumer choices of health care facilities are basic amenities, fame and quality, building and infrastructure, ease and affordability, personal substances, responsiveness of services, recommendations and

suggestions, clinical support, privacy and information sharing, and range of services. Statistically significant differences ($p<.05$) have been observed among various respondents' demographics categories, namely, age, gender, residence, education and monthly family income with respect to identified factors.

Eight factors, in descending order of consideration, affecting consumer satisfaction from health care facilities have been found to be infrastructure and amenities, fulfillment of clinical requirement, facilities at reception and Out Patient Department (OPD) area, nursing and staff care, professional behavior of doctors, affordability and convenience, registration and administrative procedures, and general behavior of doctors. Statistically significant differences ($p<.05$) have been observed between presence or absence of health insurance, and also among various categories of respondent demographics, namely, gender, residence, education and occupation with respect to identified factors.

Two linear discriminant equations have been formulated on the basis of unstandardized coefficients of identified factors affecting consumer choices and satisfaction in health care industry. It has been proposed that these equations can be used to examine repurchase and recommendation decisions of health care consumers with respect to services of health care facilities.

Decision-makers involved in selection of health care facilities have been categorized. It has been revealed that there are five categories of decision-makers, namely, family members, doctors and family members, doctors, friends and relatives, and patients who select hospitals.

A framework of consumer choices and satisfaction in health care industry has also been proposed.

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List of Abbreviations

Sr. No.	Abbreviation	Description
1	ANOVA	Analysis of Variance
2	AOHA	American Osteopathic Hospital Association
3	ATM	Automated Teller Machine
4	CECSS	Consumer Emergency Care Satisfaction Scale
5	DO	Doctor of Osteopathic Medicine
6	FFS	Fee-For-Service
7	GICS	Global Industry Classification Standard
8	HMO	Health Maintenance Organization
9	ICB	Industry Classification Benchmark
10	NFHS	National Family Health Survey
11	NRC	National Research Council
12	NSSO	National Sample Survey Organization
13	OPD	Out Patient Department
14	OPP	Out-of-Pocket Payment
15	OSHPD	Office of Statewide Health Planning and Development
16	PETS	Public Expenditure Tracking Survey
17	PISQ	Picker Inpatient Survey Questionnaire
18	QSDS	Quantitative Service Delivery Surveys
19	SERVPERF	Service Performance
20	SERVQUAL	Service Quality
21	SPSS	Statistical Package for Social Sciences
22	WHO	World Health Organization

Chapter - I

Introduction

1.1 Introduction

A service is not something that is built in a factory, shipped to a store, put on a shelf, and then taken home by a customer. It is executed on behalf of, and often with the involvement of, the customers (Shostack & Kingman-Brundage, 1991). Many definitions of service are available but all contain a common theme of intangibility and simultaneous consumption. It is very subjective in nature because of its experience. It purely depends upon the judgment of a person, which he makes from what he expects out of it (Fitzsimmons & Fitzsimmons, 2001).

Simplistically, services are the deeds, processes and performances, provided or coproduced by one entity or person for another entity or person (Wilson, Zeithaml, Bitner, & Gremler, 2012). It is a series of intangible activities that take place in interactions between consumers and service providers (Gronroos, 2000).

1.1.1 Health care industry

World Health Organization (WHO, 1946) has stated that "Health is a state of complete physical, mental and social well being and, not merely an absence of disease or infirmity". Health care is a group of services provided to the households or communities by various health care professionals for the purpose of encouraging, supervising, asserting and reinstating the good health (Webster, 2002).

Health care services refer to the treatment as well as prevention of illness. It is delivered by professionals in medicine, dentistry, nursing, pharmacy and allied health. Health care system is a combination of resources, organizations, financing and management that culminates in the delivery of health care services to the population (Roemer, 1993). It is a complex, professionally controlled, politically influenced and dynamic system (Briggs, Smyth, & Anderson, 2012).

The health care industry is a category of stocks related to medical and health care goods or services. It includes hospital management firms, Health Maintenance Organizations (HMOs),

biotechnology and a variety of medical products (Klinefelter & Klinefelter, 2015). According to industry and market classifications such as Global Industry Classification Standard (GICS) and Industry Classification Benchmark (ICB), health care industry includes health care equipment and services as well as pharmaceuticals, biotechnology and life sciences. The sectors associated with these groups are biotechnology, diagnostic substances, drug delivery, drug manufacturers, hospitals, medical equipment and instruments, diagnostic laboratories, nursing homes, providers of health care plans and home health care (Yañez, 2011).

1.1.2 Health care models

Three basic goals of any health care system are keeping people healthy, treating the sick and protecting families against financial ruin from medical bills. Every country has its own set of arrangements for providing health care to the population. These arrangements can be categorized in four basic health care models (Reid, 2010).

Beveridge Model is one of the four basic health care models, named after William Beveridge, a social reformer of Britain. He has developed the country's national health delivery system after world war two. In this health care system, services are provided and financed by the government through tax payments, just like police or public library services are financed. Hospitals and clinics are mostly owned by government doctors and employees. Some private service providers also exist and they get payments of their services from the government. The patients do not get any bill for the treatment. Countries like Great Britain, Spain, Scandinavia and New Zealand follow this model to provide health care services to the public.

Bismark Model is the second health care model, named after Prussian Chancellor Otto von Bismarck, who invented the welfare state as a part of unification of Germany in the nineteenth century. In this health care model, services are financed by two parties, namely, employer and employee through payroll deduction. Doctors and hospitals are private in nature. This model covers everybody. The providers do not make any type of profit through delivery of services. This is a multi-payer model and countries like Germany, France, Belgium, Netherlands, Japan, Switzerland and Latin America follow this model.

National Health Insurance Model is the third health care model. It is a combination of Beveridge and Bismark model. In this system, services are provided by private sector firms and payment

comes from government run insurance scheme which everyone has to compulsorily opt. This model is comparatively more affordable as compared to the previous ones. There are no profit margins for the providers and no need of marketing the services in this system. Government has the negotiation power for the low price of services, as it is the only payer for all service charges. This health care system is followed by the countries like Canada, Taiwan and South Korea.

Out-of-Pocket Payment (OPP) Model is the fourth health care model followed by developing and underdeveloped countries. In such countries rich people get medical care and poor remain sick or die due to illness. The latter generally do not have enough money to pay for doctors' bills. Many do not get medical care and some of them even live their whole life without seeing a doctor. Countries like India, China, South America and rural region of Africa come under this category.

Some countries deploy a mix of these models. Sweden has some features of a national health service such as hospitals run by government and other features of national health insurance such as physicians being paid on a Fee-For-Service (FFS) basis.

1.1.3 Service quality in health care industry

Quality, in context of service, is the difference between expectations and perception of consumers. Satisfaction from service is the overall evaluation of its quality. When performance of delivered service is less than expectations, perceived service quality is also less than satisfactory (Gustaffson, Johnson, & Roos, 2005; Parasuraman, Zeithaml, & Berry, 1988).

Quality health care services are the demand of masses throughout the world. Quality refers to both functional and technical quality. Functional quality is the manner in which services are delivered to the patients and technical quality is the accuracy of clinical procedures opted during service delivery (Gronroos, 1984; Lewis & Mitchel, 1990; Parasuraman, Zeithaml, & Berry, 1985). Consumers of health care services rely only on functional aspect of service delivery such as behavior of staff, hygienic and clean environment, responsiveness of service and basic amenities. They do not realize the technical part of service quality due to lack of expertise (Babakus & Boller, 1992; O'Connor & Lanning, 1992).

1.1.4 Tertiary-level health care services

Tertiary level health care services refer to a third level of health care system, in which specialized consultative care is provided to in-patients suffering from chronic health diseases. Multispecialty hospitals are centres of excellence for in-patient surgical procedures and offer comprehensive health care treatment across many specialties. Apart from quality treatment, patients expect superlative services to make their stay comfortable in these hospitals. (Mishra & Mishra, 2014).

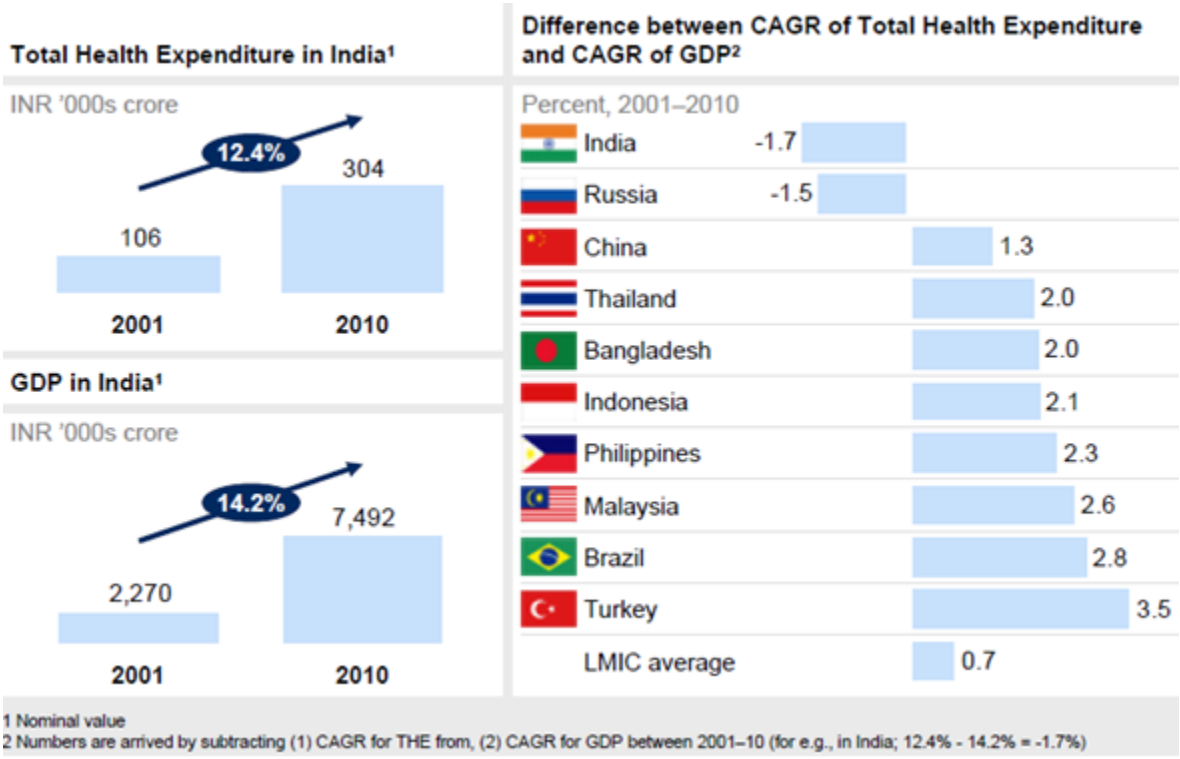
1.2 Indian health care industry

Since independence, the Indian economy has confronted a rapid change. Based on economic performance in last few decades, it has become one of the fastest growing economies in the world with an increase in physical infrastructure and technological capabilities (Budhwar & Varma, 2011). After a few years of effectuation of liberalization, privatization and globalization policies, the Indian market has become extremely competitive. The private sector has put a huge emphasis on consumer orientation. Growing public awareness and expectations, increased competition and technological changes have compelled business organizations to adopt a marketing approach to deliver high consumer satisfaction (Aggarwal & Singh, 2004).

Over the past few decades, Indian health care industry has also witnessed a significant change. It is one of India's largest industries in terms of revenue generation and employment. Health care services in India have traditionally been provided by government. In early post-independence period, the Indian health care industry was suffering from a shortage of doctors and nurses, inadequacy of hospitals as well as a lack of modern medical equipments. In the 1980s, approximate 30% decline was witnessed in the use of both urban and rural public health care facilities. Thereafter, this industry has achieved tremendous growth and has been growing at a rate faster than that seen in the last few decades. During 1990s, the sector grew at a compound annual growth rate of 16 %. It was valued at US$ 79 billion in 2012, and is expected to reach US $160 billion by 2017 and become a US$280 billion industry by the end of 2020 (Verma & Khandelwal, 2011).

The total health care expenditure in India has also grown at a rate slower than that of other economies globally. The government provides 20% of total health expenditures (lowest in the

world), households pay 78% in the form of out-of-pocket payments (highest in the world) and external aid contributes only 2% of health care financing (Nayak, Bagchi, & Nayak, 2012).



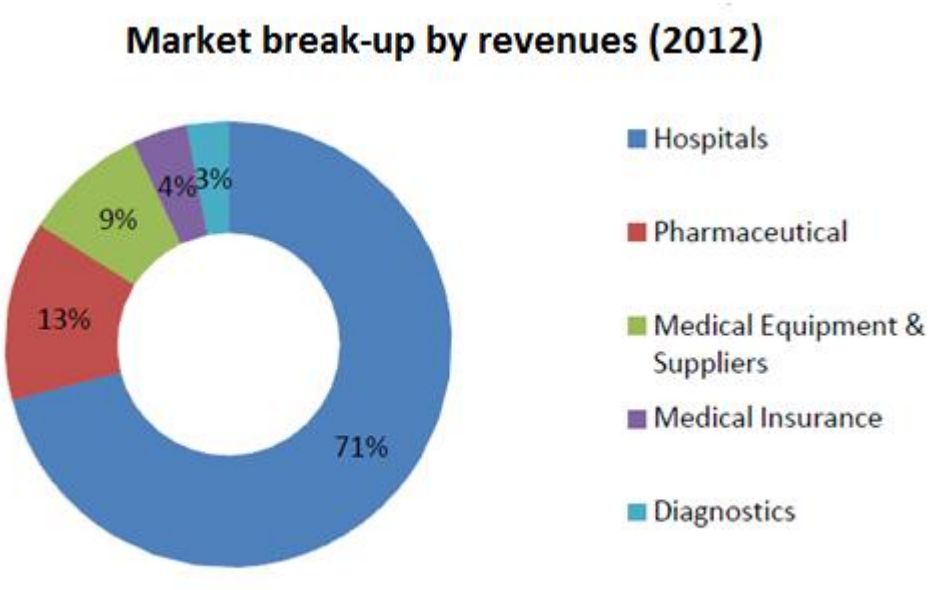
Source: World Health Organization, Global Health Expenditure Database

Figure 1.1: Total Health Care Expenditure in India

With an increase in urbanization and standard of living, demand for hospital services has been increasing rapidly in India. Due to lack of public financing, majority of government hospitals are in a deplorable condition. People depend on private sector hospitals for their health care needs because of inefficiencies in public health care delivery system. A wide network of private and corporate hospitals is now providing three-fourths of total health care services and meeting the requirements of rural as well as urban patients in India (Bhat, 1999). Private hospitals provide about 60% of out-patient and 40% of in-patient care. Approximately 70% of hospitals and 40% of hospital beds are in private sector (PricewaterhouseCoopers, 2010). The reduction of import duties on high technology medical equipments and reorganization of hospitals as an industry in a liberal economy policy have also aided the growth of corporate hospitals in India. Consequently, the Indian health care industry has been transmitted from a 'welfare orientation' to 'business orientation' (Visaria & Gumber, 1994).

Indian health care industry has the following constituents:

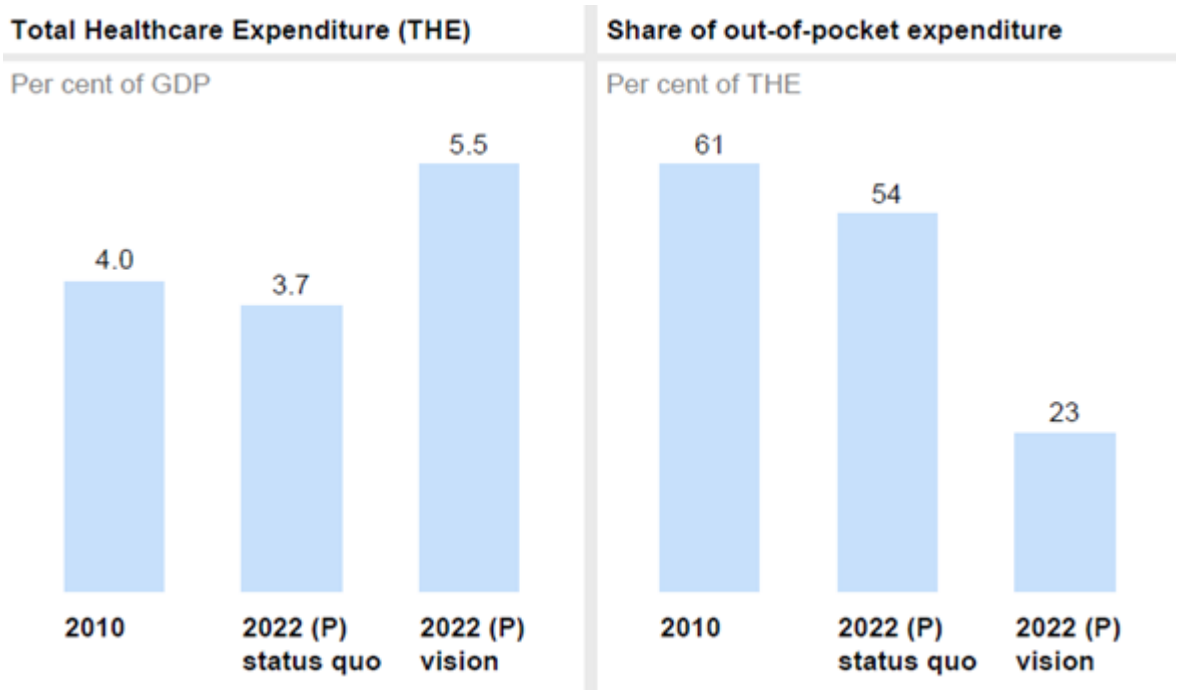
- Medical care providers: physicians, specialist clinics, nursing homes and hospitals
- Diagnostic service centers and pathology laboratories
- Medical equipment manufacturers
- Contract research organizations (CROs) and pharmaceutical manufacturers
- Third party support service providers (insurance, catering, laundry)



Source: http://www.cci.in/cci-knowledge-bank-surveys-reports.asp

Figure 1.2: Constituents of Indian Health Care Industry

Indian health care system has some specific characteristics. The share of government funding is only 1% of GDP. The beneficiaries of poor funding are generally the well-heeled people and not the poor ones. Over 80% of total health care financing is coming from private sources such as out-of-pocket payments from patients. In India, around 75-80% health care services are being provided by private sector hospitals and their charges are generally very high as compared to income levels of the population. Therefore, overall expenditure of households increases and high out-of-pocket payments push them into poverty (Garg & Karan, 2009).



Source: World Bank Database, World Development Indicators (WDI) covering 214 countries from 1960 to 2011 with 331 indicators: Mckinsey Analysis

Figure 1.3: Forecasted Total Health Care Expenditure in India

There is also an immense difference between quality of care provided by public and private health care facilities in India. Perceived service quality in public sector is very poor as compared to that of private sector. Patients are more satisfied with the services provided by private practitioners in comparison to those provided by public practitioners (Bhatia & Cleland, 2004). People choose public health facilities due to inexpensiveness and nearness to home (Sodani, Kumar, Srivastava, & Sharma, 2010).

The main causes for poor people of urban India to go to private hospitals are poor attention and non-availability of specialist doctors (Das & Hammer, 2007) as well as unavailability of even basic drugs in public health care facilities (Klein, 2011). In private sector, responsiveness of service, accuracy of diagnosis, privacy, doctor-patient communication and quality of care are much better than those in public sector. However, cost of drugs prescribed is high in private sector (Rashmi & Vijaykumar, 2010).

Teehankee (2007) has studied the role of businesses in development of society. He has contended that business firms are supposed to function for betterment of human beings by virtue of 'social license' acknowledged by society. Nevertheless, private hospitals in India seem to be more concerned about profits rather than social obligations. The relationship between patients and hospitals has become somewhat similar to that between consumers and service providers.

Since the health care sector is one of the largest service sectors in India, it has also emerged as one of the challenging sectors as well. Various factors, namely, increasing population, changing lifestyles, decreasing treatment cost, growing health insurance coverage and rising medical tourism have contributed to overall demand of health care services. Government has also recognized the significant changes in health sector and hence has provided priority status to health care in the twelfth five year plan.

1.3 Understanding consumer behavior

Behavior is an internal harmonized response of individuals or groups to an external or internal stimulus that is dynamic in nature (Allen, 1982; Hansen, 1980). Consumer behavior is the behavior of consumers in seeking, purchasing, using, evaluating and disposing of products and services in the marketplace. It is the study of how individuals spend their available resources on consumption related items (Schiffman, David, Aron, Angela, & Leslie, 2005). It takes place at all the stages of consumption process which are before, during and after the purchase. It can be studied with the help of consumer research (Brent, 1975).

Consumer buying behavior is an important aspect to understand overall consumer behavior (Gensch & Javalgi, 1987). Its knowledge serves as a tool for marketers to understand what consumers actually buy, why, when, where and how they buy, how often they buy, and also how they consume and dispose (Brent, 1975). It is influenced by social factors such as reference groups and family members, as well as by personal factors such as age, gender, education, lifestyle, personality and income (Saha, Dey, & Bhattacharyya, 2010).

Consumer satisfaction is the difference between pre-purchase expectations and post-purchase evaluation of the product or service features (Oliver, Rust, & Varki, 1997). It is a person's feelings of pleasure or disappointment resulting from comparing a product's perceived performance in relation to his or her expectations. If performance falls short of expectations, the

person is dissatisfied. If performance matches expectations, the person is satisfied. If performance exceeds expectations, the person is highly satisfied or delighted (Reichheld, 1996). It is also a main source of performance feedback of organizations and employees (Hagan, Konopaske, Bernardin, & Tyler, 2006) as well as an important tool for the financial measures of any organization (Gupta & Zeithaml, 2006).

Past research has shown that consumer satisfaction has a significant influence on repeat sales (Bearden & Teel, 1983). It is positively related with post-purchase behavior such as repurchase intentions and loyalty (Anderson & Sullivan, 1993; Yeung & Ennew, 2001). It is directly linked with positive word-of-mouth of consumers (Gremler, Gwinner, & Brown, 2001); willingness to pay more (Fornell, Johnson, Anderson, Cha, & Bryant, 1996) and firm's financial performance (Anderson, Fornell, & Rust, 1997). Also, high customer satisfaction ratings are widely believed to be the best indicator of a company's future profit and help to increase shareholder value (Anderson, Fornell, & Mazvancheryl, 2004).

1.3.1 Patients as consumers

Health care consumers are patients, users of health care services, organizations involved in delivery of services, future recipients of health promotion programmes, caretakers, attendants, and groups asking for research because they believe that they have been exposed to potentially harmful situations, products or services (Royle & Oliver, 2004).

In the last few decades, dramatic changes have been seen in health care sector. Due to increasing global competition, not only governments around the world have emphasized on access-to-information, but business establishments have also taken it as a decisive tool for competent markets (Relly & Sabharwal, 2009). Health care organizations have also been placing more emphasis on information sharing for disease prevention and health promotion. As a result, availability of online health-related information has induced various stakeholders, for instance, doctors, insurance companies, pharmacists and patients to actively use internet for searching pertinent information (Patwardhan, Pandey, & Dhume, 2014).

Nowadays, patients have become well informed and highly accountable consumers of health care services (Lane & Lindquist, 1988). They also have become more active participants in decisions regarding treatment processes and in choosing their health care providers (Blendon et al., 1998).

They are showing great interest in choice of a hospital as well as in treatment procedures (Bahrami, Jannati, Gholizadeh, Alizadeh, & Khodayari, 2013).

1.3.2 Consumer choices in health care industry

A discussion of patients' choice of a particular service provider is an important concern in health care industry. Therefore, it is essential for health care organizations to understand the factors affecting consumer choices, and to identify the decision-makers involved in selection of hospitals (Akinci, Esatoglu, Tengilimoglu, & Parsons, 2005; Christianson & McClure, 1979).

Nowadays, hospital choice criteria have become an important field of study in health care marketing literature (Boscarino & Steiber, 1982; Dubey & Sharma, 2013; Hisrich & Peters 1982). At present, hospital services are delivered not only to patients looking for medical consultation and treatment, but also to individuals who participate in wellness programs and seminars, and who use laboratory and pharmacy facilities (Vraciu, 1985).

Available literature on health care marketing indicates that patients do comparisons and shop among hospitals (Berkowitz & Flexner, 1981). Their choices in health care industry are based on factors that they consider for choosing a hospital. These factors have a positive impact on their decision-making. Therefore, these factors are of great interest to hospitals as well as health insurance companies (Lane & Lindquist, 1988). Previous research has shown that doctors, family members and sometimes relatives play an important role in selection of hospitals. Patients themselves also choose a hospital for treatment, except in emergency situations and mandatory hospitalization (Akinci et al., 2005; Smith & Clark, 1990).

1.3.3 Consumer satisfaction in health care industry

Consumer satisfaction has been considered a central concept in the business world. It is an overall psychological outcome, a judgment or a fulfillment response, based on experience of a product or service feature, or a product or service itself (Saha & Theingi, 2009). It occurs when performance of any product or service matches consumer expectations (Saklani, Purohit, & Badoni, 2000).

Today, every industry is striving for consumer satisfaction and health care in not an exception. In health care industry too, patient satisfaction is most important. It is based on various components

of service, especially the quality. Quality of service has a positive impact on patient satisfaction and patient loyalty (Chahal & Kumari, 2010). It can be measured by identifying and figuring the difference between expectations and perceptions of patients (Pakdil & Harwood, 2005). It is a combination of structure, processes and outcomes. Outcomes include various measures such as mortality, morbidity and patient satisfaction (Donabedian, 1966).

Various studies have shown that satisfied patients follow the treatment prescribed by a health care provider. They are more likely to get better and less likely to go for doctor or hospital shopping (Eisenberg, 1997; Burke-Miller et al., 2006; Ford, Bach, & Fottler, 1997; Parente, Pinto, & Barber, 2005; Williams, 1994; Zandbelt, Smets, Oort, Godfried, & Haes, 2007). Most of the researchers and marketers assume that satisfied patients generally repurchase the service and recommend the service provider to others (Eisenberg, 1997; Ford, Bach, & Fottler, 1997; Lee, 2005; Williams, 1994).

1.4 Rationale of the study

With the rise of patients as consumers and the introduction of new technologies, the health care market has become more competitive. Consequently, the service providers are required to understand the factors affecting hospital choice decisions of patients. There is also a need to understand the factors which affect patient satisfaction from hospital services. The existing literature on Indian health care sector has primarily focused on service quality in hospitals. A limited number of studies have researched the choices, satisfaction and post-purchase behavior of health care consumers. Thus, it has become imperative to study these aspects.

Therefore, the present study aims to investigate the consumers' perspective regarding health care services in Indian context. It studies the behavior of health care consumers before, while and after the purchase of service. It explores how patients choose hospitals and who decides to go for a particular hospital. Further, it examines the satisfaction of patients from various components of hospital service and analyzes their behavioral intentions after consumption of services.

Figure 1.4 presents various stimulants necessitating study of behavior of health care consumers in a competitive market place like India.

Health care consumerism
Implementation of liberalization, privatization and globalization policies
Change in technology
Cut throat competition
Incompetent government health care organizations
Presence of private and corporate health care organizations
Change in life styles
Change in demands and preferences of health care consumers
Increase in awareness of consumers about disease and treatment procedures
Increase in number of service providers
Increase in medical tourism
Spread of education about disease prevention

Figure 1.4: Stimulants Necessitating Study of Behavior of Health Care Consumers

- **Health care consumerism**

  Today, hospital beds occupants are not merely patients. They are consumers of health care services. Marketing research has consistently shown that nowadays patients know enough to sort through a variety of information from various sources when selecting a health care location.

- **Implementation of liberalization, privatization and globalization policies**

  With the implementation of liberalization, privatization and globalization policies, Indian economy has become more competitive. Specific changes like reduction in import tariffs, deregulation of markets, reduction of taxes and greater foreign investments have expanded the role of private sector in delivery of health care.

- **Change in technology**

  In health care sector, technological changes like electronic health records, hi-tech medical equipments and technological innovations have resulted in better care of patients. It has

also resulted in high involvement of health care consumers in decisions related to treatment.

- **Cut throat competition**

  With the entrance of private sector in delivery of health care services, competition has increased which benefits consumers by reducing costs and improving the quality of service.

- **Incompetent government health care organizations**

  In most developing countries, state of government health care services is still very poor. Due to lack of public financing, majority of government hospitals are in a deplorable condition. Quality of care is very low in government facilities as compared to private ones.

- **Presence of private and corporate health care organizations**

  Because of inefficient public health care delivery system in developing economies, people depend on private sector hospitals for their health care needs. In India, a wide network of private and corporate hospitals is fulfilling three-fourths of total health care demand.

- **Change in life styles**

  Health care consumers are becoming more health conscious and better informed. Hence, active participation in health care choices is becoming a reality in the marketplace.

- **Change in demands and preferences of health care consumers**

  With the passage of time, there is a change in demand of health care services. Nowadays, hospital services are delivered not only to patients seeking medical consultation and treatment, but also to individuals who participate in 'wellness' programs and seminars and who use laboratory and pharmacy facilities.

- **Increase in awareness of consumers about disease and treatment procedures**

  Research has proven that patients have become well informed, highly accountable consumers of health care services and active participants in decisions regarding choice of their health care providers.

- **Increase in number of service providers**

  Increased population, changing life styles and varying demands have resulted in more choice options to health care consumers. Private and corporate hospitals are increasing day by day to fulfill the demand of urban as well as rural patients.

- **Increase in medical tourism**

  Implementation of liberalization, privatization and globalization policies has resulted in rapid diffusion of technology. It has enabled individuals, groups and companies to tap talent to not only create new businesses but set off a virtuous cycle of growth and entrepreneurship. Consequently, medical tourism has emerged as an alternative to cater to the demand of health care consumers.

- **Spread of education about disease prevention**

  With increasing literacy rate, spread of health care education has also served as an important stimulus to study the behavior of health care consumers in India. Disease prevention and health education programs by government and private organizations have increased awareness and involvement of individuals and groups in maintaining healthy life styles.

1.5 Overview of research

The present study takes a holistic view of health care services from an emerging country perspective. It attempts to identify the factors affecting consumer choices and satisfaction in health care industry. It tests the relationships among identified factors and respondents' demographics. It analyzes the repurchase and recommendation decisions of health care consumers with regard to services of hospitals. It also categorizes the decision-makers involved in selection of hospitals.

Patients in multispecialty hospitals, particularly those suffering from tertiary-level health diseases, based in north India, comprise the population for study. Patients suffering specifically from eight types of tertiary-level health diseases have been considered as respondents. Primary data has been collected from patients through pre-tested, structured and non-disguised questionnaires. The patients have been requested to give their responses on a five-point likert-type scale.

Various demographic variables have been considered to understand the diverse behavior of respondents. Statistical data analysis tools such as exploratory factor analysis, one way ANOVA, two-tailed t-test and linear discriminant analysis have been employed to analyze data with the help of SPSS® 16.0. Table 1.1 shows the states and union territories, type of diseases and demographic variables considered for the present study.

Table 1.1 States and union territories, types of diseases and demographic variables

States and union territories	Type of diseases	Demographic variables
State 1 Haryana	Knee-joint replacement	Age
State 2 Punjab	Spinal cord operation	Gender
State 3 Uttar Pradesh	Heart by-pass surgery	Marital status
State 4 Rajasthan	Heart stent implant	Residential Area
State 5 Uttarakhand	Renal failure	Education
State 6 Himachal Pradesh	Hip-joint replacement	Occupation
State 7 Jammu and Kashmir	Intestine problem	Monthly family income
Union Territory 1 Delhi	Lungs disorders	Health insurance
Union Territory 2 Chandigarh		

The present study is based on following research questions, objectives and hypotheses.

1.5.1 Research questions

This research study seeks to address the following questions:

1. What choice criteria do consumers consider to be important in selection of hospitals?
2. How satisfied are consumers with respect to various service attributes?
3. What is the relative importance of choice criteria and service attributes?
4. How are demographic variables of consumers related to choice criteria and service attributes?
5. How do consumers behave after utilizing services of hospitals?
6. Who are the final decision-makers in selection of hospitals?

1.5.2 Research objectives

Objectives of this research study are:

1. To identify the key factors along with their relative importance affecting consumer choices of health care facilities
2. To examine if the factors affecting consumer choices of health care facilities are related with consumer demographics
3. To identify the key factors along with their relative importance affecting consumer satisfaction from health care facilities
4. To examine if the factors affecting consumer satisfaction from health care facilities are related with consumer demographics
5. To analyze the consumer decisions for repurchase and recommendation of services of health care facilities
6. To categorize the decision-makers involved in selection of health care facilities

1.5.3 Research hypotheses

The following hypotheses have been framed to achieve the objectives:

H1: There is a significant relationship between individual demographic variables and consumer choices of health care facilities

H2: There is a significant relationship between individual demographic variables and consumer satisfaction from health care facilities

H3: There is a significant relationship between consumer choices and consumer decisions for repurchase of services of health care facilities

H4: There is a significant relationship between consumer satisfaction and consumer decisions for recommendation of services of health care facilities

1.6 Demographic profiles of respondents

The present study has examined relationships among various demographic variables of respondents and the factors influencing their behavior (Marang-van de Mheen et al., 2011). Age, gender, marital status, residence, education, occupation and monthly family income have been considered as respondents' demographics. The effect of presence or absence of health insurance has also been studied.

Previous studies have reported that choices and satisfaction of health care consumers differ with respect to various demographic variables. It has been shown that age has a significant effect on hospital choice decisions of patients. It has a direct relationship with severity and duration of illness which affects the decision-making process of patients (Korgaonkar, Lund, & Price, 1985). Gender has a significant role in hospital selection and satisfaction from hospital services. Male and female respondents have different expectations and perceptions about hospital services. (Anand & Sinha, 2010; Roh & Lee, 2005).

Health insurance has a positive influence on satisfaction level of patients. Patients without health insurance have to pay hospital charges from their own pockets, whereas dues of respondents with health insurance are paid by the insurance company (Njong & Tchouapi, 2014). Choice of hospital and satisfaction from hospital services have also been found different on the basis of residential area of respondents. Respondents belonging to rural areas have to travel more in comparison to that of urban area respondents (Gesler & Meade, 1988; Sharma, Sharma, & Sharma, 2011).

Education, knowledge and awareness about disease and its treatment procedures have a significant effect on consumer choices and satisfaction in health care sector. Educated patients have been found to be more active in decisions regarding choice of service providers and treatment procedures (Lane & Lindquist, 1988; Ebrahimipour et al., 2013). Occupation and monthly family income of respondents also have an important impact on their choices and satisfaction. It has a significant relation with cost of service which also affects overall decision-making of respondents (Park & Seo, 2014; You and Kwon, 2012).

1.7 Significance of the study

The present research aims to portray a detailed picture of consumer choices and satisfaction towards health care services. The study is expected to be useful for various stakeholders such as doctors, health care organizations, other health care professionals, government and consumers. It may help them in segmenting, targeting and positioning health care consumers on the basis of their needs and demands. It may assist them in policy reformulations and overall service management. The present study seeks to provide a knowledge base to marketers of health care organizations regarding buying behavior and satisfaction levels of health care consumers.

It endeavors to understand the behavior of patients that may help corporate and private hospitals in formulating their expansion and diversification plans. It also aims to address the unexplored gaps in literature related to marketing, consumer behavior, health care industry and business strategy. Further, it tries to provide some inputs in the form of identified factors and their relationships with respondent demographics which may help in future research.

1.8 Organization of thesis

This dissertation has been organized in five chapters. A brief review of each chapter is given below.

Chapter I: Introduction

This chapter is introductory in nature and figure-outs the foundation of present research. It describes the context of services, health care industry, health care models, service quality in health care industry, tertiary-level health care services and Indian health care industry. It also discusses the concept of consumer behavior, patients as consumers, consumer choices and satisfaction in health care industry and rationale of study. Further, it outlines research questions, research objectives, research hypotheses, demographic profile of respondents, significance of study and chapter scheme for present research.

Chapter II: Review of literature

The findings of research studies that have been carried out in the area of consumer behavior in health care industry have been presented in the chapter. It helps to identify the research gaps in previous studies and to define research objectives. Basic review of literature has been divided in four different categories, namely, consumer choices in health care industry, consumer

satisfaction in health care industry, consumer decisions for repurchase and recommendation of services of health care facilities and decision-makers involved in selection of health care facilities. Further, it presents the research gaps and statement of problem.

Chapter III: Research methodology

The chapter elaborates the research plan and methodology that have been adopted in this study. It covers various phases, design, questions, objectives and hypotheses. It also outlines population, respondents, sampling, data collection, questionnaire, data analysis tools, and data reliability and validity. Finally, it develops a research framework.

Chapter IV: Statistical analysis and interpretations

Statistical analysis and interpretations of data have been discussed in the chapter. It reports the findings of present research. Exploratory factor analysis, one-way ANOVA, two-tailed t-test and linear discriminant analysis have been employed with the help of SPSS® 16.0 to analyze data. Results have been divided into six parts. It presents various factors affecting choices and satisfaction of patients and the relationship of these factors with respondent demographics. It also analyzes repurchase and recommendation intentions of patients, and various individuals or groups involved in decision-making process. It also proposes a framework of consumer choices and satisfaction in health care industry.

Chapter V: Summary and conclusions

The chapter provides the summary of present research. It revisits the objectives to understand if the purpose of research has been achieved. It also presents implications, recommendations, contributions and limitations of the study. In conclusion, it discusses the scope for future research.

Concluding remarks

This chapter introduces the concept of services, health care industry, health care models, service quality in health care industry, tertiary-level health care services and Indian health care industry. It focuses on various aspects of consumer behavior including patients as consumers, consumer choices and satisfaction in health care industry. It presents the rationale, overview and significance of the research. A chapter scheme describing the organization of thesis has also been presented.

Chapter - II

Review of Literature

2.1 Introduction

Review of literature is an essential part of any research project. It helps to plan and execute the research process by familiarizing with the work that has been done in that area. It also assists in identifying research gaps and defining research problem. This chapter presents the review of literature related to various aspects which are important and relevant in the context of current research. It has been divided into seven sections. Section 2.2 presents studies related to consumer choices in health care industry. Studies related to consumer satisfaction in health care industry have been outlined in section 2.3. Section 2.4 demonstrates studies related to consumer decisions for repurchase and recommendation of services of health care facilities. Studies related to decision-makers involved in selection of health care facilities have been depicted in Section 2.5. The research gaps and statement of problem have been discussed in section 2.6.

2.2 Consumer choices in health care industry

Berkowitz and Flexner (1981) have conducted a study to identify the factors affecting hospital choice decisions of patients. They have found that existing research in hospital choices is limited in determining final decision-makers in selection of hospitals and on the basis on which they select hospitals. The researchers have recognized that consumers of health care services generally shop among hospitals and make comparisons before selecting a hospital. They have observed that patients focus on quality of services, attitudes and behaviors of staff, reputation of hospital and cleanliness in hospitals before selecting a hospital. Thus, it has been seen that hospital service attributes are significant determinants of hospital choice decisions.

Concurrently, Fiedler (1981) has affirmed that there are various requisites which must exist before the utilization of health care services. These requisites are basic factors which have an important impact on decision-making of patients. These factors are awareness about disease, availability of service, acceptability of service on technical and human grounds as well as ability

to obtain service. Therefore, these factors have been considered as important elements in decision-making of patients.

Subsequently, Boscarino and Steiber (1982) have defined a criteria consisting of various factors affecting hospital choice decisions of patients in an ordered manner. These factors are nearness to home, availability of specialist doctors, latest equipments, clean and hygienic environment, familiarity with hospital staff, past experience with hospital, cost of service, number of beds in hospital and hospital's religious affiliation. They have found that patients prefer to decide on the basis of these criteria rather than doctors' recommendations. Further, they have expanded the hospital choice criteria on the basis of type and range of services available in hospitals. They have observed that patients choose the hospitals on the basis of type of service required. They have categorized the service requirement of health care consumers in three parts, namely, 'general services', 'specialized services' and 'emergency services'. They have discussed the first 5 out of 12 criteria for each category which are listed below.

General health care services:

1. Nearness to home
2. Doctor's recommendation
3. Past experience
4. Familiarity with hospital staff
5. Quality of physical facilities

Specialized health care services:

1. Availability of specialist doctors
2. Doctor's recommendation
3. Past experience
4. Availability of latest equipments and technology
5. Nearness to home

Emergency health care services:

1. Nearness to home
2. Past experience
3. Doctor's recommendation
4. Familiarity with hospital staff

5. Quality of physical facilities

On the same lines, Egunjobi (1983) has observed that various factors are involved in hospital choice decisions of patients. A number of 859 patients of four hospitals in Oyo Health Zone, Nigeria have been interviewed in 1979. Respondents have been asked about the reasons of choosing a particular hospital. It has been observed that factors, in descending order of magnitude, affecting hospital choice decisions of patients are distance from home, quality of service, relative living in hospital town, cost of service, ease of transport, religion and familiarity with hospital staff. The study has also affirmed that though distance from home is an important factor, yet in almost 70% of cases, patients have also considered other factors.

Wolinsky and Kurtz (1984) have added to the previously mentioned studies by theoretically and empirically examining the factors people consider important in choosing a hospital. They have carried out the study in two phases. In first phase they have identified various factors affecting hospital choice decisions of patients and in second phase they have discussed about attitudes of respondents towards hospitals. The study has concluded that hospital choice factors are prior use of service, courtesy of staff, range of facilities, cost of service, closeness to home, quality of care, doctor's and friend's recommendations. In conclusion, the authors have reduced these factors to four basic attributes, namely, ‘knowledge’, ‘cost’, ‘quality’ and ‘recommendations’.

Margoles, Territo and Lamberti (1986) have further added to the literature on hospital choice, by examining five independent studies conducted by American Osteopathic Hospital Association (AOHA) between 1980 and 1985 to identify factors affecting hospital choice decisions of patients. AOHA has mentioned the findings of each study without any discussion on methodology adopted in these studies.

In this series of five independent studies, the first study has been conducted in Pennsylvania in 1980. A set of 11 focus groups provided necessary information to develop questionnaires which have then been distributed to a randomly selected group. Five populations have been studied, namely, surgical care users affiliated with Doctor of Osteopathic Medicine (DO), emergency patients not directly affiliated with DOs, osteopathic physicians and specialists, general public and employees of osteopathic hospitals. It has been found that various factors affecting choice of hospitals, for all groups in an order, are quality of care, affordability, availability, convenience,

information and range of service. Findings of this study have also supported the result of previous studies.

The second study in the series, conducted again in 1980, has found that various factors affecting hospital choice decisions of patients are quality of care, friendliness and courteousness medical and administrative staff, availability of nurses, personalized care, latest technology and equipment, availability of specialists, range of services, reputation of hospital, convenient access to hospital, services available during evenings and weekends, parking facility, past experience, physician recommendation and cost of service. This study has extended the findings of previous study in the series.

The third study has been conducted in 1985 in a major Midwest City with the help of a telephonic survey of 427 randomly selected households. The survey has included 60% of female participants. It has been shown that various factors affecting hospital choice decisions are availability of doctors, location of hospital, quality of treatment, recommendations by friends and relatives, personalized care and general image of the hospital. This particular study in the series has highlighted the importance of recommendations by friends in hospital choice decisions.

The fourth study has been conducted concurrently in 1985 in Midwestern states in which respondents belonged to a focus group. They have been randomly contacted through mail and telephonic surveys. Factors identified from this study are quick and convenient care, personal treatment, family participation and appearance of hospital. This study has contributed in literature by surveying random population through mail telephonic surveys.

The fifth study in the series has also been conducted in Midwestern states in 1985. 'Baby boomers' (21- 38 years of age) have been approached with the help of mail surveys for information collection purpose. Various factors identified from this survey are quality of care, courteous behavior of staff, educational/informational materials, convenience and cost. This study has also arrived at conclusions similar to that of other studies in the series.

Subsequently, Lane and Lindquist (1988) have analyzed three different studies on 'Consumer Health Care Decision Process Model' conducted by National Research Council (NRC) in 1984, 1985, and 1986. In each of these studies, 1000 patients have been involved as respondents. They have been asked to rank 14 factors relating to their hospital choice decisions. These factors are

quality of medical staff, emergency services, nursing care, range of services, updated equipments, courteous employees, better surroundings, prior use of hospital, cost of care, nearness to home, facility of private rooms, doctor's recommends, family's recommends, and friend's recommendations. Further, they have divided these factors into seven categories, namely, care, staff, physical facilities, clientele, experience, convenience and institutional.

At the same time, Gesler and Meade (1988) have conducted a study on residents of Chatham County, Georgia. The researchers have analyzed health care services through distance, socio-demographics, locational and activity space factors. The researchers have re-examined various factors to find out associations among these factors with the help of consumer-provider interactions in health care facilities. These factors are distance to health care facilities, difference among subgroups of population, locations of patients, source of health care and people's activity spaces. Results of this study have also shown that these factors have a positive impact on hospital choice decisions of patients.

Another study was conducted by Luft et al. (1990) in which three different locations of California were surveyed to understand the influence of quality, charges, ownership and distance on hospital choice decisions of patients. They have observed that patients and physicians have become better informed in past few years. It has been found that affiliation of hospital has a positive impact. It has also been found that distance and public ownership have a negative impact on decision-making of patients. It has also been revealed that overall findings have revealed that quality of service has become a key determinant in selection of hospitals.

Phibbs and Robinson (1993) have investigated hospital choice decisions of female patients to further contribute to literature in this area. They have examined the data set of Office of Statewide Health Planning and Development (OSHPD), California to understand the hospital choice behavior of women for delivery. All maternal deliveries in the San Francisco Bay Area in 1985 (n=61,436) have been covered. They have used McFadden's conditional logit model for estimating hospital choice models. They have examined separate models for high-risk and low-risk patients covered either by private insurance or by California Medicaid. Quality, price, ownership, and distance to hospital have been considered as independent variables and hospital choice as dependent variable. It has been revealed that high-risk and low-risk women have different choice behaviors. High-risk patients have reported hospital service quality as important

factor. It has also been found that there is a difference between choices of hospital decisions of patients having private insurance and Medicaid. Choice factors have been found to vary across different subgroups of respondents. The present study has scientifically proven the differences among choice behavior of different patient groups.

Analogous to previous study, Bin (1997) has attempted to develop a methodology for assessing factors affecting patients' choices of hospitals. The study has been conducted on patients of two private and two government hospitals of Riyadh city. Primary data has been collected from 541 patients with the help of a structured questionnaire. Exploratory factor analysis has been employed to identify factors affecting hospital choice decisions of patients. Stepwise discriminant analysis has been carried out to study the factors affecting choice behavior of patients of government and private hospitals. Five factors, namely, convenient administrative procedures, quality of services, hospital image, cost of treatment and health insurance affecting hospital choice decisions of patients have been extracted. Eight variables have been observed to be statistically significant in discriminating between patients of government and private hospitals. These variables are cost of treatment, employment, quality of services, convenient administrative procedures, perceived state of health, health insurance coverage, age and sex. On the basis of these findings, it has been concluded that hospital choice decisions are influenced by hospital and socio-demographic factors.

Akinci et al. (2005) have carried out a study in a like manner to examine factors affecting hospital choice decisions of patients in the context of Turkey. They have surveyed 869 patients of three public and one private hospital policlinics in Ankara city. They have identified importance levels of factors affecting hospital choice decisions. It has been shown that accessibility, hospital's image, technology and government sponsored health insurance plans have a significant impact on hospital choice decisions of patients. Proximity, transport facility, service delivery environment, cleanliness, infrastructure, qualified doctors and type of services have been found to be important determinants in selection of a hospital. The present results also resemble the findings of previous studies.

To confirm the outcomes of available literature, Roh and Lee (2005) have reiterated that hospital ownership affects hospital choice decisions of patients. They have attempted to understand the behavior of rural patients for bypassing the local hospitals in Colorado. Researchers have used

conditional logistic regression to analyze Colorado inpatient discharge data of 85,529 patients. It has been shown that 45% of rural patients bypassed their local hospitals. They have been influenced by various factors, namely, number of beds, range of services, accreditation, ownership type and distance from home. Additionally, patient characteristics such as medical condition, age, gender, race, and service charges have been found to be influencing final decision of patients.

In another study to understand the problems of health care delivery in rural India, Borah (2006) has concluded that price and distance play a significant role in hospital choice decisions. The determinants of outpatient health care provider choice in rural India in mixed multinomial logit framework have been investigated. Data retrieved from National Sample Survey Organization (NSSO) of India has been used. It has been revealed that distance of hospital from home is not so much important in case of poor health status. Further, demand of service varies on the basis of income of family. However, low-income families have shown high price-sensitive demand as compared to that of high-income families. It has also been found that care of children is more price-elastic as compared to that of an adult. It could be due to importance of an adult as an earning hand in family. It shows the socio-economic structure of a typical Indian family.

Vonberg, Sander and Gastmeier (2008) have conceptualized and empirically examined the factors important in selection of a hospital. They have collected data from randomly selected 1000 households of age group of fourteen and above. A standardized questionnaire has been used and four demographic variables, namely, age, gender, education and previous admission to the hospital have been considered. They have found that factors affecting hospital choices are friendly staff, staff-to-patient ratio, cleanliness, friend's suggestion, reputation of facility and distance from home. General cleanliness and friendly staff have been found to be most important hospital choice factors. Summarizing, the findings have emphasized more on personal aspects of service delivery.

Bhangale (2011) has discussed the concept of health care marketing in India, in a study on patients, who have been recently hospitalized. Attendants of patients have also been considered. It has been shown that family physician is considered a primary source of information. Internet has also been considered for information by young patients. Multispecialty services, recommendation of local doctors, positive word-of-mouth, location of hospital and cost have

been considered as other important factors for the selection of a hospital. Importance of IT technologies in health care has also been highlighted in this study.

On the other hand, Marang-van de Mheen et al. (2011) have conducted a study to judge the relative importance of quality of care and hospital information in case of choosing a hospital for surgical treatment. An internet based questionnaire employing choice-decision based conjoint analysis has been used. Each of the 308 respondents has been requested to reply to 12 different comparisons of two hospitals, with each hospital characterized by six attributes containing two levels. Hospital's attributes such as general information, atmosphere, quality of care and surgery specific information have been found to be most important factors for hospital choice decisions. However, waiting time has been observed to be the least important factor.

In a study to identify factors affecting hospital choice decisions and bypass behavior of patients belonging to rural areas of Kentucky, He (2011) has empirically validated that hospital quality, prior experiences, satisfaction from local hospital, size of hospital, reputation and patients' insurance coverage influence hospital choice decisions. Data has been retrieved from American Hospital Directory. Binary probit model and conditional logit model have been employed for data analysis purpose.

Verma and Khandelwal (2011) have conducted an exploratory study in Indian context to investigate the factors affecting hospital choice decisions of patients. The researchers have involved 150 individual households of Agra city with the use of purposive sampling technique. Factor analysis has been employed to extract the factors. As a result, factors which have been found to be affecting hospital choice decisions of patients are employee competence, past experience, timeliness of service, convenience and customer ease.

Contributing further to literature, You and Kwon (2012) have conducted a study on 189,739 respondents of primary, secondary and tertiary care hospitals. They have collected data from Korean Health Panel. A multinomial logit model has been used to identify factors affecting hospital choice decisions. It has been found that income level, severity of disease and region are the most important factors affecting hospital choice decisions of Korean patients.

In a similar fashion, Bahrami, Jannati, Gholizadeh, Alizadeh and Khodayari (2013) have outlined various factors involved in decision-making of consumers of health care services. They have

conducted a study on in-patients of Emam Reza Governmental Hospital and Shams Private Hospital of Tabriz, Iran. A total of 376 patients from both hospitals in equal number have been involved. Data has been collected with the help of a structured questionnaire and analyzed by employing chi-square and t-test. It has been reconfirmed that reference by ambulance, doctor's recommendation, family income, insurance type, quality of service, relative working in hospital, cost of service and information given to the patients about disease and treatment procedures are most important hospital choice factors.

For the same purpose, Dubey and Sharma (2013) have conducted a study in Bilaspur city of India to identify factors affecting hospital choice factors of Indian health care consumers. Primary data collected from 156 patients has been used. Factor analysis technique has been employed. It has been observed that punctuality of staff, publicity and advertisement, nearness to home, high quality equipments, timing of outdoor services, quick administrative procedures with less paper work, quality specialist doctors, approach of doctors and confidential treatment records are key important factors for hospital choice decisions. Other factors like fame of hospital, infrastructure, basic amenities, bank and Automated Teller Machine (ATM) services have also been found to be important factors.

At last, Ngondi (2014) has investigated the differential aspects of hospital choice decisions in a study on cervical cancer patients at Kenyatta National Hospital, Nairobi. Factors affecting patients' decisions for selection of hospitals have been examined. The author has conducted a descriptive cross sectional study with the help of a structured questionnaire. A total of 228 participants, by using convenience sampling, have been approached. Frequency distribution and Chi-square test have been employed. It has been seen that the factors important for hospital choice decisions are cost of service, health insurance coverage, payment modes, accessibility of hospitals and knowledge about disease. In conclusion, the resulting factors have been found to be having significant influence on hospital choice decision of patients.

Results of various studies reviewed in this section have shown that consumers of health care services also get involved in the choice of a hospital. All these studies have demonstrated that there are many factors which patients consider before selecting a hospital. For instance, these factors are quality of service, specialist doctors, high-tech equipments, reputation of hospital, recommendation of doctors and family members, and distance from home. Most of the

mentioned studies have identified hospital choice factors from the perspective of a developed country. Therefore, a research gap has been identified in the existing literature. These findings have provided a basis to study the choice criteria which consumers may consider to be important in the selection of a hospital from the perspective of an emerging economy like India.

2.3 Consumer satisfaction in health care industry

Al-Omar (2000) has conducted a study to understand factors affecting patient satisfaction from the services of government and private hospitals in Riyadh city. Perceived satisfaction of 500 patients in seven private and government hospitals has been compared with expectations from hospital services. Descriptive and inferential statistics, particularly, paired and independent t-test, phi test and Cramers'V test have been used. Factors which positively affect satisfaction of private hospital patients are medicine, advanced medical technology, and staff kindness. Important factors for patients of government hospitals are staff kindness, waiting time, quality of nursing and medical care, advanced technology and cleanliness of hospital. In conclusion, the present study has shown that there is a significant difference between satisfaction levels of patients of private and government hospitals.

Concurrently, Cheng Lim and Tang (2000) have also studied patients' expectations and satisfaction from hospitals in the context of Singapore. Primary data has been collected from 300 patients with the help of convenience sampling technique. The factors influencing patient satisfaction have been identified. These factors are up-to-date equipments, clean and comfortable environment, basic amenities, prompt service delivery, friendly and courteous behavior of doctors and staff, waiting time, 24-hours service delivery, affordability of service, approachability of hospital and adequate parking space. Additionally, the study has found that there is a gap between expectations and perceptions of patients.

Boshoff and Gray (2004) have extended the literature by theoretically and empirically examining the effect of service quality on patient satisfaction. They have investigated whether high service quality and personalized care increase the probability of service repurchase in the context of private health care sector. The researchers have examined the impact of service quality and personalized care on two independents variables, namely, loyalty and customer satisfaction. In support of results of previous studies, it has been revealed that empathy of nursing staff,

assurance, satisfaction with meals and cost of service have a positive impact on loyalty and satisfaction.

Analogous to previous study, Pakdil and Harwood (2005) have stated that patient satisfaction is one of the most important quality dimensions of health care services. They have observed that patient satisfaction can be judged by measuring the gap between expected and perceived service quality. They have measured this gap in a hospital-based preoperative assessment clinic by using Service Quality (SERVQUAL) model. They have found that patient expectations are directly related with adequate information about disease and treatment procedures, friendliness and courtesy behavior of hospital staff, quality of nursing care, waiting time and overall quality of delivered services. The study has also acknowledged the importance of patient satisfaction factors.

On the other hand, Rao, Peters and Bandeen-Roche (2006) have studied the perception of, in-patients as well as out-patients about health care service quality in Uttar Pradesh, India. They have also identified various aspects of perceived service quality. Five dimensions of perceived service quality, namely, availability of medicine, medical information, behavior of staff, behavior of doctors and infrastructure of hospital have been identified. It has also been found that for in-patients, staff behavior is the most important factor followed by behavior of doctors, availability of medicine, medical information and infrastructure of hospital. For out-patients, behavior of doctor is most important factor followed by availability of medicine, infrastructure of hospital, behavior of staff and medical information. Furthermore, these findings have pointed out the differences in factors affecting satisfaction of in-patients and out-patients.

Chowdhury (2008) has also examined patient satisfaction factors in the context of Bangladesh. Socio-economic factors which affect patient expectations and satisfaction from health care services have been investigated. Primary data has been collected from 1900 respondents. It has been seen that factors contributing to patient satisfaction in private hospitals are fast administrative procedures, hygiene, routine visit of doctors and nurses, behavior of service personnel, effective complaint handling and promptness of service. Factors responsible for patient dissatisfaction are lack of trained, efficient and experienced nurses, unnecessary medical tests and investigations, no permanent specialist doctors and high treatment cost. Exceptionally, the present study has highlighted the importance of patient dissatisfaction factors.

Naidu (2009) has thoroughly reviewed 24 published research articles to search the factors affecting patient satisfaction and service quality. It has been found that patient satisfaction is a multidimensional construct affected by different variables. These variables are friendliness of staff, responsiveness of service, diagnostic facilities, ease of appointments with doctors, distance from home, socio-demographic factors, credibility of service provider and emergency care services.

For better understanding of patient satisfaction from health care services, Anand and Sinha (2010) have established a relationship between women's reproductive health service use and service quality perceptions in relation to public and private health care facilities in India. This study is a follow-up of the 1998-1999 National Family Health Survey (NFHS)-2. These follow-ups have been carried out in 2002-2003 in Tamil Nadu, Maharashtra, Bihar and Jharkhand. Secondary data collected by the International Institute for Population Sciences and The Johns Hopkins University has been used. Also, a scale to measure the utilization levels has been designed. Various dimensions that have been included are service proximity, doctor availability, waiting time, medicines, cleanliness of hospital, privacy during treatment, service affordability and treatment effectiveness. It has been shown that in private facilities, patients have considered doctors' availability, waiting time, cleanliness, privacy and affordability as important factors for service utilization. Similarly, medicine availability and treatment effectiveness have been viewed as important factors in public health care facilities.

In another study, Otani, Waterman, Faulkner, Boslaugh and Claiborne (2010) have investigated the impact of patient satisfaction or dissatisfaction on evaluation of quality of care, and repurchase and recommend intentions of health care consumers. Patient satisfaction has become an important parameter of health care quality measurement. On the basis of previous studies, the researchers have assumed that satisfied patients generally recommend the hospital to others and are more likely repurchase the services of the same hospitals. They have analyzed patient satisfaction data set of 14,432 patients collected by BJC health care by using multiple linear regression model. Consequently, it has been observed that patient satisfaction is directly related with nursing care, staff care, admission process, physician care, food and room.

In the Indian context, Desai (2011) has discussed the concept of patient satisfaction and service quality. He has conducted a study to explore the expectations of patients and their relatives from

hospitals. The researcher has adopted the SERVQUAL instrument and applied it on health care sector. Primary data has been collected from households of Kolhapur city. It has been concluded that service dimensions such as good behavior of doctors and medical staff, good physical facilities, cleanliness, knowledge of doctors, modern equipments, infrastructure, basic amenities, laboratory facilities, service charges and payment options have a positive and significant impact on patient satisfaction. It has also been observed that both service quality and patient satisfaction are interrelated in nature.

To access medical practitioners' awareness, competence, attitudes and performance with regards to patients' expectations, Rozenblum et al. (2011) have collected primary data from four hospitals in four countries covering three continents. Data set of 1004 respondents from Denmark, Israel, UK and USA has been used. Results have shown that understanding patients' expectations has an important influence on their satisfaction. Further, the researchers have stated that health care organizations should take active involvement to increase the clinicians' awareness about patients' expectations.

Another study conducted by Sharma et al. (2011) on patient satisfaction in Indian context has shown that patient satisfaction has become a strategic measure to judge overall performance of health care systems. The study has been conducted in a tertiary level government health care facility in Chandigarh city. The purpose of study was to investigate the behavior and care provided by doctors and paramedical staff. Primary data has been collected with the help of a structured questionnaire from outdoor patients after their consultation with doctors. It has been experienced that patient satisfaction is associated with registration services, access and approachability to hospital and doctors, professional and behavioral communication of doctors, staff care services, basic amenities, technical infrastructure, ambulatory services, laboratory services and emergency care services.

In the same manner, Ashraf, Ashraf, Rahman and Khan (2012) have examined the satisfaction of female patients with maternity care services in Pakistan. Primary data has been collected with the help of a structured questionnaire from 400 female respondents of public sector health care facilities. A systematic random sampling technique has been used. It has been seen that 61% women have reported satisfaction while the rest have expressed dissatisfaction form the services of hospitals. Factors which have been found to affect patient satisfaction are technical quality,

interpersonal aspect, communication, financial aspect, time spent with doctor, access, availability, convenience, knowledge and advice.

Shrestha, Mongkolchati, Rattanapan and Wongsawass (2012) have conducted a cross-sectional descriptive study to check the satisfaction of out-patients at Naradevi Ayurveda Hospital, Kathmandu, Nepal. Chi-square tests and multiple logistic regressions have been employed to analyze the data. It has been shown that two third of the patients have low satisfaction levels while the rest have high satisfaction levels. Factors like distance from home to hospital, long waiting time, length of service hours, income levels, health insurance, quick service, administrative procedures and expectations of patients have been seen to be highly associated with patient satisfaction in regard to hospital services.

In a study on patient satisfaction with respect to tertiary health care services, Tahir, Nawaz, Butt and Mahmood (2012) have postulated that it can be achieved by fulfilling the expectations of patients. The study has been conducted in Lahore, Pakistan to analyze the factors affecting patient satisfaction. Primary data from 600 patients of tertiary-level health care hospitals has been collected. It has been shown that patient satisfaction is positively associated with quality of care, availability of medicines, sharing of information prior to admission, follow up care, nursing care, interaction between service providers and patients, option to choose the doctor, ease of appointment, discharge services and cost of treatment.

Zamil, Areiqat and Tailakh (2012) have used Service Performance (SERVPERF) scale to measure the impact of health service quality on patient satisfaction with a sample of 450 respondents. The authors have identified that the impact of service quality on satisfaction of patients of private hospitals is better in comparison to that of patients from government hospitals. Also, responsiveness of service has been found as the most significant factor responsible for patient satisfaction.

To examine the impact of marketing mix strategies of private hospitals on patient satisfaction, Ahmad, Al-Qarni, Alsharqi, Qalai and Kadi (2013) have conducted a study in Jeddah, Saudi Arabia. Independent variables in this study are range of health services, cost, distribution, promotion, physical environment, procedures and personal strategies. Dependent variable is patient satisfaction. Primary and quantitative data has been collected with the help of a structured

questionnaire from 190 hospital managers. A purposive sampling technique has been opted. It has been seen that five variables, namely, range of health service, promotion, physical environment, procedures and personal strategies have a direct impact on patient satisfaction. In contrast, variables such as cost and distribution strategies have less impact on patient satisfaction.

In order to examine the relationship between service quality and satisfaction of patients of private hospitals, Aqel and Al-Tarawneh (2013) have carried out a research in Amman, Jordan on 300 respondents. They have established a relationship between independent variables, namely, basic health services, non-health services, nursing care and price of service, and dependent variable, namely, patient satisfaction. It has been shown that patient satisfaction is directly related with availability of appropriate health services, responsiveness of services, professional way of service delivery, nursing and staff care, modern technologies and service charges. The results of this study also resemble the findings of previous studies.

Ebrahimipour et al. (2013) have conducted a study in Iran to identify patient dissatisfaction factors. The patients of a tertiary level training hospital have been surveyed. Primary data related with patients' complaints and dissatisfaction behavior has been collected. A total of 233 responses have been received with respect to patients' written, verbal and telephonically complaints. The complaints pertains to accessibility to medical staff, communication skills, delay in service delivery, quality of basic amenities**,** admission and discharge services and quality of care. These factors have been suggested to serve as a basis to improve overall quality of service which may result in higher patient satisfaction.

Likewise, El Haj, Bahri, Noureddine and Lamrini (2013) have successfully attempted to measure the importance of patient satisfaction for improvement of quality of care at pediatrics department of a public hospital in Morocco. They have collected data from 104 parents/guardians of child patients. Univariate analysis, bivariate analysis and multiple factor analysis techniques have been employed to analyze the data. It has been concluded that key factors leading to patient satisfaction are cost of service, reputation of hospital, range of services, administrative procedures, waiting times and availably of doctors.

Baydas (2014) has also emphasized the importance of patient satisfaction by studying the same at private health care organizations in Sivas on 148 respondents selected on the basis of simple random sampling. The author has proposed a relationship between hospital management and service quality performance. It has been shown that patients opt for private hospitals because of various negative aspects of government hospitals. Various factors affecting patient satisfaction in private hospitals are physical infrastructure, responsiveness and accuracy of service delivery, experienced and knowledgeable staff, reliability, credibility and accessibility of hospital services, courtesy of hospital staff and ability to meet customers' needs. The only factor which has been accounted for lower patient satisfaction is the charges of services. The study has revealed that reasons for patient dissatisfaction from government hospitals are long waiting periods, poor trustworthiness, lack of quality equipments, poor infrastructure, lack of expert doctors and unhygienic environment.

Concurrently, Leilabadi and Noorossana (2014) have studied reasons for customer dissatisfaction with respect to hospital services. They have found that reasons for service failure or patient dissatisfaction are experiences, beliefs, values, expectation, health status, socio-demographic and psycho-cultural factors of an individual. The institutional factors accountable for patient dissatisfaction are physical care environment, attitudes, behavior and appearance of staff members, service quality and reliability of services. The study has depicted the importance of socio-demographic and psycho-cultural factors of an individual for patient satisfaction.

Messina et al. (2014) have investigated emergency health care services as a parameter to judge the overall quality of hospital services in the context of Tuscany, Italy. Convenience sampling method has been used to collect data from 259 patients with the help of Consumer Emergency Care Satisfaction Scale (CECSS), a validated tool based on literature related to emergency health care services. It has been shown that patients are satisfied with quality of information and nursing care and dissatisfied with waiting time for examinations.

In order to evaluate satisfaction and perception of patients, Njong and Tchouapi (2014) have conducted a study in Cameroon using Public Expenditure Tracking Survey (PETS) and Quantitative Service Delivery Surveys (QSDS), jointly carried out by World Bank and National Institute of Statistics in Cameroon. Confirmatory factor analysis has been used to examine the validity and reliability of adopted study instrument. Ordered Probit modeling has been used to

identify the covariates of user satisfaction. It has been observed that 85% of patients are satisfied with various service dimensions, namely, satisfaction with consultation, quantity and quality of medicines provided, courtesy and respect shown by staff, financial aspects, prompt response, quality of basic amenities and condition of medical equipments.

For the same purpose, Peprah (2014) has conducted a research at Sunyani Regional Hospital, Ghana. The researcher has stated that there is a positive relation between patient satisfaction and health care outcomes. Primary data has been collected and factor analysis based on principal component analysis has been employed. It has been found that patient satisfaction is influenced by a number of factors, namely, attitude of staff, responsiveness of services, service delivery time, explanation of disease to the patients, modern equipments, 24-hour services, emergency care services, behavior of doctors, information sharing with patients and cleanliness of the hospital.

Yadav and Mangwana (2014) have contributed to the literature by analyzing patient satisfaction at multispecialty hospital in Delhi with the help of a data set of 26,991 patients. The authors have identified nursing care is most and cafeteria is least rated patient satisfaction factors. Other factors, namely, medical care, staff behavior, diagnostics, basic facilities, housekeeping, ambience, admission process, dietary and discharge process have also been identified.

Recently, Yang and Yoon (2015) have studied the effect of hospital choice factors on patient satisfaction. Primary data has been collected from 450 cancer patients of regional hospitals in Korea. The researchers have found that human factors such as friendliness of staff, competence of doctors and explanation of disease and treatment procedures have an influence on patient satisfaction. It has been found that physical factors like latest medical equipments, hospital environment and convenient facilities may also affect satisfaction levels of patients. Accessibility of hospital has not been found to be influencing satisfaction of cancer patients. In a nutshell, the factors resulting from the study have been found to having an important influence on hospital choice decision of patients.

Results of the studies reviewed in this section point out to various factors which contribute towards the satisfaction of patients from health care facilities. The important ones are attitude of staff, responsiveness of services, friendliness and courtesy behavior of hospital staff, quality of

nursing care and physical infrastructure. As in the case of previous section, these findings also represent the factors responsible for patient satisfaction in developed economies. Consequently, a research gap has been recognized in literature to understand satisfaction levels of patients with respect to hospital services in emerging or developing economies.

2.4 Consumer decisions for repurchase and recommendation of services of health care facilities

Woodside and Shinn (1988) have investigated whether the level of awareness about hospitals, availability of choice options, perception of quality of care and satisfaction with hospital services among the discharged hospital patients influenced their repurchase decisions of hospital services. They have conducted a telephonic survey of former patients. It has been found that there is a positive relation between patients' satisfaction and intention to return to the same hospital for medical care. Moreover, the researchers have found that patients are interested to repurchase the services of the same hospital again.

Woodside, Frey and Daly (1989) have extended the hospital service repurchase and recommendation literature by theoretically and empirically examining the link between service quality, customer satisfaction and behavioral intentions. They have collected data from patients of National Medical Enterprise Inc., Los Angeles. They have developed a framework consisting of these variables and tested it empirically. A model supported with practical findings has been proposed. They have reported that consumer satisfaction leads to repeat sales, consumer loyalty and positive word-of-mouth. The study has concluded that there is a positive relation among consumer satisfaction and their repurchase intentions, positive word-of-mouth and loyalty.

Subsequently, Peyrot, Cooper and Schnapf (1993) have stated that consumer satisfaction is an important criterion for the purchase decisions for goods and services. It has a significant impact on positive word-of-mouth and subsequent buying decisions. They have also stated that health care service consumers use non-clinical dimensions such as waiting time and overall service delivery for their buying decisions. The researchers have examined factors related to consumer satisfaction and willingness to recommend the service provider. They have used primary data collected from 1366 patients and employed factor analysis and multivariate logistic regression techniques. Results of this study have also shown that non-medical service characteristics,

namely, staff behavior, atmosphere, information, comfort during examination and perceived worth have a positive effect on patient satisfaction and consequently on willingness to recommend.

In another study on patient satisfaction, Williams (1994) has stated that patient satisfaction has become a significant indicator to measure the outcomes of health service delivery. It has gained a prominent space in literature as well as in real business world. An extensive literature review has been conducted with respect to patient satisfaction. The researcher has affirmed that satisfied patients follow the prescription given by doctors and less prefers to change their service providers. Analogous to previous studies, the researcher has also asserted that satisfied patients repurchase the service again and recommend the service provider to others.

In the same manner, Hutton and Richardson (1995) have concluded that there is a direct relationship among hospital service outcomes, patient satisfaction, quality assessment, willingness to return and intention to recommend a health care provider to others. Furthermore, the role of tangibles in overall service delivery has also been emphasized.

On the other hand, Ford, Bach and Fottler (1997) have highlighted the perceptions of patients about health care service quality. It is associated with cost effectiveness and competitiveness of an organization. They have identified problems, advantages and disadvantages of nine different methods of measuring patient satisfaction with reference to service quality. Here, it has been shown again that there is a positive association between satisfaction of patient and their behavioral intentions such as repurchase and recommendation of health care services.

Around the same time, Eisenberg (1997) have also confirmed that there is a positive relationship between patient satisfaction and behavioral outcomes. Thus, it has been found that satisfied patients are more likely to recommend service providers to others and willing to return when they need the service again.

In continuation with early studies, Gremler, Gwinner and Brown (2001) have hypothesized and empirically tested that relationship between customers and employees (interpersonal bonds) has a significant impact on positive word-of-mouth. Four dimensions of interpersonal bonds, namely, trust, care, rapport and familiarity have been considered. Two set of respondents have been surveyed. Primary data has been collected with the help of a structured questionnaire from 1303

bank customers and 368 dental care patients. Confirmatory factor analysis has been employed to analyze the data. It has been found that as the trust of a customer increases in an employee, positive word-of-mouth about the organization is more likely to increase. Consequently, it has a positive influence on repurchase and recommendation behavior of customers.

On similar lines, Jenkinson, Coulter, Bruster, Richards and Chandola (2002) have also investigated various aspects of health care services influencing patient satisfaction and willingness to recommend the service provider to others. They have conducted a study with the help of Picker Inpatient Survey Questionnaire (PISQ). They have used multiple linear regression technique to analyze the data. On the basis of 2249 questionnaires with a response rate of 65%, it has been concluded that 90% of inpatients are satisfied with services of hospitals. They have shown their satisfaction with various service dimensions, namely, physical comfort, emotional support and respect for patient preferences. It has also been reconfirmed that patients are willing to repurchase and recommend the hospital services.

In the similar fashion, Boshoff and Gray (2004) have carried out a study to analyze the relationship among service quality, patient satisfaction and buying intentions in the context of services of private hospitals in South Africa. It has been observed that service quality, empathy of nursing staff, hospital charges and quality of meal have a direct impact on loyalty of health care consumers. Again, patients have shown their interests in recommending and repurchasing the services of same hospitals.

Subsequently, Lee (2005) has conducted a research study in relation to patient satisfaction. A practical method of predicting the revisit intentions of health care consumers with the help of data mining models has been examined. A qualitative data set collected from nationwide survey interviews conducted by professional interviewers in South Korea has been used. It has been observed that factors affecting patient satisfaction and their repurchase and recommendation intentions are hospital promotion and satisfaction with the behavior of doctors.

In order to predict patient loyalty towards public health care facilities in Ahmedabad, India, Chahal (2008) has studied patient loyalty, quality of hospital services and overall satisfaction of patients. The author has identified factors accountable for patient loyalty using a sample of 205 patients of general medicine, orthopedic, pediatrics, obstetrics and gynecology departments. It

has been revealed that satisfied patients are more loyal patients and they are willing to reutilize the services of same hospitals.

Lastly, in a study to evaluate overall quality of care, willingness to recommend and willingness to return in the context of hospital services, Otani et al. (2010) have found that satisfied patients repurchase the hospital service when they need it again. They have also observed that such patients recommend the services of same hospitals to others for instance to their friends and relatives. The data set of 14,432 patients collected by BJC health care in St. Louis metropolitan area, using a structured questionnaire, has been analyzed. A telephone survey has been conducted with randomly selected recently discharged patients. Multiple linear regression analysis has been employed. It has been seen that overall quality of care, willingness to recommend and willingness to return are interdependent on each other. This means that patients are willing to repurchase and recommend the services of same hospitals. They are influenced by service dimensions, namely, staff care and nursing care. Briefly, a positive association between patient satisfaction and, service repurchase and recommendation decisions have been presented.

This section of literature review summarizes findings related to decisions of patients for repurchase and recommendation of health care services. It has been observed that patients are willing to repurchase and recommend, if they are satisfied from hospital services. Simultaneously, the literature has also supported the expansion of scope of research gaps identified in previous sections. It leads to study service repurchase and recommendation behavior of patients of emerging countries.

2.5 Decision-makers involved in selection of health care facilities

Wright, Wright and Parsons (1982) have conducted a study to identify decision-makers involved in selection of hospitals. Data from female patients looking for obstetrical services has been collected. It has been observed that 54% decisions to select the hospitals for maternity care services have been taken by patients themselves.

Around the same time, Anderson (1982) has also conducted a study to understand the role of female consumers in use of hospital's gynecological services. It has been found that patients have chosen the hospitals themselves in 59% cases. Patients have reported that doctors have

given them options and final decision of selecting the hospitals has been made by them. However, in 45% of non-critical cases hospital choice decisions have been made by female patients.

Subsequently, Kurz and Wolinsky (1984) have also conducted a study to identify decision-makers involved in selection of hospitals. The study is based on a survey conducted on consumer versus physician selection of hospitals. It has been seen that in most of the cases, patients themselves choose the hospitals, except in emergency cases. A significant association has been found between perception of final decision-makers and various demographic, socio-cultural and psychological factors, namely, age and marital status (demographic), number of hospital visits (socio-cultural) and willingness to change physician (psychological). In addition to this, it has been found that the factors which have a direct impact on final selection of hospitals are type of insurance coverage (individual resource) and medical situations (in-patient or out-patient).

Similarly, in a study to measure the influence of women on hospital choice decisions, Wallace (1985) has reported that with regards to maternity care services 35% decisions have been taken by female patients for the selection hospitals for themselves.

Analogous to previous study, Deveny, Atchison and Flynn (1986) have studied the role of women in hospital choice decision for their family members. The researchers have collected data for general health diseases. As a result, it has been found that 60% of decisions have been made by female family members.

Extending the literature, Lane and Lindquist (1988) have evaluated various decision-makers involved in selection of hospitals. They have reviewed literature on hospital choice criteria for allopathic and osteopathic health care services. They have covered both published and unpublished work available in this context through a combined view of hospital choice factors and influencers in hospital choice decisions. It has been revealed that patients themselves take hospital choice decisions in 22% of cases and doctors decide in 52% of cases. They have also reported that decision may vary depending on the seriousness of illness.

In a similar fashion, King and Haefner (1988) have conducted a study to investigate the external physician search process. Respondents have been requested to give their preferences for hospital choices. It has been seen that 47% of respondents have selected the hospitals on the basis of

consultant doctor practiced in those hospitals. Findings of this study have also supported those of previous studies.

In order to identify decision-makers involved in selection of hospitals, Smith and Clark (1990) have conducted a study. They have reported that 62.5% hospital choice decisions have been made by physicians, 32.7% decisions have been made by patients with the consultation of physicians and 4.8% decisions have been made by patients themselves. The present results also resemble the findings of previous studies.

For the same purpose, Daloğlu (1991) has conducted a study on 200 patients of two private hospitals in Turkey. Accordingly, it has been found that doctors decide in 54% cases, patients take decisions in 33% cases, and friends and relatives take the call in 13% cases.

Kurtulus and Harcar (1993) have also studied choice behavior of health care consumers. It has been observed that most of the patients (91%) think that consulting only one physician is not sufficient to make a decision. Additionally, patients have reported that they have discussed with more than one consultant and decided on their own.

Likewise, Besik (1995) has conducted a study to identify decision-makers with regards to gynecological services. It has been concluded that only 12.3% of patients have searched in detail to choose the hospitals, and 57.4% of patients have searched very little about service providers.

Karafakıoğlu (1998) has also focused on the role of decision-makers in selection of hospitals. It has been confirmed that doctors have decided the hospital in 50% cases but patients have changed their doctors in order to visit their preferred hospitals in 42% cases.

Eventually, Akinci et al. (2005) have conducted a study to identify hospital choice factors and decision-makers involved in selection of hospitals in the context of Ankara, Turkey. It has been seen that patients have become more active participants in decisions regarding hospital choices and treatment procedures. It has been found that patients themselves choose the hospitals as well as consider the options given by doctors. Thus, it has been revealed that patients also take decisions for the selection of hospital.

The cited literature in this section discusses various decision-makers involved in the selection of a hospital. It has been seen that doctors, family members, friends and patient themselves choose the hospitals. Also, this section serves as a basis to examine more research gaps in literature. It provides a trigger to identify the final decision-makers involved in the selection of a hospital in emerging countries.

2.6 Research gaps and statement of problem

Since patients are the consumers of services provided by health care organizations, a better understanding of their behavior is essential for service providers to allocate the limited resources effectively. It may help the organizations to design, produce, deliver and improve the services in accordance with needs and wants of different patient groups.

As observed from the preceding review of literature, most of the studies have been conducted in the context of developed countries. The health care delivery systems in such countries are different from out-of-pocket payment system followed by developing and underdeveloped countries. Many differences are also found within developing countries in terms of culture, expectations of patients, role of government in overall medical care and respondents' demographic characteristics.

Most of the previous studies have examined the behavior of health care consumers in a general perspective. They have not specifically focused on patients suffering from tertiary-level health diseases at multispecialty hospitals. Moreover, there is a lack of studies which comprehensively focus on behavior of health care consumers with respect to hospital choices, satisfaction levels, post-purchase intentions and decision-makers involved in selection of hospitals. This gap of literature has been found in the context of both developed and developing countries. Thus, the available literature presents a limited and inadequate view of consumers' perspective with regards to health care services.

The purpose of present study is to explore the factors affecting hospital choice decisions and satisfaction of patients, in the context of tertiary-level health care services at multispecialty hospitals in India, an emerging economy. It examines if these factors have a statistically significant difference with respect to presence or absence of health insurance, and also among

various categories of respondent demographics. It analyzes the repurchase and recommendation decisions of health care consumers and categorizes the decision-makers involved in selection of hospitals. It also proposes a framework of consumer choices and satisfaction in health care industry. Therefore, the present study attempts to bridge the identified gaps and contribute theoretically to the literature.

Concluding remarks

This chapter presents a brief summary of literature related to various aspects of consumer behavior in health care industry. It demonstrates choices and satisfaction of health care consumers. It talks about consumers' decisions for repurchase and recommendation of services of health care facilities. It examines decision-makers involved in selection of health care facilities. Based on review of literature, research gaps and statement of problem have also been presented.

Chapter - III

Research Methodology

3.1 Introduction

Every research needs to be well planned. To carry out the research in a systematic and scientific manner, suitable research methodology is required to be developed. This chapter outlines the overall research design, including the methodology adopted for carrying out the research work. The present study has been conducted in the context of Indian out-of-pocket payment health care system with the objectives of identifying key factors and their relative importance, affecting hospital choice decisions of patients and their satisfaction levels with respect to tertiary-level health care services. The study also analyzes the consumers' decisions for repurchase and recommendation of services and categorizes decision-makers involved in selection of hospitals.

3.2 Phases of research

The complete research process has been carried out in the following four phases:

Phase I: Understanding the existing perspective

Existing literature on consumer behavior in health care industry has been explored in this phase. The literature includes expectations, choice decisions, satisfaction levels, and post-purchase behavior of health care consumers. It has been reviewed thoroughly to understand the behavior of consumers before, during and after purchase of hospital services. Simultaneously, identification and analysis of the variables have been done in this phase.

Phase II: Assessment of consumers' perspective

This phase of research involves designing of a well-structured questionnaire to assess the choices and satisfaction of health care consumers with respect to tertiary-level health care services. It lays emphasis on demographic profile of respondents, variables of hospital choice decisions, variables of consumer satisfaction from hospital services, and decision-maker involved in selection of hospitals. It also focuses on repurchase and recommendation decisions of consumers

with respect to the services of same health care facilities. The questionnaire has been designed after extensive literature review and validated through discussions with academicians and industry experts.

Phase III: Pilot testing of study instrument

The third phase of research includes pilot testing of study instrument before its use for final data collection. A sample of 100 respondents has been used to test the reliability and validity of the instrument. Values of Cronbach's alpha and factor loadings for each statement have also been verified.

Phase IV: Developing a strategic framework

In the last phase of present study, an endeavor has been made to synthesize consumer choices and satisfaction with respect to tertiary-level health care service. Primary data has been collected and analyzed with the help of SPSS® 16.0. Outcomes have been presented. A framework of consumer choices and satisfaction in health care industry has then been proposed.

3.3 Research design

A number of techniques are available for collecting primary information from respondents. For this study, a well-structured questionnaire based on five-point Likert type scale has been used as the prime survey instrument for data collection. In order to fulfill various research objectives, exploratory, descriptive and explanatory cross-sectional survey designs have been used.

Various statistical tools, namely, exploratory factor analysis, one-way ANOVA, two-tailed t-test and linear discriminant analysis have been employed in analyzing the data. These tools have been used to identify the factors and examining their relationships with respondents' demographics. Explanatory cross-sectional survey design has been used to answer the research questions and testing the hypotheses. This design has also been used to describe the characteristics of different respondent groups.

With the use of these research designs, consumers' choices and satisfaction with respect to tertiary-level health care services have been studied. Decisions for repurchase and recommendation of services have been analyzed. Various categories of decision-makers involved

in the selection of a hospital have been identified. On the basis of the results, a framework of consumer choices and satisfaction in health care industry has also been developed.

3.3.1 Research questions

This research study seeks to address the following questions:

1. What choice criteria do consumers consider to be important in selection of hospitals?
2. How satisfied are consumers with respect to various service attributes?
3. What is the relative importance of choice criteria and service attributes?
4. How are demographic variables of consumers related to choice criteria and service attributes?
5. How do consumers behave after utilizing services of hospitals?
6. Who are the final decision-makers in selection of hospitals?

3.3.2 Research objectives

Objectives of the study are:

1. To identify the key factors along with their relative importance affecting consumer choices of health care facilities
2. To examine if the factors affecting consumer choices of health care facilities are related with consumer demographics
3. To identify the key factors along with their relative importance affecting consumer satisfaction from health care facilities
4. To examine if the factors affecting consumer satisfaction from health care facilities are related with consumer demographics
5. To analyze the consumer decisions for repurchase and recommendation of services of health care facilities
6. To categorize the decision-makers involved in selection of health care facilities

3.3.3 Research hypotheses

The following hypotheses have been framed to achieve the objectives:

H1: There is a significant relationship between individual demographic variables and consumer choices of health care facilities

H2: There is a significant relationship between individual demographic variables and consumer satisfaction from health care facilities

H3: There is a significant relationship between consumer choices and consumer decisions for repurchase of services of health care facilities

H4: There is a significant relationship between consumer satisfaction and consumer decisions for recommendation of services of health care facilities

3.3.4 Population and respondents

India has a population of 1.3 billion people residing in 29 states and seven union territories, out of which 31% are situated in northern part of the country consisting of seven states, namely, Haryana, Punjab, Uttar Pradesh, Rajasthan, Uttarakhand, Himachal Pradesh, Jammu & Kashmir, and two union territories, namely, Delhi and Chandigarh. Patients in multispecialty hospitals, particularly those suffering from tertiary-level health diseases, based in north India, comprise the population for this study.

Patients suffering specifically from eight types of tertiary-level health diseases, namely, knee-joint replacement, spinal cord operation, heart by-pass surgery, heart stent implant, renal failure, hip-joint replacement, intestine problem and lungs disorders have been studied. These diseases seem to be prevalent because of urbanization and changing life styles in India. Also, the patients suffering from these diseases have almost similar expectations from health care service providers. Thus, they can be considered as a homogeneous respondent group.

The north region of India has been chosen based on practical considerations and also on the basis of a premise that it is representative of the country. All types of health care services are available in this region and people belonging to various countries, states, income groups, families and cultural backgrounds come to these hospitals. The region includes rich states with modern cities which are populated with multispecialty hospitals. These hospitals have all facilities to provide primary, secondary and tertiary-level health care services.

3.3.5 Sampling and data collection

Population of this research study is very large and enumeration of all members is nearly impossible. On the basis of availability of multispecialty hospitals in different cities of various

states and union territories in north India, a convenience sampling technique has been adopted. This technique is often used for exploratory research work in social sciences where population is very large (Babbie, 1990; Zikmund, 1997).

A structured questionnaire, based on a five-point Likert scale, has been used to collect primary data. In most of similar studies, this scale has been used to measure respondents' attitudes towards health care services (Colla, Bracken, Kinney, & Weeks, 2005). It is composed of an equal number of favorable and unfavorable statements concerning the attitude of respondents (McIver & Carmines, 1981). A total of 1000 questionnaires have been administered between March and August 2014, to the patients of multispecialty hospitals, located in north India, out of which 883 completely-filled questionnaires, comprise the sample for present study. Kent (1993) has also affirmed that a sample of 1000 respondents is adequate to conduct market research.

3.3.6 Structure of the questionnaire

After a systematic and thorough review of available literature, the researcher has developed the study instrument. A structured questionnaire has been designed for the purpose of primary data collection from respondents. A step-by-step approach has been adopted to generate the questions. First of all, the researcher has prepared a list of information required from respondents. Considering the objectives of present study, a sequence of questions has been decided to collect the information. On the basis of literature review and panel discussion with experts, the questionnaire has been divided in five different sections. Section 1 covers the names of hospitals visited, types of diseases, types of treatment and information about decision-makers involved in the selection of a hospital. List of variables related to patient's choice of hospitals is contained in section 2. Section 3 details the list of variables related to patient satisfaction from hospital services. Information about behavioral outcomes of respondents after service consumption is covered in section 4. Section 5 includes demographic profiles of study respondents.

Table 3.1 presents the response method and purpose of each question. The scoring of information collected from respondents has been compiled in excel format according to standardized manuals of statistical tests. The questionnaire has been shown as an appendix.

Table 3.1: Structure of questionnaire

Section No.	***Gist of question***	***Response method***	***Purpose***
1	Name of the hospital	Open ended responses	To make identification of hospitals, diseases and decision-makers
	Name of the disease		
	Type of treatment		
	Decision-maker for the selection of hospital		
2	List of attributes related to patient's choice of hospitals	Rate 1-5 (1 is not-at-all important and 5 is extremely important)	To identify the factors affecting hospital choice decisions of patients
3	List of attributes related to patient satisfaction from the hospital services	Rate 1-5 (1 is highly dissatisfied and 5 is highly satisfied)	To identify the factors affecting patient satisfaction from hospital services
4	Repurchase the services in future	Yes / No responses	To study the patients' decisions for repurchase and recommendation of hospital services
	Recommend the service provider to others		
5	Age	Please tick one option out of given different options	To collect the demographic information of study respondents
	Gender		
	Marital status		
	Residence		
	Education		
	Occupation		
	Monthly family income		
	Health insurance		

3.4 Data validity and reliability

Validity of the instrument can be verified from the values of factor loadings for each statement. It is usually accepted that factor loadings $\geq .04$ for each statement is good for the validity of questionnaire (Hair, Black, Babin, Anderson, & Tatham, 2006). The study instrument has been passed face validity test by experts. Factor loading for each statement has also shown that statements are valid as all the values are more than 0.40.

Reliability of the questionnaire can be verified from Cronbach's alpha presented for various items in the questionnaire, which suggests higher degree of inter correlation among the test items (Cronbach, 1951). In the present study, reliability analysis has been carried out by using Cronbach's coefficient alpha which indicates internal consistency of the scale used in this study for data collection purpose. Alpha is typically used when there are several Likert type items that are summed to take a composite score or summated scale. It is based on the average correlation of each item in the scale with every other item. High value of Cronbach's coefficient alpha, simply suggests that the scale possesses high internal consistency or high reliability of different items designed to measure multiple constructs and variables. Generally, as a rule of thumb, Cronbach's alpha ≥ 0.70 is considered as an acceptable reliability coefficient (Nunnaly, 1978). The questionnaire has been pre-tested on a sample of 100 respondents. All the statements have been found to be reliable since the value of Cronbach's alpha for each construct is greater than 0.70.

3.5 Data analysis

Data were analyzed with the help of Statistical Package for Social Sciences (SPSS)® 16.0. Statistical tools like exploratory factor analysis, one-way ANOVA, two-tailed t-test and linear discriminant analysis have been employed to test the hypotheses.

3.5.1 Factor analysis

Factor analysis is the best method to identify underlying factors from an array of apparently important variables. It is a set of techniques, which, by analyzing correlations among variables, reduces their number into smaller number of factors, which explain much of the original data, more efficiently. It relieves the researcher from confusion arising through overlapping measures of same underlying variables (Kim & Mueller, 1978; Nargundkar, 2005).

Exploratory factor analysis has been used in the study to identify important factors affecting hospital choice decisions and satisfaction of patients with respect to tertiary-level health care services. Measures of sample adequacy such as Kaiser-Meyer-Olkin and Bartlett's test of Sphericity have been calculated. Principal axis factoring with varimax rotation method has been used for extracting the factors. Statements with factor loadings greater than value 0.40 have been considered. Factors with an Eigen value of one or more have been extracted.

3.5.2 ANOVA

ANOVA is a set of techniques for studying the cause and effect of one or more factors (independent variables) on a single dependent variable. It makes simultaneous comparisons between two or more means. It concedes values that can be used to determine if a significant relation exists between variables. One-way ANOVA can be applied when there are three or more categories to compare (Howell, 2002; Malhotra & Birks, 2006). This technique has been employed in the present study to examine whether consumers' choices of hospitals and their satisfaction levels are different with respect to various demographic variables. F-test under ANOVA has been conducted to check if different responses have same mean values. Further, mean scores of factors have been compared to see the responses of various categories. Tukey's post hoc analysis has been performed on independent demographic variables containing more than two categories. This technique controls the Type I error rate very well without substantial loss in power. Also, it is more powerful as compared to other methods when testing large numbers of means (Field, 2009).

3.5.3 t-test analysis

A t-test is a statistical examination of two sample means. It is a parametric test and commonly used to examine the statistical differences between mean scores of two or more groups. A two-tailed t-test examines whether mean scores of two independent groups differ. It can be used when the variances of two normal distributions are unknown (Hair et al., 2006). This technique has been applied in the study to compare mean scores of various categories of respondent demographic.

3.5.4 Linear discriminant analysis

Linear discriminant analysis is a technique to find out a linear combination of features that separates two or more classes of data. It expresses one dependent variable as a linear combination of other features or measurements. It has continuous independent variables and a categorical dependent variable. It also attempts to model the difference between classes of data (Fisher, 1936). This technique has been implemented in the present study to analyze the consumers' decisions for repurchase and recommendation of services of same health care

facilities. Linear discriminant equations based on unstandardized coefficients of identified factors have also been developed.

3.6 Research framework

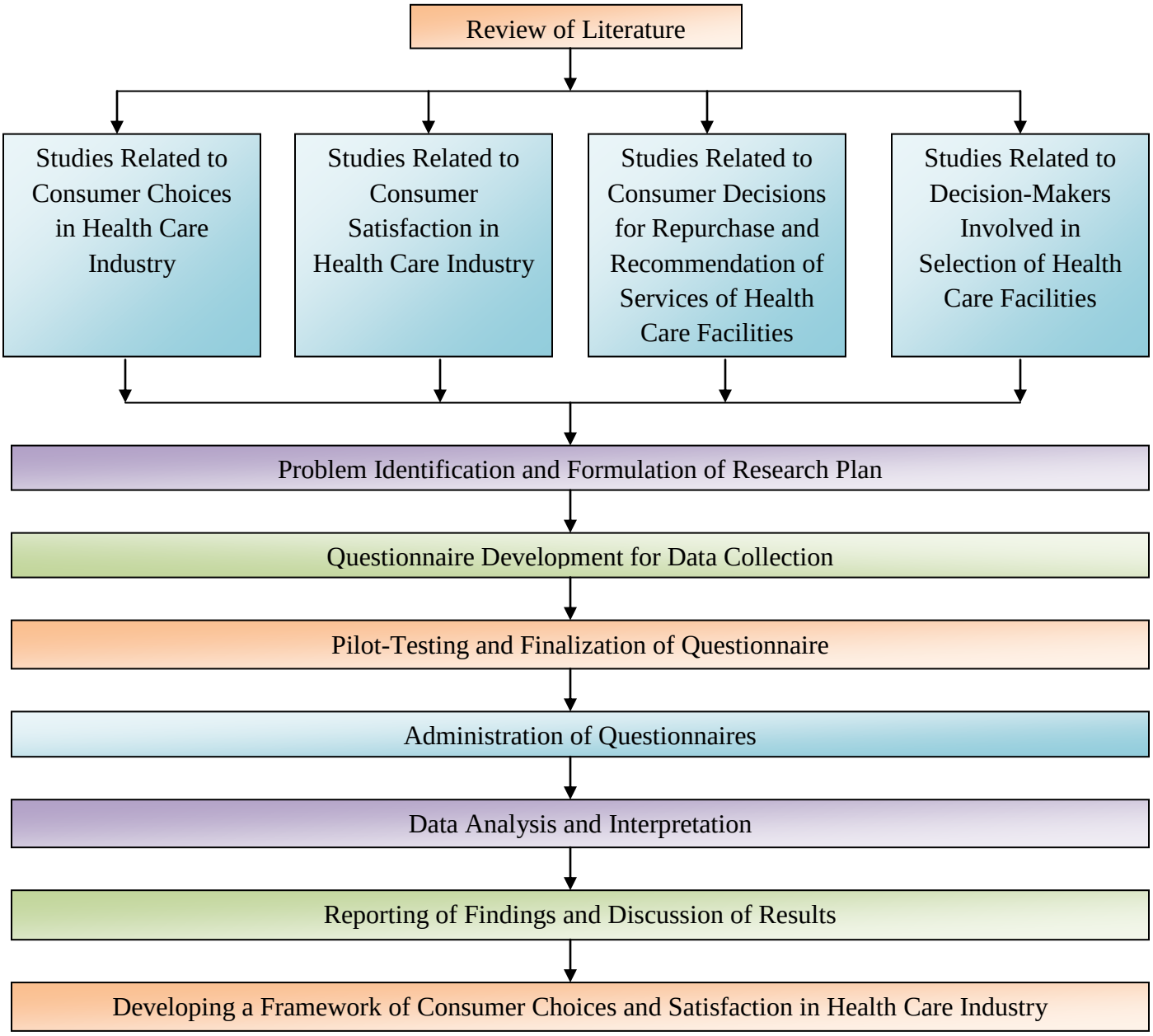


Figure 3.1: Research Framework

Concluding remarks

This chapter describes the details of step-by-step approach adopted for the present study. It explains the methodology applied at different phases of study. It outlines an overview of the rational of statistical methods such as factor analysis, ANOVA, t-test and linear discriminant analysis employed to test hypotheses. A research framework has also been developed.

Chapter - IV

Data Analysis and Interpretations

Introduction

This chapter presents the statistical analysis of data and reports the findings. Data has been analyzed with the help of SPSS® 16.0. Exploratory factor analysis, one-way ANOVA, two-tailed t-test and linear discriminant analysis have been employed to validate the research framework. Demographic criteria and health insurance-wise break-up of respondents have been discussed. Disease-wise distribution of respondents from each region has been shown. A proposed framework of consumer choices and satisfaction in health care industry has also been presented.

With regards to each research objective, this chapter has been organized into six main sections. Section 4.1 presents the results of exploratory factor analysis for consumer choices of health care facilities. Results of one-way ANOVA and two-tailed t-test for consumer choices of health care facilities have been shown in section 4.2. Section 4.3 discusses the results of exploratory factor analysis for consumer satisfaction from health care facilities. Results of one-way ANOVA and two-tailed t-test for consumer satisfaction from health care facilities have been presented in section 4.4. Section 4.5 shows the analysis of consumers' decisions for repurchase and recommendation of services of health care facilities. Results of various categories of decision-makers involved in selection of health care facilities have been discussed in section 4.6.

Demographic criteria and health insurance-wise break-up of respondents

Number of respondents on the basis of demographic criteria and health insurance are mentioned in this section.

- Age – 52 (Up to 20 Years), 159 (21-35 Years), 256 (36-50 Years), 416 (More than 50 Years)
- Gender – 591 (Male), 292 (Female)
- Marital Status – 787 (Married), 96 (Unmarried)

- Residential Area – 149 (Metro City), 423 (Non Metro City), 204 (Semi Urban Area), 107 (Rural Area)
- Education – 194 (Post Graduation and Above), 168 (Graduation), 62 (Diploma), 459 (Class XII or Below)
- Occupation – 62 (Government Employee), 141 (Private Employee), 263 (Businessman), 417 (Dependent)
- Monthly Family Income – 93 (Up to Rs. 25,000), 126 (Rs. 25,001 to Rs. 50,000), 319 (Rs. 50,001 to Rs. 75,000), 224 (Rs. 75,001 to Rs. 1,00,000), 121 (More than Rs. 1,00,000)
- Health Insurance – 114 (Yes), 769 (No)

Out of 883 respondents, 416 (47%) are more than 50 years of age, 256 (29%) are in age group of 36-50 years, 159 (18%) are between 21 and 35 years, and 52 (6%) are up to 20 years of age. The numbers of male and female respondents are 591 (67%) and 292 (33%) respectively. A total of 787 (89%) respondents are married and 96 (11%) are unmarried. A sum of 423 (48%) respondents are residing in non-metro cities, 204 (23%) are living in semi-urban area, 149 (17%) are based in metro cities and 107 (12%) are belonged to rural area.

With regards to education, 459 (52%) respondents are educated up to class XII, 194 (22%) are post graduates and above, 168 (19%) are graduates and 62 (7%) are diploma holders. A dominant share of 417 (47%) respondents are dependent, 263 (30%) are businessmen, 141 (16%) are private employees and 62 (7%) are government employees.

Monthly family income of 319 (36%) respondents is ranging between Rs. 50,001 and Rs. 75,000, for 224 (25%) respondents it is ranging between Rs. 75,001 and Rs. 1,00,000, for 126 (14%) it is ranging between Rs. 25,001 and Rs. 50,000, for 121 (14%) it is more than Rs. 1,00,000 and for 93 (11%) it is up to Rs. 25,000. Majority of 769 (87%) respondents are insured with health insurance and the rest 114 (13%) are not insured.

The distribution of respondents on the basis of demographic categories and health insurance is shown in figures 4.1 to 4.8.

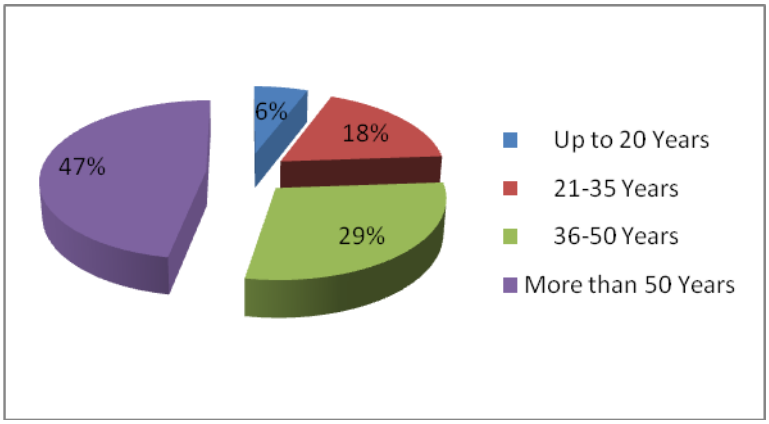


Figure 4.1: Age-Wise Distribution of Respondnets

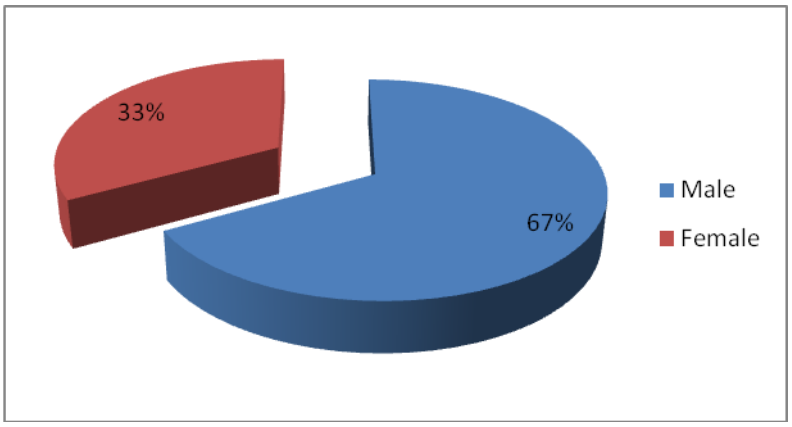


Figure 4.2: Gender-Wise Distribution of Respondnets

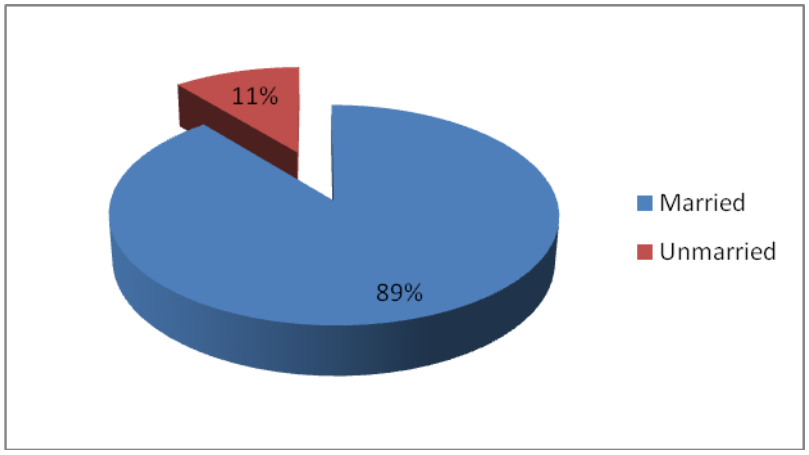


Figure 4.3: Marital Status-Wise Distribution of Respondnets

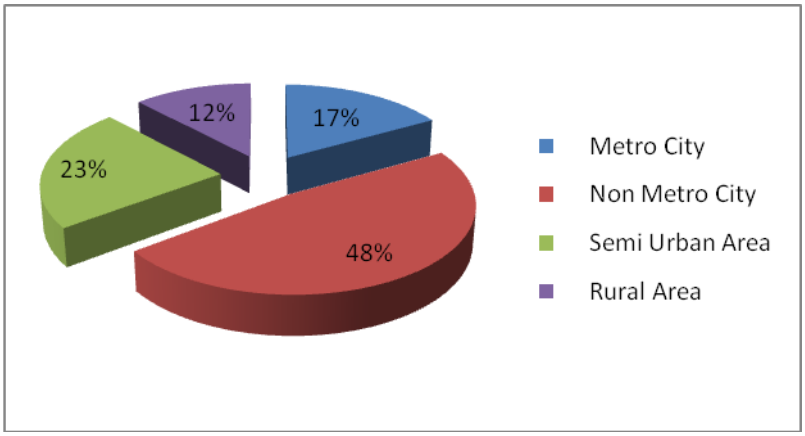


Figure 4.4: Residetial Area-Wise Distribution of Respondnets

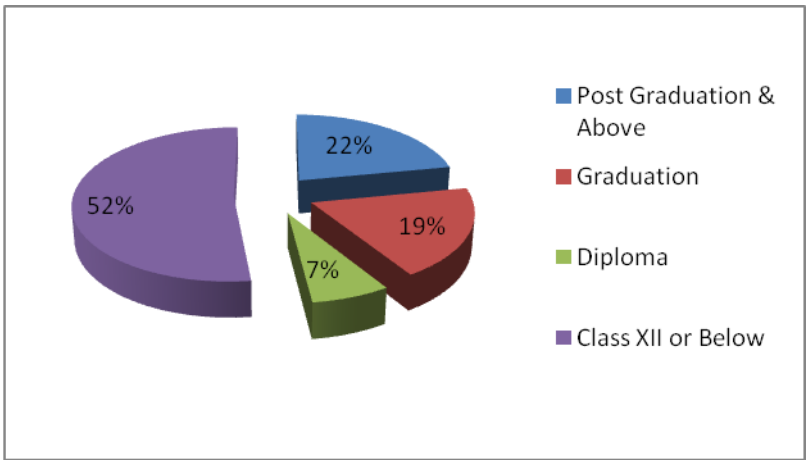


Figure 4.5: Education-Wise Distribution of Respondnets

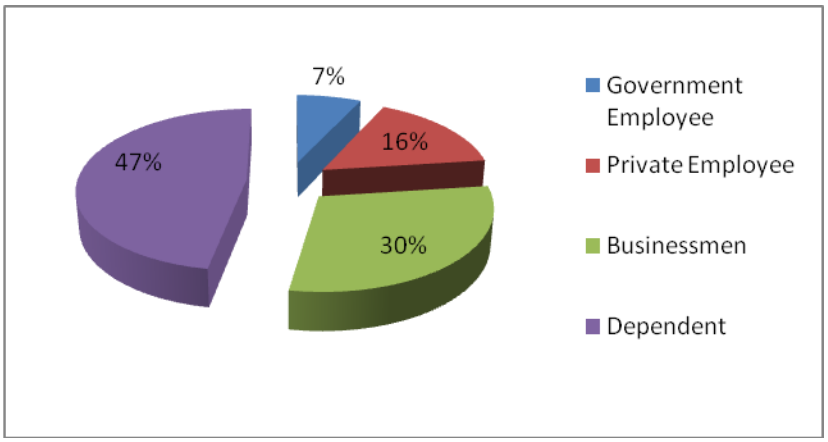


Figure 4.6: Occupation-Wise Distribution of Respondents

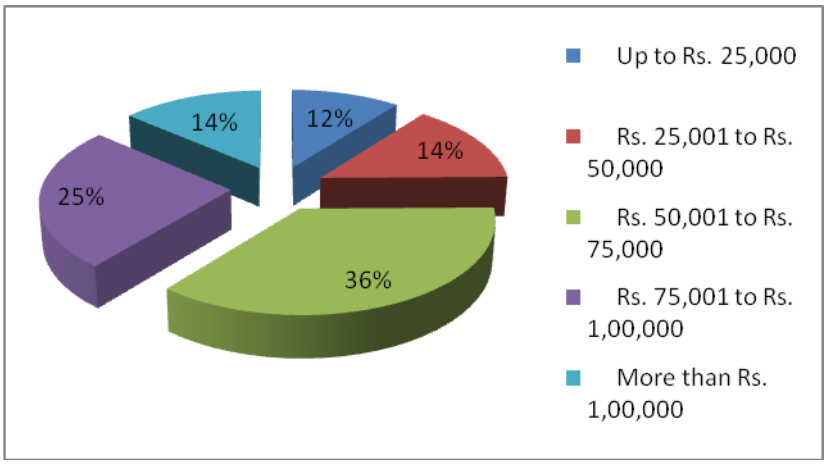


Figure 4.7: Monthly Family Income-Wise Distribution of Respondnets

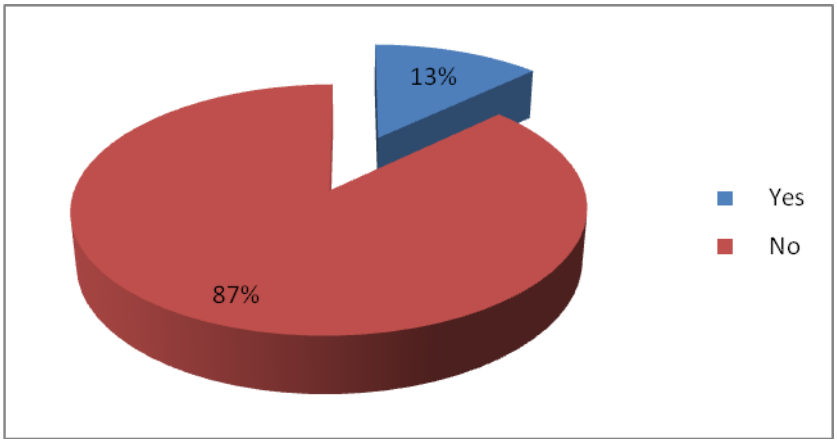


Figure 4.8: Health Insurance-Wise Distribution of Respondnets

Disease-wise distribution of respondents from each region

The disease-wise distribution of respondents for each region is shown in table 4.1. The table displays various regions to which patients belong and the diseases from which patients are suffering.

Table 4.1: Disease-wise distribution of respondents for each region

	Knee-joint replacement	**Spinal cord operation**	**Heart by-pass surgery**	**Heart stent implant**	**Renal failure**	**Hip-joint replacement**	**Intestine problem**	**Lungs disorders**	**Total**
U.T. 1	33	33	37	51	25	24	7	13	223
State 1	64	26	12	11	33	34	4	8	192
State 2	36	52	33	11	0	0	15	0	147
U.T. 2	34	22	24	6	2	5	11	10	114
State 3	4	9	13	10	13	3	4	8	64
State 4	9	13	14	3	1	0	9	3	52
State 5	1	3	13	2	5	6	3	5	38
State 6	11	6	11	0	0	1	0	0	29
State 7	5	8	5	0	0	5	0	1	24
Total	197	172	162	94	79	78	53	48	**883**

U.T. 1 = Delhi, U.T. 2 = Chandigarh, State 1 = Haryana, State 2 = Punjab, State 3 = Uttar Pradesh, State 4 = Rajasthan, State 5 = Uttarakhand, State 6 = Himachal Pradesh, State 7 = Jammu and Kashmir

A total of 223 (25%) patients belong to Delhi, 192 (22%) reside in Haryana, 147 (17%) live in Punjab, 114 (13%) dwell in Chandigarh, 64 (7%) inhabit in Uttar Pradesh, 52 (6%) have their homes in Rajasthan, 38 (4%) stay in Uttarakhand, 29 (3%) belong to Himachal Pradesh and 24 (3%) live in Jammu and Kashmir.

A number of 197 (22%) patients are suffering from knee joint replacement, 172 (20%) are admitted for spinal cord operation, 162 (18%) are patients of heart by-pass surgery, 94 (11%) are admitted for heart stent implant, 79 (9%) are suffering from renal failure, 78 (9%) are patients of hip joint replacement, 53 (6%) are admitted for the treatment of intestine problem and 48 (5%) are patients of lungs disorder.

The distribution of respondents on the basis of regions and diseases is shown in figures 4.9 and 4.10.

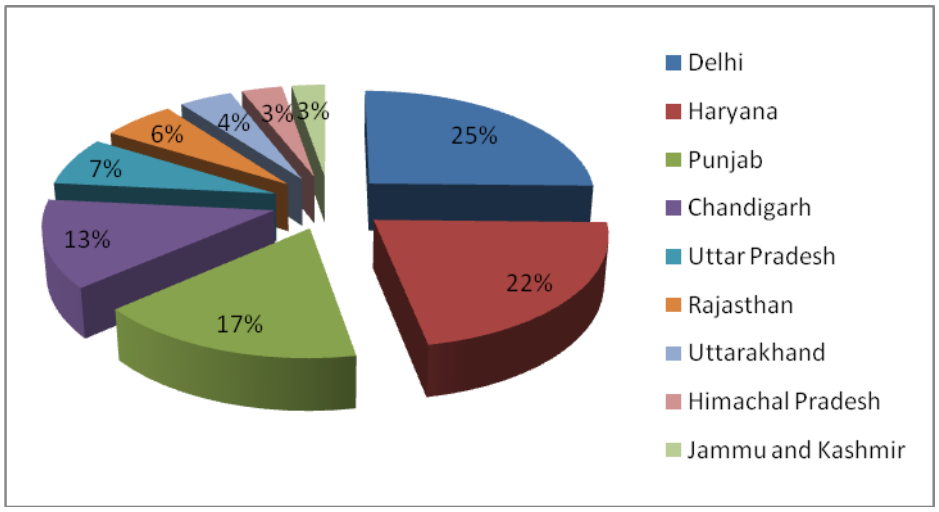


Figure 4.9: Region-Wise Distribution of Respondents

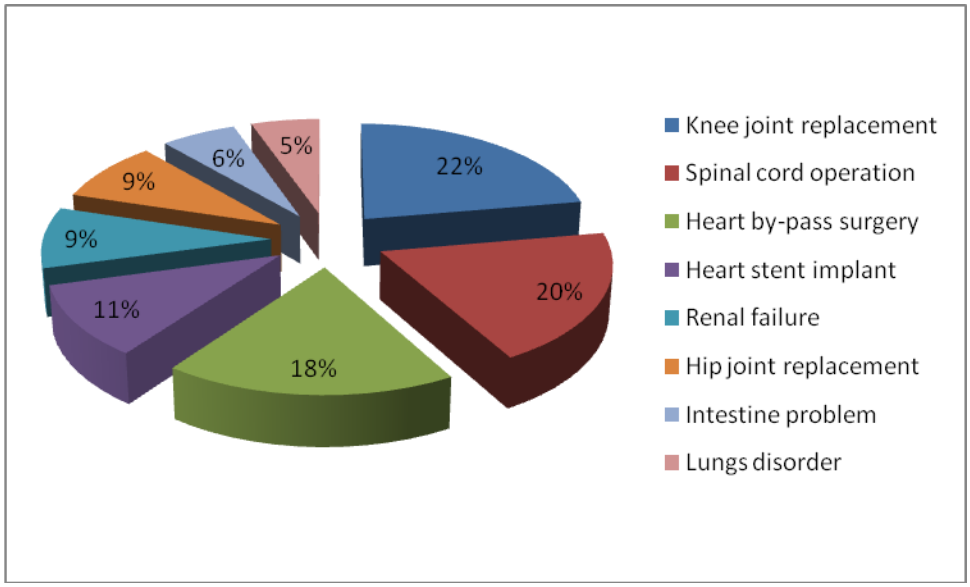


Figure 4.10: Disease-Wise Distribution of Respondents

Objective 1: To identify the key factors along with their relative importance affecting consumer choices of health care facilities

4.1 Exploratory factor analysis for consumer choices of health care facilities

Exploratory factor analysis has been employed for extracting the factors affecting consumer choices of health care facilities. Respondents have been asked to give responses to various statements affecting their hospital choice decisions on a five-point Likert type importance scale. Measures of sample adequacy such as Kaiser-Meyer-Olkin and Bartlett's Test of Sphericity have shown that factor analysis can be applied.

Table 4.2 presents the values of Kaiser-Meyer-Olkin and Bartlett's Test of Sphericity.

Table 4.2: Kaiser-Meyer-Olkin and Bartlett's Test of Sphericity for consumer choices

Kaiser-Meyer-Olkin		.70
Bartlett's Test of Sphericity	Approximate Chi-Square	21313.85
	Degrees of Freedom	861
	Significance	.000

Principal axis factoring with varimax rotation method has been used for extracting the factors. Statements with factor loadings value greater than 0.40 have been considered. Factors with an eigen value of one or more have been extracted. Ten factors cumulatively explaining 65.21% of total variance have been extracted. All the factors have been given appropriate names according to the statements that have been loaded on these factors. Rotated factor matrix has been used for this purpose.

Table 4.3 presents the names, eigen values, total variance explained and relative importance of each identified factor.

Table 4.3: Names, eigen values, variance explained and relative importance for the factors affecting consumer choices of health care facilities

Names of factors	Eigen values	Variance explained	Relative importance
Basic amenities	3.568	8.496	1
Fame and quality	3.447	8.208	2
Building and infrastructure	3.226	7.681	3
Ease and affordability	3.128	7.448	4
Personal substances	2.736	6.513	5
Responsiveness of services	2.537	6.040	6
Recommendations and suggestions	2.369	5.640	7
Clinical support	2.173	5.174	8
Privacy and information sharing	2.151	5.123	9
Range of services	2.054	4.890	10

Table 4.4 presents the statements, factor loadings and values of Cronbach's alpha for all factors.

Table 4.4: Statements, factor loadings and values of Cronbach's alpha for the factors affecting consumer choices of health care facilities

Names of factors	Statements	Factor loadings	Values of Cronbach's alpha
Basic amenities	Sufficient waiting area	0.757	0.784
	Approachable medical shop	0.711	
	Canteen and cafeteria facility	0.699	
	Provision for parking the vehicles	0.689	
	Availability of facilities like water, electricity, fans and wash rooms.	0.632	
Fame and quality	Years of existence of the hospital	0.795	0.719
	Brand name of the hospital	0.739	
	Fame of the doctors associated with the hospital	0.719	
	General image of the hospital in the society	0.565	
	Quality specialist doctors	0.511	
	Religious/cultural preference	0.451	
Building and infrastructure	Latest equipments and facilities in the operation theater	0.741	0.733
	Modern living room facilities	0.736	
	Hospital's building and infrastructure	0.554	
	Number of the rooms and beds	0.541	
	Availability of latest and hi-tech equipments	0.493	
Ease and affordability	Proximity of the hospital to your place of residence	0.811	0.785
	Ease of getting appointments	0.775	
	Ease of approaching the hospital	0.735	
	Timing of the OPD services	0.733	
	Tie up of the hospital with the insurance companies	0.579	
	Cost of the hospital services	0.489	
Personal substances	Any friend/relative/known who is working in the hospital	0.841	0.758
	Awareness about disease and its treatment process	0.825	
	Severity and duration of the illness	0.618	
	Your previous experience with the hospital	0.539	
Responsiveness of services	Punctuality and courteous behavior of the nursing staff	0.841	0.713
	Quick administrative procedures	0.662	
	Speed in the delivery of services	0.626	
	Waiting time to get treated	0.417	
Recommendations and suggestions	Recommendation by your local doctor	0.799	0.752
	Recommendation by someone who has already taken the treatment	0.722	
	Recommendation by your friends/relatives	0.648	
Clinical support	Provision for the ambulance and blood bank	0.719	0.794
	Provision for the laboratories	0.674	
Privacy and information sharing	Sharing of information about treatment process with patient	0.795	0.826
	Privacy and dignity while treatment process	0.767	
Range of services	Availability of service packages like full body checkup	0.798	0.731
	Availability of general health care services	0.732	
	Availability of specialized health care services	0.646	
	Having all the medical departments	0.481	
	Availability of emergency health care services	0.448	

Factor-1: Basic amenities

The first factor affecting hospital choice decisions of patients with highest explained variance of 8.49% has been named as 'basic amenities'. Eigen value of this factor is 3.56. Five statements which significantly load on this factor are availability of facilities like water, electricity, wash rooms and fans, approachable medical shop, canteen and cafeteria facility, provision for parking of vehicles and sufficient waiting area. This factor has been considered as the most important factor because the condition of basic amenities in public hospitals in India is not up-to-mark. People expect this as basic requirement to be fulfilled by health care providers. Findings of other studies have also shown that basic amenities are considerable determinants of hospital choice decisions of patients (Boscarino & Steiber, 1982).

Factor-2: Fame and quality

'Fame and quality' is the name that has been given to the second factor. It has explained the variance of 8.20%. Eigen value of this factor is 3.44. Brand name of the hospital, fame of doctors associated with hospital, general image of hospital in the society, years of existence of hospital, religious/cultural preference and quality specialist doctors are six statements which load on this factor. Patients in India mostly prefer such hospitals which have a good image in the society. Moreover, they rely on fame of doctors associated with hospitals. Therefore, this factor has been considered as the second most important factor. Results of Previous studies have also presented similar results (Vonberg et al., 2008).

Factor-3: Building and infrastructure

The third factor has been mentioned as 'building and infrastructure'. It has explained the variance of 7.68% and Eigen value of this factor is 3.22. Five statements which significantly load on this factor are latest equipments and facilities in the operation theater, modern living room facilities, hospital's building and infrastructure, availability of latest and hi-tech equipments and number of the rooms as well as beds. In India, when we talk about infrastructure, there is a huge gap between government and private hospitals in terms of technological / medical equipments and availability / maintenance of buildings. Thus, it has been marked as another important factor for choice of a hospital. Other studies have also described these service features as important determinants of hospital choice decisions of patients (Bahrami et al., 2013).

Factor-4: Ease and affordability

'Ease and affordability' has been reported as the fourth factor. It has explained the variance of 7.44%. Eigen value of this factor is 3.12. Six statements which significantly load on this factor are cost of the hospital services, ease of approaching the hospital, ease of getting appointments, proximity of the hospital to place of residence, tie up of the hospital with insurance companies and timing of the OPD services. In Indian out-of-pocket health care system, two-third payments come from households' side. Also, a few health insurance options and a small number of hospitals, as compared to the population size is another reason of this factor having been considered the next important factor. Various studies have also shown that these service features are significant determinants of hospital choice decisions of health care consumers (Bhangale, 2011).

Factor-5: Personal substances

The fifth factor has been described as 'personal substance'. It has explained the variance of 6.51%. Eigen value of this factor is 2.73. Four statements which significantly load on this factor are friends/relatives working in the hospital, awareness about disease and its treatment process, severity and duration of illness and previous experience with the hospital. People in India mostly choose health service providers while considering their personal essence. Therefore, this factor has also been considered another important factor. Previous studies have also demonstrated same service features as determinants of hospital choice decisions (Dubey & Sharma, 2013).

Factor-6: Responsiveness of services

'Responsiveness of service' is the name that has been given to the sixth factor. It has explained the variance of 6.04%. Eigen value of this factor is 2.53. Four statements which significantly load on this factor are punctuality and courteous behavior of nursing staff, quick administrative procedures, speed in delivery of services and waiting time for treatment. In India, population density is very high as compared to the availability of hospitals. Consequently, responsiveness of service is quite less as compared to that in developed countries. Therefore, respondents have given importance to this factor as well. Findings of other studies have also reported similar results (Verma & Khandelwal, 2011).

Factor-7: Recommendations and suggestions

The seventh factor has been named as 'recommendations and suggestions'. It has explained the variance of 5.64%. Eigen value of this factor is 2.36. Recommendations by someone who has already taken the treatment and the recommendations by friends, relatives and local doctors are three statements which have been loaded on this factor. Most of the times for tertiary-level health care, people seek recommendations from relatives, local doctors or someone else who has already taken the treatment from a particular service provider. Therefore, this factor has also been considered important in the Indian context. Previous studies have also shown that these service features are relevant determinants of hospital choice decisions (Wolinsky & Kurz, 1984).

Factor-8: Clinical support

'Clinical support' has been recognized as the eighth factor. It has explained the variance of 5.17%. Eigen value of this factor is 2.17. Two statements which significantly load on this factor are provision for ambulance, blood bank, and laboratories. Due to poor ambulatory services, and deficit of blood banks and laboratories in public health care facilities in India, this factor has also been considered by the respondents. Findings of other studies have also revealed identical findings (Lane & Lindquist, 1988).

Factor-9: Privacy and information sharing

The ninth factor has been named as 'privacy and information sharing'. It has explained the variance of 5.12%. Eigen value of this factor is 2.15. Two statements significantly loaded on this factor are privacy and dignity while treatment process, and sharing of information with patients. Due to changing life-styles and spread of education about disease prevention, Indian health care consumers are participating actively in decision-making. Thus, it has been considered as an important factor. Previous studies have also observed these service features as determinants of hospital choice decisions (Guymon, Buschang, & Brown, 1999).

Factor-10: Range of services

'Range of services' has been documented as the tenth factor affecting hospital choice decisions of patients with lowest explained variance of 4.89%. Eigen value of this factor is 2.05. Availability of emergency healthcare services, availability of general healthcare services, availability of service packages like full body checkup, availability of specialized healthcare services and having all the medical departments are the five statements which significantly load

on this factor. Nowadays, Indian patients are looking for advanced and preventive health care services. Therefore, this factor has also emerged as the last but not the least important factor in hospital choice decision. Findings of various studies have also depicted similar service features as determinants of hospital choice decisions (Akinci et al., 2005).

Objective 2: To examine if the factors affecting consumer choices of health care facilities are related with consumer demographics

H1: There is a significant relationship between individual demographic variables and consumer choices of health care facilities

4.2 One-way ANOVA and Two-tailed t-test for consumer choices of health care facilities

One-way ANOVA and two-tailed t-test techniques have been applied to check the differences between presence or absence of health insurance and also among various categories of respondents' demographics with respect to factors affecting consumer choices of health care facilities.

4.2.1 One-way ANOVA for consumer choices

Differences among mean scores of various categories of respondent demographics in relation to the factors affecting consumer choices have been checked with the help of one-way ANOVA. All the factors have been tested individually with respect to various categories of respondent demographics. Mean scores have been compared and post hoc analysis has been performed on independent demographic variables containing more than two categories.

Age:

One-way ANOVA has been applied in order to examine if significant differences exist among means scores of various factors affecting hospital choice decisions of patients with respect to various categories of age.

Table 4.5: ANOVA for consumer choices and age

Source = Between groups					
Factors	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Basic amenities	.286	3	.095	.095	.963
Fame and quality	4.496	3	1.499	1.501	.213
Building and infrastructure	.496	3	.165	.165	.920
Ease and affordability	4.360	3	1.453	1.456	.225
Personal substances	9.320	3	3.107	3.129	.025*
Responsiveness of services	.739	3	.246	.246	.864
Recommendations and suggestions	1.321	3	.440	.440	.725
Clinical support	1.170	3	.390	.389	.761
Privacy and information sharing	1.520	3	.507	.506	.678
Range of services	1.393	3	.464	.464	.708

* Mean difference is significant at 0.05 percent level

From table 4.5, it can be concluded that a factor, namely, 'personal substance' has been found to be significantly different statistically ($p<.05$) among different categories of age. It can also be seen from table 4.6 that respondents in age group of '36-50 years' and 'more than 50 years' have attributed higher importance to 'personal substance' in comparison to that placed by other categories.

Table 4.6: Descriptive statistics for consumer choices and age

Statistics = Mean	**Dependent variable = Personal substances**
Up to 20 years	-.1144009
21-35 years	-.1967858
36-50 years	.0236015
More than 50 years	.0749899
Total	.0000000

From table 4.7, it has been observed that 'personal substance' for respondents in the age brackets of '21-35 years' and 'more than 50 years' are significantly different statistically ($p<.05$). It could be due to severity and duration of illness along with previous experience of patients with same hospital. Respondents of 'more than 50 years' age group might be having high severity of illness. Such differences could also be due to varying levels of awareness about disease and its treatment procedures. Patients in age group of '21-35 years' may also be more educated in comparison to the patients in age bracket of 'more than 50 years'.

Korgaonkar et al. (1985) have reported similar findings and concluded that age has a significant impact on choice behavior of consumers.

Table 4.7: Post hoc analysis for consumer choices and age

Factor = Personal substance				**Multiple comparisons**
(I) Age	**(J) Age**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**
Up to 20 years	21-35 years	.08238489	.15917473	.955
	36-50 years	-.13800239	.15156078	.799
	More than 50 years	-.18939076	.14655739	.568
21-35 years	Up to 20 years	-.08238489	.15917473	.955
	36-50 years	-.22038727	.10060942	.127
	More than 50 years	-.27177564	.09290131	.018*
36-50 years	Up to 20 years	.13800239	.15156078	.799
	21-35 years	.22038727	.10060942	.127
	More than 50 years	-.05138837	.07915004	.916
More than 50 years	Up to 20 years	.18939076	.14655739	.568
	21-35 years	.27177564	.09290131	.018*
	36-50 years	.05138837	.07915004	.916

* Mean difference is significant at 0.05 percent level

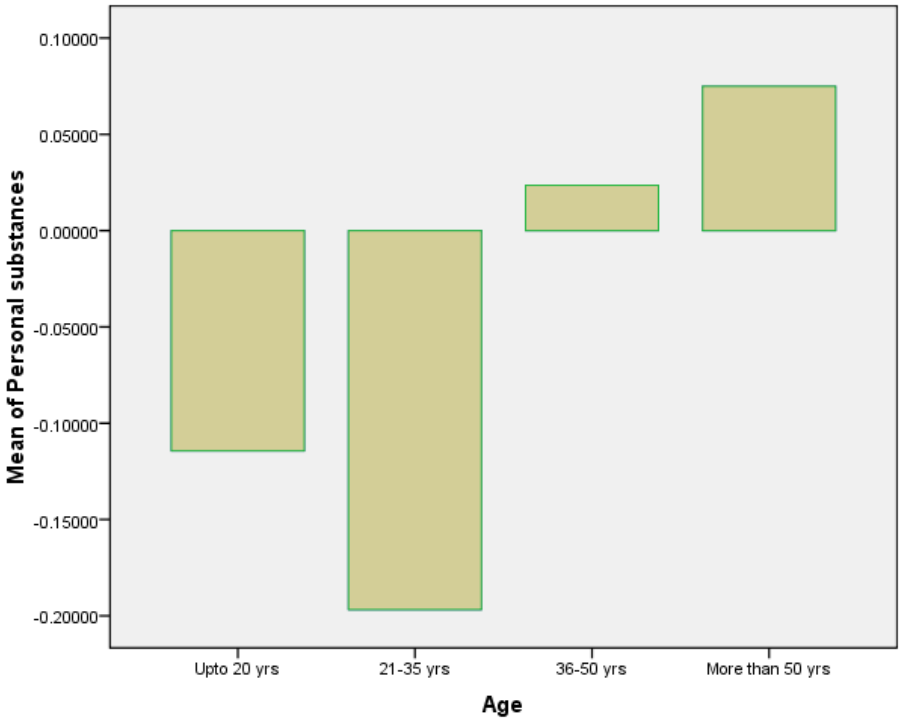


Figure 4.11: Means Plots of Age and Personal Substance for Consumer Choices

Residential Area:

One-way ANOVA has been applied in order to examine if significant differences exist among means scores of various factors affecting hospital choice decisions of patients with respect to various categories of residential area.

Table 4.8: ANOVA for consumer choices and residential area

Source = Between groups					
Factors	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Basic amenities	5.583	3	1.861	1.866	.134
Fame and quality	.522	3	.174	.174	.914
Building and infrastructure	3.374	3	1.125	1.125	.338
Ease and affordability	1.312	3	.437	.436	.727
Personal substances	7.120	3	2.373	2.385	.068
Responsiveness of services	9.215	3	3.072	3.093	.026*
Recommendations and suggestions	1.209	3	.403	.402	.752
Clinical support	1.074	3	.358	.357	.784
Privacy and information sharing	10.482	3	3.494	3.524	.015*
Range of services	5.091	3	1.697	1.701	.165

* Mean difference is significant at 0.05 percent level

From table 4.8, it can be concluded that two factors, namely, 'responsiveness of services' and 'privacy and information sharing' have been found to be significantly different statistically ($p<.05$) among different categories of residence. It can be seen from table 4.9 that respondents of 'rural area' have attributed higher importance to 'responsiveness of services'. It can also be seen table 4.10 that respondents of 'non-metro city' have attributed higher importance to 'privacy and information sharing' in comparison to that reported by other categories.

Table 4.9: Descriptive statistics for consumer choices (factor 1) and residential area

Statistics = Mean	**Dependent variable = Responsiveness of services**
Metro City	.0479367
Non Metro City	-.0285782
Semi Urban Area	-.1034616
Rural Area	.2434783
Total	.0000000

Table 4.10: Descriptive statistics for consumer choices (factor 2) and residential area

Statistics = Mean	**Dependent variable = Privacy and information sharing**
Metro City	-.1409857
Non Metro City	.1030629
Semi Urban Area	-.1209911
Rural Area	.0195651
Total	.0000000

From table 4.11, it has been observed that 'responsiveness of services' for the respondents of 'semi urban area' and 'rural area' are significantly different statistically ($p<.05$). Possible reasons for the same could be distance from home and waiting time to avail the service. The respondents of 'semi urban area' and 'rural area' might have to travel more in comparison to the respondents of other categories. It is quite possible that they do not find it comfortable to have long waiting periods and lengthy administrative procedures.

Gesler and Meade (1988) have presented comparable findings and reported that distance has an important effect on hospital choice decisions of health care consumers.

Table 4.11: Post hoc analysis for consumer choices (factor 1) and residential area

Factor = Responsiveness of services				**Multiple comparisons**
(I) Residence	**(J) Residence**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**
Metro City	Non Metro City	.07651498	.09492792	.852
	Semi Urban Area	.15139836	.10738371	.493
	Rural Area	-.19554160	.12626827	.409
Non Metro City	Metro City	-.07651498	.09492792	.852
	Semi Urban Area	.07488338	.08493912	.814
	Rural Area	-.27205658	.10782889	.057
Semi Urban Area	Metro City	-.15139836	.10738371	.493
	Non Metro City	-.07488338	.08493912	.814
	Rural Area	-.34693996	.11894125	.019*
Rural Area	Metro City	.19554160	.12626827	.409
	Non Metro City	.27205658	.10782889	.057
	Semi Urban Area	.34693996	.11894125	.019*

* Mean difference is significant at 0.05 percent level

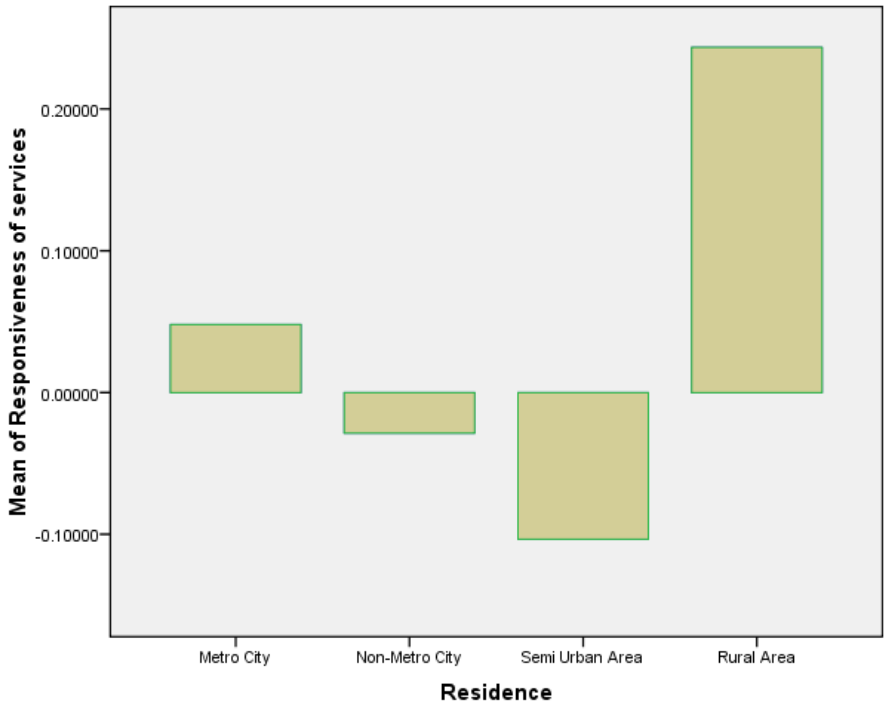


Figure 4.12: Means Plots of Residential Area and Responsiveness of Services for Consumer Choices

From table 4.12, it has been found that 'privacy and information sharing' for respondents of 'non metro city' and 'semi urban area', and 'non metro city' and 'metro city' are significantly different statistically ($p<.05$). It could be due to interest of the patients in treatment procedures as well as in confidentiality of their health records. It has been felt that 'metro city' respondents might have high awareness level to understand the problem and their treatment procedures. They seem to be more conscious about privacy and confidentiality of the treatment record in comparison to respondents of 'semi urban area' and 'non metro city'.

Marang-van de Mheen et al. (2011) have observed similar findings and concluded that information sharing has an important effect on hospital choice decisions of patients.

Table 4.12: Post hoc analysis for consumer choices (factor 2) and residential area

Factor = Privacy and information sharing				Multiple comparisons
(I) Residence	**(J) Residence**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**
Metro City	Non Metro City	-.24404858	.09485898	.050*
	Semi Urban Area	-.01999467	.10730572	.998
	Rural Area	-.16055082	.12617656	.581
Non Metro City	Metro City	.24404858	.09485898	.050
	Semi Urban Area	.22405391	.08487743	.042*
	Rural Area	.08349776	.10775057	.866
Semi Urban Area	Metro City	.01999467	.10730572	.998
	Non Metro City	-.22405391	.08487743	.042*
	Rural Area	-.14055615	.11885486	.638
Rural Area	Metro City	.16055082	.12617656	.581
	Non Metro City	-.08349776	.10775057	.866
	Semi Urban Area	.14055615	.11885486	.638

* Mean difference is significant at 0.05 percent level

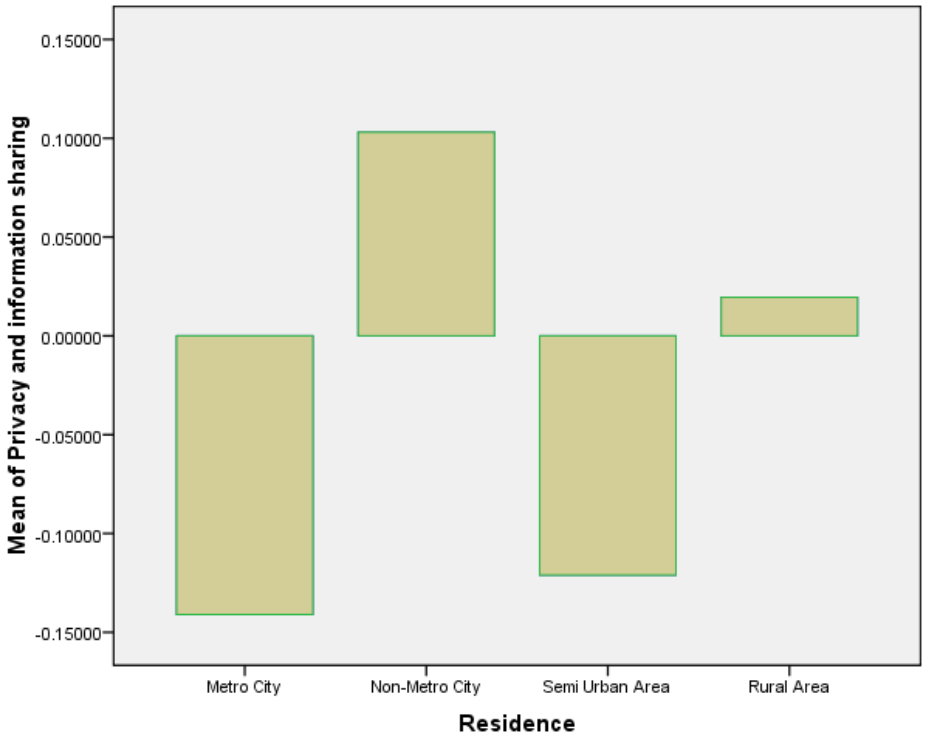


Figure 4.13: Means Plots of Residenctial Area, and Privacy and Information Sharing for Consumer Choices

Education:

One-way ANOVA has been applied in order to examine if significant differences exist among means scores of various factors affecting hospital choice decisions of patients with respect to various categories of education.

Table 4.13: ANOVA for consumer choices and education

Source = Between groups					
Factors	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Basic amenities	.272	3	.091	.090	.965
Fame and quality	1.256	3	.419	.418	.740
Building and infrastructure	.079	3	.026	.026	.994
Ease and affordability	.803	3	.268	.267	.849
Personal substances	11.167	3	3.722	3.757	.011*
Responsiveness of services	.113	3	.038	.037	.990
Recommendations and suggestions	1.823	3	.608	.607	.611
Clinical support	.766	3	.255	.255	.858
Privacy and information sharing	4.326	3	1.442	1.444	.228
Range of services	2.405	3	.802	.801	.493

* Mean difference is significant at 0.05 percent level

It can be seen from table 4.13 that a factor, namely, 'personal substance' has been found to be significantly different statistically ($p<.05$) among different categories of education. It can also be seen from table 4.14 that respondents of 'class XII or below' category have attributed higher importance to 'personal substance' in comparison to that reported by other categories.

Table 4.14: Descriptive statistics for consumer choices and education

Statistics = Mean	**Dependent variable = Personal substances**
Post Graduation & Above	-.0292339
Graduation	-.1931198
Diploma	-.0931744
Class XII or below	.0956260
Total	.0000000

Table 4.15 has revealed that 'personal substance' for the education categories of 'graduation' and 'class XII or below' are significantly different statistically ($p<.05$). It could be due to awareness about disease and its treatment process along with references of friends and relatives. Respondents of 'graduation' category might be having more knowledge about symptoms, reasons and treatment procedures of the diseases. Differences could also be due to faith and

belief of respondents of 'class XII or below' category in a friend or relative who is already working in the hospital.

Similar findings have been presented by Lane and Lindquist (1988), who have reported that education and awareness about disease and its treatment process has a significant impact on the hospital choice decision.

Table 4.15: Post hoc analysis for consumer choices and education

Factor = Personal substances				**Multiple comparisons**
(I) Education	**(J) Education**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**
Post Graduation & Above	Graduation	.16388588	.10489911	.401
	Diploma	.06394050	.14520992	.971
	Class XII or below	-.12485987	.08523587	.459
Graduation	Post Graduation & Above	-.16388588	.10489911	.401
	Diploma	-.09994537	.14790623	.906
	Class XII or below	-.28874575	.08975235	.007*
Diploma	Post Graduation & Above	-.06394050	.14520992	.971
	Graduation	.09994537	.14790623	.906
	Class XII or below	-.18880037	.13467584	.498
Class XII or below	Post Graduation & Above	.12485987	.08523587	.459
	Graduation	.28874575	.08975235	.007*
	Diploma	.18880037	.13467584	.498

* Mean difference is significant at 0.05 percent level

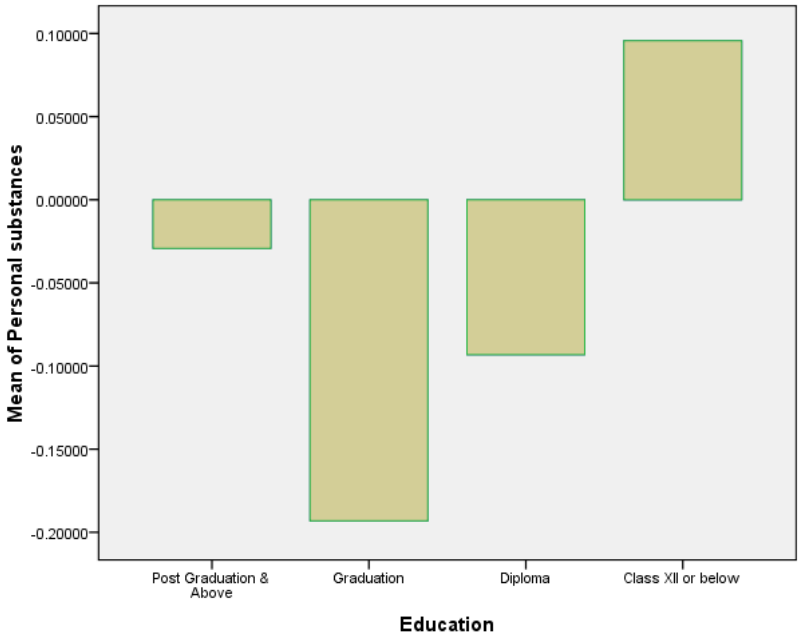


Figure 4.14: Means Plots of Education and Personal Substance for Consumer Choices

Monthly Family Income:

One-way ANOVA has been applied in order to examine if significant differences exist among means scores of various factors affecting hospital choice decisions of patients with respect to various categories of monthly family income.

Table 4.16: ANOVA for consumer choices and monthly family income

Source = Between groups					
Factors	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Basic amenities	9.795	4	2.449	2.465	.044*
Fame and quality	1.466	4	.366	.365	.833
Building and infrastructure	4.724	4	1.181	1.182	.317
Ease and affordability	3.288	4	.822	.821	.512
Personal substances	2.432	4	.608	.607	.658
Responsiveness of services	6.252	4	1.563	1.567	.181
Recommendations and suggestions	4.597	4	1.149	1.150	.332
Clinical support	1.680	4	.420	.419	.795
Privacy and information sharing	6.320	4	1.580	1.584	.176
Range of services	4.709	4	1.177	1.178	.319

* Mean difference is significant at 0.05 percent level

Table 4.16 shows that a factor, namely, 'basic amenities' has been found to be significantly different statistically ($p<.05$) among various categories of monthly family income. From table 4.17, it can be reported that respondents in monthly family income group of 'Rs. 25,001 to Rs. 50,000' have attributed higher importance to 'basic amenities' in comparison to that reported by other categories.

Table 4.17: Descriptive statistics for consumer choices and monthly family income

Statistics = Mean	**Dependent variable = Basic amenities**
Up to Rs. 25,000	-.2491124
Rs. 25,001 to Rs. 50,000	.1589813
Rs. 50,001 to Rs. 75,000	-.0172713
Rs. 75,001 to Rs. 1,00,000	.0537808
More Than Rs. 1,00,000	-.0281119
Total	.0000000

It can be observed from table 4.18 that 'basic amenities' for monthly family income group of 'Up to Rs. 25,000' and 'Rs. 25,001 to Rs. 50,000' has been found to be significantly different

statistically ($p<.05$). Possible reasons for the same could be availability of basic facilities in hospital premises. Respondents in monthly family income group of 'Up to Rs. 25,000' and 'Rs. 25,001 to Rs. 50,000' might have more concern about basic facilities like waiting area, medical shop, cafeteria, parking, lights, water and fans in comparison to those of other categories.

You and Kwon (2012) have presented similar findings and confirmed that basic amenities and infrastructure has a positive relation with the choice of hospitals.

Table 4.18: Post hoc analysis for consumer choices and monthly family income

Factor = Basic amenities				**Multiple comparisons**
(I) Monthly Family Income	**(J) Monthly Family Income**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**
Up to Rs. 25,000	Rs. 25,001 to Rs. 50,000	-.40809370	.13625656	.024*
	Rs. 50,001 to Rs. 75,000	-.23184105	.11745565	.280
	Rs. 75,001 to Rs. 1,00,000	-.30289319	.12294936	.100
	More Than Rs. 1,00,000	-.22100046	.13744687	.493
Rs. 25,001 to Rs. 50,000	Up to Rs. 25,000	.40809370	.13625656	.024*
	Rs. 50,001 to Rs. 75,000	.17625265	.10487247	.446
	Rs. 75,001 to Rs. 1,00,000	.10520051	.11099077	.878
	More Than Rs. 1,00,000	.18709324	.12686232	.579
Rs. 50,001 to Rs. 75,000	Up to Rs. 25,000	.23184105	.11745565	.280
	Rs. 25,001 to Rs. 50,000	-.17625265	.10487247	.446
	Rs. 75,001 to Rs. 1,00,000	-.07105215	.08688458	.925
	More Than Rs. 1,00,000	.01084059	.10641441	1.000
Rs. 75,001 to Rs. 1,00,000	Up to Rs. 25,000	.30289319	.12294936	.100
	Rs. 25,001 to Rs. 50,000	-.10520051	.11099077	.878
	Rs. 50,001 to Rs. 75,000	.07105215	.08688458	.925
	More Than Rs. 1,00,000	.08189274	.11244884	.950
More Than Rs. 1,00,000	Up to Rs. 25,000	.22100046	.13744687	.493
	Rs. 25,001 to Rs. 50,000	-.18709324	.12686232	.579
	Rs. 50,001 to Rs. 75,000	-.01084059	.10641441	1.000
	Rs. 75,001 to Rs. 1,00,000	-.08189274	.11244884	.950

* Mean difference is significant at 0.05 percent level

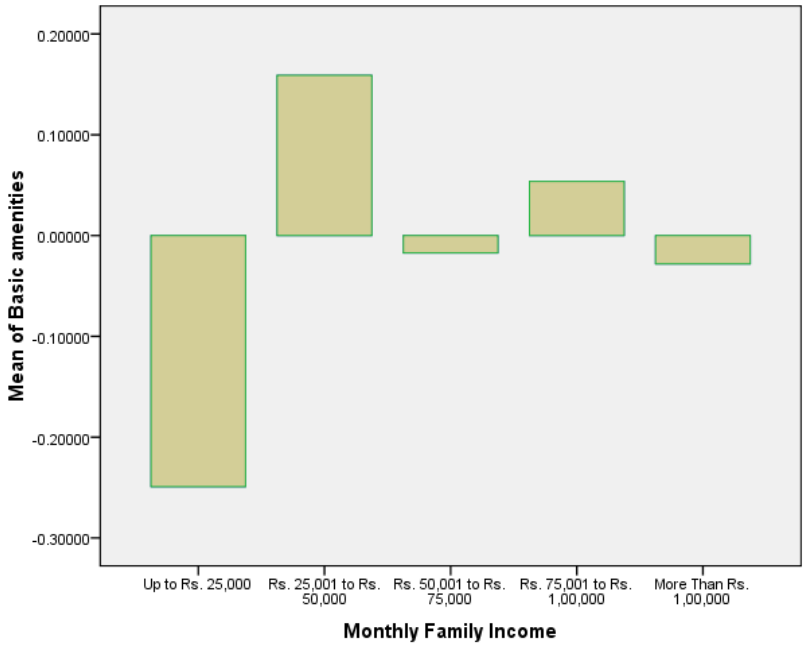


Figure 4.15: Means Plots of Monthly Family Income and Basic Amenities for Consumer Choices

Occupation:

One-way ANOVA has been applied in order to examine if significant differences exist among means scores of various factors affecting hospital choice decisions of patients with respect to various categories of occupation.

Table 4.19: ANOVA for consumer choices and occupation

Source = Between groups					
Factors	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Basic amenities	6.800	3	2.267	2.277	.078
Fame and quality	3.714	3	1.238	1.239	.294
Building and infrastructure	.311	3	.104	.103	.958
Ease and affordability	2.286	3	.762	.761	.516
Personal substances	3.833	3	1.278	1.279	.280
Responsiveness of services	.739	3	.246	.246	.864
Recommendations and suggestions	1.893	3	.631	.630	.596
Clinical support	3.437	3	1.146	1.146	.329
Privacy and information sharing	2.056	3	.685	.685	.562
Range of services	1.388	3	.463	.462	.709

* Mean difference is significant at 0.05 percent level

It can be concluded on the basis of table 4.19 that no factor has been found to be significantly different statistically with respect to the categories of occupation.

4.2.2 Two-tailed t-test for consumer choices

Differences among mean scores of various categories of respondent demographics in relation to the factors affecting consumer choices have also been checked with the help of two-tailed t-test. All the factors have been tested individually and mean scores have been compared with respect to various categories of respondent demographics.

Gender:

Two-tailed t-test has been applied in order to examine if significant differences exist among means scores of various factors affecting hospital choice decisions of patients with respect to both categories of gender.

Table 4.20: t-test for consumer choices and gender

Independent sample test			**Assumptions = Equal variances assumed**		
	Levene's Test for Equality of Variances		**t-test for Equality of Means**		
Factors	**F**	**Sig.**	**t**	**df**	**Sig. (2-tailed)**
Basic amenities	.041	.839	-.732	881	.464
Fame and quality	.282	.596	-.790	881	.430
Building and infrastructure	3.538	.060	1.687	881	.092
Ease and affordability	5.836	.016	-1.493	881	.136
Personal substances	.402	.526	.451	881	.652
Responsiveness of services	.718	.397	1.964	881	.050*
Recommendations and suggestions	.614	.434	1.349	881	.178
Clinical support	2.701	.101	1.168	881	.243
Privacy and information sharing	.114	.736	-.266	881	.791
Range of services	.975	.324	2.521	881	.012*

* Mean difference is significant at 0.05 percent level

From table 4.20, it can be observed that two factors, namely, 'responsiveness of services' and 'range of services' have been found to be significantly different statistically ($p<.05$) between different categories of gender. It can also be seen from tables 4.21 and 4.22 that male respondents have attributed higher importance to both the factors in comparison to that reported by female respondents. Possible reasons for the same could be greater concern of male patients about availability of services, time of service delivery, quick administrative procedures and punctuality of the doctors and staff members.

Roh and Lee (2005) have found related findings and concluded that demographics of respondents like gender have a significant effect on their choice behavior.

Table 4.21: Group statistics for consumer choices (factor 1) and gender

Dependent variable = Responsiveness of services				
Gender	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Male	591	.0463921	.95254358	.03918241
Female	292	-.0938963	1.08539736	.06351808

Table 4.22: Group statistics for consumer choices (factor 2) and gender

Dependent variable = Range of service				
Gender	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Male	591	.0594513	.98726558	.04061068
Female	292	-.1203277	1.01638514	.05947944

Marital Status:

Two-tailed t-test has been applied in order to examine if significant differences exist among means scores of various factors affecting hospital choice decisions of patients with respect to both categories of marital status.

Table 4.23: t-test for consumer choices and marital status

Independent sample test			**Assumptions = Equal variances assumed**		
	Levene's Test for Equality of Variances		**t-test for Equality of Means**		
Factors	**F**	**Sig.**	**t**	**df**	**Sig. (2-tailed)**
Basic amenities	.025	.873	.217	881	.828
Fame and quality	1.063	.303	1.676	881	.094
Building and infrastructure	.167	.683	.878	881	.380
Ease and affordability	.016	.899	-.214	881	.831
Personal substances	.121	.729	.090	881	.929
Responsiveness of services	.021	.885	-.767	881	.443
Recommendations and suggestions	1.382	.240	-.085	881	.932
Clinical support	1.670	.197	-.261	881	.794
Privacy and information sharing	.063	.801	.146	881	.884
Range of services	.054	.817	.536	881	.592

* Mean difference is significant at 0.05 percent level

Table 4.23 shows that no factor has been found to be significantly different statistically with respect to the categories of marital status.

Health Insurance:

Two-tailed t-test has been applied in order to examine if significant differences exist among means scores of various factors affecting hospital choice decisions of patients with respect to the categories of health insurance.

Table 4.24: t-test for consumer choices and health insurance

Independent sample test			**Assumptions = Equal variances assumed**		
	Levene's Test for Equality of Variances		**t-test for Equality of Means**		
Factors	**F**	**Sig.**	**t**	**df**	**Sig. (2-tailed)**
Basic amenities	.939	.333	-.525	881	.600
Fame and quality	.419	.518	.136	881	.892
Building and infrastructure	.005	.945	.121	881	.903
Ease and affordability	.371	.543	.317	881	.751
Personal substances	1.509	.220	-.931	881	.352
Responsiveness of services	1.159	.282	1.243	881	.214
Recommendations and suggestions	.020	.888	.861	881	.389
Clinical support	1.342	.247	-.601	881	.548
Privacy and information sharing	.110	.740	.383	881	.702
Range of services	.058	.810	-1.004	881	.316

* Mean difference is significant at 0.05 percent level

On the basis of table 4.24, it can be stated that no factor has been found to be significantly different statistically with respect to the categories of health insurance.

From the results of ANOVA and t-test, it can be concluded that there is a significant relationship between individual demographic variables such as age, residential area, education, monthly family income and gender, and consumer choices of health care facilities. Hence, H1 has been accepted.

Objective 3: To identify the key factors along with their relative importance affecting consumer satisfaction from health care facilities

4.3 Exploratory factor analysis for consumer satisfaction from health care facilities

Exploratory factor analysis has been employed for extracting the factors affecting patient satisfaction from health care facilities. Respondents have been asked to give responses to various statements affecting their satisfaction levels from hospital services on a five-point Likert type satisfaction scale. Measures of sample adequacy such as Kaiser-Meyer-Olkin and Bartlett's Test of Sphericity have shown that factor analysis can be applied.

Table 4.25 presents the values of Kaiser-Meyer-Olkin and Bartlett's Test of Sphericity.

Table 4.25: Kaiser-Meyer-Olkin and Bartlett's Test of Sphericity for consumer satisfaction

Kaiser-Meyer-Olkin		.816
Bartlett's Test of Sphericity	Approximate Chi-Square	28374.130
	Degree of Freedom	861
	Significance	.000

Principal axis factoring with varimax rotation method has been used for extracting the factors. Statements with factor loadings value greater than 0.40 have been considered. Factors with an eigen value of one or more have been extracted. Eight factors cumulatively explaining 68.08% of the total variance have been extracted. All the factors have been given appropriate names according to the statements that have been loaded on these factors. Rotated factor matrix has been used for this purpose.

Table 4.26 presents the names, eigen values, total variance explained and relative importance for each identified factor.

Table 4.26: Names, eigen values, variance explained and relative importance for the factors affecting consumer satisfaction from health care facilities

Names of factors	Eigen values	Variance explained	Relative importance
Infrastructure and amenities	5.255	12.512	1
Fulfillment of clinical requirement	4.113	9.792	2
Facilities at reception and OPD area	4.004	9.532	3
Nursing and staff care	3.869	9.213	4
Professional behavior of doctors	3.306	7.870	5
Affordability and convenience	3.170	7.548	6
Registration and administrative procedures	2.503	6.746	7
General behavior of doctors	2.376	4.871	8

Table 4.27 presents the statements, factor loadings and values of Cronbach's alpha for all factors.

Table 4.27: Statements, factor loading and values of Cronbach's alpha for the factors affecting consumer satisfaction from health care facilities

Names of factors	Statements	Factor loadings	Values of Cronbach's alpha
Infrastructure and amenities	Facility of canteen and cafeteria	0.826	0.877
	Facility of ATM/Bank	0.767	
	Cleanliness of the toilets	0.686	
	Clear/Airy/lighted stairs and ramps	0.658	
	Availability of proper sign boards	0.654	
	Availability of spacious lifts	0.631	
	Adequate space for parking vehicles	0.583	
	Living room facilities	0.531	
	Adequacy of utilities like water supply, fans, light, and wash rooms.	0.509	
Fulfillment of clinical requirements	Quality of ambulance services	0.763	0.865
	Correct and timely reports given by the laboratories	0.757	
	Availability of diagnostic facilities	0.735	
	Availability of required medicines	0.705	
	Availability of required blood groups	0.701	
Facilities at reception and OPD area	Adequate sitting area at main reception and respective OPD	0.893	0.868
	Cleanliness in the OPD area	0.815	
	Availability of trolley/wheel chairs at the reception area	0.768	
Nursing and staff care	Courteous and cooperative behavior of servants and security staff	0.832	0.825
	Personal attention and proper time given by the nursing staff	0.812	
	Sufficient nursing staff	0.762	
	Sympathetic behavior of staff at waiting area	0.713	
	Courteous and cooperative behavior of nursing staff	0.497	
	Courteous and cooperative behavior of lab and diagnostic staff	0.473	
Professional behavior of doctors	Doctors advised you about the way to avoid illness and stay healthy	0.771	0.848
	Required tests and diagnosis were explained properly	0.701	
	Your problem was listened carefully by the doctor	0.616	
	Disease and its consequences were proper explained to you	0.605	
	Schedule and time of the treatment were explained properly	0.521	
Affordability and convenience	Charges for various tests and other medical services	0.803	0.835
	Easy access to the doctors in the hospitals	0.794	
	Tie up of the hospital with insurance companies	0.736	
	Timing of OPD services	0.694	
	Convenient location of the hospital	0.672	
Registration and administrative procedures	Waiting time at registration counter	0.713	0.833
	Meeting time with patient	0.704	
	Courteous and cooperative behavior of registration staff	0.648	
	Queries handling at reception counter	0.636	
	Efficient system of addressing the complaints	0.622	
General behavior of doctors	Personal attention and proper time given by the doctors	0.794	0.753
	Tension free/relaxed environment	0.725	
	Courteous and cooperative behavior of the doctors	0.707	
	Privacy during clinical examination	0.639	

Factor-1: Infrastructure and amenities

This first factor affecting patient satisfaction from hospital services with highest explained variance of 12.51% has been named as 'infrastructure and amenities'. Eigen value of this factor is 5.25. Nine statements which significantly load on this factor are water supply, fan, light, wash rooms etc., adequate space for parking vehicles, availability of proper sign boards, availability of spacious lifts, clean/airy/lighted stairs and ramps, cleanliness of the toilets, facility of ATM/bank, facility of canteen and cafeteria and living room facilities. Respondents of the present study have reported this factor as the most important for patient satisfaction because of deficiencies in basic infrastructure and amenities in public hospitals in India. Other studies have also presented similar findings (Tahir et al., 2012).

Factor-2: Fulfillment of clinical requirements

'Fulfillment of clinical requirements' is the name that has been given to the second factor. It has explained the variance of 9.79%. Eigen value of this factor is 4.11. Availability of diagnosis facilities, availability of required blood groups, availability of required medicines, correct and timely reports given by the laboratories, and quality of ambulance service are five statements which significantly load on this factor. Due to inability of Indian government hospitals in providing quality health care services, this factor has been found to be the second most important factor by the patients of private hospitals. Various studies have also shown that these service features are considerable determinants of patient satisfaction (Baydas, 2014).

Factor-3: Facilities at reception and OPD area

This third factor has been reported as 'facilities at reception and OPD area'. It has explained the variance of 9.53%. Eigen value of this factor is 4.00. Three statements which significantly load on this factor are adequate sitting area at reception and respective OPD, availability of trolley/wheel chairs at the reception and cleanliness in the OPD area. This factor has been considered important for patient satisfaction because of over-crowdedness at both public and private hospitals in India. Findings of other studies have also described that cleanliness in hospital and facilities at OPD are important determinants of patient satisfaction (Shrestha et al., 2012).

Factor-4: Nursing and staff care

'Nursing and staff care' has been reported as the fourth factor. It has explained the variance of 9.21%. Eigen value of this factor is 3.86. Six statements which significantly load on this factor are courteous and cooperative behavior of servants, security staff, nursing staff, lab and diagnostic staff, sympathetic behavior of staff at waiting area, sufficient nursing staff, and personal attention and proper time given by nursing staff. This factor has been considered important by Indian patients because of high expectations of sympathy from the hospital staff. Various studies have also demonstrated similar findings (Otani et al., 2010).

Factor-5: Professional behavior of doctors

The fifth factor has been described as 'professional behavior of doctors'. It has explained the variance of 7.87%. Eigen value of this factor is 3.30. Five statements which significantly load on this factor are problem was listened carefully by doctors, schedule and time of treatment as well as required tests and diagnosis were explained properly, doctors advised about the ways to avoid illness and stay healthy, and disease and its consequences were properly explained to you. This factor has also emerged as important for patient satisfaction in the Indian context, due to spread of education, changing life styles and high expectations of patients from doctors. Previous studies have also highlighted these service features as relevant determinants of patient satisfaction (Sharma et al., 2011).

Factor-6: Affordability and convenience

'Affordability and convenience' is the name that has been given to the sixth factor. It has explained the variance of 7.54%. Eigen value of this factor is 3.17. Charges for various tests and other medical services, convenient location of the hospital, easy access to the doctors in hospital, tie up of hospital with insurance companies and timings of OPD services are the five statements which significantly load on this factor. As a result of limited government funding, poor status of health insurance and mass urbanization in India, patients have to pay from their own pockets and travel more to get treatment. Therefore, this factor has also been considered as another important factor for patient satisfaction. Other studies have also observed similar findings (Boshoff & Gray, 2004).

Factor-7: Registration and administrative procedures

The seventh factor has been recognized as 'registration and administrative procedures'. It has explained the variance of 6.74%. Eigen value of this factor is 2.50. Five statements which significantly load on this factor are courteous and cooperative behavior of registration staff, efficient system of addressing the complaints, meeting time with patient, waiting time at registration counter and queries handling at reception counter. It seems that, this factor has been reported as important because of long waiting times, less availability of specialist doctors and poor grievance handling systems in Indian hospitals. Findings of other studies have also revealed similar findings (Messina et al., 2014).

Factor-8: General behavior of doctors

'General behavior of doctors' has been documented as the eighth factor affecting patient satisfaction from hospital services with lowest explained variance of 4.87%. Eigen value of this factor is 2.37. Tension free/relaxed environment, personal attention and proper time given by doctors, privacy during clinical examination, and courteous and cooperative behavior of doctors are the four statements which significantly load on this factor. Role of doctors in making the patients more comfortable has also been considered by Indian patients in overall satisfaction from health care services. Findings of various studies have also depicted these service features as determinants of patient satisfaction (Duan, Qiu, Yu, & Hu, 2014).

Objective 4: To examine if the factors affecting consumer satisfaction from health care facilities are related with consumer demographics

H2: There is a significant relationship between individual demographic variables and consumer satisfaction from health care facilities

4.4 One-way ANOVA and Two-tailed t-test for consumer satisfaction from health care facilities

One-way ANOVA and two-tailed t-test techniques have been applied to check the differences between presence or absence of health insurance and also among various categories of

respondents' demographics with respect to factors affecting consumer satisfaction from health care facilities.

4.4.1 One-way ANOVA for consumer satisfaction

Differences among mean scores of various categories of respondent demographics in relation to the factors affecting patient satisfaction have been checked with the help of one-way ANOVA. All the factors have been tested individually with respect to various categories of respondent demographics. Mean scores have been compared and post hoc analysis has been performed on independent demographic variables containing more than two categories.

Residential Area:

One-way ANOVA has been applied in order to examine if significant differences exist among means scores of various factors affecting patient satisfaction from hospital services with respect to various categories of residential area.

Table 4.28: ANOVA for consumer satisfaction and residential area

Source = Between groups					
Factors	Sum of Squares	Df	Mean Square	F	Sig.
Infrastructure and amenities	1.378	3	.459	.459	.711
Fulfillment of clinical requirements	2.748	3	.916	.916	.433
Facilities at reception and OPD area	6.002	3	2.001	2.008	.111
Nursing and staff care	9.103	3	3.034	3.055	.028*
Professional behavior of the doctors	.461	3	.154	.153	.928
Affordability and convenience	3.420	3	1.140	1.141	.332
Registration and administrative procedures	3.898	3	1.299	1.301	.273
General behavior of the doctors	2.235	3	.745	.744	.526

* Mean difference is significant at 0.05 percent level

It can be seen from table 4.28 that a factor, namely, 'nursing and staff care' has been found to be significantly different statistically ($p<.05$) among different categories of residence. From table 4.29, it can also be seen that respondents of 'semi urban area' have shown higher satisfaction to 'nursing and staff care' in comparison to that reported by other categories.

Table 4.29: Descriptive statistics for consumer satisfaction and residential area

Statistics = Mean	**Dependent variable = Nursing and staff care**
Metro City	-.0636519
Non Metro City	.0033921
Semi Urban Area	.1440943
Rural Area	-.1994951
Total	.0000000

It has been depicted in table 4.30 that 'nursing and staff care' for the respondents in the residence category of 'semi urban area' and 'rural area' has been found to be significantly different statistically ($p<.05$). Probable reasons for the same could be fewer expectations of respondents of 'semi urban area' about quality of nursing and staff care. Respondents in residence category of 'metro city' and 'non metro city' might have higher expectations in terms of nursing care. The difference could also be due to varying levels of attention given by nursing and laboratory staff to the respondents in different categories.

Al-Omar (2000) and Sharma et al. (2011) have found comparable findings and reported that residential areas have an important influence on satisfaction levels of health care consumers.

Table 4.30 Post hoc analysis for consumer satisfaction and residential area

Factor = Nursing and staff care				**Multiple comparisons**
(I) Residential Area	**(J) Residence**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**
Metro City	Non Metro City	-.06704406	.09493401	.895
	Semi Urban Area	-.20774627	.10739060	.214
	Rural Area	.13584316	.12627638	.704
Non Metro City	Metro City	.06704406	.09493401	.895
	Semi Urban Area	-.14070221	.08494458	.348
	Rural Area	.20288722	.10783581	.237
Semi Urban Area	Metro City	.20774627	.10739060	.214
	Non Metro City	.14070221	.08494458	.348
	Rural Area	.34358943	.11894888	.021*
Rural Area	Metro City	-.13584316	.12627638	.704
	Non Metro City	-.20288722	.10783581	.237
	Semi Urban Area	-.34358943	.11894888	.021*

* Mean difference is significant at 0.05 percent level

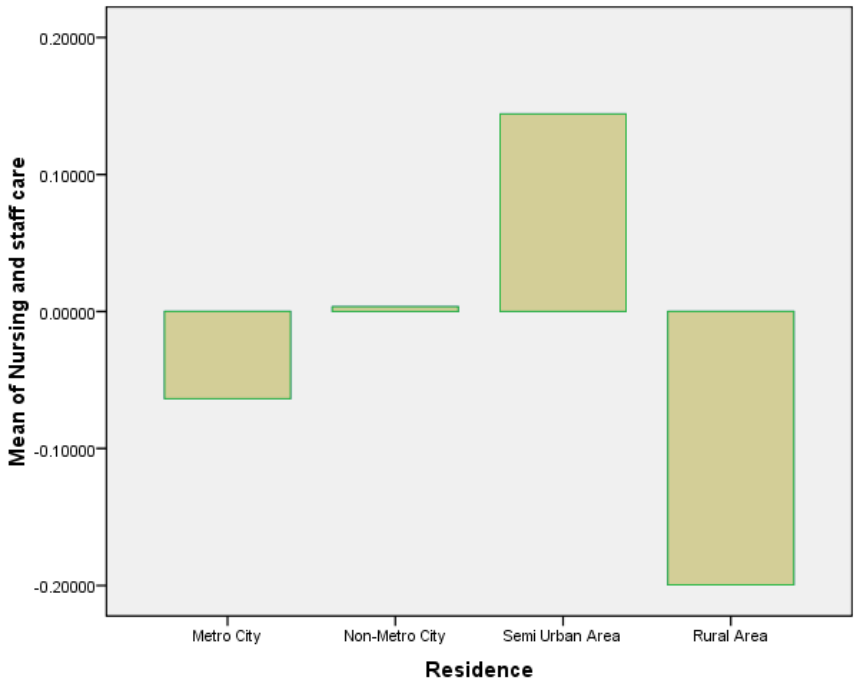


Figure 4.16: Means Plots of Residential Area and, Nursing and Staff Care for Consumer Satisfaction

Education:

One-way ANOVA has been applied in order to examine if significant differences exist among means scores of various factors affecting patient satisfaction from hospital services with respect to various categories of education.

Table 4.31: ANOVA for consumer satisfaction and education

Source = Between groups					
Factors	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Infrastructure and amenities	4.539	3	1.513	1.516	.209
Fulfillment of clinical requirements	2.032	3	.677	.676	.567
Facilities at reception and OPD area	10.897	3	3.632	3.665	.012*
Nursing and staff care	3.031	3	1.010	1.010	.387
Professional behavior of the doctors	3.628	3	1.209	1.210	.305
Affordability and convenience	.827	3	.276	.275	.843
Registration and administrative procedures	2.315	3	.772	.771	.510
General behavior of the doctors	1.956	3	.652	.651	.582

* Mean difference is significant at 0.05 percent level

Table 4.31 shows that a factor, namely, 'facilities at reception and OPD area' has been found to be significantly different statistically ($p<.05$) among different categories of education. From table 4.32, it can also be seen that respondents of 'diploma' category have shown a higher satisfaction score to the 'facilities at reception and OPD area' in comparison to that shown by other categories.

Table 4.32: Descriptive statistics for consumer satisfaction and education

Statistics = Mean	**Dependent variable = Facilities at reception and OPD area**
Post Graduation & Above	.0783183
Graduation	.0495531
Diploma	.2968845
Class XII or below	-.0913410
Total	.0000000

From table 4.33, it can be seen that 'facilities at reception and OPD area' for the education categories of 'diploma' and 'class XII or below' has been found to be significantly different statistically ($p<.05$). It could be due to high awareness level and expectations of the respondents of 'graduation' and 'post graduation and above' categories. Respondents of these categories might be having more concern about cleanliness and basic facilities at reception and OPD area.

Ebrahimipour et al. (2013) have submitted similar findings and have observed that knowledge, education and awareness about disease and its treatment process have a significant impact on satisfaction of patients.

Table 4.33: Post hoc analysis for consumer satisfaction and education

Factor = Facilities at reception and OPD area				**Multiple comparisons**
(I) Education	**(J) Education**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**
Post Graduation & Above	Graduation	.02876520	.10491538	.993
	Diploma	-.21856624	.14523245	.435
	Class XII or below	.16965930	.08524909	.192
Graduation	Post Graduation & Above	-.02876520	.10491538	.993
	Diploma	-.24733144	.14792917	.339
	Class XII or below	.14089410	.08976627	.397
Diploma	Post Graduation & Above	.21856624	.14523245	.435
	Graduation	.24733144	.14792917	.339
	Class XII or below	.38822554	.13469673	.021*
Class XII or below	Post Graduation & Above	-.16965930	.08524909	.192
	Graduation	-.14089410	.08976627	.397
	Diploma	-.38822554	.13469673	.021*

* Mean difference is significant at 0.05 percent level

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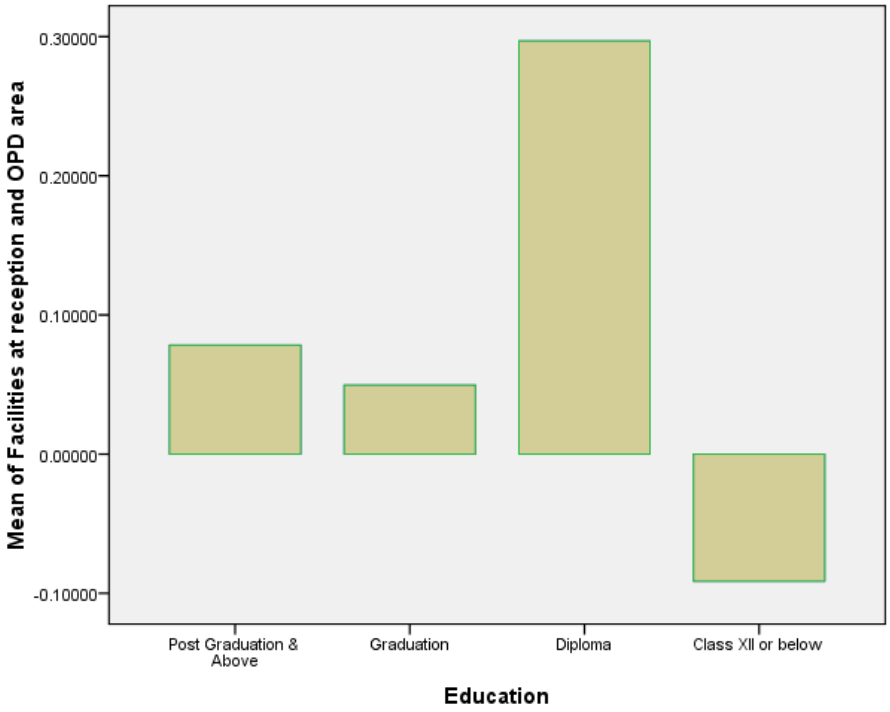

Figure 4.17: Means Plots of Education, and facilities at Recption and OPD Area for Consumer Satisfaction

Occupation:

One-way ANOVA has been applied in order to examine if significant differences exist among means scores of various factors affecting patient satisfaction from hospital services with respect to various categories of occupation.

Table 4.34: ANOVA for consumer satisfaction and occupation

Source = Between groups					
Factors	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Infrastructure and amenities	2.161	3	.720	.720	.540
Fulfillment of clinical requirements	1.114	3	.371	.371	.774
Facilities at reception and OPD area	2.747	3	.916	.915	.433
Nursing and staff care	1.974	3	.658	.657	.579
Professional behavior of doctors	8.741	3	2.914	2.933	.033*
Affordability and convenience	2.034	3	.678	.677	.566
Registration and administrative procedures	2.071	3	.690	.689	.559
General behavior of the doctors	1.489	3	.496	.495	.686

* Mean difference is significant at 0.05 percent level

It can be concluded from table 4.34 that a factor, namely, 'professional behavior of doctors' has been found to be significantly different statistically ($p<.05$) among different categories of occupation. It can also be seen from table 4.35 that respondents of 'private employee' category have reported higher satisfaction to 'professional behavior of doctors' in comparison to that shown by other categories.

Table 4.35: Descriptive statistics for consumer satisfaction and occupation

Statistics = Mean	**Dependent variable = Professional behavior of doctors**
Government Employee	-.3037929
Private Employee	.1437577
Businessman	.0133166
Dependent	-.0118392
Total	.0000000

From table 4.36, it has been found that 'professional behavior of doctors' for the occupation categories of 'private employee' and 'government employee' has been found to be significantly different statistically ($p<.05$). Expected reasons for same could be different levels of attention given by doctors to the patients of various categories. Respondents of 'private employee' category might have high concern regarding prescriptions and instructions about treatment process given by doctors. Difference could also be due to cost involved in treatment process because patients of 'government employee' category have to pay hospital charges through employer insurance scheme and patients of 'private employee' category have to pay the dues from their own pockets.

Park and Seo (2014) have made similar observations and reported that occupation and source of income have a direct impact on patient satisfaction.

Table 4.36: Post hoc analysis for consumer satisfaction and occupation

Factor = Professional behavior of doctors				Multiple comparisons
(I) Occupation	**(J) Occupation**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**
Government Employee	Private Employee	-.44755066	.15188669	.017*
	Businessman	-.31710955	.14071651	.110
	Dependent	-.29195374	.13566911	.138
Private Employee	Government Employee	.44755066	.15188669	.017*
	Businessman	.13044111	.10403521	.593
	Dependent	.15559692	.09709941	.378
Businessman	Government Employee	.31710955	.14071651	.110
	Private Employee	-.13044111	.10403521	.593
	Dependent	.02515581	.07848482	.989
Dependent	Government Employee	.29195374	.13566911	.138
	Private Employee	-.15559692	.09709941	.378
	Businessman	-.02515581	.07848482	.989

* Mean difference is significant at 0.05 percent level

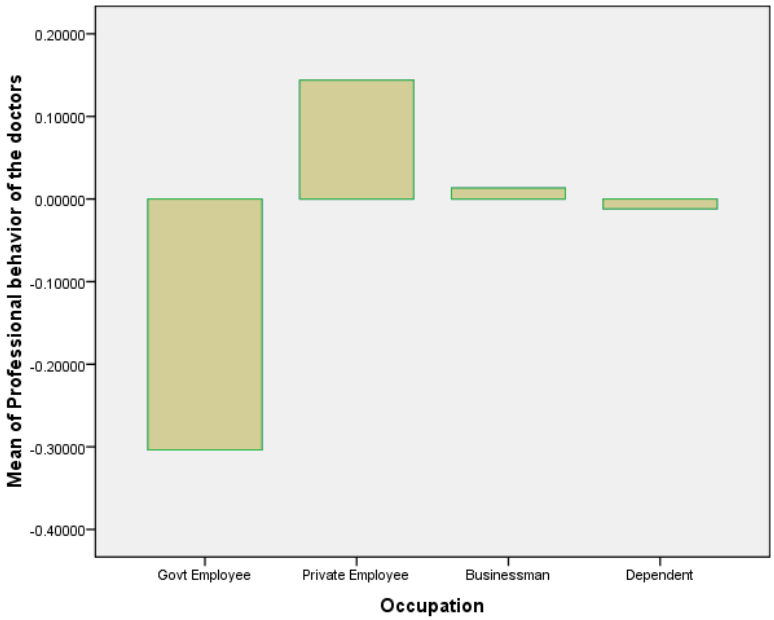

Figure 4.18: Means Plots of Occupation and Professional Behavior of Doctors for Consumer Satisfaction

AGE:

One-way ANOVA has been applied in order to examine if significant differences exist among means scores of various factors affecting patient satisfaction from hospital services with respect to various categories of age.

Table 4.37: ANOVA for consumer satisfaction and age

Source = Between groups					
Factors	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Infrastructure and amenities	5.068	3	1.689	1.693	.167
Fulfillment of clinical requirements	1.408	3	.469	.469	.704
Facilities at reception and OPD area	7.493	3	2.498	2.511	.057
Nursing and staff care	1.191	3	.397	.396	.756
Professional behavior of doctors	1.957	3	.652	.652	.582
Affordability and convenience	3.268	3	1.089	1.090	.353
Registration and administrative procedures	2.500	3	.833	.833	.476
General behavior of the doctors	2.306	3	.769	.768	.512

* Mean difference is significant at 0.05 percent level

From table 4.37, it can be seen that no factor has been found to be significantly different statistically with respect to categories of age.

Monthly Family Income:

One-way ANOVA has been applied in order to examine if significant differences exist among means scores of various factors affecting patient satisfaction from hospital services with respect to various categories of monthly family income.

Table 4.38: ANOVA for consumer satisfaction and monthly family income

Source = Between groups					
Factors	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Infrastructure and amenities	1.656	4	.414	.413	.799
Fulfillment of clinical requirements	2.236	4	.559	.558	.693
Facilities at reception and OPD area	4.536	4	1.134	1.135	.339
Nursing and staff care	5.045	4	1.261	1.263	.283
Professional behavior of doctors	4.903	4	1.226	1.227	.298
Affordability and convenience	2.035	4	.509	.508	.730
Registration and administrative procedures	2.510	4	.627	.626	.644
General behavior of the doctors	1.390	4	.348	.347	.846

* Mean difference is significant at 0.05 percent level

It can be stated on the basis of table 4.38 that no factor has been found to be significantly different statistically with respect to the categories of monthly family income.

4.4.2 Two-tailed t-test for consumer satisfaction

Differences among mean scores of various categories of respondent demographics in relation to the factors affecting patient satisfaction from hospital services have also been checked with the help of two-tailed t-test. All the factors have been tested individually and mean scores have been compared with respect to various categories of respondent demographics.

Gender:

Two-tailed t-test has been applied in order to examine if significant differences exist among means scores of various factors affecting patient satisfaction from hospital services with respect to both categories of gender.

Table 4.39: t-test for consumer satisfaction and gender

Independent sample test			**Assumptions = Equal variances assumed**		
	Levene's Test for Equality of Variances		**t-test for Equality of Means**		
Factors	**F**	**Sig.**	**t**	**df**	**Sig. (2-tailed)**
Infrastructure and amenities	1.552	.213	1.241	881	.215
Fulfillment of clinical requirements	.747	.388	-1.156	881	.248
Facilities at reception and OPD area	.156	.693	-2.252	881	.025*
Nursing and staff care	1.556	.213	-.582	881	.561
Professional behavior of doctors	2.353	.125	-.641	881	.521
Affordability and convenience	2.476	.116	-2.120	881	.034*
Registration and administrative procedures	1.761	.185	-.091	881	.927
General behavior of the doctors	.729	.393	-1.060	881	.289

* Mean difference is significant at 0.05 percent level

It can be concluded from table 4.39 that two factors, namely, 'facilities at reception and OPD area' and 'affordability and convenience' have been found to be significantly different statistically ($p<.05$) between different categories of gender. From tables 4.40 and table 4.41, it can also be seen that female respondents have reported higher satisfaction to both the factors in comparison to that shown by male respondents. Possible reasons for the same could be greater concern of male patients about cost of the service, approachability to hospital, timing of OPD services, general cleanliness and availability of basic facilities at the reception area. It is possible that female respondents might have lesser concern about all these issues and greater concern

about other issues like behavior of doctors and staff members, and care provided by nursing staff in comparison to male respondents.

Anand and Sinha (2010) and Sharma et al. (2011) have presented similar findings and concluded that gender has a significant effect on patient satisfaction.

Table 4.40: Group statistics for consumer satisfaction (factor 1) and gender

Dependent variable = Facilities at reception and OPD area				
Gender	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Male	591	-.0531564	1.00877257	.04149536
Female	292	.1075870	.97486124	.05704944

Table 4.41: Group statistics for consumer satisfaction (factor 2) and gender

Dependent variable = Affordability and convenience				
Gender	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Male	591	-.0500424	1.01286356	.04166364
Female	292	.1012844	.96724336	.05660364

Health Insurance:

Two-tailed t-test has been applied in order to examine if significant differences exist among means scores of various factors affecting patient satisfaction from hospital services with respect to both categories of health insurance.

Table 4.42: t-test for consumer satisfaction and health insurance

Independent sample test			**Assumptions = Equal variances assumed**		
	Levene's Test for Equality of Variances		**t-test for Equality of Means**		
Factors	**F**	**Sig.**	**t**	**df**	**Sig. (2-tailed)**
Infrastructure and amenities	.012	.911	1.432	881	.153
Fulfillment of clinical requirements	.369	.544	-.731	881	.465
Facilities at reception and OPD area	1.259	.262	-1.310	881	.191
Nursing and staff care	.807	.369	.179	881	.858
Professional behavior of doctors	.468	.494	-.083	881	.934
Affordability and convenience	.314	.575	-.027	881	.978
Registration and administrative procedures	1.186	.276	2.947	881	.003*
General behavior of the doctors	2.186	.140	.193	881	.847

* Mean difference is significant at 0.05 percent level

It can be concluded on the basis of table 4.42 that a factor, namely, 'registration and administrative procedures' has been found to be significantly different statistically ($p<.05$) between different categories of health insurance. It can also be seen from table 4.43 that respondents with health insurance have reported higher satisfaction to 'registration and administrative procedures' in comparison to that reported by respondents without health insurance. Reasons for the same could be time and attention given by registration staff to the respondents of various categories. Respondents with health insurance do not pay hospital charges from their own pockets. The charges are mostly paid by insurance companies. Respondents do not have to worry regarding hospital bill and paper work related to admission and discharge of patient.

Njong and Tchouapi (2014) have shown parallel findings and affirmed that health insurance has an impact on satisfaction level of hospital service consumers.

Table 4.43: Group statistics for consumer satisfaction and health insurance

Dependent variable = Registration and administrative procedures				
Health Insurance	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Yes	114	.2564666	1.00454287	.09408406
No	769	-.0380198	.99435976	.03585753

Marital Status:

Two-tailed t-test has been applied in order to examine if significant differences exist among means scores of various factors affecting patient satisfaction from hospital services with respect to both categories of marital status.

Table 4.44: t-test for consumer satisfaction and marital status

Independent sample test			**Assumptions = Equal variances assumed**		
	Levene's Test for Equality of Variances		**t-test for Equality of Means**		
Factors	**F**	**Sig.**	**t**	**df**	**Sig. (2-tailed)**
Infrastructure and amenities	.035	.851	-.486	881	.627
Fulfillment of clinical requirements	1.672	.196	-.641	881	.522
Facilities at reception and OPD area	.121	.728	-1.223	881	.222
Nursing and staff care	2.385	.123	-.015	881	.988
Professional behavior of doctors	1.487	.223	1.198	881	.231
Affordability and convenience	1.389	.239	.008	881	.993
Registration and administrative procedures	.000	.987	.861	881	.389
General behavior of the doctors	1.457	.228	.139	881	.890

* Mean difference is significant at 0.05 percent level

The table 4.44 shows that no factor has been found to be significantly different statistically with respect to categories of marital status.

From the results of ANOVA and t-test, it can be concluded that there is a significant relationship between health insurance and consumer satisfaction from health care facilities. There is also a significant relationship between individual demographic variables such as residential area, education, occupation and gender, and consumer satisfaction from health care facilities. Hence, H2 has been accepted.

Objective 5: To analyze the consumer decisions for repurchase and recommendation of services of health care facilities

4.5 Consumer decisions for repurchase and recommendation of services of health care facilities

Linear discriminant analysis has been applied to develop linear discriminant equations based on unstandardized coefficients of identified factors. Standardized coefficients (β) of these factors have also been used to compare the importance of each identified factor.

4.5.1 Linear discriminant analysis for repurchase of hospital services

H3: There is a significant relationship between consumer choices and consumer decisions for repurchase of services of health care facilities

Consumers' decisions for repurchase of hospital services have been analyzed with the help of linear discriminant analysis. Ten factors obtained from exploratory factor analysis (at 5% significance level) have been considered as independent variables, and categorical variable 'repurchase of hospital service' has been taken as dependent variable.

Canonical discriminant function coefficients

A positive association has been observed between hospital choice decisions and repurchases intentions of health care consumers. As observed in table 4.45, repurchase intentions have been found to be influenced by 'basic amenities', 'fame and quality', 'building and infrastructure', 'ease and affordability', 'personal substances', 'responsiveness of services', 'recommendations and suggestions', 'clinical support', 'privacy and information sharing' and 'range of services'.

Table 4.45: Canonical discriminant function coefficients for repurchase of hospital service

Intention to repurchase	Function 1
Basic amenities	.725
Fame and quality	-.214
Building and infrastructure	-.115
Ease and affordability	-.341
Personal substances	.048
Responsiveness of services	.241
Recommendations and suggestions	.160
Clinical support	-.117
Privacy and information sharing	.260
Range of services	-.439
(Constant)	.006

Discriminant score

Canonical discriminant function coefficients yield coefficients of various factors. The discriminant equation based on unstandardized coefficients of various factors is as follows:

Discriminant score (Repurchase of hospital service) = .725 (basic amenities) - .214 (fame and quality) - .115 (building and infrastructure) - .341 (ease and affordability) + .048 (personal substances) + .241 (responsiveness of services) + .160 (recommendations and suggestions) - .117 (clinical support) + .260 (privacy and information sharing) - .439 (range of services) - .006 (constant)

Group centroid values

Group centroid values can be used to compare the score of discriminant equation. As seen in table 4.46, patients are expected to repurchase hospital services if the discriminant score of equation is greater than 0.109, they are not expected to repurchase if the score is less than -.209, and they may or may not repurchase if the score is in-between these limits.

Table 4.46: Group centroid values for repurchase of hospital service

Would you repurchase services of this hospital in future?	Function 1
Yes	.109
No	-.209

Standardized coefficients (β) of independent factors

Standardized coefficients (β) of various factors can be used to compare the importance of each independent variable. It has been observed that 'responsiveness of service' is the most important, and 'privacy and information sharing' is the least important factor for repurchase of hospital services. Table 4.47 shows the standardized coefficients (β) of independent factors for repurchase of hospital services.

Table 4.47: Standardized coefficients (β) of independent factors for repurchase of hospital service

Names of factors	Standardized coefficients (β)	Importance levels of factors
Basic amenities	.649	3
Fame and quality	-.790	2
Building and infrastructure	-.257	7
Ease and affordability	-.493	5
Personal substances	.532	4
Responsiveness of services	.891	1
Recommendations and suggestions	.178	9
Clinical support	-.231	8
Privacy and information sharing	.156	10
Range of services	-.315	6

Classification results

The classification results provide the strength of discriminant equation. Respondents have been divided into two groups using Bernoulli function. A total of 70% cases have been selected for predicting discriminant equation and remaining have been used to check the strength of equation.

The equation correctly classifying more than 80% cases has been considered good in social sciences (Malhotra & Birks, 2006). It has been observed that 88% of selected cases and 86.4% of unselected cases have been correctly classified. Table 4.48 presents the classification results for repurchase of hospital services.

Table 4.48: Classification results for repurchase of hospital service

Repurchase of hospital service				Predicted Group Members		
				Yes	No	Total
Cases Selected	Original	Count	Yes	389	22	411
			No	53	161	214
		%	Yes	94.6	5.4	100.0
			No	24.8	75.2	100.0
Cases Not Selected	Original	Count	Yes	160	14	174
			No	21	63	84
		%	Yes	92.0	8.0	100.0
			No	25.0	75.0	100.0

88.0 % of selected original grouped cases correctly classified
86.4 % of unselected original grouped cases correctly classified

It is evident from the results that there is a significant relationship between consumer choices and consumer decisions for repurchase of services of health care facilities. Thus, H3 has been accepted. Boshoff and Gray (2004), Peyrot et al. (1993) and Woodside and Shinn (1988) have presented similar findings.

4.5.2 Linear discriminant analysis for recommendation of hospital services

H4: There is a significant relationship between consumer satisfaction and consumer decisions for recommendation of services of health care facilities

Consumers' decisions for recommendation of hospital services have been analyzed with the help of linear discriminant analysis. Eight factors obtained from exploratory factor analysis (at 5% significance level) have been considered as independent variables, and categorical variable 'recommendation of hospital service' has been taken as dependent variable.

Canonical discriminant function coefficients

A positive association has been observed between satisfaction and service recommendation decisions of health care consumers. As seen from table 4.49, recommendation intentions have been found to be influenced by the 'infrastructure and amenities', 'fulfillment of clinical requirements', 'facilities at reception and OPD area', 'nursing and staff care', 'professional

behavior of doctors', 'affordability and convenience', 'registration and administrative procedures', and 'general behavior of doctors'.

Table 4.49: Canonical discriminant function coefficients for recommendation of hospital services

Intention to recommend	Function 1
Infrastructure and amenities	.816
Fulfillment of clinical requirements	.840
Facilities at reception and OPD area	-.225
Nursing and staff care	-.199
Professional behavior of doctors	.468
Affordability and convenience	.340
Registration and administrative procedures	.401
General behavior of doctors	.089
(Constant)	-.014

Discriminant score

Canonical discriminant function coefficients yield coefficients of various factors. The discriminant equation based on unstandardized coefficients of various factors is as follows:

Discriminant score (Recommendation of hospital service) = .816 (infrastructure and amenities) + .840 (fulfillment of clinical requirements) - .225 (facilities at reception and OPD area) - .199 (nursing and staff care) + .468 (professional behavior of doctors) + .340 (affordability and convenience) + .401 (registration and administrative procedures) + .089 (general behavior of doctors) - .014 (constant)

Group centroid values

Group centroid values can be used to compare the score of discriminant equation. As seen in table 4.50, patients are expected to recommend hospital services if the discriminant score of equation is greater than 0.709, they are not expected to recommend if the score is less than -1.314, and they may or may not recommend if the score is in-between these limits.

Table 4.50: Group centroid values for recommendation of hospital services

Would you recommend services of this hospital to others?	Function 1
Yes	.709
No	-1.314

Standardized coefficients (β) of independent factors

Standardized coefficients (β) of various factors can also be used to compare the importance of each independent variable. It has been observed that 'fulfillment of clinical requirements' is the most important, and 'general behavior of doctors' is the least important factor for recommendation of hospital services. Table 4.51 presents the standardized coefficients (β) of independent factors for recommendation of hospital services.

Table 4.51: Standardized coefficients (β) of independent factors for recommendation of hospital services

Names of factors	Standardized coefficients (β)	Importance levels of factors
Infrastructure and amenities	.640	3
Fulfillment of clinical requirements	.872	1
Facilities at reception and OPD area	-.437	6
Nursing and staff care	-.781	2
Professional behavior of doctors	.211	7
Affordability and convenience	.598	4
Registration and administrative procedures	.482	5
General behavior of doctors	.164	8

Classification results

The classification results provide the strength of discriminant equation. Respondents have been divided into two groups using Bernoulli function. A total of 70% cases have been selected for predicting discriminant equation and remaining have been used to check the strength of equation.

The equation correctly classifying more than 80% cases has been considered good in social sciences (Malhotra & Birks, 2006). It has been found that 86.2% of selected cases and 83.3% of unselected cases have been correctly classified. Table 4.52 illustrates the classification results for recommendation of hospital services.

Table 4.52: Classification results for recommendation of hospital services

Recommendation of hospital service				Predicted Group Members		
				Yes	No	Total
Cases Selected	Original	Count	Yes	372	34	406
			No	52	167	219
		%	Yes	91.6	8.4	100.0
			No	23.7	76.3	100.0
Cases Not Selected	Original	Count	Yes	151	12	163
			No	31	64	95
		%	Yes	92.6	7.4	100.0
			No	32.6	67.4	100.0

86.2 % of selected original grouped cases correctly classified
83.3 % of unselected original grouped cases correctly classified

It is apparent from the results that there is a significant relationship between consumer satisfaction and consumer decisions for recommendation of services of health care facilities. Thus, H4 has been accepted. Ford et al. (1997), Otani et al. (2010) and Williams (1994) have demonstrated same findings.

Objective 6: To categorize the decision-makers involved in selection of health care facilities

4.6 Categories of decision-makers involved in selection of health care facilities

Various categories of decision-makers involved in selection of health care facilities have been identified.

Table 4.53: Categories of decision-makers involved in selection of health care facilities

Decision-maker(s)	N=883	Percentage
Family members	438	49.6
Doctors and family members	172	19.5
Doctors	109	12.3
Friends and relatives	92	10.4
Patients	72	8.2

As observed in table 4.53, family members have chosen the hospitals in 438 (50%) cases, doctors and family members have jointly decided in 172 (20%) cases, doctors alone have taken the decision in 109 (12%) cases, friends and relatives have selected the hospitals in 92 (10%) cases, and patients themselves have taken the initiative to choose the hospitals in 72 (8%) cases.

The categories of decision-makers involved in selection of hospitals are shown in figure 4.19.

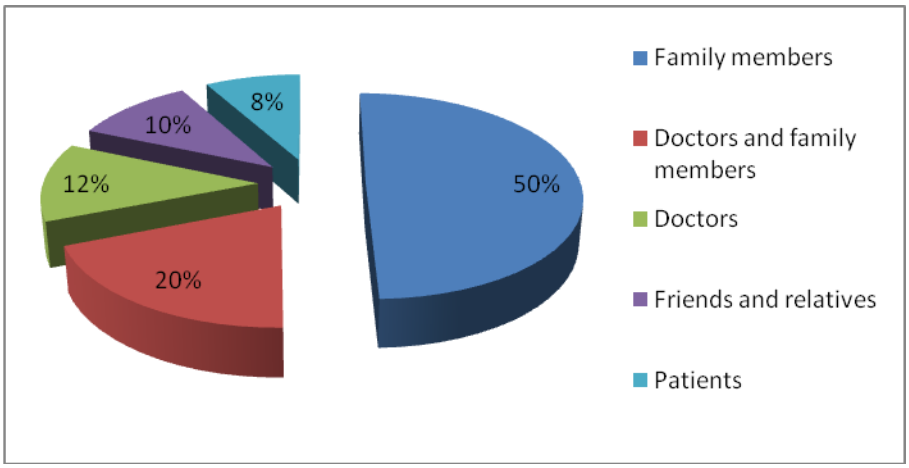

Figure 4.19: Categories of Decision-Maker Involved in Selection of Hospital Services

It is clear from the results that family members, doctors and family members, doctors, friends and relatives, and patients play a significant role in selection of health care facilities. Akinci et al. (2005), Lane and Lindquist (1988) and Smith and Clark (1990) have reported similar findings.

A framework of consumer choices and satisfaction in health care industry

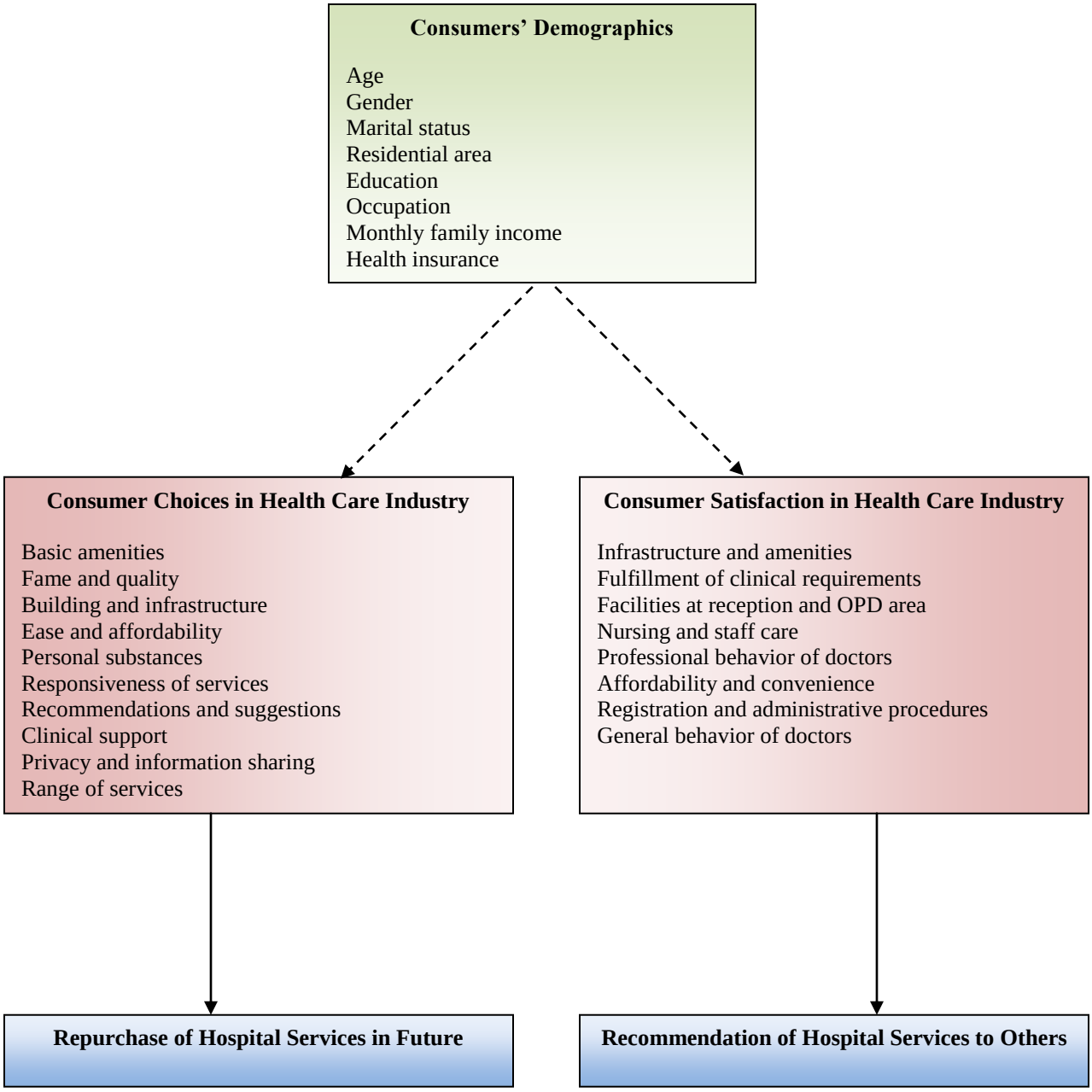

Figure 4.20: A Framework of Consumer Choices and Satisfaction in Health Care Industry

As seen from figure 4.20, a framework of consumer choices and satisfaction in health care industry has been proposed. This framework depicts that consumer choices and consumer satisfaction in health care industry are based on identified factors. Ten factors affecting hospital choice decisions of patients have been identified. Eight factors affecting patient satisfaction from hospital services have been identified. These factors have been observed to be significantly different statistically with respect to presence or absence of health insurance and various categories of respondent demographics. This framework also portrays that there is a significant effect of consumer choices and consumer satisfaction on repurchase and recommendation decisions of health care consumers, respectively.

Concluding remarks

This chapter describes consumers' perspectives with respect to health care services. It discusses the analysis of respondents' profile and disease-wise distribution of respondents from each region. It explores the factors which affect choices and satisfaction of health care consumers in the context of tertiary-level health care services. It examines if these factors are significantly different statistically with respect to the presence or absence of health insurance and various categories of respondent demographics. It discusses the consumers' decisions for repurchase and recommendation of services of same health care facilities. It presents various categories of decision-makers involved in selection of hospitals. A framework of consumer choices and satisfaction in health care industry has also been developed.

Chapter - V

Summary and Conclusions

5.1 Introduction

This chapter deals with the summary of present research. The study has been conducted to explore consumer choices and satisfaction with respect to tertiary-level health care services in India. It is based on a survey of patients in multispecialty hospitals, located in north India, particularly those suffering from tertiary-level health diseases. Primary data collected with the help of a structured questionnaire from 883 patients, suffering specifically from eight types of tertiary-level health diseases, has been analyzed with the help of SPSS® 16.0. Various demographic variables have been considered to understand the diverse behavior of health care consumers. Statistical tools like exploratory factor analysis, one-way ANOVA, two-tailed t-test and linear discriminant analysis have been employed to test hypotheses.

In this chapter, results of the study have been summarized. Research objectives have been discussed to understand whether the purpose of research has been achieved. Implications and recommendations of study along with contribution to research have been mentioned. Limitations of study and future research have also been presented.

5.2 Summary of results

5.2.1 Consumer choices of health care facilities

Exploratory factor analysis

Ten factors in descending order of consideration, affecting consumer choices of health care facilities, namely, basic amenities, fame and quality, building and infrastructure, ease and affordability, personal substances, responsiveness of services, recommendations and suggestions, clinical support, privacy and information sharing, and range of services have been identified. Various studies have also presented similar findings (Bahrami et al., 2013; Boscarino & Steiber, 1982; Lane & Lindquist, 1988; Wolinsky & Kurz, 1984).

Most of the respondents have reported that basic facilities like water, electricity, wash rooms, fans, approachable medical shop, canteen, provision for parking vehicles and sufficient waiting area are important features which affect hospital choice decisions. Brand names of hospitals, reputation of doctors and general image of hospitals in society have a significant impact on decision-making of patients. Religious and cultural preference, years of existence of hospital and quality specialist doctors have also been considered for selection of hospitals.

It has been found that patients prefer hospitals which have latest equipments, hi-tech operation theaters and modern living room facilities. Cost of services, ease of approaching the hospital, number of rooms, ease of getting appointments, hospital's tie-up with insurance companies, nearness to home and number of beds in hospital have also a significant impact on patients' final decision. It has been observed that patients generally prefer such hospitals where any friend/relative/known person is working. Timing of OPD services, awareness about disease and treatment procedures, severity and duration of the illness, and previous experience with hospital also have an influence on patients' decisions.

The study has revealed that punctuality and courteous behavior of nursing staff, quick administrative procedures, speed in delivery of services and waiting time have a direct impact on choice behavior of health care consumers. Recommendation of friends/relatives, local doctors and someone who has already taken treatment have influenced the decisions of patients. It has been observed that provision of ambulance, facility of blood bank, privacy during treatment, information sharing with patients and range of services also affect patient's choice decisions.

One-way ANOVA and two-tailed t-test

Statistically significant differences ($p<.05$) have been found among various respondents' demographics categories, namely, age, gender, residence, education and monthly family income with respect to identified factors. Findings of previous studies have observed similar results (Gesler & Meade, 1988; Korgaonkar et al., 1985; Roh & Lee, 2005; You & Kwon, 2012).

Age has a positive effect on hospital choice decisions of patients. A factor named as 'personal substance' has been shown higher importance by respondents in age groups of '36-50 years' and 'more than 50 years' in comparison to that reported by other categories. It has been shown the

least importance by respondents of '21-35 years' category. It could be due to severity and duration of illness, and previous experience of patients.

It has been observed that residential area of patients has a significant impact on hospital choice decisions. Respondents from 'semi urban' and 'rural area' have reported higher importance, in comparison to that reported by other categories, with respect to a factor, namely, 'responsiveness of services'. The respondents from 'metro city' have reported considerably higher importance, in comparison to that reported by other categories, with respect to a factor, namely, 'privacy and information sharing'. It could be due to travel time to receive the treatment and high awareness level of metro city respondents about treatment process and confidentiality of complete health records.

Knowledge, education and awareness about disease and its treatment process have a significant impact on hospital choice decisions of patients. A factor named as 'personal substance' have been expressed higher importance by respondents of 'graduation' category in comparison to that reported by other categories. It has been shown the least importance by respondents of 'class XII or below' category. It could be due to awareness about disease and its treatment process, and reference of any friend or relative, who is already working in hospital.

Income status of patients has been observed to be having a direct impact on hospital choice decisions. Respondents having monthly family incomes of 'Rs. 25,001 to Rs. 50,000' have shown higher importance, in comparison to that reported by other categories, with respect to a factor, namely, 'basic amenities'. The respondents having monthly family incomes of 'Rs. 50,001 to Rs. 75,000' category have shown the least importance. It could be due to availability of basic facilities in hospital premises.

It has also been seen that gender of patients also creates a difference in selection of hospitals. Two factors named as 'responsiveness of services' and 'range of services' have been reported higher importance by male respondents in comparison to that reported by female respondents. It could be due to a greater concern of male patients about availability of services, time of service delivery, quick administrative procedures, punctuality and behavior of staff as well as doctors, and quality of care.

5.2.2 Consumer satisfaction from health care services

Exploratory factor analysis

Eight factors, in descending order of consideration, affecting consumer satisfaction from health care facilities have been identified. They are infrastructure and amenities, fulfillment of clinical requirement, facilities at reception and OPD area, nursing and staff care, professional behavior of doctors, affordability and convenience, registration and administrative procedures, and general behavior of doctors. Other studies have also presented similar findings (Baydas, 2014; Duan, Qiu, Yu, & Hu, 2014; Otani et al., 2010; Tahir et al., 2012).

The study has revealed that patient satisfaction is more influenced by basic facilities such as water supply, fan, lights, wash rooms, adequate parking space, availability of proper sign boards, spacious lifts, clean/airy/lighted stairs and ramps, cleanliness of toilets, ATM/bank and cafeteria. It is evident from the results that fulfillment of clinical requirements has a direct effect on patient satisfaction. The most important service features with respect to patient satisfaction are availability of diagnosis facilities, required blood groups, required medicines, correct and timely reports given by the laboratories and quality of ambulance service.

Findings have shown that adequate sitting area at the reception, availability of trolley/wheel chairs, cleanliness in the OPD area, courteous, cooperative and sympathetic behavior of paramedical staff and sufficient nursing staff are also important service features responsible for patient satisfaction. Most of the respondents have described that personal attention and proper time given by the nursing staff and doctors have an important influence on satisfaction.

Professional communications of doctors such as proper explanation of schedule and time of treatment, and required tests or diagnosis have also been reported notable attributes affecting patient satisfaction from hospitals services. It has been found that affordability and convenience of service have a direct impact on patient satisfaction. Charges for tests and other medical services, convenient location of hospital, easy access to doctors, tie-up of hospital with insurance companies and timings of OPD services also have a significant effect on satisfaction of health care consumers.

Courteous and cooperative behavior of registration staff, efficient system of addressing complaints, meeting time with patient, waiting time at registration counter and queries handling at reception have been found to be direct service components affecting satisfaction levels of patients. Similarly, general behavior of doctors such as tension free and relaxed environment, privacy during clinical examination, and courteous behavior of doctors have a strong effect on patient satisfaction.

One-way ANOVA and two-tailed t-test

Statistically significant differences ($p<.05$) have been found between presence or absence of health insurance, and also among various categories of respondent demographics, namely, gender, residence, education and occupation with respect to identified factors. Findings of previous studies have observed similar results (Al-Omar, 2000; Njong & Tchouapi, 2014; Park & Seo, 2014; Sharma et al., 2011).

Residential area of patients has an important influence on satisfaction. A factor named as 'nursing and staff care' has been reported higher satisfaction by respondents of 'semi urban area' in comparison to that reported by other categories. It has been shown the least satisfaction by respondents of 'rural area' category. It could be due to fewer expectations of semi urban area respondents about the quality of nursing care in comparison to those of other categories.

It has been observed that education has a significant impact on the satisfaction levels of patients. Respondents of diploma category have reported higher satisfaction, in comparison to that reported by other categories, with respect to a factor, namely, 'facilities at reception and OPD area'. Respondents of 'class XII or below' category have shown the least satisfaction. It may be due to high expectations of respondents of 'graduation' and 'post graduation and above' categories about basic facilities in comparison to those of other categories.

Occupation has been observed to be having a positive influence on patient satisfaction. A factor named as 'professional behavior of doctors' has been presented higher satisfaction by respondents of 'private employee' category in comparison to that reported by other categories. It has been shown the least satisfaction by respondents of 'government employee' category. It could be due to varying levels of attention given by doctors to patients in different categories.

Gender has been seen to be having a notable effect on patient satisfaction. It has been shown that female respondents have reported higher satisfaction in comparison to that reported by male respondents with respect to factors, namely, 'facilities at reception and OPD area' and 'affordability and convenience'. It could be due to greater concern of male patients in comparison to that of female patients about cost of service, availability of basic facilities, approachability to hospital, general cleanliness and timing of OPD services.

It has been seen that health insurance also has a significant effect on patient satisfaction. A factor named as 'registration and administrative procedures' has been reported higher satisfaction by respondents possessing health insurance in comparison to that reported by respondents not having health insurance. It could be due to fact that respondents without health insurance have to pay hospital charges from their own pockets whereas dues of respondents with health insurance are paid by the insurance company.

5.2.3 Consumer decisions for repurchase and recommendation of hospital services

5.2.3.1 Repurchase of hospital services

Linear discriminant analysis

Ten factors affecting consumer choices of health care facilities (at 5% significance level) have been considered as independent variables, and categorical variable 'repurchase of hospital service' has been taken as the dependent variable.

Results of canonical discriminant function coefficients have shown that there is a positive association between hospital choice and service repurchase decisions of health care consumers. Service repurchase decisions have been found to be influenced by identified factors. Other studies have also presented similar findings (Boshoff & Gray, 2004; Peyrot et al., 1993; Woodside & Shinn, 1988).

The discriminant equation based on unstandardized coefficients of various factors is as follows:

Discriminant score (Repurchase of hospital service) = .725 (basic amenities) - .214 (fame and quality) - .115 (building and infrastructure) - .341 (ease and affordability) + .048 (personal substances) + .241 (responsiveness of services) + .160 (recommendations and suggestions) - .117 (clinical support) + .260 (privacy and information sharing) - .439 (range of services) - .006 (constant)

Group centroid values have shown that patients are expected to repurchase hospital services, if the discriminant score of equation is greater than .109. They are not expected to repurchase if the score is less than -.209, and they may or may not repurchase if the score is in-between these two values.

It has been observed from the values of standardized coefficients (β) of identified factors that 'responsiveness of service' is the most important factor for repurchase of hospital services. 'Privacy and information sharing' has been found to be the least important factor.

Respondents have been divided into two groups using Bernoulli function. A total of 70% cases have been selected for predicting discriminant equation and the remaining have been used for checking the strength of equation. It has been found from the classification results that 88% of selected cases and 86.4% of unselected cases have been correctly classified.

5.2.3.2 Recommendation of hospital services

Linear discriminant analysis

Eight factors affecting consumer satisfaction from health care facilities (at 5% significance level) have been considered as independent variables, and categorical variable 'recommendation of hospital service' has been taken as the dependent variable.

Results of canonical discriminant function coefficients have shown that there is a positive association between satisfaction and service recommendation decisions of health care consumers. Service recommendation decisions have been found to be influenced by identified factors. Various studies have also presented similar findings (Ford et al., 1997; Otani et al., 2010; Williams, 1994).

The discriminant equation based on unstandardized coefficients of various factors is as follows:

Discriminant score (Recommendation of hospital service) = .816 (infrastructure and amenities) + .840 (fulfillment of clinical requirements) - .225 (facilities at reception and OPD area) - .199 (nursing and staff care) + .468 (professional behavior of doctors) + .340 (affordability and convenience) + .401 (registration and administrative procedures) + .089 (general behavior of doctors) - .014 (constant)

Group centroid values have shown that patients are expected to recommend hospital services to others, if the discriminant score of equation is greater than .709. They are not expected to recommend if the score is less than -1.314, and they may or may not recommend if the score is in-between these two values.

It has been observed from the values of standardized coefficients (β) of identified factors that 'fulfillment of clinical requirements' is the most important factor for recommendation of hospital services. 'General behavior of doctors' has been found to be the least important factor.

Respondents have been divided into two groups using Bernoulli function. A total of 70% cases have been selected for predicting discriminant equation and the rest of cases have been used for checking the strength of equation. It has been found from the classification results that 86.2% of selected cases and 83.3% of unselected cases have been correctly classified.

5.2.4 Decision-makers involved in selection of health care facilities

Five categories of individuals taking decisions for selection of hospitals have been found.

It is evident from the results that family members have chosen the hospitals in 49.6% cases, and doctors and family members have jointly decided in 19.5% cases. Doctors alone have taken the decision in 12.3% cases, friends and relatives have completed the decision process in 10.4% cases, and patients themselves have taken the initiative to choose the hospitals in 8.2% cases. Previous studies have observed similar results (Akinci et al., 2005; Lane & Lindquist, 1988; Smith & Clark, 1990).

5.3 Discussion of research objectives

The discussion of research objectives is important to understand whether the same have been accomplished. This study has six research objectives.

The first objective of the present research is 'to identify the key factors along with their relative importance affecting consumer choices of health care facilities'. To achieve this, exploratory factor analysis has been applied. Principal axis factoring with varimax rotation method has been used for extracting the factors. Statements with factor loadings greater than value of 0.4 have been considered. Factors with an eigen value of one or more have been extracted. Ten factors in descending order of consideration, namely, basic amenities, fame and quality, building and infrastructure, ease and affordability, personal substances, responsiveness of services, recommendations and suggestions, clinical support, privacy and information sharing, and range of services have been extracted.

'To examine if the factors affecting consumer choices of health care facilities are related with consumer demographics' is the second objective. One-way ANOVA and two tailed t-test techniques have been applied to achieve the objective. Differences among mean scores of various categories of respondent demographics in relation to identified factors have been checked. The factors have been tested individually with respect to various categories of respondent demographics. Mean scores have been compared and post hoc analysis has been performed on independent demographic variables containing more than two categories. It has been shown that identified factors are significantly different statistically ($p<.05$) with respect to various categories of respondent demographics, namely, age, gender, residence, education and monthly family income.

The third objective is 'to identify the key factors along with their relative importance affecting consumer satisfaction from health care facilities'. It has been achieved by employing exploratory factor analysis. Principal axis factoring with varimax rotation method has been used for extracting the factors. Statements with factor loadings greater than value 0.4 have been considered. Factors with an eigen value of one or more have been extracted. Eight factors in descending order of consideration, namely, infrastructure and amenities, fulfillment of clinical requirement, facilities at reception and OPD area, nursing and staff care, professional behavior of

doctors, affordability and convenience, registration and administrative procedures, and general behavior of doctors have been extracted.

'To examine if the factors affecting consumer satisfaction from health care facilities are related with consumer demographics' is the fourth objective. One-way ANOVA and two tailed t-test techniques have been applied to meet the objective. Differences among mean scores of various categories of respondent demographics in relation to identified factors have been checked. The factors have been tested individually with respect to various categories of respondent demographics. Mean scores have been compared and post hoc analysis has been performed on independent demographic variables containing more than two categories. It has been shown that identified factors are significantly different statistically ($p<.05$) with respect to presence or absence of health insurance as well as various categories of respondent demographics, namely, gender, residence, education and occupation.

The fifth objective is 'to analyze the consumer decisions for repurchase and recommendation of services of health care facilities'. It has been achieved by employing linear discriminant analysis. Discriminant equations based on unstandardized coefficients of identified factors have been developed. Group centroid values have been calculated to compare the scores of discriminant equations. Standardized coefficients (β) have been considered to find out the importance of identified factors for repurchase and recommendation of hospital services. The results have revealed that 88% of selected cases and 86.4% of unselected cases have been correctly classified for repurchase of hospital service. It has been revealed that 86.2% of selected cases and 83.3% of unselected cases have been correctly classified for recommendation of hospital services.

'To categorize the decision-makers involved in selection of health care facilities' is the sixth objective. Five categories of decision-makers involved in selection of hospitals have been found. It has been seen that family members, doctors and family members together, doctors, friends and relatives, and patients themselves take the decisions for final selection of hospitals.

5.4 Interpretation in light of theoretical framework of SERVQUAL

Parasuraman, Zeithaml and Berry (1988) have developed a theoretical framework, SERVQUAL, which consists of five service quality dimensions, namely, tangibles, reliability, responsiveness, assurance and empathy. These dimensions contain various attributes related to service delivery like physical facility, equipment, appearance of personnel, ability to perform promised service, prompt service, courtesy of employees, employees' ability to inspire trust and confidence, individual attention and caring behavior of service providers.

The present study has affirmed that these service attributes also play a vital role in the delivery of health care services.

It has been found in the study that there are various attributes of health care services which affect hospital choice decision of patients. These attributes are availability of basic facilities like water, electricity, wash rooms and fans, approachable medical shops, general image of hospital, availability of latest and hi-tech equipments, ease of approaching the hospital, ease of getting appointments, hospital's building and infrastructure, proximity of the hospital, previous experience, waiting time for treatment, speed in delivery of services, punctuality and courteous behavior of hospital staff, recommendations by friends, relatives and doctors, clinical support, availability of different range of services and sharing of information with patients.

Similarly, it has been shown that patient satisfaction is influenced by various service attributes, namely, availability of proper sign boards, spacious lifts and wheel chairs, lighted stairs and ramps, required medicines, cleanliness of toilets, correct and timely reports given by laboratories, quality of ambulance service, adequate sitting area at reception and respective OPD, sufficient nursing staff, behavior of doctors, affordability of services, queries handling at reception counter and quick administrative procedures.

5.5 Implications

The present research has found factors which patients consider important in selection of hospitals. Basic amenities, fame and quality, building and infrastructure and ease and affordability have been reported as the most important factors by patients in selection of hospitals. Health care consumers have considered other factors like personal substances,

responsiveness of services, recommendations and suggestions and clinical support. Patients have also expressed importance towards privacy during clinical examinations, information sharing with patients and range of services available in hospitals. These identified factors can be used as inputs by health care organizations to design and reformulate their business strategies. It may also help the hospital administrators in understanding the criteria on which a particular patient chooses the hospital.

It has been observed that various factors affect patient satisfaction from hospital services. These factors are service features like basic infrastructure and amenities, fulfillment of clinical requirement, availability of facilities at reception and OPD area, quality of nursing and staff care, professional and general behavior of doctors, affordability of service, convenience to access the service and registration as well as other administrative procedures. By focusing on these factors, doctors and other health care professionals can enhance the service quality and hence patient satisfaction. Care can be improved for patients and consequently they can perceive high value in hospital services.

It has been demonstrated that statistically significant differences ($p<.05$) exist among various categories of respondent demographics with respect to factors affecting consumer choices and satisfaction in health care industry. These differences have been observed among various categories of age, gender, residence, education and monthly family income, with respect to factors affecting hospital choice decisions of patients. These differences have also been found between patients having health insurance and those without it, and also among various categories of gender, residence, education and occupation with respect to factors affecting patient satisfaction. The results of demographic analysis can help the hospital administrators in redesigning service packages as per needs and demands of different patient groups. They may also be used in reengineering service delivery process by making it more patient-centric.

The present research has developed linear discriminant equations based on unstandardized coefficients of identified factors. These equations can be seen as inputs to predict repurchase and recommendation intentions of health care consumers. The equations may also serve as instruments to formulate retention strategies.

The study has categorized various decisions-makers involved in selection of hospitals. Health care organizations can consider the categories of decision-makers to formulate their positioning strategies. The categories may help organizations to redesign their promotional activities.

A framework of consumer choices and satisfaction in health care industry has also been proposed. This framework is expected to be useful to hospital administrators in understanding and satisfying needs and wants of health care consumers. It may also prove to be useful to consumers in choosing service providers.

5.6 Recommendations

There is a need to understand the factors that patients consider for selecting a health care facility. Hospitals can improve patients' experience by improving the quality of service components such as basic amenities, registration and administrative procedures, nursing and staff care, specialist doctors, system for addressing complaints and clinical support. The organizations can see these factors as opportunities to provide health care services to surpass patients' expectations.

Factors affecting patient satisfaction from hospital services are required to be incorporated in total quality management practices of health care organizations. For instance, fulfillment of clinical requirements, availability of facilities at reception and OPD area, quality of nursing and staff care, and professional and general behavior of doctors must be of priority for improvement areas. Health care organizations can strive to achieve high quality standards while creating and delivering the services to health care consumers.

Demographic analysis of respondents with respect to identified factors can be considered in designing service packages for different patient groups. The hospital administrators can consider this analysis as a base to upgrade clinical and non-clinical constituents of hospital services.

The results related to repurchase and recommendation intentions of health care consumers can also be used by practitioners. The equations can be used to forecast the demand of health care services. The categories of decision-makers can be seen as a base for devising expansion and diversification plans for health care organizations.

Some other recommendations are:

- Doctors and paramedical staff need to follow strict time schedules.
- Health care organizations can promote the adoption of health insurance plans which may result in less financial burden on patients.
- Health care organizations can organize orientation programs to create awareness about healthy life styles so that patients may get right health related information.
- Patients' experiences can be collected and analyzed as a tool for continuous monitoring and improvement of service quality.
- Health care organizations can periodically conduct market research to understand dynamic market situations.

5.7 Contributions

The study has sought to provide insight not only to the existing health care organizations but also to those planning to enter the market place. Patients can use these findings as a source of information for decision-making. They can use it as hospital choice criteria. Moreover, researchers may also use the results of this study for future research.

The study has been conducted to explore consumer choices and satisfaction in health care industry in the context of India. It attempts to provide meaningful inputs to management of health care organizations with respect to consumer buying behavior and satisfaction levels in a competitive market place. It may be useful for hospital administrators to understand consumer behavior which may help them to formulate future plans. It aims to address unexplored gaps in literature among the disciplines of marketing, consumer behavior and health care, which may result in provision of inputs for next studies.

5.8 Limitations

General limitations

Due to cost and time constraints, a limited number of respondents have been studied. The study has been conducted in north India and its results concur with the results of many studies. However, there could be some differences in approach or results as compared to those of studies conducted elsewhere. Another limitation is the adoption of convenience sampling method.

Methodological limitations

Ideally, the results of exploratory factor analysis should yield instrumentation which should be used in a separate sample for the testing of hypotheses. For present research, the same have been deemed confirmed and therefore used as validated constructs for the subsequent analysis. It may be treated as a methodological limitation.

For parametric tests (ANOVA, t-test analysis and linear discriminant analysis), the results of diagnostics on assumptions such as homogeneity of variance, linearity, independence of error terms need to be shown. The same has not been done in this study. It may be considered as next methodological limitation.

The researcher has collected data in categorical form for two demographic variables, namely, 'age' and 'monthly family income'. Collection of data in a precise manner, rather than in categorical form, has the potential of improving the analysis statistically. Therefore, it may be viewed as another methodological limitation.

5.9 Future research directions

Though the present study has attempted to cover many important aspects of consumer choices and satisfaction in health care industry, there is a huge scope for further research. The research can be extended to other regions of country on the basis of proposed and validated framework. The exploratory nature of the study can be given a new shape as conclusive by testing causal relationships among different variables. Future research can be based on a larger sample size and other methods of sampling. A disease-wise analysis can also be carried out to gain more insight into this area of research.

Concluding remarks

This chapter resumes the summary of results. It discusses various research objectives with respect to findings of the study. It presents the theoretical discussion, implications, recommendations, contributions and limitations of the present research. Future research directions have also been highlighted.

References

Aggarwal, N., & Singh, R. (2004). Market orientation in Indian organizations: An empirical study. *Marketing Intelligence & Planning, 22*(7), 700-715.

Ahmad, A. E. M. K., Al-Qarni, A. A., Alsharqi, O. Z., Qalai, D. A., & Kadi, N. (2013). The impact of marketing mix strategy on hospitals performance measured by patient satisfaction: An empirical investigation on Jeddah private sector hospital senior managers perspective. *International Journal of Marketing Studies, 5*(6), 210-227.

Akinci, F., Esatoglu, A. E., Tengilimoglu, D., & Parsons, A. (2005). Hospital choice factors: A case study in Turkey. *Health Marketing Quarterly, 22*(1), 3-19.

Allen, C. T. (1982). Self-perception based strategies for stimulating energy conservation. *Journal of Consumer Research, 8*(4), 381-390.

Al-Omar, B. A. (2000). Patients' expectations, satisfaction and future behavior in hospitals in Riyadh City. *Saudi Medical Journal, 21*(7), 655-665.

Anand, S., & Sinha, R. K. (2010). Quality differentials and reproductive health service utilisation determinants in India. *International Journal of Health Care Quality Assurance, 23*(8), 718-729.

Anderson, D. (1982). Mothers and markets: Consumer behavior in the use of hospital obstetrical services. In A. Smith & M. Venkatesan (Eds.), *Advances in health care research.* Provo, UT: American Association for Advances in Health Care Research.

Anderson, E. W., & Sullivan, M. W. (1993). The antecedents and consequences of customer satisfaction for firms. *Marketing Science, 12*(2), 125-143.

Anderson, E. W., Fornell, C., & Mazvancheryl, S. K. (2004). Customer satisfaction and shareholder value. *Journal of Marketing*, *68*(4), 172-185.

Anderson, E. W., Fornell, C., & Rust, R. T. (1997). Customer satisfaction, productivity, and profitability: Differences between goods and services. *Marketing Science*, *16*(2), 129-145.

Aqel, I. S., & Al-Tarawneh, K. A. (2013). Study of the relationship between the quality of the medical service and patient satisfaction in private hospitals operating in Amman area. *European Journal of Business and Management, 5*(4), 255-274.

Ashraf, M., Ashraf, F., Rahman, A., & Khan, R. (2012). Assessing women's satisfaction level with maternity services: Evidence from Pakistan. *International Journal of Collaborative Research on Internal Medicine & Public Health (IJCRIMPH), 4*(11), 1841-1851.

Babakus, E., & Boller, G. W. (1992). An empirical assessment of the SERVQUAL scale. *Journal of Business Research, 24*(3), 253-268.

Babbie, E. (1990). *Survey research methods (2nd ed.*). Belmont, California: Wadsworth Publishing Company.

Bahrami, M. A., Jannati, A., Gholizadeh, M., Alizadeh, L., & Khodayari, M. T. (2013). A survey of factors affecting patients' decision in selecting governmental and private hospitals in Tabriz, Iran. *Journal of Tourism Research & Hospitality, 2*(1), 1-4.

Baydas, A. (2014). Customer satisfaction in private health organizations: An empirical study. *Review of Applied Socio-Economic Research, 8*(2), 43-56.

Bearden, W. O., & Teel, J. E. (1983). Selected determinants of consumer satisfaction and complaint reports. *Journal of Marketing Research, 20*(1), 21-28.

Berkowitz, E. N., & Flexner, W. A. (1981). The market for health care services: Is there a non-traditional consumer?. *Journal of Health Care Marketing*, *1*(1), 25-34.

Besik, T. (1995). Kad1n doğum uzman1 doktorlarin seçiminde etkili olan faktörlerin incelenmesi. İstanbul Üniversitesi Sosyal Bilimler Enstitüsü Yayinlanmamiş Yüksek Lisans Tezi, İstanbul (in Turkish).

Bhangale, V. (2011). Marketing of healthcare services in India: A study on factors influencing patients' decision making on choice of a hospital. *Journal of Management & Marketing in Healthcare*, *4*(4), 229-233.

Bhat, R. (1999). Characteristics of private medical practice in India: a provider perspective. *Health Policy and Planning*, *14*(1), 26-37.

Bhatia, J., & Cleland, J. (2004). Health care of female outpatients in south-central India: Comparing public and private sector provision. *Health Policy and Planning*, *19*(6), 402-409.

Bin, S. K. (1997). Factors affecting patient's choice of hospitals. *Annals of Saudi Medicine*, *18*(5), 420-424.

Blendon, R. J., Brodie, M., Benson, J. M., Altman, D. E., Levitt, L., Hoff, T., & Hugick, L. (1998). Understanding the managed care backlash. *Health Affairs*, *17*(4), 80-94.

Borah, B. J. (2006). A mixed logit model of health care provider choice: Analysis of NSS data for rural India. *Health Economics*, *15*(9), 915-932.

Boscarino, J., & Steiber, S. R. (1982). Hospital shopping and consumer choice. *Journal of Health Care Marketing*, *2*(2), 15-23.

Boshoff, C., & Gray, B. (2004). The relationships between service quality, customer satisfaction and buying intentions in the private hospital industry. *South African Journal of Business Management, 35*(4), 27-35.

Brent, C. M. (1975). International patterns of consumer behavior. In M. J. Schlinger (Ed), *Advance consumer research.* Columbus: Association for Consumer Research.

Briggs, D. S., Smyth, A., & Anderson, J. A. (2012). In search of capable health managers: What is distinctive about health management and why does it matter?. *Asia Pacific Journal of Health Management*, *7*(2), 71-78.

Budhwar, P. S., & Varma, A. (2011). Introduction: The business context. In P. S. Budhwar & A. Varma (Eds.), *Doing business in India*: *Building research-based practice*. Hoboken: Taylor & Francis, 3-9.

Burke-Miller, J. K., Cook, J. A., Cohen, M. H., Hessol, N. A., Wilson, T. E., Richardson, J. L., ... & Gange, S. J. (2006). Longitudinal relationships between use of highly active antiretroviral therapy and satisfaction with care among women living with HIV/AIDS. *American Journal of Public Health, 96*(6), 1044-1051.

Chahal, H. (2008). Predicting patient loyalty and service quality relationship: A case study of civil hospital, Ahmedabad, India. *Vision: The Journal of Business Perspective, 12*(4), 45-55.

Chahal, H., & Kumari, N. (2010). Development of multidimensional scale for healthcare service quality (HCSQ) in Indian context. *Journal of Indian Business Research*, *2*(4), 230-255.

Cheng Lim, P., & Tang, N. K. (2000). A study of patients' expectations and satisfaction in Singapore hospitals. *International Journal of Health Care Quality Assurance*, *13*(7), 290-299.

Chowdhury, M. U. (2008). Customer expectations and management perceptions in healthcare services of Bangladesh. *Journal of Services Research, 8*(2), 121-140.

Colla, J. B., Bracken, A. C., Kinney, L. M., & Weeks, W. B. (2005). Measuring patient safety climate: A review of surveys. *Quality and Safety in Health Care, 14*(5), 364-366.

Christianson, J. B., & McClure, W. (1979). Competition in the delivery of medical care. *New England Journal of Medicine, 301*(15), 812-818.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. P*sychometrika, 16*(3), 297-334.

Daloğlu, G. (1991). Özel hastaneyi kullananlarin tercih nedenleri ve seçilen hastalik gruplarindaki ortalama yatis süresi. *Hacettepe Üniversitesi Salgik Bilimleri Enstitüsü Yayinlanmamis Yüksek Lisans Tezi,* Ankara (in Turkish).

Das J., & Hammer J. (2007). Money for nothing: The dire straits of medical practice in Delhi, India. *Journal of Development Economics, 83*(1), 1-36.

Desai, V. V. (2011). Patient satisfaction and service quality dimensions. *Advances in Management, 4*(5), 40-45.

Deveny, K., Atchison, S. D., & Flynn, J. (1986, August 25). The health care industry finally asks: What do women want?. *Business Week*, p. 81.

Donabedian, A. (1966). Evaluating the quality of medical care. *The Milbank Memorial Fund Quarterly, 44*(3), 166-206.

Duan, G., Qiu, L., Yu, W., & Hu, H. (2014). Outpatient service quality and doctor-patient relationship: A study in Chinese public hospital. *International Journal of Services, Economics and Management, 6*(1), 97-111.

Dubey, P., & Sharma, S. K. (2013). Factors affecting choice of hospital services in Bilaspur city. *Abhinav: International Monthly Refereed Journal of Research in Management and Technology*, *2*(4), 97-104.

Ebrahimipour, H., Vafaee-Najar, A., Khanijahani, A., Pourtaleb, A., Saadati, Z., Molavi, Y., & Kaffashi, S. (2013). Customers' complaints and its determinants: The case of a training educational hospital in Iran. *International Journal of Health Policy and Management, 1*(4), 273-277.

Egunjobi, L. (1983). Factors influencing choice of hospitals: A case study of the northern part of Oyo State, Nigeria. *Social Science & Medicine, 17*(9), 585-589.

Eisenberg, B. (1997). Customer service in health care: A new era. *Hospital & Health Services Administration, 42*(1), 17-31.

El Haj, H. I., Bahri, K., Noureddine, R. A. I. S., & Lamrini, M. (2013). Patient satisfaction: The importance of its measurement in improving the quality of care and services in a public pediatrics department. *Journal of Biology, Agriculture and Healthcare, 3*(8), 96-104.

Fiedler, J. L. (1981). A review of the literature on access and utilization of medical care with special emphasis on rural primary care. *Social Science & Medicine. Part C: Medical Economics*, *15*(3), 129-142.

Field, A. (2009). *Discovering statistics using SPSS*. London: Sage publications.

Fisher, R. A. (1936). The use of multiple measurements in taxonomic problems. *Annals of Eugenics, 7*(2), 179-188.

Fitzsimmons, J. A., & Fitzsimmons, M. J. (2001). *Service management: Operations, strategy, and information technology*. New York, NY: McGraw-Hill.

Ford, R. C., Bach, S. A., & Fottler, M. D. (1997). Methods of measuring patient satisfaction in health care organizations. *Health Care Management Review*, *22*(2), 74-89.

Fornell, C., Johnson, M. D., Anderson, E. W., Cha, J., & Bryant, B. E. (1996). The American customer satisfaction index: Nature, purpose, and findings. *The Journal of Marketing*, *60*(4), 7-18.

Garg, C. C., & Karan, A. K. (2009). Reducing out-of-pocket expenditures to reduce poverty: A disaggregated analysis at rural-urban and state level in India. *Health Policy and Planning*, *24*(2), 116-128.

Gensch, D. H. & Javalgi, R. G. (1987). The influence of involvement on disaggregate choice models. *Journal of Consumer Research*, *14*(1), 71-82.

Gesler, W. M., & Meade, M. S. (1988). Locational and population factors in health care-seeking behavior in Savannah, Georgia. *Health Services Research*, *23*(3), 443.

Gremler, D. D., Gwinner, K. P., & Brown, S. W. (2001). Generating positive word-of-mouth communication through customer-employee relationships. *International Journal of Service Industry Management*, *12*(1), 44-59.

Gronroos, C. (1984). A service quality model and its marketing implications. *European Journal of Marketing*, *18*(4), 36-44.

Gronroos, C. (2000). *Service management and marketing – A customer relationship Management approach*. Chichester: John Wiley and Sons.

Gupta, S., & Zeithaml, V. (2006). Customer metrics and their impact on financial performance. *Marketing Science*, *25*(6), 718–739.

Gustafsson, A., Johnson, M. D., & Roos, I. (2005). The effects of customer satisfaction, relationship commitment dimensions, and triggers on customer retention. *Journal of Marketing*, *69*(4), 210-218.

Guymon, G., Buschang, P. H., & Brown, T. J. (1999). Criteria used by general dentists to choose an orthodontist, *Journal of Clinical Orthodontics*, *33*(2), 87-93.

Hagan, C. M., Konopaske, R., Bernardin, H. J., & Tyler, C. L. (2006). Predicting assessment center performance with 360-degree, top-down, and customer-based competency assessments. *Human Resource Management*, *45*(3), 357-390.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis*. New Jersey: Pearson Education.

Hansen, R. A. (1980). A self-perception interpretation of the effect of monetary and nonmonetary incentives on mail survey respondent behavior. *Journal of Marketing Research*, *17*(1), 77-83.

He, X. (2011). *Factors affecting rural Kentucky patients hospital choice and bypass behavior.* (Master's thesis, University of Kentucky).
Retrieved from: http://uknowledge.uky.edu/gradschool_theses/115

Hisrich, R. D., & Peters, M. (1982). Comparison of perceived hospital affiliation and selection criteria by primary market segments. *Journal of Health Care Marketing*, *2*(3), 24-30.

Howell, D. C. (2002). *Statistical methods for psychology*. Duxbury: Thomson Learning.

Hutton, J. D., & Richardson, L. D. (1995). Healthscapes: The role of the facility and physical environment on consumer attitudes, satisfaction, quality assessments, and behaviors. *Health Care Management Review*, *20*(2), 48-61.

Jenkinson, C., Coulter, A., Bruster, S., Richards, N., & Chandola, T. (2002). Patients' experiences and satisfaction with health care: Results of a questionnaire study of specific aspects of care. *Quality and Safety in Health Care*, *11*(4), 335-339.

Karafakıoğlu, M. (1998). *Sağlık hizmetleri pazarlaması*, İstanbul Üniversitesi İşletme Fakültesi Yayin No: 271, İstanbul (in Turkish).

Kent, R.A. (1993). *Marketing research in action*. London: Routledge, Taylor & Francis.

Kim, J. O., & Mueller, C. W. (1978). *Introduction to factor analysis. What it is and how to do it*. Beverly Hills, Calif: Sage Publications.

King, K. W., & Haefner, J. E. (1988). An investigation of the external physician search process. *Journal of Health Care Marketing*, *8*(2), 4-13.

Klein T. (2011). *Why do India's urban poor choose to go private? Hospital choice experiments in slums of Hyderabad.* Paper presented at the meeting of Second European Research Conference on Microfinance.
Retrieved from:
http://www.rug.nl/gsg/Research/Conferences/EUmicrofinconf2011/papers/4B.Klein.pdf

Klinefelter, J. R., & Klinefelter, T. A. (2015). *Minimalist investor maximum profits.* New York, NY: Page Publishing.

Korgaonkar, P. K., Lund, D., & Price, B. (1985). A structural equations approach toward examination of store attitude and store patronage behavior. *Journal of Retailing*, *61*(2), 39-60.

Kurtulus, K., & Harcar, T. (1993). Tüketicinin saglik hizmetleri veren hekimler konusunda tutum araþtirmasi. *Yönetim*, İstanbul Üniversitesi Işletme Iktisadi Enstitüsü Dergisi, y1l 4, say1 16 (in Turkish).

Kurz, R. S., & Wolinsky, F. D. (1984). Who picks the hospital: Practitioner or patient?. *Hospital & Health Services Administration*, *30*(2), 95-106.

Lane, P. M., & Lindquist, J. D. (1988). Hospital choice: A summary of the key empirical and hypothetical findings of the 1980s. *Journal of Health Care Marketing*, *8*(4), 5-20.

Lee, K. J. (2005). A practical method of predicting client revisit intention in a hospital setting. *Health Care Management Review*, *30*(2), 157-167.

Leilabadi, S. H., & Noorossana, R. (2014). Modeling the quality and reliability dependent customer satisfaction in Healthcare. *International Journal Research in Industrial Engineering*, *3*(2), 33-45.

Lewis, B. R., & Mitchell, V. W. (1990). Defining and measuring the quality of customer service. *Marketing Intelligence & Planning*, *8*(6), 11-17.

Luft, H. S., Garnick, D. W., Mark, D. H., Peltzman, D. J., Phibbs, C. S., Lichtenberg, E., & McPhee, S. J. (1990). Does quality influence choice of hospital?. *Jama*, *263*(21), 2899-2906.

Malhotra, N. K., & Birks, D. F. (2006). *Marketing research: An applied approach*. Harlow, UK: Prentice-Hall.

Marang-Van De Mheen, P. J., Dijs-Elsinga, J., Otten, W., Versluijs, M., Smeets, H. J., Vree, R., ... & Kievit, J. (2011). The relative importance of quality of care information when choosing a hospital for surgical treatment a hospital choice experiment. *Medical Decision Making*, *31*(6), 816-827.

Margoles, R. A., Territo, J. L., & Lamberti, P. E. (1986). Why do consumers come to a hospital?. *Osteopathic Hospital Leadership*, *30*(7), 12-13.

McIver, J. P., & Carmines, E. G. (1981). *Unidimensional scaling*. Thousand Oaks, CA: Sage.

Messina, G., Vencia, F., Mecheroni, S., Dionisi, S., Baragatti, L., & Nante, N. (2014). Factors affecting patient satisfaction with emergency department care: An Italian rural hospital. *Global Journal of Health Science, 7*(4), 30-39.

Mishra, P. H., & Mishra, T. (2014). Study of patient satisfaction at a super specialty tertiary care hospital. *Indian Journal of Clinical Practice, 25*(7), 624–634.

Naidu, A. (2009). Factors affecting patient satisfaction and healthcare quality. *International Journal of Health Care Quality Assurance, 22*(4), 366-381.

Nargundkar, R. (2005). *Factor analysis in marketing research text and cases.* New Delhi: Tata McGraw Hill.

Nayak, A., Bagchi, K. K., & Nayak, C. R. (2012). Healthcare finance, health insurance and healthcare administration for the poor and elderly people in India–Scope of public-private partnership. *SIT Journal of Management, 1*(1), 106-121.

Ngondi, B. W. (2014). *Factors influencing access to health care services among cervical cancer patients at Kenyatta National Hospital.* (Doctoral dissertation, University of Nairobi). Retrieved from: http://erepository.uonbi.ac.ke/handle/11295/75221.

Njong, A. M., & Tchouapi, R. P. M. (2014). *Assessing user satisfaction with the quality of healthcare services in Cameroon*. Nairobi, Kenya: African Economic Research Consortium.

Nunnally, J. C. (1978). *Psychometric theory.* New York, NY: McGraw-Hill.

O'Connor, S. J., & Lanning, J. A. (1992). The end of autonomy? Reflections on the postprofessional physician. *Health Care Management Review, 17*(1), 63-72.

Oliver, R. L., Rust, R. T., & Varki, S. (1997). Customer delight: foundations, findings, and managerial insight. *Journal of Retailing, 73*(3), 311-336.

Otani, K., Waterman, B., Faulkner, K. M., Boslaugh, S., & Claiborne D. W. (2010). How patient reactions to hospital care attributes affect the evaluation of overall quality of care, willingness to recommend, and willingness to return. *Journal of Healthcare Management, 55*(1), 25-37.

Pakdil, F., & Harwood, T. N. (2005). Patient satisfaction in a preoperative assessment clinic: An analysis using SERVQUAL dimensions. *Total Quality Management & Business Excellence*, *16*(1), 15-30.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, *49*(4), 41-50.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: Multiple-item scale for measuring consumer perception of service quality. *Journal of Retailing*, *64*(1), 12-40.

Parente, D. H., Pinto, M. B., & Barber, J. C. (2005). A pre-post comparison of service operational efficiency and patient satisfaction under open access scheduling. *Health care Management Review*, *30*(3), 220-228.

Park, H. S., & Seo, Y. J. (2014). Determinants of inpatients satisfaction and intent to revisit oriental medical hospitals. *Journal of Korean Medicine, 35*(4), 65-73.

Patwardhan, A. A., Pandey, N., & Dhume, S. M. (2014). Analysis of physicians' technology acceptance literature in changing Indian pharmaceutical marketing context: A Markus and Robey's causal structure approach. *International Journal of Marketing & Business Communication, 3*(2), 33-45.

Peprah, A. A. (2014). Determinants of patients' satisfaction at Sunyani regional hospital, Ghana. *International Journal of Business and Social Research, 4*(1), 96-108.

Peyrot, M., Cooper, P. D., & Schnapf, D. (1993). Consumer satisfaction and perceived quality of outpatient health services. *Marketing Health Services, 13*(1), 24-33.

Phibbs, C. S., & Robinson, J. C. (1993). A variable-radius measure of local hospital market structure. *Health Services Research, 28*(3), 313-324.

PricewaterhouseCoopers. (2010). *Healthcare in India: Emerging market report 2007*. McLean, VA: Author.

Rao, K. D., Peters, D. H., & Bandeen-Roche, K. (2006). Towards patient-centered health services in India—A scale to measure patient perceptions of quality. *International Journal for Quality in Health Care, 18*(6), 414-421.

Rashmi, & Vijaykumar, B. (2010). Quality assessment of child care services in primary health care settings of Central Karnataka (Davangere District). *Indian Journal of Community Medicine: Official Publication of Indian Association of Preventive & Social Medicine, 35*(1), 24-28.

Reichheld, F. F. (1996). Learning from customer defections. *Harvard Business Review, 74*(2), 56-67.

Reid, T. R. (2010). *The healing of America: A global quest for better, cheaper, and fairer health care*. New York: Penguin Press.

Relly, J. E., & Sabharwal, M. (2009). Perceptions of transparency of government policymaking: A cross-national study. *Government Information Quarterly, 26*(1), 148-157.

Roemer, M. I. (1993). National health systems throughout the world. *Annual Review of Public Health*, *14*(1), 335-353.

Roh, C. Y., & Lee, K. H. (2005). Hospital choice by rural Medicare beneficiaries: Does hospital ownership matter?—A Colorado case. *Journal of Health and Human Services Administration*, *28*(3), 346-365.

Royle, J., & Oliver, S. (2004). Consumer involvement in the health technology assessment program. *International Journal of Technology Assessment in Health Care*, *20*(4), 493-497.

Rozenblum, R., Lisby, M., Hockey, P. M., Levtizion-Korach, O., Salzberg, C. A., Lipsitz, S., & Bates, D. W. (2011). Uncovering the blind spot of patient satisfaction: An international survey. *BMJ Quality & Safety*, *20*(11), 959-965.

Saha, G. C., & Theingi. (2009). Service quality, satisfaction, and behavioral intentions: A study of low-cost airline carriers in Thailand. *Managing Service Quality, 19*(3), 350–372.

Saha, S., Dey, M., & Bhattacharyya, S. (2010). Factors affecting consumer buying behavior of Shoes in Kolkata: A case study. *IUP Journal of Management Research*, *9*(4), 39-60.

Saklani, A., Purohit, H. C., & Badoni, D. C. (2000). Positive disconfirmation as a threshold to high satisfaction. *Journal of Management Research*, *1*(1), 31-37.

Schiffman, L., David, B., Aron, O., Angela, P., & Leslie, K. (2005). *Consumer behaviour*. Frenchs Forest, NSW: Pearson Education.

Sharma, R., Sharma, M., & Sharma, R. K. (2011). The patient satisfaction study in a multispecialty tertiary level hospital, PGIMER, Chandigarh, India. *Leadership in Health Service*, *24*(1), 64-73.

Shostack, G. L., & Kingman-Bundage, L. (1991). How to design service. In C. Congram & M. Friedman (Eds.), *The AMA handbook for the service Industries.* New York, NY: Amacom.

Shrestha, N., Mongkolchati, A., Rattanapan, C., & Wongsawass, S. (2012). Assessment of patient satisfaction at a traditional medicine hospital in Nepal. *Journal of Public Health and Development, 10*(3), 17-29.

Smith, S. M., & Clark, M. (1990). Hospital image and the positioning of service centers: An application in market analysis and strategy development. *Journal of Health Care Marketing, 10*(3), 13-22.

Sodani, P. R., Kumar, R. K., Srivastava, J., & Sharma, L. (2010). Measuring patient satisfaction: A case study to improve quality of care at public health facilities. *Indian Journal of Community Medicine: Official Publication of Indian Association of Preventive & Social Medicine, 35*(1), 52-56.

Tahir, M., Nawaz, S., Butt, M. Z., & Mahmood, F. A. K. T. (2012). In-patient perceptions, needs, expectations and satisfaction within tertiary care settings. *Journal of Pharmaceutical Sciences and Research, 4*(12), 2025-2031.

Teehankee, B. (2007). Why should corporations be socially responsible?. *Doing Good in Business Matters: CSR in the Philippines Frameworks*. Manila: AIM & De La Salle GSB, 1-29.

Verma, D. S., & Khandelwal, U. (2011). Consumers' preferences towards service industry: A factorial study of health care industry. *International Journal of Multidisciplinary Research, 1*(8), 83-89.

Visaria, P., & Gumber, A. (1994). Utilisation of and Expenditure on Health Care in India, 1986-87: A study of five states. *Gujarat Institute of Development Research, Gota, Gujarat*, 26-37.

Vonberg, R. P., Sander, C., & Gastmeier, P. (2008). Consumer attitudes about health care—acquired infections: A German survey on factors considered important in the choice of a hospital. *American Journal of Medical Quality*, *23*(1), 56-59.

Vraciu, R. A. (1985). Hospital strategies for the eighties: A mid-decade look. *Health Care Management Review*, *10*(4), 9-20.

Wallace, C. (1985). Women's healthcare spending new target of hospitals' ads. *Modern Healthcare*, *15*(6), 52-56.

Webster, C. (2002). *The national health service: A political history*. USA: Oxford University Press.

Williams, B. (1994). Patient satisfaction: A valid concept?. *Social Science & Medicine*, *38*(4), 509-516.

Wilson, A., Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2012). *Services marketing: Integrating customer focus across the firm*. UK: McGraw Hill.

Wolinsky, F. D., & Kurz, R. S. (1984). How the public chooses and views hospitals. *Hospital & Health Services Administration*, *29*(6), 58-67.

Woodside, A. G., Frey, L. L., & Daly, R. T. (1989). Linking service quality, customer satisfaction, and behavioral intention. *Journal of Health Care Marketing*, 9(4), 5-17.

Woodside, A., & Shinn, R. (1988). Customer awareness and preferences toward competing hospital services. *Marketing Health Services*, *8*(1), 39-47.

World Health Organization. (1946). Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948.

World Health Organization. (2000). *Health systems: Improving performance*: *The world health report 2000.* Geneve: Author.

World Health Organization. (2002). R*educing risks, promoting healthy life*: *The world health report 2002.* Geneva: Author.

Wright, D., Wright, V., & Parsons, R. (1982). Customer selection of hospital maternity care. In S. Smith & Venkatesan, M. (Eds.), *Advances in Health Care Research*. Provo, UT: American Association for Advances in Health Care Research.

Yadav, P., & Mangwana, S. (2014). Analysis of patient satisfaction survey in multi-specialty accredited tertiary care hospital in northern India. *International Journal of Basic and Applied Medical Science, 4*(3), 33-39.

Yañez, J. R. R. (2011). *Wikibook of Health Informatics*. Germany: Pedia Press.

Yang, J. H., & Yoon, J. A. (2015). How the factors of hospital choice of cancer patients affect customer satisfaction. *International Journal of Bio-Science and Bio-Technology, 7*(3), 175-182.

Yeung, M. C., & Ennew, C. T. (2001). Measuring the impact of customer satisfaction on profitability: A sectoral analysis. *Journal of Targeting, Measurement and Analysis for Marketing, 10*(2), 106-116.

You, C. H., & Kwon, Y. D. (2012). Factors influencing medical institution selection for outpatient services. *Journal of the Korean Medical Association*, *55*(9), 898-910.

Zamil, A. M., Areiqat, A. Y., & Tailakh, W. (2012). The impact of health service quality on patients' satisfaction over private and public hospitals in Jordan: A comparative study. *International Journal of Marketing Studies*, *4*(1), 123-137.

Zandbelt, L. C., Smets, E. M., Oort, F. J., Godfried, M. H., & de Haes, H. C. (2007). Medical specialists' patient-centered communication and patient-reported outcomes. *Medical care*, *45*(4), 330-339.

Zikmund, W. G. (1997). *Business Research Methods.* Fort Worth, TX: The Dryden Press.

Appendix I - Research Questionnaire

Questionnaire for Health Care Consumers

Dear Respondent

I am working on a research project named **"Consumer Choices and Satisfaction in Health Care Industry : A Study Based on Multispecialty Hospitals in North India".**

The information collected shall be kept confidential and would be used for research and academic purpose only. Your cooperation would be a great help.

Name of Hospital: ……

Name of Disease: …….

Who Decided to Choose this Hospital? ……...

How important are these variables for you to select a hospital for treatment?

1 = Not At All Important 2 = Unimportant 3 = Neither Important Nor Unimportant
4 = Important 5 = Extremely Important

	Statements	1	2	3	4	5
1	Any friend/relative/known who is working in the hospital					
2	Approachable medical shop					
3	Availability of emergency health care services					
4	Availability of facilities like water, electricity, fans and wash rooms.					
5	Availability of general health care services					
6	Availability of latest and hi-tech equipments					
7	Availability of service packages like full body checkup					
8	Availability of specialized health care services					
9	Awareness about disease and its treatment process					
10	Brand name of the hospital					
11	Canteen and cafeteria facility					
12	Cost of the hospital services					
13	Ease of approaching the hospital					

14	Ease of getting appointments					
15	Fame of the doctors associated with the hospital					
16	General image of the hospital in the society					
17	Having all the medical departments					
18	Hospital's building and infrastructure					
19	Latest equipments and facilities in the operation theater					
20	Modern living room facilities					
21	Number of the rooms and beds					
22	Privacy and dignity while treatment process					
23	Provision for the ambulance and blood bank					
24	Provision for the laboratories					
25	Provision for the parking vehicles					
26	Proximity of the hospital to your place of residence					
27	Punctuality and courteous behavior of the nursing staff					
28	Quality specialist doctors					
29	Quick administrative procedures					
30	Recommendation by someone who has already taken the treatment					
31	Recommendation by your friends/relatives					
32	Recommendation by your local doctor					
33	Religious/cultural preference					
34	Severity and duration of the illness					
35	Sharing of information about treatment process with patient					
36	Speed in the delivery of services					
37	Sufficient waiting area					
38	Tie up of the hospital with the insurance companies					
39	Timing of the OPD services					
40	Waiting time to get treated					
41	Years of existence of the hospital					
42	Your previous experience with the hospital					

Any other variable (s): ……

How satisfied are you from various services of this hospital?

1 = Highly Dissatisfied 2 = Dissatisfied 3 = Neither Satisfied Nor Dissatisfied
4 = Satisfied 5 = Highly Satisfied

	Statements	1	2	3	4	5
1	Adequacy of utilities like water supply, fans, light and wash rooms.					
2	Adequate sitting area at main reception and respective OPD					
3	Adequate space for parking vehicles					
4	Availability of diagnosis facilities					
5	Availability of proper sign boards					
6	Availability of required blood groups					
7	Availability of required medicines					
8	Availability of spacious lifts					
9	Availability of trolley/wheel chairs at the reception					
10	Charges for various tests and other medical services					
11	Clean/airy/lighted stairs and ramps					
12	Cleanliness in the OPD area					
13	Cleanliness of the toilets					
14	Convenient location of the hospital					
15	Correct and timely reports given by the laboratories					
16	Courteous and cooperative behavior of lab and diagnostic staff					
17	Courteous and cooperative behavior of the doctors					
18	Courteous and cooperative behavior of nursing staff					
19	Courteous and cooperative behavior of registration staff					
20	Courteous and cooperative behavior of servants and security staff.					
21	Disease and its consequences were properly explained to you					
22	Doctors advised you about the ways to avoid illness and stay healthy					
23	Easy access to the doctors in the hospital					
24	Efficient system of addressing the complaints					
25	Facility of ATM/bank					
26	Facility of canteen and cafeteria					
27	Living room facilities					
28	Meeting time with patient					
29	Personal attention and proper time given by the doctors					
30	Personal attention and proper time given by the nursing staff					
31	Privacy during clinical examination					
32	Quality of ambulance service					
33	Queries handling at reception counter					
34	Required tests and diagnosis were explained properly					
35	Schedule and time of the treatment were explained properly					
36	Sufficient nursing staff					
37	Sympathetic behavior of staff at waiting area					
38	Tension free/relaxed environment					

39	Tie up of hospital with insurance companies					
40	Timings of the OPD services					
41	Waiting time at registration counter					
42	Your problem was listened carefully by the doctor					

Would you repurchase services of this hospital in future? Yes ☐ No ☐

Would you recommend services of this hospital to others? Yes ☐ No ☐

Please tick on right check box to fill your details.

Age: Up to 20 Years ☐ 21 to 35 Years ☐ 36 to 50 Years ☐ More than 50 Years ☐

Gender: Male ☐ Female ☐

Marital Status: Married ☐ Unmarried ☐

Residential Area: Metro City ☐ Non Metro City ☐ Semi Urban Area ☐ Rural Area ☐

Education: Post Graduation and Above ☐ Graduation ☐ Diploma ☐ Class XII or Below ☐

Occupation: Government Employee ☐ Private Employee ☐ Businessman ☐ Dependent ☐

Monthly Family Income: Up to Rs. 25,000 ☐ Rs. 25,001 to Rs. 50,000 ☐

Rs. 50,001 to Rs. 75,000 ☐ Rs. 75,001 to Rs. 1,00,000 ☐

More than Rs. 1,00,000 ☐

Health Insurance: Yes ☐ No ☐

Thank you for sharing your valuable time to fill up this questionnaire.

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Appendix II - Research Publications

(Research Paper - 1)

Title of Paper: Factors affecting patient satisfaction: An exploratory study for quality management in the health-care sector

Author(s): Vishal Kamra, Harjot Singh, Kalyan Kumar De

Name of Journal: Total Quality Management & Business Excellence

ISSN: 1478-3363 (Print), 1478-3371 (Online)

Publisher: Taylor & Francis LTD, England

Abstracted and Indexed: Social Science Citation Index (SSCI), SCOPUS, EBSCO, ProQuest

Date of Publication: June 18, 2015 (Online), August 26, 2016 (Print)

Volume No., Issue No. & Page Nos.: Volume: 27, Issue: 9, Pages: 1013 - 1027

DOI: http://dx.doi.org/10.1080/14783363.2015.1057488

(Research Paper - 2)

Title of Paper: Factors affecting hospital choice decisions: An exploratory study of healthcare consumers in northern India

Author(s): Vishal Kamra, Harjot Singh, Kalyan Kumar De

Name of Journal: Asia Pacific Journal of Health Management

ISSN: 2204-3136

Publisher: Australasian College of Health Service Management, Australia

Abstracted and Indexed: Australian Business Deans Council (ABDC)

Date of Publication: March 29, 2016

Volume No., Issue No. & Page Nos.: Volume: 11, Issue: 1, Pages: 76 - 84

(Research Paper - 3)

Title of Paper: Satisfaction levels and recommendation intentions of healthcare consumers: An exploratory study based on multispecialty hospitals in north India

Author(s): Vishal Kamra, Harjot Singh, Kalyan Kumar De

Name of Journal: Indian Journal of Clinical Practice

ISSN: 0971-0876

Publisher: IJCP: A Medical Communications Group, India

Abstracted and Indexed: IndMED

Date of Publication: October 14, 2015

Volume No., Issue No. & Page Nos.: Volume: 26, Issue: 5, Pages: 424 - 430

(Research Paper - 4)

Title of Paper: Service quality, consumer satisfaction and behavioral outcomes: A study for firm's future growth in Indian healthcare delivery system

Author(s): Vishal Kamra, Harjot Singh, Kalyan Kumar De

Name of Book: Advances in Management for Business Excellence

Editor (s): Dr. Rajender Kumar, Dr. Neeraj Kaushik, Dr. Ajay Solkhe, Dr. Mohammad Firoz, Dr. Manish Kumar Jha

ISBN: 978-93-84370-32-9

Publisher: Manakin Press, India

Date of Publication: February 27, 2015

Page Nos.: Pages: 416 - 421